



Charter Schools Institute
State University of New York

ACHIEVEMENT ACADEMY CHARTER SCHOOL

FINAL CHARTERED AGREEMENT

Section 2852(5) Submission to the Board of Regents

REDACTED

Volume 2 of 3

JUL 02 2004

ACHIEVEMENT ACADEMY CHARTER SCHOOL
Albany, New York

VOLUME TWO: EXHIBITS

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Charter Schools Institute

ACHIEVEMENT ACADEMY CHARTER SCHOOL**VOLUME TWO: EXHIBITS**

Exhibit A	Management agreement (not applicable)
Exhibit B	Management co. background (not applicable)
Exhibit C	Learning Standards and Curriculum
Exhibit D	By-Laws
Exhibit E	Freedom of Information Law Policy
Exhibit F	Open Meetings Law Policy
Exhibit G	Personnel Policies; Staff Responsibilities and Qualifications
Exhibit H	Appendices:
	1. Agreement Letter with Amistad's Achievement First, Inc.
	2. Background information on Amistad Academy
	3. Community interest/support survey summary
	4. Trustee Resumes & Request for Information Forms

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EXHIBIT A**MANAGEMENT AGREEMENT**

Not applicable.

EXHIBIT B**MANAGEMENT COMPANY BACKGROUND**

Not applicable.

EXHIBIT C

**LEARNING STANDARDS AND CURRICULUM
ACHIEVEMENT ACADEMY CHARTER SCHOOL**

The academic program for the Achievement Academy Charter School is based on the curricular materials used in the successful Amistad Academy, including its own developed programs in reading, writing and math. The School also will use a combination of the Core Knowledge sequence and New York State (Core Curriculum) for Science and Social Studies. Achievement First, the non-profit partner of Amistad Academy (which will provide curricular materials and leadership training to the Charter School), has created top-quality standards-based materials in math practice, grammar practice, novel units, and other areas that teachers in grades 5 thru 8 will use in the classroom.

Achievement Academy Charter School will use the following curricula and publications for the core academic subjects:

- Amistad Academy Reading (Amistad) for all grades, 5-8;
- Corrective Reading Decoding (SRA) for grades 5 & 6 intervention;
- Worldly Wise 3000 (EPS) as a reading supplement for all grades;
- Amistad Academy Writing (Amistad) for all grades, 5-8;
- Amistad Academy Math (Amistad) for grades 5-7;
- Basic Algebra (McDougal-Littell) for math in grade 8;
- Core Knowledge (Core Knowledge) for science for all grades, 5-8;
- Core Knowledge & NYS Core Curriculum for social studies for all grades, 5-8.

These curricula programs have been aligned with New York State Learning Standards, Key Ideas and intermediate Performance Indicators to ensure mastery subjects of as demonstrated by meeting and exceeding the Regents performance standards on state assessments – a central focus of the School's mission. (Alignment tables begin on page C-4.)

Aligning each curricula program to the State Performance Indicators required a combination of Amistad curriculum, Core Knowledge sequence and New York State Core Curriculum to cover all performance indicators in the core subjects. For example, Amistad curriculum was designed for Connecticut standards, not New York's, and where it fell short of certain indicators, Core Knowledge and New York Core Curriculum filled the gaps. The Core Knowledge sequence for Social Studies did not adequately align well with 7th and 8th grade benchmarks necessary for meeting state performance standards on the 8th grade social studies assessment, thus the State Core Curriculum was used.

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Exhibit C-1

English Language Arts -- Reading

Teaching students to read well is the critical task of middle schools. The School will use Amistad's reading program to develop in students the ability to analyze text using explicit comprehension strategies. Once students have mastered phonemic awareness and phonics, the curriculum emphasizes fluency. In order to ensure all our readers are fluent, the School will test all students in each grade, and those students who need fluency practice will receive instruction using the Corrective Reading Decoding program. This program has been used with great success at Amistad Academy; the program is designed to, in a two-year sequence, take fifth grade students—many of whom will be two years behind—from the 3rd to 8th grade levels in reading fluency.

Once students are fluent readers, the focus of reading classes will increasingly shift to comprehension. Teachers will build student comprehension skills in two different ways. First, through the study of literature (each grade level reads a mix of fiction and non-fiction), teachers will develop the comprehension skills of students. Teachers will be teaching main idea, cause-and-effect, and author's purpose using story texts. The School will use the Amistad-developed standards-based novel unit creation tool that aids teachers in developing standards-based questions for novels, and teachers will share this base of top-quality units with each other.

Second, our students will learn to deeply analyze text. Using shorter pieces primarily poetry and non-fiction, students will learn to identify question types and go back to the text to find the answer to those questions. Students will be asked to prove their answers, and rich discussions about question types and text proofs will build the analysis skills of students. Achievement First also will design a multi-year sequence of textual analysis passages and questions; this sequence will progressively expose students to more challenging text and questions, building essential analysis skills.

English Language Arts -- Writing

The Charter School will offer a rigorous writing curriculum aimed at producing writing with excellent organization, elaboration, and flow in multiple genres. Students will be expected to complete Daily Oral Language activities to improve their grammar skills, and teachers will use a variety of grammar materials in daily mini-lessons. Students will learn step-by-step how to create excellent sentences, paragraphs, and papers using templates and a teacher modeling until they are confident enough to tackle the task without assistance. Extensive prewriting, drafting, revising, and editing will take place on all pieces of writing. Students graduating from the School will be able to produce top-quality narratives, expository essays, persuasive essays, research papers, and literary analysis.

Social Studies

Students must know how to decode words and analyze text. To truly understand the text, however, one must also know the basic vocabulary and contextual information the author assumes his or her readers understand. For this reason – and the

importance of our students understanding the world around them – it is essential that students receive a rich and rigorous education in the social studies.

Our social studies curriculum will follow a combination of the Core Knowledge sequence and New York State Core Curriculum to better align with state standards. This social studies curriculum will be presented in a way that is engaging and challenging. Teachers will expect students to master the key concepts and vocabulary, and they will also teach them to analyze primary sources, debate different points of view, and make cause-and-effect connections. Social studies class will be a fast-paced, multi-modal class in which students hone their non-fiction reading skills, and apply it in written essays and oral presentations.

Mathematics

Achievement Academy Charter School's mathematics curriculum will produce students who have mastered middle school mathematics and Algebra I by the end of 8th grade. The curriculum recognizes that students need both basic fact knowledge with procedural computation, understanding of concepts, and the ability to solve complex mathematical problems. Students will begin Amistad Academy's math curriculum, which requires daily demonstration of problem-solving skills.

Math lessons will follow a structured lesson plan designed for maximum success. The first 25 minutes of class and all homework assignments will include cumulative review. There will also be daily sections for basic facts review and problem solving. Concepts will be introduced in a set sequence, emphasizing both step-by-step approaches and explanations for all mathematical processes.

Science

Science instruction at the School will combine student mastery of core vocabulary and conceptual knowledge with the application of scientific principals in laboratory settings. Science assessments, for example, will include sections that focus on the key terms and ideas of a unit as well as a performance task component that will require students to synthesize and analyze data from laboratory experiments. Science teachers will also actively work to reinforce key mathematical concepts, especially graphing and measurement skills.

Spanish

All students will receive two years of intensive Spanish language instruction beginning in 7th grade and derived entirely from New York State Key Ideas and Performance Indicators and curriculum resource guides. The Board may determine, in consultation with its appointed Head of School and sufficient funding sources, to begin Spanish instruction even earlier.

Art

The curriculum for the Arts is developed entirely from New York State curriculum.

ACHIEVEMENT ACADEMY CHARTER SCHOOL
CURRICULUM BENCHMARKS
Aligned to
NYS INTERMEDIATE PERFORMANCE INDICATORS

<u>Subject and Grade</u>	<u>Page Number</u>
<i>English Language Arts</i>	
Grade 5	ELA5 1 - 12
Grade 6	ELA6 1 - 11
Grade 7	ELA7 1 - 12
Grade 8	ELA8 1 - 11
<i>Mathematics</i>	
Grade 5	Math5 1- 9
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<i>Science</i>	
Grade 5	Sci5 1 - 28
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Grade 7	Sci7 1 - 14
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<i>Social Studies</i>	
Grade 5	SS5 1 - 11
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<i>Spanish</i>	
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<i>Art</i>	
Grade 5	Arts5 1 - 11
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Grade 7	Arts7 1 - 12
Grade 8	Arts8 1 - 11

5th Grade English Language Arts:

ELA Standard 1

Students will read, write, listen, and speak for information and understanding.

Key Ideas	Performance Indicators	Core Curriculum
ELA 1. LR 1: Listening and reading to acquire information and understanding involves collecting data, facts, and ideas; discovering relationships, concepts, and generalizations; and using knowledge from oral, written, and electronic sources.	Students interpret and analyze information from textbooks and nonfiction books for young adults, as well as reference materials, audio and media presentations, oral interviews, graphs, charts, diagrams, and electronic databases intended for a general audience. Students use a wide variety of strategies for selecting, organizing, and categorizing information. Students understand and use the text features that make information accessible and usable, such as format, sequence, level of diction, and relevance of details. Students distinguish between relevant and irrelevant information and between fact and opinion.	Reading: Right There Go back to the text to find facts and details Main Idea / Theme Main Idea and Details - Graphic Organizer Main Idea from Title Summarizing Summarizing Predicting Make predictions Vocabulary in context Vocabulary in context Setting Setting - Graphic Organizer Problem/Conflict/Events/Resolution Character Analysis Character's Behavior Character's Traits Character's Feelings Character's Thoughts Character's Motivation Structure of Text Structural/organizational patterns Sequence: Story Map - Graphic Organizer Sequencing - Graphic Organizer Compare-and-Contrast: Compare and Contrast - Graphic Organizer Venn Diagram - ALIKE - Graphic Organizer Venn Diagram - DIFFERENT - Graphic Organizer Cause-and-effect:

Cause-and-effect - Graphic Organizer
Genre Study

Monitor comprehension while reading

RAP

Reciprocal Reading

Coding the text

Double-entry diaries

Summarizing

Visualizing

Predicting

Ask questions before, during, and after reading

Make inferences

Author's Purpose

Draw Conclusion

Using evidence to support a conclusion

Fact v. Opinion

Author's craft / techniques

WHY an author includes certain words,
paragraphs, ideas, or literary devices
(simile, metaphor, alliteration)

Select relevant information to extend or evaluate

Author's point of view

Beliefs of the authors, characters

Figurative Language

Students relate new information to prior
knowledge and experience.

Connecting Text to Self

Connecting Text to Text

Connecting Text to Other Experiences

Personal Response

Students compare and synthesize
information from different sources.

ELA1.SW2: Speaking and writing to
acquire and transmit information requires
asking probing and clarifying questions,
interpreting information in one's own
words, applying information from one
context to another, and presenting the

Students produce oral and written reports
on topics related to all school subjects.

Students establish an authoritative

Writing:□

Step-by-step review of all phases of 5-
paragraph persuasive essay

Circle Issue

Underline Audience

State Position

information and interpretation clearly, concisely, and comprehensibly.

stance on the subject and provide references to establish the validity and verifiability of the information presented.

Students organize information according to an identifiable structure, such as compare/contrast or general to specific.

Students develop information with appropriate supporting material, such as facts, details, illustrative examples or anecdotes, and exclude extraneous material.

Students use the process of pre-writing, drafting, revising, and proofreading (the writing process) to produce well-constructed informational texts.

Students use standard English for formal presentation of information selecting

Three reasons (using lawyer's toolbox)
Graphic organizer (fold)
Great introduction
Clear topic sentences
Great elaboration (all methods)
Memorize the "start phrases" for each method of elaboration
Conclusion
Review of all starters and enhancers
Review of flow

Students produce a variety of types of writing, including:
reports
summaries
descriptions
essays that explain a process
research essays

Students know how to gather information from different sources (such as an encyclopedia, magazines, interviews, observations, atlas, on-line), and write short reports synthesizing information from at least three different sources, presenting the information in his or her own words, with attention to the following:

understanding the purpose and audience of the writing
defining a main idea and sticking to it
providing an introduction and conclusion
organizing material in coherent paragraphs
illustrating points with relevant examples
documenting sources in a rudimentary bibliography

Intensive Grammar Review of all editing and revising standards

appropriate grammatical constructions and vocabulary, using a variety of sentence structures, and observing the rules of punctuation, capitalization, and spelling.

Use of Achieve Academy Charter School
DOLs and Cumulative review materials to
reinforce grammar mastery
Targeted instruction on problem areas
following the Core Knowledge sequence

ELA Standard 2

Students will read, write, listen, and speak for literary response and expression

Key Ideas	Performance Indicators	Core Curriculum
ELA2.LR1: Listening and reading for literary response involves comprehending, interpreting, and critiquing imaginative texts in every medium, drawing on personal experiences and knowledge to understand the text, and recognizing the social, historical and cultural features of the text.	Students read and view texts and performances from a wide range of authors, subjects, and genres. Students recognize different levels of meaning. Students begin to evaluate literary merit based on an understanding of the genre and the literary elements. Students understand and identify the distinguishing features of the major genres and use them to aid their interpretation and discussion of literature.	Direct reading activity for at least 30 minutes (40-45 is ideal) daily Fast-paced classes using the Achieve Quick Questions: No more than 5 minutes "soup to nuts" Vocabulary Review: No more than 5 minutes (students do vocabulary in breakfast) Pre-Reading: No more than 15 minutes ... usually 5-10 (background knowledge, graphic organizer, KWL, interesting idea, mini-lesson etc.) Reading Activities: 40-50 minutes Summary: 2-5 minutes HW & Class Points: 1-2 minutes Complete at least 7 novels a year (or All teachers must include one unit/novel on the following: biography, November/December: All teachers should do a biography unit sometime during this two-month period historical fiction, January/February: All teachers should do a historical fiction unit sometime during this two-month period poetry. April/May: All teachers should do a poetry unit sometime during this two-month period Teachers must pick all but one of their novels from the grade level lists. Novel units are the core instructional materials

It is Achieve Academy Charter School's preference that teachers use the top-quality novel units that have been edited and approved by Achieve Academy Charter School; however, teachers may create their own novel units and/or edit Achieve Academy Charter School novel units for use in their classes.

Novel units in hard copy and electronic (disk/CD/email) must be turned in to the academic dean within two weeks of completing the novel; before teaching a novel, teachers will have a 30-45 minute conversation with the academic dean (or a teacher the dean appoints) to discuss their plans for the novel.

All of the following ten elements are included

Cover

Syllabus

Building background knowledge

Guide Sheets (with standards-based questions)

Guide sheets aren't the core; they supplement and can be used effectively after the class has

read a chapter/section, and they can be excellent homework resources

Reciprocal Reading is at the CORE of every

Summarizing

Clarifying

Questioning

Predicting

Other core reading strategies (e.g. Visualizing, Think-aloud, Fix-it)

Make a connection

Make a prediction

Stop and think

Ask yourself a question

Write

Visualize

Use bold, italics, quotations

Retell what you've just read

Reread

Slow down, speed up

Character Analysis Work

Story Boards

Vocabulary is learned in context and
celebrated throughout the class

Structured vocabulary program (Great
Source or Wordly Wise 3000)

Vocabulary walls, constant use of words
in discussion writing, celebrating words

Assessment

Genre Study

Students identify significant literary
elements (including metaphor,
symbolism, foreshadowing, dialect,
rhyme, meter, irony, climax) and use
those elements to interpret the work.

Author's craft / techniques

WHY an author includes certain words,
paragraphs, ideas, or literary devices

Select relevant information to extend or evaluate

Author's point of view

Beliefs of the authors, characters

Figurative Language

Students read aloud with expression,
conveying the meaning and mood of a
work.

Reading is done in a variety of ways:

Whole Class Reading (Round Robin,

Reader's Theater / Parts)

Teacher read-aloud

Pairs

Independent

ELA2.SW2: Speaking and writing for
literary response involves presenting
interpretations, analysis, and reactions to
the content and language of a text.
Speaking and writing for literary
expression involves producing
imaginative texts that use language and
text structures that are inventive and
often multi-layered.

Students present responses to and
interpretations of literature, making
reference to the literary elements found
in the text and connections with their
personal knowledge and experience.

Writing: □

Step-by-step review of all phases of 5-
paragraph persuasive essay

Circle Issue

Underline Audience

State Position

Three reasons (using lawyer's toolbox)

Graphic organizer (fold)

Great introduction

Clear topic sentences

Great elaboration (all methods)

Students produce interpretations of literary works that identify different levels of meaning and comment on their significance and effect.

Students write stories, poems, literary essays, and plays that observe the conventions of the genre and contain interesting and effective language and voice.

Students use standard English effectively.

Memorize the "start phrases" for each method of elaboration
Conclusion
Review of all starters and enhancers
Review of flow

The task
Circle question
Arguable thesis
Three main points
Writing great introductions to literary analysis papers.
Graphic organizers
Evidence from the text
Types of evidence

Students produce a variety of types of writing, including:
stories
poems
descriptions

Intensive Grammar Review of all editing and revising standards
Use of Achieve Academy Charter School DOLs and Cumulative review materials to Targeted instruction on problem areas following the Core Knowledge sequence

ELA Standard 3

Students will read, write, listen, and speak for critical analysis and evaluation

Key Ideas	Performance Indicators	Core Curriculum
ELA3.LR1: Listening and reading to analyze and evaluate experiences, ideas, information, and issues requires using evaluative criteria from a variety of perspectives and recognizing the differences in evaluations based on different sets of criteria.	Students analyze, interpret, and evaluate information, ideas, organization, and language from academic and nonacademic texts, such as textbooks, public documents, book and movie reviews, and editorials.	Reading: Right There Go back to the text to find facts and details Main Idea / Theme Main Idea and Details - Graphic Organizer Main Idea from Title Summarizing Summarizing Predicting Make predictions
	Students assess the quality of texts and	

presentations, using criteria related to the genre, the subject area, and purpose (e.g., using the criteria of accuracy, objectivity comprehensiveness, and understanding of the game to evaluate a sports editorial).

Students understand that within any group there are many different points of view depending on the particular interests and values of the individual, and recognize those differences in perspective in texts and presentations (e.g., in considering whether to let a new industry come into a community, some community members might be enthusiastic about the additional jobs that will be created while others are concerned about the air and noise pollution that could result).

Students evaluate their own and others work based on a variety of criteria (e.g., logic, clarity, comprehensiveness, conciseness, originality, conventionality)

Vocabulary in context

Vocabulary in context

Monitor comprehension while reading

RAP

Reciprocal Reading

Coding the text

Double-entry diaries

Summarizing

Visualizing

Predicting

Ask questions before, during, and after reading

Make inferences

Setting

Setting - Graphic Organizer

Problem/Conflict/Events/Resolution

Character Analysis

Character's Behavior

Character's Traits

Character's Feelings

Character's Thoughts

Character's Motivation

Structure of Text

Structural/organizational patterns

Sequence:

Story Map - Graphic Organizer

Sequencing - Graphic Organizer

Compare-and-Contrast:

Compare and Contrast - Graphic Organizer

Venn Diagram - ALIKE - Graphic Organizer

Venn Diagram - DIFFERENT - Graphic Organizer

Cause-and-effect:

Cause-and-effect - Graphic Organizer

Genre Study

Author's Purpose

Draw Conclusion

Using evidence to support a conclusion

Fact v. Opinion

and recognize the varying effectiveness of different approaches.

Author's craft / techniques

WHY an author includes certain words, paragraphs, ideas, or literary devices (simile, metaphor, alliteration)

Select relevant information to extend or evaluate

Author's point of view

Beliefs of the authors, characters

Figurative Language

Connecting Text to Self

Connecting Text to Text

Connecting Text to Other Experiences

Personal Response

ELA3.SW2: Speaking and writing for critical analysis and evaluation requires presenting opinions and judgments on experiences, ideas, information, and issues clearly, logically, and persuasively with reference to specific criteria on which the opinion or judgment is based.

Students present (in essays, position papers, speeches, and debates) clear analyses of issues, ideas, texts, and experiences, supporting their positions with well-developed arguments.

Students develop arguments with effective use of details and evidence that reflect a coherent set of criteria (e.g., reporting results of lab experiments to support a hypothesis).

Students monitor and adjust their own oral and written presentations according to the standards for a particular genre (e.g., defining key terms used in a formal debate).

Students use standard English, precise vocabulary, and presentational strategies effectively to influence an audience.

Writing: □

Step-by-step review of all phases of 5-paragraph persuasive essay

Circle Issue

Underline Audience

State Position

Three reasons (using lawyer's toolbox)

Graphic organizer (fold)

Great introduction

Clear topic sentences

Great elaboration (all methods)

** Memorize the "start phrases" for each method of elaboration

Conclusion

Review of all starters and enhancers

Review of flow

Vocabulary in context

Vocabulary in context

Intensive Grammar Review of all editing and revising standards

Use of Achieve Academy Charter School
DOLs and Cumulative review materials to
Targeted instruction on problem areas
following the Core Knowledge sequence

ELA Standard 4

Students will read, write, listen, and speak for social interaction

Key Ideas	Performance Indicators	Core Curriculum
ELA4.LS1: Oral communication in formal and informal settings requires the ability to talk with people of different ages, genders, and cultures, to adapt presentations to different audiences, and to reflect on how talk varies in different situations.	Students listen attentively to others and build on others' ideas in conversations with peers and adults. Students use verbal and nonverbal skills to improve communications with others. Students express ideas and concerns clearly and respectfully in conversations and group discussions.	Reading is done in a variety of ways: Whole Class Reading (Round Robin, Reader's Theater / Parts) Teacher read-aloud Pairs Independent Students participate in daily Morning Circles
ELA4.RW2: Written communication for social interaction requires using written messages to establish, maintain, and enhance personal relationships with others.	Students learn some words and expressions in another language to communicate with a peer or adult who speaks that language. Students write social letters, cards, and electronic messages to friends, relatives, community acquaintances, and other electronic network users.	Students learn foreign phrases commonly used in English communication (e.g. ad hoc, modus operandi, proforma) Understand that social communication may Students produce a variety of types of informal, social writing Write the following to establish, maintain, and friendly letters, notes, and cards personal journals friendly electronic messages (email)

Students use appropriate language and style for the situation and the audience and take into account the ideas and interests expressed by the person receiving the message.

Students read and discuss social communications and electronic communications of other writers and use some of the techniques of those writers in their own writing.

Students participate civilly and productively in group discussions

Students give a short speech to the class that is well-organized and well-supported

Students demonstrate an ability to use standard pronunciation when speaking to large groups and in formal circumstances, such as a job interview.

Communicate by sharing reading experiences to build a relationship with peers or adults (e.g. read together silently or aloud with a partner or in small groups)

Read to establish, maintain, and enhance friendly letters, notes, cards
published letters, diaries and journals
electronic mail (email)

6th Grade English Language Arts:

ELA Standard 1

Students will read, write, listen, and speak for information and understanding.

Key Ideas	Performance Indicators	Core Curriculum
ELA 1. LR 1: Listening and reading to acquire information and understanding involves collecting data, facts, and ideas; discovering relationships, concepts, and generalizations; and using knowledge from oral, written, and electronic sources.	Students interpret and analyze information from textbooks and nonfiction books for young adults, as well as reference materials, audio and media presentations, oral interviews, graphs, charts, diagrams, and electronic databases intended for a general audience. Students use a wide variety of strategies for selecting, organizing, and categorizing information. Students understand and use the text features that make information accessible and usable, such as format, sequence, level of diction, and relevance of details. Students distinguish between relevant and irrelevant information and between fact and opinion.	Reading: Right There Go back to the text to find facts and details Main Idea / Theme Main Idea and Details - Graphic Organizer Main Idea from Title Summarizing Summarizing Predicting Make predictions Vocabulary in context Vocabulary in context Setting Setting - Graphic Organizer Problem/Conflict/Events/Resolution Character Analysis Character's Behavior Character's Traits Character's Feelings Character's Thoughts Character's Motivation Structure of Text Structural/organizational patterns Sequence: Story Map - Graphic Organizer Sequencing - Graphic Organizer Compare-and-Contrast: Compare and Contrast - Graphic Organizer Venn Diagram - ALIKE - Graphic Organizer Venn Diagram - DIFFERENT - Graphic Organizer Cause-and-effect: Cause-and-effect - Graphic Organizer Genre Study Monitor comprehension while reading RAP

Reciprocal Reading
 Coding the text
 Double-entry diaries
 Summarizing
 Visualizing
 Predicting

Ask questions before, during, and after reading
 Make inferences

Author's Purpose
 Draw Conclusion
 Using evidence to support a conclusion
 Fact v. Opinion

Author's craft / techniques
 WHY an author includes certain words,
 paragraphs, ideas, or literary devices (simile,
 metaphor, alliteration)
 Select relevant information to extend or evaluate
 Author's point of view
 Beliefs of the authors, characters
 Figurative Language

Students relate new information to prior
 knowledge and experience.

Students compare and synthesize
 information from different sources.

Connecting Text to Self
 Connecting Text to Text
 Connecting Text to Other Experiences
 Personal Response

ELA1.SW2: Speaking and writing to
 acquire and transmit information requires
 asking probing and clarifying questions,
 interpreting information in one's own
 words, applying information from one
 context to another, and presenting the
 information and interpretation clearly,
 concisely, and comprehensibly.

Students produce oral and written reports
 on topics related to all school subjects.

Students establish an authoritative
 stance on the subject and provide
 references to establish the validity and
 verifiability of the information presented.

Writing: □
 Step-by-step review of all phases of 5-paragraph
 persuasive essay
 Circle Issue
 Underline Audience
 State Position
 Three reasons (using lawyer's toolbox)
 Graphic organizer (fold)
 Great introduction
 Clear topic sentences

Students organize information according to an identifiable structure, such as

Students develop information with appropriate supporting material, such as facts, details, illustrative examples or anecdotes, and exclude extraneous material.

Students use the process of pre-writing, drafting, revising, and proofreading (the writing process) to produce well-constructed informational texts.

Students use standard English for formal presentation of information selecting appropriate grammatical constructions and vocabulary, using a variety of sentence structures, and observing the rules of punctuation, capitalization, and spelling.

Great elaboration (all methods)
Memorize the "start phrases" for each method of elaboration
Conclusion
Review of all starters and enhancers
Review of flow

Students write a research essay, with attention to:

Asking open-ended questions
Gathering relevant data through library and field research
Summarizing, paraphrasing, and quoting accurately when taking notes
Defining
Organizing with an outline
Integrating quotations from sources
Acknowledging sources and avoiding plagiarism
Preparing a bibliography

Intensive Grammar Review of all editing and revising standards

Use of Achieve Academy Charter School DOLs and Cumulative review materials to reinforce grammar mastery
Targeted instruction on problem areas following the Core Knowledge sequence

ELA Standard 2

Students will read, write, listen, and speak for literary response and expression.

Key Ideas

Performance Indicators

Core Curriculum

ELA2.LR1: Listening and reading for literary response involves comprehending, interpreting, and critiquing imaginative texts in every medium, drawing on personal experiences and knowledge to understand the text, and recognizing the social, historical and cultural features of the text.

Students read and view texts and performances from a wide range of authors, subjects, and genres.

Students recognize different levels of meaning.

Students evaluate literary merit based on an understanding of the genre and the literary elements.

Students understand and identify the distinguishing features of the major genres and use them to aid their interpretation and discussion of literature.

Direct reading activity for at least 30 minutes (40-45 is ideal) daily

Fast-paced classes using the Amistad Academy Reading Lesson Plan

Quick Questions: No more than 5 minutes "soup to nuts"

Vocabulary Review: No more than 5 minutes (students do vocabulary in breakfast)

Pre-Reading: No more than 15 minutes ... usually 5-10 (background knowledge, graphic organizer, KWL, interesting idea, mini-lesson etc.)

Reading Activities: 40-50 minutes

Summary: 2-5 minutes

HW & Class Points: 1-2 minutes

Complete at least 7 novels a year (or equivalent in 5th

All teachers must include one unit/novel on the following:

biography,

November/December: All teachers should do a biography unit sometime during this two-month period

historical fiction,

January/February: All teachers should do a historical fiction unit sometime during this two-month period

poetry.

April/May: All teachers should do a poetry unit sometime during this two-month period

Teachers must pick all but one of their novels from the grade level lists.

Novel units are the core instructional materials for

It is Amistad's preference that teachers use the top-quality novel units that have been edited and approved by Amistad; however, teachers may create their own novel units and/or edit Amistad novel units for use in their classes.

Novel units in hard copy and electronic (disk/CD/email) must be turned in to the academic dean within two weeks of completing the novel; before teaching a novel, teachers will have a 30-45 minute conversation with the academic dean (or a teacher the dean appoints) to discuss their plans for the novel.

All of the following ten elements are included in each

Cover

Syllabus

Building background knowledge

Guide Sheets (with standards-based questions)

Guide sheets aren't the core; they supplement and can be used effectively after the class has read a chapter/section, and they can be excellent homework resources

Reciprocal Reading is at the CORE of every reading

Summarizing

Clarifying

Questioning

Predicting

Other core reading strategies (e.g. Visualizing, Think-aloud, Fix-it)

Make a connection

Make a prediction

Stop and think

Ask yourself a question

Write

Visualize

Use bold, italics, quotations

Retell what you've just read

Reread

Slow down, speed up

Character Analysis Work

Story Boards

Vocabulary is learned in context and celebrated throughout the class

Structured vocabulary program (Great Source or Wordly Wise 3000)

Vocabulary walls, constant use of words in discussion writing, celebrating words

Assessment

ELA2.SW2: Speaking and writing for literary response involves presenting interpretations, analysis, and reactions to the content and language of a text. Speaking and writing for literary expression involves producing imaginative texts that use language and text structures that are inventive and often multi-layered.

Students identify significant literary elements (including metaphor, symbolism, foreshadowing, dialect, rhyme, meter, irony, climax) and use those elements to interpret the work.

Students read aloud with expression, conveying the meaning and mood of a work.

Students present responses to and interpretations of literature, making reference to the literary elements found in the text and connections with their personal knowledge and experience.

Students produce interpretations of literary works that identify different levels of meaning and comment on their significance and effect.

Genre Study

Author's craft / techniques

WHY an author includes certain words, paragraphs, ideas, or literary devices

Select relevant information to extend or evaluate

Author's point of view

Beliefs of the authors, characters

Figurative Language

Reading is done in a variety of ways:

Whole Class Reading (Round Robin, Reader's

Theater / Parts)

Teacher read-aloud

Pairs

Independent

Writing:□

Step-by-step review of all phases of 5-paragraph persuasive essay

Circle Issue

Underline Audience

State Position

Three reasons (using lawyer's toolbox)

Graphic organizer (fold)

Great introduction

Clear topic sentences

Great elaboration (all methods)

Memorize the "start phrases" for each method of elaboration

Conclusion

Review of all starters and enhancers

Review of flow

The task

Circle question

Arguable thesis

Three main points

Writing great introductions to literary analysis papers

Graphic organizers

Evidence from the text

Types of evidence

Students write stories, poems, literary essays, and plays that observe the conventions of the genre and contain interesting and effective language and voice.

Write original creative works in response to class reading

Students use standard English effectively.

Intensive Grammar Review of all editing and revising standards
Use of Amistad DOLs and Cumulative review materials to reinforce grammar mastery
Targeted instruction on problem areas following the Core Knowledge sequence

ELA Standard 3

Students will read, write, listen, and speak for critical analysis and evaluation

Key Ideas	Performance Indicators	Core Curriculum
ELA3.LR1: Listening and reading to analyze and evaluate experiences, ideas, information, and issues requires using evaluative criteria from a variety of perspectives and recognizing the differences in evaluations based on different sets of criteria.	Students analyze, interpret, and evaluate information, ideas, organization, and language from academic and nonacademic texts, such as textbooks, public documents, book and movie reviews, and editorials. Students assess the quality of texts and presentations, using criteria related to the genre, the subject area, and purpose (e.g., using the criteria of accuracy, objectivity comprehensiveness, and understanding of the genre to evaluate a sports editorial).	Reading: Right There Go back to the text to find facts and details Main Idea / Theme Main Idea and Details - Graphic Organizer Main Idea from Title Summarizing Summarizing Predicting Make predictions Vocabulary in context Vocabulary in context Monitor comprehension while reading RAP Reciprocal Reading Coding the text Double-entry diaries Summarizing Visualizing Predicting Ask questions before, during, and after reading Make inferences

Students understand that within any group there are many different points of view depending on the particular interests and values of the individual, and recognize those differences in perspective in texts and presentations (e.g., in considering whether to let a new industry come into a community, some community members might be enthusiastic about the additional jobs that will be created while others are concerned about the air and noise pollution that could result).

Students evaluate their own and others work based on a variety of criteria (e.g., logic, clarity, comprehensiveness, conciseness, originality, conventionality) and recognize the varying effectiveness of different approaches.

Setting

Setting - Graphic Organizer

Problem/Conflict/Events/Resolution

Character Analysis

Character's Behavior

Character's Traits

Character's Feelings

Character's Thoughts

Character's Motivation

Structure of Text

Structural/organizational patterns

Sequence:

Story Map - Graphic Organizer

Sequencing - Graphic Organizer

Compare-and-Contrast:

Compare and Contrast - Graphic Organizer

Venn Diagram - ALIKE - Graphic Organizer

Venn Diagram - DIFFERENT - Graphic Organizer

Cause-and-effect:

Cause-and-effect - Graphic Organizer

Genre Study

Author's Purpose

Draw Conclusion

Using evidence to support a conclusion

Fact v. Opinion

Author's craft / techniques

WHY an author includes certain words, paragraphs, ideas, or literary devices (simile, metaphor, alliteration)

Select relevant information to extend or evaluate

Author's point of view

Beliefs of the authors, characters

Figurative Language

Connecting Text to Self

Connecting Text to Text

Connecting Text to Other Experiences

Personal Response

Writing: □

ELA3.SW2: Speaking and writing for

Students present (in essays, position

critical analysis and evaluation requires presenting opinions and judgments on experiences, ideas, information, and issues clearly, logically, and persuasively with reference to specific criteria on which the opinion or judgment is based.

papers, speeches, and debates) clear analyses of issues, ideas, texts, and experiences, supporting their positions with well-developed arguments.

Students develop arguments with effective use of details and evidence that reflect a coherent set of criteria (e.g., reporting results of lab experiments to support a hypothesis).

Students monitor and adjust their own oral and written presentations according to the standards for a particular genre (e.g., defining key terms used in a formal debate).

Students use standard English, precise vocabulary, and presentational strategies effectively to influence an audience.

Step-by-step review of all phases of 5-paragraph persuasive essay

Circle Issue

Underline Audience

State Position

Three reasons (using lawyer's toolbox)

Graphic organizer (fold)

Great introduction

Clear topic sentences

Great elaboration (all methods)

** Memorize the "start phrases" for each method of elaboration

Conclusion

Review of all starters and enhancers

Review of flow

Vocabulary in context

Vocabulary in context

Intensive Grammar Review of all editing and revising standards

Use of Amistad DOLs and Cumulative review materials to reinforce grammar mastery

Targeted instruction on problem areas following the Core Knowledge sequence

ELA Standard 4:
Students will read, write, listen, and speak for social interaction.

Key Ideas	Performance Indicators	Core Curriculum
ELA4.LS1: Oral communication in formal and informal settings requires the ability to talk with people of different ages, genders, and cultures, to adapt presentations to different audiences, and to reflect on how talk varies in different situations.	Students listen attentively to others and build on others' ideas in conversations with peers and adults.	Reading is done in a variety of ways: Whole Class Reading (Round Robin, Reader's Theater / Parts) Teacher read-aloud Pairs Independent
	Students use verbal and nonverbal skills to improve communications with others.	Students participate in daily Morning Circles
	Students express ideas and concerns clearly and respectfully in conversations and group discussions.	
ELA4.RW2: Written communication for social interaction requires using written messages to establish, maintain, and enhance personal relationships with others.	Students learn some words and expressions in another language to communicate with a peer or adult who speaks that language.	Students learn foreign phrases commonly used in English communication (e.g. ad hoc, modus operandi, proforma)
	Students write social letters, cards, and electronic messages to friends, relatives, community acquaintances, and other electronic network users.	Students write a standard business letter Write the following to establish, maintain, and enhance friendly letters, notes, and cards personal journals friendly electronic messages (email)
	Students use appropriate language and style for the situation and the audience and take into account the ideas and interests expressed by the person receiving the message.	Students participate civilly and productively in group discussions Students give a short speech to the class that is well-organized and well-supported Students demonstrate an ability to use standard pronunciation when speaking to large groups and in formal circumstances, such as a job interview.
	Students read and discuss social	Students read, discuss, and write a standard business

communications and electronic
communications of other writers and use
some of the techniques of those writers
in their own writing.

Communicate by sharing reading experiences to build a
relationship with peers or adults (e.g. read together
silently or aloud with a partner or in small groups)

Communicate by sharing reading experiences to build a
relationship with peers or adults (e.g. read together
silently or aloud with a partner or in small groups)

7th Grade English Language Arts:

ELA Standard 1

Students will read, write, listen, and speak for information and understanding.

Key Ideas	Performance Indicators	Core Curriculum
ELA 1. LR 1: Listening and reading to acquire information and understanding involves collecting data, facts, and ideas; discovering relationships, concepts, and generalizations; and using knowledge from oral, written, and electronic sources.	Students interpret and analyze information from textbooks and nonfiction books for young adults, as well as reference materials, audio and media presentations, oral interviews, graphs, charts, diagrams, and electronic databases intended for a general audience. Students use a wide variety of strategies for selecting, organizing, and categorizing information. Students understand and use the text features that make information accessible and usable, such as format, sequence, level of diction, and relevance of details. Students distinguish between relevant and irrelevant information and between fact and opinion.	Reading: Right There Go back to the text to find facts and details Main Idea / Theme Main Idea and Details - Graphic Organizer Main Idea from Title Summarizing Summarizing Predicting Make predictions Vocabulary in context Vocabulary in context Setting Setting - Graphic Organize Problem/Conflict/Events/Resolution Character Analysis Character's Behavior Character's Traits Character's Feelings Character's Thoughts Character's Motivation Structure of Text Structural/organizational patterns Sequence: Story Map - Graphic Organizer Sequencing - Graphic Organizer Compare-and-Contrast: Compare and Contrast - Graphic Organizer Venn Diagram - ALIKE - Graphic Organizer Venn Diagram - DIFFERENT - Graphic Organizer Cause-and-effect: Cause-and-effect - Graphic Organizer Genre Study Monitor comprehension while reading

RAP

Reciprocal Reading

Coding the text

Double-entry diaries

Summarizing

Visualizing

Predicting

Ask questions before, during, and after reading

Make inferences

Author's Purpose

Draw Conclusion

Using evidence to support a conclusion

Fact v. Opinion

Author's craft / techniques

WHY an author includes certain words,
paragraphs, ideas, or literary devices (simile,
metaphor, alliteration)

Select relevant information to extend or evaluate

Author's point of view

Beliefs of the authors, characters

Figurative Language

Students relate new information to prior
knowledge and experience.

Connecting Text to Self

Connecting Text to Text

Connecting Text to Other Experiences

Personal Response

Students compare and synthesize
information from different sources.

ELA1.SW2: Speaking and writing to
acquire and transmit information requires
asking probing and clarifying questions,
interpreting information in one's own
words, applying information from one
context to another, and presenting the
information and interpretation clearly,
concisely, and comprehensibly.

Students produce oral and written reports
on topics related to all school subjects.

Students establish an authoritative
stance on the subject and provide
references to establish the validity and
verifiability of the information presented.

Writing:□

Step-by-step review of all phases of 5-
paragraph persuasive essay

Circle Issue

Underline Audience

State Position

Three reasons (using lawyer's toolbox)

Graphic organizer (fold)

Great introduction

Students organize information according to an identifiable structure, such as compare/contrast or general to specific.

Students develop information with appropriate supporting material, such as facts, details, illustrative examples or anecdotes, and exclude extraneous material.

Students use the process of pre-writing, drafting, revising, and proofreading (the writing process) to produce well-constructed informational texts.

Students use standard English for formal presentation of information selecting appropriate grammatical constructions and vocabulary, using a variety of sentence structures, and observing the rules of punctuation, capitalization, and spelling.

Clear topic sentences
Great elaboration (all methods)
Memorize the "start phrases" for each method of elaboration
Conclusion

Review of all starters and enhancers
Review of flow

Students expository writing:

describe
narrate
persuade
compare and contrast

Students write research essays, with attention to

Asking open-ended questions
Gathering relevant data through library and filed research
Summarizing, paraphrasing, and quoting accurately when taking notes
Defining a thesis (that is, a central proposition, a main idea)
Organizing with an outline
Integrating quotations from sources
Acknowledging sources and avoiding plagiarism
Preparing a bibliography

Intensive Grammar Review of all editing and revising standards

Use of Achieve Academy Charter School DOLs and Cumulative review materials to reinforce grammar mastery

Targeted instruction on problem areas following the Core Knowledge sequence

ELA Standard 2

Students will read, write, listen, and speak for literary response and expression.

Key Ideas	Performance Indicators	Core Curriculum
ELA2.LR1: Listening and reading for literary response involves comprehending, interpreting, and critiquing imaginative texts in every medium, drawing on personal experiences and knowledge to understand the text, and recognizing the social, historical and cultural features of the text.	Students read and view texts and performances from a wide range of authors, subjects, and genres. Students recognize different levels of meaning. Students evaluate literary merit based on an understanding of the genre and the literary elements. Students understand and identify the distinguishing features of the major genres and use them to aid their interpretation and discussion of literature.	Direct reading activity for at least 30 minutes (40-45 is ideal) daily Fast-paced classes using the Amistad Academy Reading Lesson Plan Quick Questions: No more than 5 minutes "soup to nuts" Vocabulary Review: No more than 5 minutes (students do vocabulary in breakfast) Pre-Reading: No more than 15 minutes ... usually 5-10 (background knowledge, graphic organizer, KWL, interesting idea, mini-lesson etc.) Reading Activities: 40-50 minutes Summary: 2-5 minutes HW & Class Points: 1-2 minutes Complete at least 7 novels a year (or equivalent in All teachers must include one unit/novel on the following: biography, November/December: All teachers should do a biography unit sometime during this two-month period historical fiction, January/February: All teachers should do a historical fiction unit sometime during this two-month period poetry. April/May: All teachers should do a poetry unit sometime during this two-month period Teachers must pick all but one of their novels from the grade level lists. Novel units are the core instructional materials for Reading Comprehension class and cover multiple genres.

It is Amistad's preference that teachers use the top-quality novel units that have been edited and approved by Amistad; however, teachers may create their own novel units and/or edit Amistad novel units for use in their classes.

Novel units in hard copy and electronic (disk/CD/email) must be turned in to the academic dean within two weeks of completing the novel; before teaching a novel, teachers will have a 30-45 minute conversation with the academic dean (or a teacher the dean appoints) to discuss their plans for the novel.

All of the following ten elements are included in each
Cover

Syllabus

Building background knowledge

Guide Sheets (with standards-based questions)

Guide sheets aren't the core; they supplement and can be used effectively after the class has read a chapter/section, and they can be excellent homework resources

Reciprocal Reading is at the CORE of every reading

Summarizing

Clarifying

Questioning

Predicting

Other core reading strategies (e.g. Visualizing, Think-aloud, Fix-it)

Make a connection

Make a prediction

Stop and think

Ask yourself a question

Write

Visualize

Use bold, italics, quotations

Retell what you've just read

Reread

Slow down, speed up

Character Analysis Work

ELA2.SW2: Speaking and writing for literary response involves presenting interpretations, analysis, and reactions to the content and language of a text. Speaking and writing for literary expression involves producing imaginative texts that use language and text structures that are inventive and often multi-layered.

Students present responses to and interpretations of literature, making reference to the literary elements found in the text and connections with their personal knowledge and experience.

Students identify significant literary elements (including metaphor, symbolism, foreshadowing, dialect, rhyme, meter, irony, climax) and use those elements to interpret the work.

Students read aloud with expression, conveying the meaning and mood of a work.

Story Boards

Vocabulary is learned in context and celebrated throughout the class

Structured vocabulary program (Great Source or Wordly Wise 3000)

Vocabulary walls, constant use of words in discussion writing, celebrating words

Assessment

Genre Study

Author's craft / techniques

WHY an author includes certain words, paragraphs, ideas, or literary devices

Select relevant information to extend or evaluate

Author's point of view

Beliefs of the authors, characters

Figurative Language

Reading is done in a variety of ways:

Whole Class Reading (Round Robin, Reader's Theater / Parts)

Teacher read-aloud

Pairs

Independent

Writing: □

Step-by-step review of all phases of 5-paragraph persuasive essay

Circle Issue

Underline Audience

State Position

Three reasons (using lawyer's toolbox)

Graphic organizer (fold)

Great introduction

Clear topic sentences

Great elaboration (all methods)

Memorize the "start phrases" for each method of elaboration

Conclusion

Review of all starters and enhancers

Students produce interpretations of literary works that identify different levels of meaning and comment on their significance and effect.

Students write stories, poems, literary essays, and plays that observe the conventions of the genre and contain interesting and effective language and voice.

Students use standard English effectively.

Review of flow

The task
Circle question
Arguable thesis
Three main points
Writing great introductions to literary analysis papers
Graphic organizers
Evidence from the text
Types of evidence

Write original creative works in response to class reading

Intensive Grammar Review of all editing and revising standards
Use of Amistad DOLs and Cumulative review materials to reinforce grammar mastery
Targeted instruction on problem areas following the Core Knowledge sequence

ELA Standard 3:
Students will read, write, listen, and speak for critical analysis and evaluation.

Key Ideas	Performance Indicators	Core Curriculum
ELA3.LR1: Listening and reading to analyze and evaluate experiences, ideas, information, and issues requires using evaluative criteria from a variety of perspectives and recognizing the differences in evaluations based on different sets of criteria.	Students analyze, interpret, and evaluate information, ideas, organization, and language from academic and nonacademic texts, such as textbooks, public documents, book and movie reviews, and editorials. Students assess the quality of texts and presentations, using criteria related to the genre, the subject area, and purpose (e.g., using the criteria of accuracy, objectivity comprehensiveness, and understanding of the genre to evaluate a sports editorial). Students understand that within any group there are many different points of view depending on the particular interests and values of the individual, and recognize those differences in perspective in texts and presentations (e.g., in considering whether to let a new industry come into a community, some community members might be	Reading: Right There Go back to the text to find facts and details Main Idea / Theme Main Idea and Details - Graphic Organizer Main Idea from Title Summarizing Summarizing Predicting Make predictions Vocabulary in context Vocabulary in context Monitor comprehension while reading RAP Reciprocal Reading Coding the text Double-entry diaries Summarizing Visualizing Predicting Ask questions before, during, and after reading Make inferences Setting Setting - Graphic Organizer Problem/Conflict/Events/Resolution Character Analysis Character's Behavior Character's Traits Character's Feelings Character's Thoughts Character's Motivation Structure of Text Structural/organizational patterns Sequence: Story Map - Graphic Organizer Sequencing - Graphic Organizer Compare-and-Contrast:

enthusiastic about the additional jobs that will be created while others are concerned about the air and noise pollution that could result).

Students evaluate their own and others work based on a variety of criteria (e.g., logic, clarity, comprehensiveness, conciseness, originality, conventionality) and recognize the varying effectiveness of different approaches.

Compare and Contrast - Graphic Organizer
Venn Diagram - ALIKE - Graphic Organizer
Venn Diagram - DIFFERENT - Graphic Organizer
Cause-and-effect:
Cause-and-effect - Graphic Organizer
Genre Study

Author's Purpose
Draw Conclusion
Using evidence to support a conclusion
Fact v. Opinion

Author's craft / techniques
WHY an author includes certain words, paragraphs, ideas, or literary devices (simile, metaphor, alliteration)
Select relevant information to extend or evaluate Author's point of view
Beliefs of the authors, characters
Figurative Language

Connecting Text to Self
Connecting Text to Text
Connecting Text to Other Experiences
Personal Response

ELA3.SW2: Speaking and writing for critical analysis and evaluation requires presenting opinions and judgments on experiences, ideas, information, and issues clearly, logically, and persuasively with reference to specific criteria on which the opinion or judgment is based.

Students present (in essays, position papers, speeches, and debates) clear analyses of issues, ideas, texts, and experiences, supporting their positions with well-developed arguments.

Students develop arguments with effective use of details and evidence that reflect a coherent set of criteria (e.g., reporting results of lab experiments to support a hypothesis).

Students monitor and adjust their own oral and written presentations according to the standards for a particular genre (e.g., defining key terms used in a formal debate).

Students use standard English, precise vocabulary, and presentational strategies effectively to influence an audience.

Writing:□

Step-by-step review of all phases of 5-paragraph persuasive essay
 Circle Issue
 Underline Audience
 State Position
 Three reasons (using lawyer's toolbox)
 Graphic organizer (fold)
 Great introduction
 Clear topic sentences
 Great elaboration (all methods)
 Memorize the "start phrases" for each method of elaboration
 Conclusion
 Review of all starters and enhancers
 Review of flow

Vocabulary in context
 Vocabulary in context
 Intensive Grammar Review of all editing and revising standards
 Use of Amistad DOLs and Cumulative review materials to reinforce grammar mastery
 Targeted instruction on problem areas following the Core Knowledge sequence

ELA Standard 4

Students will read, write, listen, and speak for social interaction.

Key Ideas

ELA4.LS1: Oral communication in formal and informal settings requires the ability to talk with people of different ages, genders, and cultures, to adapt presentations to different audiences, and to reflect on how talk varies in different situations.

Performance Indicators

Students listen attentively to others and build on others' ideas in conversations with peers and adults.

Core Curriculum

Reading is done in a variety of ways:
 Whole Class Reading (Round Robin, Reader's Theater / Parts)
 Teacher read-aloud
 Pairs
 Independent

Students use verbal and nonverbal skills to improve communications with others.

Students express ideas and concerns clearly and respectfully in conversations and group discussions.

Students learn some words and expressions in another language to communicate with a peer or adult who speaks that language.

Students participate in daily Morning Circles

Students learn foreign phrases commonly used in English communication (e.g. ad hoc, modus operandi, proforma)

ELA4.RW2: Written communication for social interaction requires using written messages to establish, maintain, and enhance personal relationships with others.

Students write social letters, cards, and electronic messages to friends, relatives, community acquaintances, and other electronic network users.

Students use appropriate language and style for the situation and the audience and take into account the ideas and interests expressed by the person receiving the message.

Students read and discuss social communications and electronic communications of other writers and use some of the techniques of those writers in their own writing.

Write the following to establish, maintain, and enhance personal relationships; for example:
friendly letters, notes, and cards
personal journals
friendly electronic messages (email)

Students participate civilly and productively in group discussions
Students give a short speech to the class that is well-organized and well-supported
Students demonstrate an ability to use standard pronunciation when speaking to large groups and in formal circumstances, such as a job interview.

Read to establish, maintain, and enhance personal relationships in:
friendly letters, notes, cards
published letters, diaries and journals
electronic mail (email)

Communicate by sharing reading experiences to build a relationship with peers or adults (e.g. read together silently or aloud with a partner or in small

8th Grade English Language Arts:

ELA Standard 1

Students will read, write, listen, and speak for information and understanding.

Key Ideas	Performance Indicators	Core Curriculum
ELA 1. LR 1: Listening and reading to acquire information and understanding involves collecting data, facts, and ideas; discovering relationships, concepts, and generalizations; and using knowledge from oral, written, and electronic sources.	Students interpret and analyze information from textbooks and nonfiction books for young adults, as well as reference materials, audio and media presentations, oral interviews, graphs, charts, diagrams, and electronic databases intended for a general audience. Students use a wide variety of strategies for selecting, organizing, and categorizing information. Students understand and use the text features that make information accessible and usable, such as format, sequence, level of diction, and relevance of details. Students distinguish between relevant and irrelevant information and between fact and opinion.	Reading: Right There Go back to the text to find facts and details Main Idea / Theme Main Idea and Details - Graphic Organizer Main Idea from Title Summarizing Summarizing Predicting Make predictions Vocabulary in context Vocabulary in context Setting Setting - Graphic Organize Problem/Conflict/Events/Resolution Character Analysis Character's Behavior Character's Traits Character's Feelings Character's Thoughts Character's Motivation Structure of Text Structural/organizational patterns Sequence: Story Map - Graphic Organizer Sequencing - Graphic Organizer Compare-and-Contrast: Compare and Contrast - Graphic Organizer Venn Diagram - ALIKE - Graphic Organizer Venn Diagram - DIFFERENT - Graphic Organizer Cause-and-effect: Cause-and-effect - Graphic Organizer Genre Study Monitor comprehension while reading RAP Reciprocal Reading Coding the text Double-entry diaries

	Summarizing Visualizing Predicting Ask questions before, during, and after reading Make inferences Explain/describe information in a text
	Author's Purpose Draw Conclusion Using evidence to support a conclusion Fact v. Opinion
	Author's craft / techniques WHY an author includes certain words, paragraphs, ideas, or literary devices (simile, metaphor, alliteration) Select relevant information to extend or evaluate Author's point of view Beliefs of the authors, characters Figurative Language
Students relate new information to prior knowledge and experience.	Connecting Text to Self Connecting Text to Text Connecting Text to Other Experiences Personal Response
Students compare and synthesize information from different sources.	Self-Reflection / Graduation Portfolio Project

ELA1.SW2: Speaking and writing to acquire and transmit information requires asking probing and clarifying questions, interpreting information in one's own words, applying information from one context to another, and presenting the information and interpretation clearly, concisely, and comprehensibly.

Students produce oral and written reports on topics related to all school subjects.

Students establish an authoritative stance on the subject and provide references to establish the validity and verifiability of the information presented.

Students organize information according to an identifiable structure, such as compare/contrast or general to specific.

Students develop information with appropriate supporting material, such as facts, details, illustrative examples or anecdotes, and exclude extraneous material.

Students use the process of pre-writing, drafting, revising, and proofreading (the writing process) to produce well-constructed informational texts.

Students use standard English for formal presentation of information selecting appropriate grammatical constructions and vocabulary, using a variety of sentence structures, and observing the

Writing:□

Step-by-step review of all phases of 5-paragraph persuasive essay

Circle Issue

Underline Audience

State Position

Three reasons (using lawyer's toolbox)

Graphic organizer (fold)

Great introduction

Clear topic sentences

Great elaboration (all methods)

Memorize the "start phrases" for each method of elaboration

Conclusion

Review of all starters and enhancers

Review of flow

Literary Analysis / Research papers

Students expository writing:

describe

narrate

persuade

compare and contrast

Students write research essays, with attention to

Asking open-ended questions

Gathering relevant data through library and filed research

Summarizing, paraphrasing, and quoting

accurately when taking notes

Defining a thesis (that is, a central proposition, a main idea)

Organizing with an outline

Integrating quotations from sources

Acknowledging sources and avoiding plagiarism

Preparing a bibliography

Students work on A Better Chance essays

High School Application essays

Intensive Grammar Review of all editing and revising standards

Use of Achieve Academy Charter School DOLs and Cumulative review materials to reinforce grammar mastery

rules of punctuation, capitalization, and spelling.

Targeted instruction on problem areas following the Core Knowledge sequence

ELA Standard 2

Students will read, write, listen, and speak for literary response and expression.

Key Ideas	Performance Indicators	Core Curriculum
ELA2.LR1: Listening and reading for literary response involves comprehending, interpreting, and critiquing imaginative texts in every medium, drawing on personal experiences and knowledge to understand the text, and recognizing the social, historical and cultural features of the text.	Students read and view texts and performances from a wide range of authors, subjects, and genres.	Direct reading activity for at least 30 minutes (40-45 is ideal) daily Fast-paced classes using the Amistad Academy Reading Lesson Plan Quick Questions: No more than 5 minutes "soup to nuts" Vocabulary Review: No more than 5 minutes (students do vocabulary in breakfast) Pre-Reading: No more than 15 minutes ... usually 5-10 (background knowledge, graphic organizer, KWL, interesting idea, mini-lesson etc.) Reading Activities: 40-50 minutes Summary: 2-5 minutes HW & Class Points: 1-2 minutes
	Students recognize different levels of meaning.	
	Students evaluate literary merit based on an understanding of the genre and the literary elements. Students understand and identify the distinguishing features of the major genres and use them to aid their interpretation and discussion of literature.	

Novel units in hard copy and electronic (disk/CD/email) must be turned in to the academic dean within two weeks of completing the novel; before teaching a novel, teachers will have a 30-45 minute conversation with the academic dean (or a teacher the dean appoints) to discuss their plans for the novel.

All of the following ten elements are included in each
Cover

Syllabus

Building background knowledge

Guide Sheets (with standards-based questions)

Guide sheets aren't the core; they supplement and can be used effectively after the class has read a chapter/section, and they can be excellent homework resources

Reciprocal Reading is at the CORE of every reading

Summarizing

Clarifying

Questioning

Predicting

Other core reading strategies (e.g. Visualizing, Think-aloud, Fix-it)

Make a connection

Make a prediction

Stop and think

Ask yourself a question

Write

Visualize

Use bold, italics, quotations

Retell what you've just read

Reread

Slow down, speed up

Character Analysis Work

Story Boards

Vocabulary is learned in context and celebrated throughout the class

Structured vocabulary program (Great Source or Wordly Wise 3000)

Vocabulary walls, constant use of words in discussion writing, celebrating words

Assessment

Genre Study

Students identify significant literary elements (including metaphor, symbolism, foreshadowing, dialect, rhyme, meter, irony, climax) and use those elements to interpret the work.

Students read aloud with expression, conveying the meaning and mood of a work.

Author's craft / techniques
WHY an author includes certain words, paragraphs, ideas, or literary devices
Select relevant information to extend or evaluate
Author's point of view
Beliefs of the authors, characters
Figurative Language

Reading is done in a variety of ways:
Whole Class Reading (Round Robin, Reader's Theater / Parts)
Teacher read-aloud
Pairs
Independent

ELA2.SW2: Speaking and writing for literary response involves presenting interpretations, analysis, and reactions to the content and language of a text. Speaking and writing for literary expression involves producing imaginative texts that use language and text structures that are inventive and often multi-layered.

Students present responses to and interpretations of literature, making reference to the literary elements found in the text and connections with their personal knowledge and experience.

Students produce interpretations of literary works that identify different levels of meaning and comment on their significance and effect.

Writing: □
Step-by-step review of all phases of 5-paragraph persuasive essay
Circle Issue
Underline Audience
State Position
Three reasons (using lawyer's toolbox)
Graphic organizer (fold)
Great introduction
Clear topic sentences
Great elaboration (all methods)
Memorize the "start phrases" for each method of elaboration
Conclusion
Review of all starters and enhancers
Review of flow

Literary Analysis / Research papers
Quotation analysis of literature
SSAT essays
Global interpretation of a Quote

The task
Circle question
Arguable thesis
Three main points
Writing great introductions to literary analysis papers
Graphic organizers

Students write stories, poems, literary essays, and plays that observe the conventions of the genre and contain interesting and effective language and voice.

Students use standard English effectively.

Evidence from the text
Types of evidence

Write original creative works in response to class reading

Intensive Grammar Review of all editing and revising standards
Use of Amistad DOLs and Cumulative review materials to reinforce grammar mastery
Targeted instruction on problem areas following the Core Knowledge sequence

ELA Standard 3

Students will read, write, listen, and speak for critical analysis and evaluation

Key Ideas	Performance Indicators	Core Curriculum
ELA3.LR1: Listening and reading to analyze and evaluate experiences, ideas, information, and issues requires using evaluative criteria from a variety of perspectives and recognizing the differences in evaluations based on different sets of criteria.	Students analyze, interpret, and evaluate information, ideas, organization, and language from academic and nonacademic texts, such as textbooks, public documents, book and movie reviews, and editorials. Students assess the quality of texts and presentations, using criteria related to the genre, the subject area, and purpose (e.g., using the criteria of accuracy, objectivity, comprehensiveness, and understanding of the genre to evaluate a sports editorial).	Reading: Right There Go back to the text to find facts and details Main Idea / Theme Main Idea and Details - Graphic Organizer Main Idea from Title Summarizing Summarizing Predicting Make predictions Vocabulary in context Vocabulary in context Monitor comprehension while reading RAP Reciprocal Reading Coding the text Double-entry diaries Summarizing Visualizing Predicting Ask questions before, during, and after reading Make inferences Setting Setting - Graphic Organizer Problem/Conflict/Events/Resolution

Students understand that within any group there are many different points of view depending on the particular interests and values of the individual, and recognize those differences in perspective in texts and presentations (e.g., in considering whether to let a new industry come into a community, some community members might be enthusiastic about the additional jobs that will be created while others are concerned about the air and noise pollution that could result).

Students evaluate their own and others work based on a variety of criteria (e.g., logic, clarity, comprehensiveness, conciseness, originality, conventionality) and recognize the varying effectiveness of different approaches.

ELA3.SW2: Speaking and writing for critical analysis and evaluation requires presenting opinions and judgments on experiences, ideas, information, and issues clearly, logically, and persuasively with reference to specific criteria on which the opinion or judgment is based.

Students present (in essays, position papers, speeches, and debates) clear analyses of issues, ideas, texts, and experiences, supporting their positions with well-developed arguments.

Character Analysis

- Character's Behavior
- Character's Traits
- Character's Feelings
- Character's Thoughts
- Character's Motivation

Structure of Text

- Structural/organizational patterns

Sequence:

- Story Map - Graphic Organizer
- Sequencing - Graphic Organizer

Compare-and-Contrast:

- Compare and Contrast - Graphic Organizer
- Venn Diagram - ALIKE - Graphic Organizer
- Venn Diagram - DIFFERENT - Graphic Organizer

Cause-and-effect:

- Cause-and-effect - Graphic Organizer

Genre Study

Author's Purpose

Draw Conclusion

- Using evidence to support a conclusion

Fact v. Opinion

Author's craft / techniques

- WHY an author includes certain words, paragraphs, ideas, or literary devices (simile, metaphor, alliteration)

Select relevant information to extend or evaluate

Author's point of view

- Beliefs of the authors, characters

Figurative Language

Connecting Text to Self

Connecting Text to Text

Connecting Text to Other Experiences

Personal Response

Writing: □

- Step-by-step review of all phases of 5-paragraph persuasive essay

- Circle Issue

- Underline Audience

- State Position

- Three reasons (using lawyer's toolbox)

Students develop arguments with effective use of details and evidence that reflect a coherent set of criteria (e.g., reporting results of lab experiments to support a hypothesis).

Students monitor and adjust their own oral and written presentations according to the standards for a particular genre (e.g., defining key terms used in a formal debate).

Students use standard English, precise vocabulary, and presentational strategies effectively to influence an audience.

Graphic organizer (fold)
Great introduction
Clear topic sentences
Great elaboration (all methods)
** Memorize the "start phrases" for each method of elaboration
Conclusion
Review of all starters and enhancers
Review of flow

Students work on A Better Chance essays
High School Application essays

Vocabulary in context
Vocabulary in context
Intensive Grammar Review of all editing and revising standards
Use of Amistad DOLs and Cumulative review materials to reinforce grammar mastery
Targeted instruction on problem areas following the Core Knowledge sequence

ELA Standard 4

Students will read, write, listen, and speak for social interaction.

Key Ideas	Performance Indicators	Core Curriculum
ELA4.LS1: Oral communication in formal and informal settings requires the ability to talk with people of different ages, genders, and cultures, to adapt presentations to different audiences, and to reflect on how talk varies in different situations.	Students listen attentively to others and build on others' ideas in conversations with peers and adults.	Reading is done in a variety of ways: Whole Class Reading (Round Robin, Reader's Theater / Parts) Teacher read-aloud Pairs Independent
	Students use verbal and nonverbal skills to improve communications with others.	Students participate in daily Morning Circles
	Students express ideas and concerns clearly and respectfully in conversations and group discussions.	

ELA4.RW2: Written communication for social interaction requires using written messages to establish, maintain, and enhance personal relationships with others.

Students learn some words and expressions in another language to communicate with a peer or adult who speaks that language.

Students write social letters, cards, and electronic messages to friends, relatives, community acquaintances, and other electronic network users.

Students use appropriate language and style for the situation and the audience and take into account the ideas and interests expressed by the person receiving the message.

Students read and discuss social communications and electronic communications of other writers and use some of the techniques of those writers in their own writing.

Students learn foreign phrases commonly used in English communication (e.g. au revoir, coup d'etat, Déjà vu, Savoir-faire)

Write the following to establish, maintain, and enhance personal relationships; for example:
friendly letters, notes, and cards
personal journals
friendly electronic messages (email)

Students participate civilly and productively in group discussions
Students give a short speech to the class that is well-organized and well-supported
Students demonstrate an ability to use standard pronunciation when speaking to large groups and in formal circumstances, such as a job interview.

Read to establish, maintain, and enhance personal relationships in:
friendly letters, notes, cards
published letters, diaries and journals
electronic mail (email)

Communicate by sharing reading experiences to build a relationship with peers or adults (e.g. read together silently or aloud with a partner or in small groups)

Basic Reading Questions

	Describing the Text	Interpreting the Text	Moving Beyond the Text
Literary Material	What happens in the story? Who is this story about? What is the problem/conflict in this story? How would I describe the main character? What was my first reaction to this story?	How did the plot develop? How did the main character change in this story? How is this story similar to experiences I have had? What does this story mean to me?	How does this story remind me of other works I have read? What devices did the author use to make an impact on the reader? What do I hear this writer saying about human nature? Should this story be considered "good literature"? Why or why not?
Informational Material	What is this selection about? What did I learn from this selection? How did the author organize his or her ideas?	How do the ideas in this selection relate to what I know about the topic? What are the major causes of the problem? What solution is most promising based on the evidence?	Are the ideas in this selection important? Why or why not? How effectively did the author communicate his or her ideas? How could I use information from this selection?
Persuasive Material	What was the author's purpose in writing this selection? What message is the author sending? How does the author feel about this topic?	Has the author supported his or her arguments? Is the author's reasoning logical or emotional? How do the author's views on this topic compare to those of other author's I have read?	What techniques did the author use to persuade the reader? Who would be persuaded by this author? Who would not be persuaded? Why should readers believe or not believe this author?

5th Grade Mathematics

MST3. Students will understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integrated study of number systems, geometry, algebra, data analysis, probability, and trigonometry.

Key Ideas

Performance Indicators

Core Curriculum

MST3.1. Mathematical reasoning:
Students use mathematical reasoning to analyze mathematical situations, make conjectures, gather evidence, and construct an argument.

Students apply a variety of reasoning strategies.

Students make and evaluate conjectures and arguments using appropriate language.

Students make conclusions based on inductive reasoning.

Students justify conclusions involving simple and compound (e.g. and/or) statements.

MST3.2. Number and numeration:
Students use number sense and numeration to develop an understanding

Students understand, represent, and use numbers in a variety of equivalent forms (integer, fraction, decimal, percent,

Students solve word problems addition, subtraction, multiplication, and division.

Students solve word problems with multiple steps and more than one operation.

Students solve problems with more than one operation.

Students use a variety of problem-solving strategies.

Students write story problems using addition, subtraction, multiplication, and division of whole numbers.

Students use computation skills in investigation studies in other subjects areas and games and report their findings in writing.

Students keep a daily math journal explaining concepts learned.

Students develop formulas for area and perimeters of rectangles and squares.

Students use Venn diagrams to organize data in problem solving.

Students read and write numbers (in digits and words) up to the billions.

of the multiple uses of numbers in the real world, the use of numbers to communicate mathematically, and the use of numbers in the development of mathematical ideas.

exponential, expanded notation and scientific notation).

Students understand and apply ratios, proportions, and percents through a wide variety of hands-on explorations.

Students recognize place value up to billions.

Students write numbers in expanded form.

Using a number line, locate positive and negative whole numbers.

Students recognize the percent sign (%) and understand percent as "per hundred."

Students express equivalences between fractions, decimals, and percents, and know common equivalences: $1/10 = 10\%$, $1/4 = 25\%$, $1/2 = 50\%$, $3/4 = 75\%$

Students recognize equivalent fractions. (for example, $1/2 = 3/6$)

Students put fractions in lowest terms.

Students write fractions as decimals. (e.g., $1/4 = 0.25$, $17/25 = 0.68$, $1/3 = 0.3333\ldots$ or 0.33 , rounded to the nearest hundredth)

Students write decimals in expanded form.

Students read and write decimals on a number line.

Students write numbers in expanded form using multiplication.

Students review perfect squares (and square roots) to 144; recognize the square root sign.

Students determine and express simple ratios.

Students develop an understanding of number theory (primes, factors, and multiples).

Students recognize order relations for decimals, integers, and rational numbers

MST3.3. Operations: Students use mathematical operations and relationships among them to understand mathematics.

Students add, subtract, multiply, and divide fractions, decimals, and integers.

Students determine the greatest common factor (GCF) of given numbers.

Students determine the least common multiple (LCM) of given numbers.

Students identify prime numbers less than 50.

Students determine the least common denominator (LCD) of fractions with unlike denominators.

Students order and compare to 999,999,999 using the $<$, $>$, and $=$.

Students compare fractions with like and unlike denominators, using the signs $<$, $>$, and $=$.

Students read, write, and order decimals to the nearest ten-thousandth.

Students identify the reciprocal of a given fraction.

Students add and subtract fractions with like and unlike denominators.

Students add and subtract mixed numbers and fractions; multiply mixed numbers and fractions.

Students divide decimals by whole numbers.

Students multiply two factors of up to four digits each.

Students know how to move the decimal point when dividing by 10, 100, or 1,000.

Students divide dividends up to four digits by

Students use grouping symbols (parentheses) to clarify the intended order of operations.

Students apply the associative, commutative, distributive, inverse, and identity elements.

Students demonstrate an understanding of operational algorithms (procedures for adding, subtracting, etc.)

Students develop appropriate proficiency with facts and algorithms.

one-digit, two-digit, and three-digit divisors.

Students solve division problems with remainders; round a repeating decimal quotient.

Students check division by multiplying (and adding remainder).

Students know conventional rules for order of operations.

Students know that the product of a given number and its reciprocal = 1.

Students recognize and understand commutative and associative properties for addition.

Students recognize and understand commutative, associative, and distributive properties for multiplication.

Students understand multiplication and division as opposite operations.

Students know that you cannot divide by 0; that any number divided by 1 = that number.

Students communicate accurately the purpose for each step in basic calculations.

Students use mental computation strategies for multiplication, such as breaking a problem into partial products, for example: $3 \times 27 = (3 \times 20) + (3 \times 7) = 60 + 21 = 81$

MST3.4. Modeling/multiple representation: Students use mathematical modeling/multiple representation to provide a means for presenting, interpreting, communicating, and connecting mathematical information and relationships

Students apply concepts of ratio and proportion to solve problems

Students visualize, represent, and transform two- and three-dimensional shapes

Students use maps and scale drawings to represent real objects and places

Students use the coordinate plane to explore geometric ideas.

Students represent numerical relationships in one- and two-dimensional graphs

Students use variables to represent relationships

Students use concrete materials and diagrams to describe the operation of real world processes and systems

Students develop and explore models

Students use ratio to create a simple scale drawing.

Ratio and rate: solve problems on speed as a ratio, using formula $S=D/T$ (or $D= R \times T$).

Students find the given percent of a number

Students identify and draw basic shapes.

Students explain properties of basic shapes.

Students design scale drawings like floor plans, using centimeter grids to relate scale to ratio.

Students plot point on a coordinate plane, using ordered pairs of positive and negative whole numbers.

Students solve problems requiring interpretation and application of graphically displayed data.

Students apply formulas for area and perimeter of squares and rectangles.

Communicate the counting principle as discovered through experiences with tree diagrams or organized lists of possible events

Students identify events with a probability of 0,

that do and do not rely on chance

events that are certain (probability = 1), and
events that happen sometimes, with probability
between 0 and 1.

Students investigate both two- and three-dimensional transformations

Students use appropriate tools to construct and verify geometric relationships

MST3.5. Measurement: Students use measurement in both metric and English measure to provide a major link between the abstractions of mathematics and the real world in order to describe and compare objects and data

Students estimate, make, and use measurements in real-world situations

Students select appropriate standard and nonstandard measurement units and tools to measure to a desired degree of accuracy

Students use concrete and artistic activities to explore the concept of symmetry.

Students identify and draw points, segments, rays, lines.

Students identify and draw lines: horizontal; vertical; perpendicular; parallel; intersecting.

Students measure degrees in angles with protractor.

Students identify and construct different kinds of triangles: equilateral, right and isosceles.

Using a compass, students draw circles with a given diameter or radius

Students convert to common units in problems involving addition and subtraction of different units.

Time: Solve problems on elapsed time; regroup when multiplying and dividing amounts of time.

Students estimate length, area, and angle measure.

Students measure lengths in metric and English units and use those lengths to find area and perimeter.

Students identify appropriate units of measurement.

Students develop measurement skills and informally derive and apply formulas in direct measurement activities

Students measure the degrees in angles, and know that a right angle = 90 degrees, an acute angle = less than 90 degrees, an obtuse angle is greater than 90 degrees, and a straight angle = 180 degrees.

Students find the circumference of a circle using the formulas $C = \pi \cdot D$ and $C = 2 \pi \cdot R$ using 3.14 as the value of pi.

Students apply the formula for the area of a rectangle (area = length x width) and solve problems involving finding area in a variety of square units (such as mi^2 , yd^2 , ft^2 , in^2 , km^2 , cm^2 , and mm^2).

Students find area of triangles, using the formula $A = \frac{1}{2} (b \times h)$.

Students find the area of a parallelogram using the formula $A = b \times h$

Students find the area of an irregular figure (such as a trapezoid) by dividing into regular figures for which they know how to find the area.

Students find the surface area of a rectangular prism

Students develop formulas for area and perimeter of a square and rectangle.

Students find the average (mean) of a given set of numbers.

Students use statistical methods and measures of central tendencies to display, describe, and compare data

Students explore and produce graphic representations of data.

Students collect and organize data in graphic form. (bar, line, and circle graphs)

(Calculators/computers may be used.)

Students develop critical judgment for the reasonableness of measurement

Students use estimation to check the reasonableness of results obtained by computation, algorithms, or the use of technology

Students use estimation to solve problems for which exact answers are inappropriate

Students estimate the probability of events

Students determine probabilities of independent events

Students recognize, describe, and generalize a wide variety of patterns and functions

MST3.6. Uncertainty: Students use ideas of uncertainty to illustrate that mathematics involves more than exactness when dealing with everyday situations

MST3.7. Patterns/functions: Students use patterns and functions to develop mathematical power, appreciate the true beauty of mathematics, and construct

Round decimals and whole numbers in a context to a reasonable answer.

Students estimate a product.

Students estimate the quotient.

Students round fractions to the nearest whole number.

Students round decimals (and decimal quotients) to the nearest tenth; to the nearest hundredth; to the nearest thousandth.

Students estimate decimals: by 10, 100, and 1,000; by another decimal.

Students identify whether and why a particular strategy will result in an overestimate or an underestimate.

Students develop an awareness of when estimation is more appropriate than an exact answer.

Students understand probability as a measure of the likelihood that an event will happen

Using simple models, students express the probability of a given event as a fraction.

Students complete basic patterns involving numbers, words, and pictures.

generalizations that describe patterns simply and efficiently

Students describe and represent patterns and functional relationships using tables, charts and graphs, algebraic expressions, rules, and verbal descriptions

Students draw and justify reasonable conclusions from data in tables, graphs, and charts.

Students develop methods to solve basic linear equations

Students recognize variables and solve basic equations using variables.

Students write and solve equations for word problems.

Students develop an understanding of functions and functional relationships: that a change in one quantity (variable) results in change in another

Students graph simple functions.

Students apply the concept of similarity in relevant situations

Students use concrete and artistic experiences to explain similarity and congruence in plane geometric figures.

Students use properties of polygons to classify them

Students identify polygons: triangle, quadrilateral, pentagon, hexagon, and octagon, parallelogram, trapezoid, rhombus, rectangle, and square

Students know that regular polygons have sides of equal length and angles of equal measure.

Students identify and draw diagonals of polygons.

Students know what it means for triangles to be congruent.

6th Grade Mathematics

MST3. Students will understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integrated study of number systems, geometry, algebra, data analysis, probability, and trigonometry.

Key Ideas	Performance Indicators	Core Curriculum
MST3.1. Mathematical reasoning: Students use mathematical reasoning to analyze mathematical situations, make conjectures, gather evidence, and construct an argument.	Students apply a variety of reasoning strategies.	Students solve proportions, including word problems involving proportions with one unknown Students solve word problems with multiple steps. Students write and solve equations for word problems. Students write story problems using decimals.
	Students make and evaluate conjectures and arguments using appropriate language. Students make conclusions based on inductive reasoning. Students justify conclusions involving simple and compound (e.g. and/or) statements.	Participate in extended record-keeping projects involving data gathering. Students keep a daily math journal explaining concepts learned. Develop formulas for area and perimeter of rectangles and squares. Use Venn diagrams to demonstrate simple and compound statements (and/or). May include set ideas and terms such as element, subset, intersection and union.
MST3.2. Number and numeration: Students use number sense and numeration to develop an understanding of the multiple uses of numbers in the real world, the use of numbers to communicate mathematically, and the	Students understand, represent, and use numbers in a variety of equivalent forms (integer, fraction, decimal, percent, exponential, expanded notation and scientific notation).	Students read and write numbers (in digits and words) up to the trillions. Students recognize place value up to hundred-billions.

use of numbers in the development of mathematical ideas.

Students understand and apply ratios, proportions, and percents through a wide variety of hands-on explorations.

Students Review squares (and square roots).

Students use the terms "squared" and "cubed" and "to the n th power," read and evaluate numerical expressions with exponents.

Students Identify value of powers of ten up to 10^6 .

Students write numbers in expanded notation using exponents.

Students express equivalences between fractions, decimals, and percents.

Students write fractions as decimals; identify repeating decimals.

Students write fractions as percents.

Students write decimals in expanded form.

Students write decimals as fractions or percents.

Students find the given percent of a number, and find what percent a given number is of another number.

Students solve problems involving percent increase and decrease.

Students find an unknown number when a percent of the number is known.

Students use expressions with percents greater than 100%.

Students develop an understanding of number theory (primes, factors, and multiples).

Students recognize order relations for decimals, integers, and rational numbers

Students determine whether a number is a prime number or composite number.

Students determine the greatest common factor (GCF) of given numbers.

Students determine the least common multiple (LCM) of given numbers

Students locate positive and negative integers on a number line.

Students compare integers using $<$, $>$, $=$.

Students compare and order whole numbers, mixed numbers, fractions, and decimals, using the symbols $<$, $>$, $=$.

Students compare mixed numbers and fractions with like and unlike denominators, using the signs $<$, $>$, $=$.

Students identify the reciprocal of a given fraction; the product of a given number and its reciprocal = 1

Students read, write, and order decimals to the nearest hundred-thousandth.

Students add and subtract positive and negative integers.

Students add and subtract mixed numbers and fractions with like and unlike denominators.

Students multiply and divide mixed numbers, and whole numbers and fractions.

MST3.3. Operations: Students use mathematical operations and relationships among them to understand mathematics.

Students add, subtract, multiply, and divide fractions, decimals, and integers.

Students use grouping symbols (parentheses) to clarify the intended order of operations.

Students apply the associative, commutative, distributive, inverse, and identity elements.

Students divide by a fraction (i.e., multiply by reciprocal)

Students round fractions to the nearest whole number.

Students round decimals (and decimal quotients) to the nearest tenth; to the nearest hundredth; to the nearest thousandth.

Students multiply decimals: by 10, 100, and 1,000; by another decimal.

Students add and subtract decimals through hundred-thousandths.

Students divide decimals by whole numbers and decimals.

Students multiply multi-digit factors, with and without a calculator.

Students multiply by a decimal.

Students divide multi-digit dividends by up to three-digit divisors, with and without a calculator.

Students divide by a decimal

Students solve problems with more than one operation, according to order of operations (with and without a calculator).

Students know that the sum of an integer and its opposite is 0.

Students know the names and understand the properties: commutative, associative, and – distributive.

Students understand multiplication and division as opposite operations.

Students demonstrate an understanding of operational algorithms (procedures for adding, subtracting, etc.)

Divide fractions, using a variety of approaches: factor product, partitioning, measurement, common denominator, and multiply by the reciprocal.

Students develop appropriate proficiency with facts and algorithms.

Ensure quick recall of basic addition, subtraction, multiplication, and division facts.

Students apply concepts of ratio and proportion to solve problems

Students use ratios and proportions to interpret map scale drawings.

MST3.4. Modeling/multiple representation: Students use mathematical modeling/multiple representation to provide a means for presenting, interpreting, communicating, and connecting mathematical information and relationships

Students visualize, represent, and transform two- and three-dimensional shapes

Use geometric ideas to solve problems.

Students use maps and scale drawings to represent real objects and places

Make scale drawings like floor plans, using centimeter grids to relate scale to ratio.

Students use the coordinate plane to explore geometric ideas.

Students plot points on a coordinate plane, using ordered pairs of positive and negative whole numbers.

Students represent numerical relationships in one- and two-dimensional graphs

Students use variables to represent relationships

Students use concrete materials and diagrams to describe the operation of real world processes and systems

Students develop and explore models that do and do not rely on chance

Students investigate both two- and three-dimensional transformations

Students use the terms "origin" (0,0); "x-axis"; and "y-axis."

Students graph simple functions and solve problems involving use of a coordinate plane.

Students compare histogram, line, picture, circle graphs, and stem and leaf as to what information each presents and note the advantages and disadvantages of each.

Students write and solve open sentences dealing with inverse operations, using letters as well as frames as placeholders.

Students will discover the multiplication principle through experiences with tree diagrams or lists of possible events taken in order.

Students represent and count the elements in a sample space.

Students construct a figure congruent to a given figure, using reflection over a line of symmetry, and identify corresponding parts.

Students show how congruent plane figures can be made to correspond through reflection, rotation, and translation.

Students identify congruent angles and sides, and axes of symmetry, in parallelograms, rhombuses, rectangles, and squares.

Students use appropriate tools to construct and verify geometric relationships

Students construct parallel lines and a parallelogram.

Students construct a perpendicular bisector.

Students bisect an angle.

Students construct an angle congruent to a given angle

Students construct different kinds of triangles

Students will using a compass, draw circles with a given diameter or radius.

Time: solve problems on elapsed time; express parts of an hour in fraction or decimal form.

MST3.5. Measurement: Students use measurement in both metric and English measure to provide a major link between the abstractions of mathematics and the real world in order to describe and compare objects and data

Students estimate, make, and use measurements in real-world situations

Students select appropriate standard and nonstandard measurement units and tools to measure to a desired degree of accuracy

Students associate prefixes used in metric system with quantities

Students develop measurement skills and informally derive and apply formulas in direct measurement activities

Students find the area (A) and perimeter (P) of plane figures, or given the area or perimeter find the missing dimension, using the following formulas:

$A = lw$; $P = 2(l+w)$; $A = s^2$; $P = 4s$; $A = \frac{1}{2}bh$; $P = s_1 + s_2 + s_3$; $A = bh$; $P = 2(b+s)$

Students solve problems involving application of the formulas for finding the circumference of a circle: $C = \pi d$, and $C = 2\pi r$, using 3.14 as the value of π .

Students find the area of a circle using the formula $A = r^2$

Students find volume of rectangular solids, or given the volume find a missing dimension, using the formulas $V = lwh$, or $V = bh$ (in which b = area of base).

Students develop formulas for area and perimeter of rectangles, squares and circles.

Students collect and organize data in graphic form (bar, line, and circle graphs).

Students given a set of data, find the mean, median, range, and mode.

Students solve problems requiring interpretation and application of graphically displayed data.

Students round to the nearest ten; to the nearest hundred; to the nearest thousand; to the nearest hundred-thousand; to the nearest million.

Students solve problems requiring conversion of units within the U. S. Customary System, and within the metric system.

Students estimate decimal sums, differences, and products by rounding.

Students use statistical methods and measures of central tendencies to display, describe, and compare data

Students explore and produce graphic representations of data.
(Calculators/computers may be used.)

Students develop critical judgment for the reasonableness of measurement

MST3.6. Uncertainty: Students use ideas of uncertainty to illustrate that mathematics involves more than

Students use estimation to check the reasonableness of results obtained by computation, algorithms, or the use of

exactness when dealing with everyday situations

technology

Students use estimation to solve problems for which exact answers are inappropriate

Students estimate the probability of events

Students determine probabilities of independent events

MST3.7. Patterns/functions: Students use patterns and functions to develop mathematical power, appreciate the true beauty of mathematics, and construct generalizations that describe patterns simply and efficiently

Students recognize, describe, and generalize a wide variety of patterns and functions

Students describe and represent patterns and functional relationships using tables, charts and graphs, algebraic expressions, rules, and verbal descriptions

Students develop methods to solve basic linear equations

Students estimate a product.

Students estimate the quotient.

Students develop an awareness of when an estimation is more appropriate than an exact answer.

Students make predictions based on sample data.

Students review: probability as a measure of the likelihood that an event will happen; express probability of a given event as a fraction or ratio.

Students review computation skills by describing and extending number patterns and sequences.

Students construct a histogram; a tree diagram.

Students recognize variables and solve equations with one variable.

Students develop an understanding of functions and functional relationships: that a change in one quantity (variable) results in change in another

Students apply the concept of similarity in relevant situations

Students use properties of polygons to classify them

Students understand that the basic function of tables and graphs is to make explicit how the values of one quantity are related to the values of another.

Students identify and use signs that mean congruent, similar, parallel, perpendicular.

Students know that if two lines are parallel, any line perpendicular to one is also perpendicular to the other; and, that two lines perpendicular to the same line are parallel.

Students will identify and measure the degrees in angles (review terms: right, acute, obtuse, and straight)

Students know that the sum of the measures of the angles of a triangle is 180 degrees

Students know terms by which we classify kinds of triangles: by length of sides: equilateral, isosceles, and scalene

Students know terms by which we classify kinds of triangles: by angles: right, acute, and obtuse

Students identify arc, chord, radius (plural: radii), and diameter; know that radius = $\frac{1}{2}$ diameter.

7th Grade Mathematics

Standard 3: Mathematics. Students will understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integral study of number systems, geometry, algebra, data analysis, probability, and trigonometry.

Key Ideas	Performance Indicators	Core Curriculum
M3.1 Students use mathematical reasoning to analyze mathematical situations, make conjectures, gather evidence, and construct an argument.	M3.1.1 Apply a variety of reasoning strategies.	Students recognize proportionally, if it exists, in a table of numbers and on a graph.
	M3.1.2 Make and evaluate conjectures and arguments, using appropriate language.	Clarify problems, using discussion with peers. Students keep a daily math journal explaining concepts learned. Students debate and record multiple alternatives to the solution of a problem.
	M3.1.3 Make conclusions based on inductive reasoning.	Identify patterns in a number sequence (include sequences with integral terms).
	M3.1.4 Justify conclusions involving simple and compound (i.e., and/or) statements.	Find numbers that satisfy one or more conditions.
M3.2 Students use number sense and numeration to develop an understanding of the multiple uses of numbers in the real world, the use of numbers to communicate mathematically, and the use of numbers in the development of mathematical ideas.	M3.2.1 Understand, represent, and use numbers in a variety of equivalent forms (integer, fraction, decimal, percent, exponential, expand, and scientific notation).	Students change improper fractions to mixed numbers. Students calculate percentages.

M3.2.2 Understand and apply ratios, proportions, and percents through a wide variety of hands-on explorations.

Students use proportions to complete a set of data and complete a graph.

Students calculate distances using the scale on a map.

M3.2.3 Develop an understanding of number theory (primes, factors, and multiples).

Define and identify prime factors, using factor trees and repeated division.

M3.2.4 Recognize order relations for decimals, integers, and rational numbers.

Students estimate relative magnitudes of fractions with common denominators.

Students compare magnitudes of integers, signed decimals, and fractions using the symbols $<$, $>$, $=$, $<,>$.

M3.3 Students use mathematical operations and relationships among them to understand mathematics.

M3.3.1 Add, subtract, multiply, and divide fractions, decimals, and integers.

Students add, subtract, multiply, and divide mixed numbers and fractions.

M3.3.2 Explore and use the operations dealing with roots and powers.

Understand that every positive number has two square roots (introduce the $\pm$ symbol).

M3.3.3 Use grouping symbols (parentheses) to clarify the intended order of operations.

Students know the proper order of operations including grouping symbols and be able to apply to whole number and decimal expressions.

Students add and subtract integers and signed decimals using parentheses.

M3.3.4 Apply the associative, commutative, and distributive properties, and inverse and identity elements.

Students know the distributive and associative properties and be able to apply to numeric expressions.

M3.4 Students use mathematical modeling/multiple representation to provide a means of presenting, interpreting, communicating, and connecting mathematical information and relationships.

M3.3.5 Demonstrate an understanding of operational algorithms (procures for adding, subtracting, etc.).

M3.3.6 Develop appropriate proficiency with facts and algorithms.

M3.3.7 Apply concepts of ratio and proportion to solve problems.

M3.4.1 Visualize, represent, and transform two-and three-dimensional shapes.

M3.4.2 Use maps and scale drawings to represent real objects or places.

M3.4.3 Use the coordinate plane to explore geo-metric ideas.

M3.4.4 Represent numerical relationships in one-and two-dimensional graphs.

Students learn basic algebraic equations, mainly using numerical expressions, and equations of the form $k(a + b) = ka + kb$ and $k(a - b) = ka - kb$.

Solve and explain the rules for the operational algorithms relative to real numbers.

Solutions of facts and algorithms using real numbers.

Students calculate average speeds.

Students calculate the variation in the area of similar triangles and parallelograms when there are given variations in one side.

Identify and construct two-dimensional patterns for three-dimensional models.

Students select appropriate units of measure and use proportional reasoning to convert measures.

Students identify the coordinates of a given point.
Students plot a point given its coordinates.
Students calculate the distance between two lines that lie on the vertical y-axis.

Use a number line graph to represent the solution of a problem with one unknown.

M3.4.5 Use variables to represent relationships.

Use variables and appropriate operations to write an expression, equation, inequality, or system of equations or inequalities that represent a verbal description (three less than a number, half as large as area A).

M3.4.6 Use concrete materials and diagrams to describe the operation of real-world processes and systems.

Model situations geometrically to interpret, formulate, and solve problems.

M3.4.7 Develop and explore models that do and do not rely on chance.

Explore the range of probabilities (certainty, impossibility, sometimes).

M3.4.8 Investigate both two- and three-dimensional transformations.

Understand and use coordinate grids to plot simple figures and to determine lengths and areas related to them.

M3.4.9 Use appropriate tools to construct and verify geometric relationships.

Students describe and construct simple right prisms, cylinders, cones, and spheres using the concepts of parallel and perpendicular.

Students construct plane figures that exhibit symmetry about a line and symmetry about a point.
Students explain why two parts of a shape are symmetrical
Students construct parallel lines and a transversal using a compass and straight edge.

M3.4.10 Develop procedures for basic geometric constructions.

Construct an angle with a given measure.

M3.5 Students use measurement in both metric and English measure to provide a major link between the abstractions of mathematics and the real world in order to describe and compare objects and data.

M3.5.1 Estimate, make, and use measurements in real-world situations.

M3.5.2 Select appropriate standard and nonstandard measurement units and tools to measure to a desired degree of accuracy.

M3.5.3 Develop measurement skills and informally derive and apply formulas in direct measurement activities.

M3.5.4 Use statistical methods and measures of central tendencies to display, describe, and compare data.

M3.5.5 Explore and produce graphic representations of data (calculators/computers may be us).

M3.5.6 Develop critical judgment for the reasonableness of measurement.

M3.6 Students use ideas of uncertainty to illustrate that mathematics involves more than exactness when dealing with everyday situations.

M3.6.1 Use estimation to check the reasonableness of results obtain by computation, algorithms, or the use of technology.

Use measurement in everyday situations.

Understand the uses of units, square units, and cubic units.

Find the measure of angles, using a protractor.

Know and apply formulas for perimeter and area of polygons, volume of rectangular solids, circumference, and area of circles.

Students derive formulas for area, perimeter and volume of shapes and solids.

Students given a set of data, find the mean, median, range, and mode.

Use graphing calculators and computer spreadsheets to organize and analyze data.

Select, use, and explain a method for comparing weights, capacities, geometric measures, times, and temperatures within and between measurement systems.

Round whole numbers, decimals, and fractions.

M3.6.2 Use estimation to solve problems for which exact answers are inappropriate.	M3.6.2 Use estimation to solve problems for which exact answers are inappropriate.	Recognize when an estimate is appropriate.
		Estimate a reasonable answer and defend the reasoning.
		Determine and describe an estimation strategy.
	M3.6.3 Estimate the probability of events.	Combinations and permutations.
	M3.6.4 Use simulation techniques to estimate probabilities.	Conduct a variety of simulations to represent an experiment that can not be determined by theoretical probability or is not practical to determine experimentally.
	M3.6.5 Determine probabilities of independent and mutually exclusive events.	Students review (from grade 6): probability as a measure of the likelihood that an event will happen; express probability of a given event as a fraction or ratio.
M3.7 Students use patterns and functions to develop mathematical power, appreciate the true beauty of mathematics, and construct generalizations that describe patterns simply and efficiently.	M3.7.1 Recognize, describe, and generalize a wide variety of patterns and functions.	Identify, describe, represent, extend, and create patterns (numerical and geometric).
	M3.7.2 Describe and represent patterns and functional relationships, using tables, charts, graphs, algebraic expressions, rules, and verbal descriptions.	Read and interpret statistical data presented in the form of tables and graphs.
		Translate statistical data into line graphs, bar graphs, histograms, and circle graphs.
	M3.7.3 Develop methods to solve basic linear and quadratic equations.	Students solve informally simple one-step equations with one variable.

M3.7.4 Develop an understanding of functions and functional relationships: that a change in one quantity (variable) results in change in another.

M3.7.5 Verify results of substituting variables.

M3.7.6 Apply the concept of similarity in relevant situations.

M3.7.7 Use properties of polygons to classify them.

M3.7.8 Explore relationships involving points, lines, angles, and planes.

M3.7.9 Develop and apply the Pythagorean principle in the solution of problems.

M3.7.10 Explore and develop basic concepts of right triangle trigonometry.

M3.7.11 Use patterns and functions to represent and solve problems.

Students calculate the change in volume of right prisms, cylinders, and cones as the length of one of the dimensions changes.

Students recognize that the change in a circle's radius and the change in area which results are not proportional.

Solve an equation and check the solution set by substitution.

Understand the difference between similarity and congruence.

Classify triangles according to angle size and/or length of sides.

Understand and use proper terminology, symbols, definitions, and formulas for undefined and defined terms.

Use the Pythagorean theorem in the solution of problems (include rational and irrational numbers).

Understand the relationships of the sides of a right triangle.

Use patterns and functions to solve problems.

8th Grade Mathematics

Standard 3 Mathematics - Students will understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integrat study of number systems, geometry, algebra, data analysis, probability, and trigonometry.

Key Ideas	Performance Indicators	Core Curriculum
M3.1 Students use mathematical reasoning to analyze mathematical situations, make conjectures, gather evidence, and construct an argument.	M3.1.1 Apply a variety of reasoning strategies.	Students translate a word problem into an equation and solve it. Students interpret geometrical problems and put them in equation form. Students interpret proportional data put it in equation form. Students write story problems with unknowns variables
	M3.1.2 Make and evaluate conjectures and arguments, using appropriate language.	Students check the equivalence of algebraic manipulations by evaluating them for a specific value of the variable. Students keep a daily math journal explaining concepts learned. Students debate and record multiple alternatives to the solution of a problem.
	M3.1.3 Make conclusions based on inductive reasoning.	Apply strategies and results from simpler problems to more complex situations.
	M3.1.4 Justify conclusions involving simple and compound (i.e., and/or) statements.	Find numbers that stisfy one or more conditions.

M3.2 Students use number sense and numeration to develop an understanding of the multiple uses of numbers in the real world, the use of numbers to communicate mathematically, and the use of numbers in the development of mathematical ideas.

M3.2.1 Understand, represent, and use numbers in a variety of equivalent forms (integer, fraction, decimal, percent, exponential, expand, and scientific notation).

Students convert decimal numbers to and from scientific notation.

M3.2.2 Understand and apply ratios, proportions, and percents through a wide variety of hands-on explorations.

Students show situations of constant proportionality as a line on the coordinate plane.
Students learn to use proportions to calculate for an unknown quantity.
Students know the concept of slope.

M3.2.3 Develop an understanding of number theory (primes, factors, and multiples).

Discover rules of divisibility of numbers in the context of finding prime factors.

M3.2.4 Recognize order relations for decimals, integers, and rational numbers.

Students use inequality symbols to compare the value of real number.

Students know that for a positive numbers if $a - b > 0$ then $a > b$, and if $a - b < 0$, then $a < b$.
Students review the meaning of the symbols $<$ and $>$.
Students know that in order to maintain an inequality when multiplying or dividing by a negative number the inequality symbol must be changed.

M3.3 Students use mathematical operations and relationships among them to under-stand mathematics.

M3.3.1 Add, subtract, multiply, and divide fractions, decimals, and integers.

Students perform addition, subtraction, multiplication, and division on rational numbers.

M3.3.2 Explore and use the operations dealing with roots and powers.

Students know the definition of an exponent n when n is positive or negative.

	Students know that a non-zero number to the zero power is 1 Students understand why a negative number to an even power is positive and a negative number to an odd power is negative. Students know the multiplication properties of exponents: $(a^m)(a^n) = a^{m+n}$ $(a^m)^n = a^{mn}$ $(ab)^n = (a^n)(b^n)$ Students know the proper order of operations with exponents.
M3.3.3 Use grouping symbols (parentheses) to clarify the intended order of operations.	Extend the order of operations to include roots.
M3.3.4 Apply the associative, commutative, and distributive properties, and inverse and identity elements.	Students know how to distribute a minus sign that precedes a series of numbers enclosed in parentheses. Students simplify expressions by using the number properties and combining like terms. Students expand two binomials of the form $(a + b)(c + d) = ac + ad + bc + bd$. Students factor an algebraic expression. Students simplify an algebraic expression by combining like terms.
M3.3.5 Demonstrate an understanding of operational algorithms (procedures for adding, subtracting, etc.).	Solve and explain the use of absolute value in operational algorithms.
M3.3.6 Develop appropriate proficiency with facts and algorithms.	Solutions of facts and algorithms using real numbers.

M3.4 Students use mathematical modeling/multiple representation to provide a means of presenting, interpreting, communicating, and connecting mathematical information and relationships.

M3.3.7 Apply concepts of ratio and proportion to solve problems.

M3.4.1 Visualize, represent, and transform two-and three-dimensional shapes.

M3.4.2 Use maps and scale drawings to represent real objects or places.

M3.4.3 Use the coordinate plane to explore geometric ideas.

M3.4.4 Represent numerical relationships in one-and two-dimensional graphs.

M3.4.5 Use variables to represent relationships.

M3.4.6 Use concrete materials and diagrams to describe the operation of real-world processes and systems.

M3.4.7 Develop and explore models that do and do not rely on chance.

M3.4.8 Investigate both two- and three-dimensional transformations.

Determine the unit cost of items to compare prices.

Identify elements of three-dimensional geometric objects.

Construct scale drawings and models with reasonable measurement accuracy.

Compare geometric measurements and computations on coordinate axes as they are applied to parallel lines, congruent and similar figures.

Use two-dimensional graphs, including the coordinate plane, to represent the solution of a problem.

Students translate situations of proportionality into equations of the form $y = mx$, where m is the constant of proportionality or slope.

Students show that translation and rotations of figures conserve lengths, angles, and midpoints.
Students know that certain plane figures are invariant after a rotation.

Consider the reliability of sampling procedures.

Students construct the image of a point, line segment, and circle through a translation.

M3.4.9 Use appropriate tools to construct and verify geometric relationships.

Students construct the image of a point, line segment, and circle through a rotation about a point.

Students construct an equilateral triangle, a square, and a regular hexagon, given its center and one of its vertices.

Students demonstrate by measurement both kinds of symmetry.
Students construct a circle that circumscribes a triangles using a compass and a straight edge.
Students use the triangular inequality to show that the shortest distance from a point to a line is a perpendicular segment.

Students show that any triangle inscribed in a circle with one side as the diameter is a right triangle.
Students show that given a line and a point, the line is tangent to the circle whose center is the point and whose radius is the distance from the point to the line.

Students review the characteristics of isosceles and equilateral triangles.
Students show that the bisector of an angle is the set of all points equidistant from both sides.
Students know that translations of vectors form a parallelogram.

M3.4.10 Develop procedures for basic geometric constructions.

Students show that the perpendicular bisectors of the three sides of a triangle intersect at a point which is the center of the circle that circumscribes the triangle.

Students show that the bisectors of the three angles of a triangle intersect at a point which is the center of a circle that is inscribed in the triangle.

M3.5 Students use measurement in both metric and English measure to provide a major link between the abstractions of mathematics and the real world in order to describe and compare objects and data.

M3.5.1 Estimate, make, and use measurements in real-world situations.

M3.5.2 Select appropriate standard and nonstandard measurement units and tools to measure to a desired degree of accuracy.

M3.5.3 Develop measurement skills and informally derive and apply formulas in direct measurement activities.

M3.5.4 Use statistical methods and measures of central tendencies to display, describe, and compare data.

M3.5.5 Explore and produce graphic representations of data (calculators/computers may be us).

Students know that the medians of a triangle intersect at a point called the center of gravity.

Make an appropriate estimate relating to size, quantity, temperature, capacity, and the passage of time.

Determine appropriate units of measure.

Determine the degree of accuracy needed in measurement situations.

Students calculate the surface area and volumes of simple right prisms, cylinders, cones, and spheres.

Students calculate the surface of a sphere using the equation $SA = 4\pi r^2$

Students calculate the volume of a sphere using the equation $V = \frac{4}{3}\pi r^3$

Students know and are able to use the area formula for these figures: parallelogram, triangle, circle, trapezoid.

Students derive formulas for area, perimeter, volume and surface area of shapes and solids.

Students calculate frequencies from data.

Students create charts, graphs, and tables indicating frequencies.

	M3.5.6 Develop critical judgment for the reasonableness of measurement.	Select, use, and explain a method for comparing weights, capacities, geometric measures, times, and temperatures within and between measurement systems.
M3.6 Students use ideas of uncertainty to illustrate that mathematics involves more than exactness when dealing with everyday situations.	M3.6.1 Use estimation to check the reasonableness of results obtain by computation, algorithms, or the use of technology.	Estimate the outcomes of problems experiments, complete the task, and compare the results with the prediction.
	M3.6.2 Use estimation to solve problems for which exact answers are inappropriate.	Recognize when an estimate is appropriate.
	M3.6.3 Estimate the probability of events.	Understand the terms relative frequency, cumulative frequency, and cumulative relative frequency.
	M3.6.4 Use simulation techniques to estimate probabilities.	Conduct a variety of simulations to represent an experiment that can not be determined by theoretical probability or is not practical to determine experimentally.
	M3.6.5 Determine probabilities of independent and mutually exclusive events.	Develop and explore combinations and permutations.
M3.7 Students use patterns and functions to develop mathematical power, appreciate the true beauty of mathematics, and construct generalizations that describe pat-terns simply and efficiently.	M3.7.1 Recognize, describe, and generalize a wide variety of patterns and functions.	Describe functions and generalize by the use of rules and albegraic expressions.

M3.7.2 Describe and represent patterns and functional relationships, using tables, charts, graphs, algebraic expressions, rules, and verbal descriptions.

M3.7.3 Develop methods to solve basic linear and quadratic equations.

M3.7.4 Develop an understanding of functions and functional relationships: that a change in one quantity (variable) results in change in another.

M3.7.5 Verify results of substituting variables.

M3.7.6 Apply the concept of similarity in relevant situations.

M3.7.7 Use properties of polygons to classify them.

Students determine the equation of a linear function from data in a table.

Students read the values from the graph of a linear function.

Students interpret charts or graphs that have been indexed to a particular value.

Students solve one-step equations of the form $A + x = B$ and $Ax = B$, where A and B are constants.

Students maintain the equivalence of an equation by addition, subtraction, multiplication, or division of the same value to both sides of the equation.

Use a variety of representations to describe a functional relationship.

Understand that an equation containing a variable may be true for just one value of the variable.

Demonstrate an understanding of congruence between two geometric figures and what congruence means about the relationships between the sides and angles of the two figures

Students prove the triangular inequality, that the length of any one side of a triangle is always less than the sum of the other two sides.

M3.7.8 Explore relationships involving points, lines, angles, and planes.

Students demonstrate that the sum of the interior angles of a triangle equals 180 degrees

Students review the characteristics of right, equilateral, and isosceles triangles.

Students know that the midpoint of a line segment of any slope, projected perpendicularly onto the horizontal x-axis or vertical y-axis, will be the midpoint of its projection, and that many triangular applications build upon this property.

Students know that the section created by the intersection of a plane and a sphere is a circle.

Students determine the location of the center of a circle created by the intersection of a plane and a sphere using the concepts of perpendicular and parallel.

Students understand the properties of the cross sections created by lines of latitude, lines of longitude, and great circles as they pertain to the earth.

Students understand vertical angles, congruent angles, complementary angles, supplementary angles, adjacent angles, corresponding angles, and alternate interior and alternate exterior angles.

M3.7.9 Develop and apply the Pythagorean principle in the solution of problems.

Students know and use the Pythagorean Theorem to calculate the third side of a right triangle using the square root key on a calculator.

M3.7.10 Explore and develop basic concepts of right triangle trigonometry.

Students know that in a right triangle the cosine of an angle is the ratio of the adjacent side to the hypotenuse.

M3.7.11 Use patterns and functions to represent and solve problems.

Students use a calculator to determine the approximate value of the cosine given an acute angle.

Students use a calculator to determine the approximate value of an acute angle given the cosine.

Students understand what a function is and determine the equation of a linear function given its slope and intercepts.

5th Grade Science Curriculum - Based on Core Knowledge

Standard 1 Analysis, Inquiry and Design - Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions

Key Ideas	Performance Indicators	Core Curriculum
S1.1The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process	S1.1.1 Formulate questions independently with the aid of references appropriate for guiding the search for explanations of everyday observations.	S1.1.1a formulate questions about natural phenomena S1.1.1b identify appropriate references to investigate a question ideas presented by others, including peers, teachers, authors, and scientists. S1.1.1c refine and clarify questions so that they are subject to scientific investigation S1.1.2a independently formulate a hypothesis S1.1.2b propose a model of a natural phenomenon S1.1.2c differentiate among observations, inferences, predictions, and explanations
	S1.1.2 Construct explanations independently for natural phenomena, especially by proposing preliminary visual models of phenomena.	SS1.1.2a Independently formulate a hypothesis SS1.1.2b Propose a model of a natural phenomenon SS1.1.2c Differentiate among observations, inferences, predictions, and explanation

S1.2 Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed

explanations involving the use of conventional techniques and procedures

requiring considerable ingenuity

S1.3 The observations made while testing proposed explanations, when analyzed using conventional and invented methods, provide new insights into natural phenomena

S1.1.2.1 Use conventional techniques and those of their own design to make further observations

and refine their explanations, guided by a need for more information.

S1.3.1 Design charts, tables, graphs, and other representations of observations in conventional and creative ways to help them address their research question or hypothesis.

S1.2.1a demonstrate appropriate safety techniques

S1.2.1b conduct an experiment designed by others

S1.2.1c design and conduct an experiment to test a hypothesis

S1.2.1d use appropriate tools and conventional techniques to solve problems about the natural world, including: measuring, observing, classifying.

S1.3.1a include appropriate safety procedures

S1.3.1b Design scientific investigations (e.g., observing, describing, and comparing; collecting samples; seeking more information, conducting a controlled experiment; discovering new objects or phenomena; making models)

S1.3.1c Design a simple controlled experiment

S1.3.1d identify independent variables (manipulated), dependent variables (responding), and constants in a simple controlled experiment

S1.3.1e choose appropriate sample size and number of trials

S1.2.3a Use appropriate safety procedures

S1.2.3b Conduct a scientific investigation

S1.3.2 Interpret the organized data to answer the research question or hypothesis and to gain insight into the problem.

S1.3.3 Modify their personal understanding of phenomena based on evaluation of their hypothesis.

S1.2.3c Collect quantitative and qualitative data

S1.3.1a Organize results, using appropriate graphs, diagrams, data tables, and

other models to show relationships

S1.3.1b Generate and use scales, create legends, and appropriately label axes

S1.3.2a Accurately describe the procedures used and the data gathered

S1.3.2b Identify sources of error and the limitations of data collected

S1.3.2c Evaluate the original hypothesis in light of the data

S1.3.2d formulate and defend explanations and conclusions as they relate to scientific phenomena

S1.3.2e form and defend a logical argument about cause-and-effect relationships

in an investigation

S1.3.2f Make predictions based on experimental data

S1.3.2g suggest improvements and recommendations for further studying

S1.3.2h use and interpret graphs and data tables

SS1.3.3a Report on results of their investigation

S1.4 Engineering design is an iterative process involving modeling and optimization finding the best solution within given constraints which is used to develop technological solutions to problems within given constraints

S1.4.1 Students engage in the following steps in a design process: describe objects, imaginary or real, that might be modeled or made differently and suggest ways in which the objects can be changed, fixed, or improved

S1.4.1a Students will understand that design consists of steps in a process by participating in the design and modelling of project, real or imaginary.

S1.4 .2 Students engage in the following steps in a design process: investigate prior solutions and ideas from books, magazines, family, friends, neighbors, and community members

S1.4.2a Students gain knowledge of various ways to approach the design process.

S1.4.3 Students engage in the following steps in a design process: generate ideas for possible solutions, individually and through group activity; apply age-appropriate mathematics and science skills; evaluate the ideas and determine the best solution; and explain reasons for the choices

S1.4.3a Students will begin a design either in groups or individually, generating ideas, applying mathematical concepts and science skills to arrive at a possible solution

S1.4.4 Students engage in the following steps in a design process: plan and build, under supervision, a model of the solution using familiar materials, processes, and hand tools.

S1.4.4a Students will understand through trial and error how to complete a design.

S.1.4 .5 Students engage in the following steps in a design process: discuss how best to test the solution; perform the test under teacher supervision; record and portray results through numerical and graphic means; discuss orally why things worked or didn't work; and summarize results in writing, suggesting ways to make the solution better.

S.1.4.5a. Students will explain the process followed through to a solution, describing possible setbacks and how they were overcome.

1.5 Engineering design is an iterative process involving modeling and optimization finding the best solution within given constraints which is used to develop technological solutions to problems within given constraints.

S1.5.1 initiate and carry out a thorough investigation of an unfamiliar situation and identify needs and opportunities for technological invention or innovation

S1.5.1a Students will explore possibilities for invention and innovation.

S1.5.2 identify, locate, and use a wide range of information resources, and document through notes and sketches how findings relate to the problem

Students will be able to use reference and online resources to research possible solutions to design problems.

1.5.3 generate creative solutions, break ideas into significant functional elements, and explore possible refinements; predict possible outcomes using mathematical and functional modeling techniques; choose the optimal solution to the problem, clearly documenting ideas against design criteria and constraints; and explain how human understands, economics, ergonomics, and environmental considerations have influenced the solution

Standard 2 - Students will access, generate, process, and transfer information using appropriate technologies.

S2.1 Information technology is used to retrieve, process, and communicate information and as a tool to enhance learning.

S2.1.1 use a range of equipment and software to integrate several forms of information in order to create good quality audio, video, graphic, and text-based presentations

S2.1.2 use spreadsheets and data-base software to collect, process, display, and analyze information. Students access needed information from electronic data bases and on-line telecommunication services

S2.1.3 systematically obtain accurate and relevant information pertaining to a particular topic from a range of sources, including local and national media, libraries, museums, governmental agencies, industries, and individuals

S2.1.4 collect data from probes to measure events and phenomena

S2.1.4a collect the data, using the appropriate, available tool

S2.1.4b organize the data

S2.1.4b use the collected data to communicate a scientific concept

S2.1.5 use simple modeling programs to make predictions

S2.2 Knowledge of the impacts and limitations of information systems is essential to its effective and ethical use.

S2.2.1 understand the need to question the accuracy of information displayed on a computer because the results produced by a computer may be affected by incorrect data entry

S2.2.2 identify advantages and limitations of data-handling programs and graphics programs

S2.2.3 understand why electronically stored personal information has greater potential for misuse than records kept in conventional form

S2.3 Information technology can have positive and negative impacts on society, depending upon how it is used.

S2.3.1 use graphical, statistical, and presentation software to presents project to fellow classmates

S2.3.2 describe applications of information technology in mathematics, science, and other technologies that address needs and solve problems in the community

S2.3.3 explain the impact of the use and abuse of electronically generated information on individuals and families

Standard 4 Students will understand and apply scientific concepts, principles and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science

Key Ideas	Performance Indicators	Core Curriculum
S4.1 Scientists have divided and classified living things into large groups called kingdoms	S4.1.1 Understand the breakdown of living things into kingdoms	S2.1.1a Understand Plant Kingdom S2.1.1b Understand Animal Kingdom S4.1.1c Unaderstand Fungus Kingdom (mushrooms, yeast, mold, mildew) S4.1.1d Understand Protist Kingdom (algwe, protogoans, amoeba, euglena) S4.1.1eUnderstand Moneran Kingdom (Bacteria, blue0green algae)

S4.2 Living things are both similar to and different from each other and from nonliving things. All living things are made up of cells.

S4.1.2 Kingdoms are broken down into smaller groupings

S4.1.3 Classifications and names are assigned using language that has meaning to scientists

S4.1.4 Identify classes of vertebrates and describe major characteristics

S4.2.1 Compare and contrast the parts of plants, animals, and one-celled organisms.

S4.1.2a Describe the order of the groupings into: Kingdom, Phylum, Class, Order, Family, Genus, Species, (Variety)

S4.1.3a Describe use of Latin to name and describe living things eg. Homosapiens can be broken down into genus Homo and species sapiens

S4.1.4a Students will distinguish between fish, amphibians, reptiles, birds, mammals.

S4.2.1a Living things are composed of cells. Cells provide structure and carry on major functions to sustain life. Cells are usually microscopic in size.

S4.2.1b The way in which cells function is similar in all living things. Cells grow and divide, producing more cells. Cells take in nutrients, which they use to provide energy for the work that cells do and to make the materials that a cell or an organism needs.

S4.2.1c Most cells have cell membranes, genetic material, and cytoplasm. Some cells have a cell wall and/or chloroplasts. Many cells have a nucleus.

S4.2.1d Some organisms are single cells; others, including humans, are multicellular.

S4.2.1e Cells are organized for more effective functioning in multicellular organisms. Levels of organization for structure and function of a multicellular organism include cells, tissues, organs, and organ systems.

S4.2.3 Organizations of cells into tissues, organs and systems

S4.2.1f Many plants have roots, stems, leaves, and reproductive structures. These organized groups of tissues are responsible for a plant's life activities.

S4.2.1g Multicellular animals often have similar organs and specialized systems for carrying out major life activities.

S4.2.1h Living things are classified by shared characteristics on the cellular and organism level. In classifying organisms, biologists consider details of internal and external structures. Biological classification systems are arranged from general (kingdom) to specific (species)

S4.2.3a Exhibit understanding that in complex organism, groups of cells form tissues. Tissues with similar functions form organs.

S4.2.3b Know that examples of organs in animals include the heart, stomach, brain.

S4.2.3c Explain that examples of organs in plants include the root or the flower.

S4.2.3d Show understanding that in complex organisms, organs work together in a system.

S4.3.1a Describe a non-vascular plant (algae)

S4.3.1b Vascular plants have tube-like structures that allow water and dissolved nutrients to move through the plant

S4.3.1c Students will draw vascular plants - parts and functions

S4.3. Plant structures and processes work in specific ways.

S4.3.1 Structure of vascular and non-vascular plants

S4.3.2 Photosynthesis is an important life function that occurs in plant but not animal cells.

S4.3.3 Plant reproduction can be either sexual or asexual

S4.4 Plants and animals depend on each other and their physical environment

S4.4.1 Students describe the flow of energy and matter through food chains and food webs.

S4.3.2a Describe photosynthesis and the role it plays in: energy from sunlight, chlorophyll, carbon dioxide and water, xylem and phloem, stomata, oxygen, sugar.

S4.3.3a Asexual reproduction examples

S4.3.3b Sexual reproduction by spore-bearing plants, non-flowering seed plants and flowering plants

S4.4.1a Energy flows through ecosystems in one direction, usually from the Sun, through producers to consumers and then to decomposers. This process may be visualized with food chains or energy pyramids.

S4.4.1b Food webs identify feeding relationships among producers, consumers, and decomposers in an ecosystem

S4.4.1c Matter is transferred from one organism to another and between organisms and their physical environment. Water, nitrogen, carbon dioxide, and oxygen are examples of substances cycled between the living and nonliving environment.

S4.5 Human decisions and activities have had a profound impact on the physical and living environment.

S4.6 The number of organisms an ecosystem can support depends on the resources available and physical factors: quantity of light, air, and water; range of temperatures; soil composition. To ensure the survival of our planet, people have a responsibility to consider the impact of their actions on the environment

S4.6.1 Students describe how living things, including humans, depend upon the living and nonliving environment for their survival

S.4.6.1a A population consists of all individuals of a species that are found together at a given place and time. Populations living in one place form a community. The community and the physical factors with which it interacts compose an ecosystem

S4.6.1b Given adequate resources and no disease or predators, populations (including humans) increase. Lack of resources, habitat destruction, and other factors such as predation and climate limit the growth of certain populations in the ecosystem.

In all environments, organisms interact with one another in many ways. Relationships among organisms may be competitive, harmful, or beneficial. Some species have adapted to be dependent upon each other with the result that neither could survive without the other

Some microorganisms are essential to the survival of other living things.

The environment may contain dangerous levels of substances (pollutants) that are harmful to organisms. Therefore, the good health of environments and individuals requires the monitoring of soil, air, and water, and taking steps to keep them safe.

A population consists of all individuals of a species that are found together at a given place and time. Populations living in one place form a community. The community and the physical factors with which it interacts compose an ecosystem

Students describe the effects of environmental changes on humans and other populations

S4.7 Human beings are an interactive organization of cells, tissues, organs, and systems. Viruses lack cellular organization.

S.4.7.1 Students explain the functioning of the major human organ systems and their interactions.

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The environment may contain dangerous levels of substances (pollutants) that are harmful to organisms. Therefore, the good health of environments and individuals requires the monitoring of soil, air, and water, and taking steps to keep them safe.

S.4.7.1a Each system is composed of organs and tissues which perform specific functions and interact with each other, e.g., digestion, gas exchange, excretion, circulation, locomotion, control, coordination, reproduction, and protection from disease.

S4.7.1b Tissues, organs, and organ systems help to provide all cells with nutrients, oxygen, and waste removal.

S4.7.1c The digestive system consists of organs that are responsible for the mechanical and chemical breakdown of food. The breakdown process results in molecules that can be absorbed and transported to cells.

During respiration, cells use oxygen to release the energy stored in food. The respiratory system supplies oxygen and removes carbon dioxide (gas exchange)

The excretory system functions in the disposal of dissolved waste molecules, the elimination of liquid and gaseous wastes, and the removal of excess heat energy

The excretory system functions in the disposal of dissolved waste molecules, the elimination of liquid and gaseous wastes, and the removal of excess heat energy.

The circulatory system moves substances to and from cells, where they are needed or produced, responding to changing demands

Locomotion, necessary to escape danger, obtain food and shelter, and reproduce, is accomplished by the interaction of the skeletal and muscular systems, and coordinated by the nervous system.

The nervous and endocrine systems interact to control and coordinate the body's responses to changes in the environment, and to regulate growth, development, and reproduction. Hormones are chemicals produced by the endocrine system; hormones regulate many body functions

S4.8 Organisms inherit genetic information in a variety of ways that result in continuity of structure and function between parents and offspring.

S4.8.1 Every organism requires a set of instructions for specifying its traits. This information is found in the genes of cells. As organisms reproduce, these instructions are passed from one generation to the next

The male and female reproductive systems are responsible for producing sex cells necessary for the production of offspring.

Disease breaks down the structures or functions of an organism. Some diseases are the result of failures of the system. Other diseases are the result of damage by infection from other organisms (germ theory). Specialized cells protect the body from infectious disease. The chemicals they produce identify and destroy microbes that enter the body

S4.8.1a Hereditary information is contained in genes. Genes are composed of DNA that makes up the chromosomes of cells.

S.4.8.1b Each gene carries a single unit of information. A single inherited trait of an individual can be determined by one pair or by many pairs of genes. A human cell contains thousands of different genes.

Each human cell contains a copy of all the genes needed to produce a human being

In asexual reproduction, all the genes come from a single parent. Asexually produced offspring are genetically identical to the parent

In sexual reproduction typically half of the genes come from each parent. Sexually produced offspring are not identical to either parent.

In all organisms, genetic traits are passed on from generation to generation.

S4.9 Evolution is the change in a species over time. Millions of diverse species are alive today. Generally this diversity of species developed through gradual processes of change occurring over many generations. Species acquire many of their unique characteristics through biological adaptation, which involves the selection of naturally occurring variations in populations (natural selection). Biological adaptations are differences in structures, behaviors, or physiology that enhance survival and reproductive success in a particular environment.

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S4.9.1 Students describe sources of variation in organisms and their structures and relate the variations to survival

Some genes are dominant and some are recessive. Some traits are inherited by mechanisms other than dominance and recessiveness

The probability of traits being expressed can be determined using models of genetic inheritance. Some models of prediction are pedigree charts and Punnett squares.

S4.9.1a The processes of sexual reproduction and mutation have given rise to a variety of traits within a species

S4.9.1b Changes in environmental conditions can affect the survival of individual organisms with a particular trait. Small differences between parents and offspring can accumulate in successive generations so that descendants are very different from their ancestors. Individual organisms with certain traits are more likely to survive and have offspring than individuals without those traits

Human activities such as selective breeding and advances in genetic engineering may affect the variations of species

S4.9.2 Students describe factors responsible for competition within species and the significance of that competition.

In all environments, organisms with similar needs may compete with one another for resources

Extinction of a species occurs when the environment changes and the adaptive characteristics of a species are insufficient to permit its survival. Extinction of species is common. Fossils are evidence that a great variety of species existed in the past

Many thousands of layers of sedimentary rock provide evidence for the long history of Earth and for the long history of changing lifeforms whose remains are found in the rocks.

Recently deposited rock layers are more likely to contain fossils resembling existing species

Although the time needed for change in a species is usually great, some species of insects and bacteria have undergone significant change in just a few years

S4.10 Human body and systems change over time

S4.10.1 Changes in human adolescence

S4.10.1a Understand the concept of puberty including glands and hormones.

S4.10.1b Understand growth changes including: growth spurt, hair growth, breasts, voice change

S4.10.2 The endocrine system is composed of ductless glands which secrete hormones

S4.10.2a Study the chemical action of Hormones and the ways they control different body processes.

S4.10.2b List endocrine glands and functions of the hormones they secrete including pituitary, thyroid, pancreas and adrenal. Include bodily reactions to secretion of hormones.

S4.11 Physical Setting - The Earth and celestial phenomena can be described by principles of relative motion and perspective.

S4.10.3 Reproductive system of humans

S4.11.1 Students explain daily, monthly, and seasonal changes on Earth

S4.10.3a Compare and contrast reproductive systems of male and female humans

S4.4.3b Identify sexual reproduction and recognize the following terms: intercourse; fertilization; zygote; implantation of zygote in uterus; pregnancy; embryo; fetus; newborn

S4.11.1a Earth's Sun is an average-sized star. The Sun is more than a million times greater in volume than Earth

S4.11.1b Other stars are like the Sun but are so far away that they look like points of light. Distances between stars are vast compared to distances within our solar system.

The Sun and the planets that revolve around it are the major bodies in the solar system. Other members include comets, moons, and asteroids. Earth's orbit is nearly circular.

Gravity is the force that keeps planets in orbit around the Sun and the Moon in orbit around the Earth

Most objects in the solar system have a regular and predictable motion. These motions explain such phenomena as a day, a year, phases of the Moon, eclipses, tides, meteor showers, and comets.

The latitude/longitude coordinate system and our system of time are based on celestial observations

Moons are seen by reflected light. Our Moon orbits Earth, while Earth orbits the Sun. The Moon's phases as observed from Earth are the result of seeing different portions of the lighted area of the Moon's surface. The phases repeat in a cyclic pattern in about one month.

The apparent motions of the Sun, Moon, planets, and stars across the sky can be explained by Earth's rotation and revolution. Earth's rotation causes the length of one day to be approximately 24 hours. This rotation also causes the Sun and Moon to appear to rise along the eastern horizon and to set along the western horizon. Earth's revolution around the Sun defines the length of the year as 365 1/4 days

The tilt of Earth's axis of rotation and the revolution of Earth around the Sun cause seasons on Earth. The length of daylight varies depending on latitude and season.

The shape of Earth, the other planets, and stars is nearly spherical.

S4.12.1a Nearly all the atmosphere is confined to a thin shell surrounding Earth. The atmosphere is a mixture of gases, including nitrogen and oxygen with small amounts of water vapor, carbon dioxide, and other trace gases. The atmosphere is stratified into layers, each having distinct properties. Nearly all weather occurs in the lowest layer of the atmosphere.

S4.12 Many of the phenomena that we observe on Earth involve interactions among components of air, water, and land

S4.12.1 Students explain how the atmosphere (air), hydrosphere (water), and lithosphere (land) interact, evolve, and change

S4.12.1b As altitude increases, air pressure decreases.

The rock at Earth's surface forms a nearly continuous shell around Earth called the lithosphere.

The majority of the lithosphere is covered by a relatively thin layer of water called the hydrosphere.

Rocks are composed of minerals. Only a few rock-forming minerals make up most of the rocks of Earth. Minerals are identified on the basis of physical properties such as streak, hardness, and reaction to a solution.

Fossils are usually found in sedimentary rocks. Fossils can be used to study past climates and environments

The dynamic processes that wear away Earth's surface include weathering and erosion.

The process of weathering breaks down rocks to form sediment. Soil consists of sediment, organic material, water, and air.

Erosion is the transport of sediment. Gravity is the driving force behind erosion. Gravity can act directly or through agents such as moving water, wind, and glaciers.

Students describe volcano and earthquake patterns, the rock cycle, and weather and climate changes.

Water circulates through the atmosphere, lithosphere, and hydrosphere in what is known as the water cycle

The interior of Earth is hot. Heat flow and movement of material within Earth cause sections of Earth's crust to move. This may result in earthquakes, volcanic eruption, and the creation of mountains and ocean basins

Analysis of earthquake wave data (vibrational disturbances) leads to the conclusion that there are layers within Earth. These layers - the crust, mantle, outer core, and inner core - have distinct properties

Folded, tilted, faulted, and displaced rock layers suggest past crustal movement

Continents fitting together like puzzle parts and fossil correlations provided initial evidence that continents were once together

The Theory of Plate Tectonics explains how the "solid" lithosphere consists of a series of plates that "float" on the partially molten section of the mantle. Convection cells within the mantle may be the driving force for the movement of the plates

Plates may collide, move apart, or slide past one another. Most volcanic activity and mountain building occur at the boundaries of these plates.

Weather describes the conditions of the atmosphere at a given location for a short period of time.

Climate is the characteristic weather that prevails from season to season and year to year.

Air masses form when air remains nearly stationary over a large section of Earth's surface and takes on the conditions of temperature and humidity from that location.

Weather conditions at a location are determined primarily by temperature, humidity, and pressure of air masses over that location

Most local weather condition changes are caused by movement of air masses. The movement of air masses is determined by prevailing winds and upper air currents. Fronts are boundaries between air masses. Precipitation is likely to occur at these boundaries.

Substances enter the atmosphere naturally and from human activity. Some of these substances include dust from volcanic eruptions and greenhouse gases such as carbon dioxide, methane, and water vapor. These substances can affect weather

SS4.13 Chemistry involves matter and change

S4.13.1 Matter is made up of particles whose properties determine the observable characteristics of matter and its reactivity.

S4.13.1a Atoms, Molecules and Compounds make up matter.

S4.13.1b Identify the basics of atomic structure

S4.14 Matter is composed of elements which are made of small particles called atoms. All living and nonliving material is composed of these elements or combinations of these elements.

S4.14.1 Elements have atoms of only one kind, having the same number of protons. There are more than 100 different.

SS4.14.2 The periodic Table organizes elements with common properties Atomic symbol and atomic number.

S4.15 Chemical change and physical change

S4.15.1 Know the difference between a chemical and a physical change in elements and molecules

S4.13.1c Describe how atoms are constantly in motion

S4.13.1d Atoms join to form molecules and compounds

S4.13.1e Identify common compounds and their formulas.

S4.14.1a Identify properties of elements.

S4.14.2a Students will identify some well known elements and their symbols.

S4.14.2b Describe two categories of elements

S4.15.1a Describe Chemical change in rusting of iron, burning of wood or milk turning sour.

S4.15.1b Understand that Physical change involves only the appearance of a substance, but does not change what the substance is made up of like cutting paper, breaking glass or freezing water.

S4.15.1c Substances are often placed in categories if they react in similar ways. Examples include metals, nonmetals, and noble gases.

S4.16.1d The Law of Conservation of Mass states that during an ordinary chemical reaction matter cannot be created or destroyed. In chemical reactions, the total mass of the reactants equals the total mass of the products.

S4.16.2 Students develop mental models to explain common chemical reactions and changes in states of matter.

S4.16.2a All matter is made up of atoms. Atoms are far too small to see with a light microscope. Atoms and molecules are perpetually in motion. The greater the temperature, the greater the motion. Atoms may join together in well-defined molecules or may be arranged in regular geometric patterns.

S4.16.2b interactions among atoms and/or molecules result in chemical reactions.

S4.16.2c The atoms of any one element are different from the atoms of other elements

There are more than 100 elements. Elements combine in a multitude of ways to produce compounds that account for all living and nonliving substances. Few elements are found in their pure form

The periodic table is one useful model for classifying elements. The periodic table can be used to predict properties of elements (metals, nonmetals, noble gases

S4.17 Energy exists in many forms, and when these forms change energy is conserved.

S4.17.1 Students describe the sources and identify the transformations of energy observed in everyday life.

4.17.1a The Sun is a major source of energy for Earth. Other sources of energy include nuclear and geothermal energy.

S4.17.1b Fossil fuels contain stored solar energy and are considered nonrenewable resources. They are a major source of energy in the United States. Solar energy, wind, moving water, and biomass are some examples of renewable energy resources.

S4.18 Scientists of earlier ages have contributed greatly to the understanding of the physical world.

S.4.18.1 The contributions of scientific pioneers have led the way to important breakthroughs

Most activities in everyday life involve one form of energy being transformed into another. For example, the chemical energy in gasoline is transformed into mechanical energy in an automobile engine. Energy, in the form of heat, is almost always one of the products of energy transformations

Different forms of energy include heat, light, electrical, mechanical, sound, nuclear, and chemical. Energy is transformed in many ways.

Energy can be considered to be either kinetic energy, which is the energy of motion, or potential energy, which depends on relative position

S4.18.1a Students will explore the lives and contributions of such important scientists such as Galileo, Percy Lavon Julian, Ernest Just Carl Linnaeus.

Standard 5 Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs.

S5.1 Engineering design is an iterative process involving modeling and optimization used to develop technological solutions to problems within given constraints.

S5.1.1 identify needs and opportunities for technical solutions from an investigation of situations of general or social interest

S5.1.2 locate and utilize a range of printed, electronic, and human information resources to obtain ideas

S5.1.3 consider constraints and generate several ideas for alternative solutions, using group and individual ideation techniques (group discussion, brainstorming, forced connections, role play); defer judgment until a number of ideas have been generated; evaluate (critique) ideas; and explain why the chosen solution is optimal

S5.1.5 develop plans, including drawings with measurements and details of construction, and construct a model of the solution, exhibiting a degree of craftsmanship

S5.1.6 in a group setting, test their solution against design specifications, present and evaluate results, describe how the solution might have been modified for different or better results, and discuss tradeoffs that might have to be made

S5.2 Technological tools, materials, and other resources should be selected on the basis of safety, cost, availability, appropriateness, and environmental impact; technological processes change energy, information, and material resources into more useful forms.

S5.2.1 choose and use resources for a particular purpose based upon an analysis and understanding of their properties, costs, availability, and environmental impact

S5.2.2 use a variety of hand tools and machines to change materials into new forms through forming, separating, and combining processes, and processes which cause internal change to occur

S5.2.3 combine manufacturing processes with other technological processes to produce, market, and distribute a product

S5.2.4 process energy into other forms and information into more meaningful information

Standard 6: Interconnectedness - Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning.

S6.1 Through systems thinking, people can recognize the commonalities that exist among all systems and how parts of a system interrelate and combine to perform specific functions.

S6.1.1 describe the differences between dynamic systems and organizational systems.

describe the differences and similarities between engineering systems, natural systems, and social systems.

describe the differences between open- and closed-loop systems.

describe how the output from one part of a system (which can include material, energy, or information) can become the input to other parts.

S6.2 Models are simplified representations of objects, structures, or systems used in analysis, explanation, interpretation, or design.

S6.2.1 select an appropriate model to begin the search for answers or solutions to a question or problem

S7.1.1a compare systems with internal control (e.g., homeostasis in organisms or an ecological system) to systems of related components without internal control (e.g., the Dewey decimal, solar system).

Students will understand how systems are linked. They may follow the route of rubber from a tree to a tire to road fill.

S6.2.1a choose a mathematical model to predict the distance a car will travel at a given speed in a given time.

	S6.2.2 use models to study processes that cannot be studied directly (e.g., when the real process is too slow, too fast, or too dangerous for direct observation). S6.2.3 demonstrate the effectiveness of different models to represent the same thing and the same model to represent different things.	S6.2.2a use a computer simulation to observe the process of growing vegetables or to test the performance of cars S6.2.3a compare the relative merits of using a flat map or a globe to model where places are situated on Earth. S6.2.3b use blueprints or scale models to represent room plans.
S6.3 The grouping of magnitudes of size, time, frequency, and pressures or other units of measurement into a series of relative order provides a useful way to deal with the immense range and the changes in scale that affect the behavior and design of systems	S6.3.1 cite examples of how different aspects of natural and designed systems change at different rates with changes in scale S6.3.2 use powers of ten notation to represent very small and very large numbers	
S6.4 Equilibrium is a state of stability due either to a lack of changes (static equilibrium) or a balance between opposing forces (dynamic equilibrium).	S6.4.1 describe how feedback mechanisms are used in both designed and natural systems to keep changes within desired limits S6.4.2 describe changes within equilibrium cycles in terms of frequency or cycle length and determine the highest and lowest values and when they occur	S6.4.1a Students will identify feedback mechanisms
S6.5 Identifying patterns of change is necessary for making predictions about future behavior and conditions	S6.5.1 use simple linear equations to represent how a parameter changes with time	

S6.6 In order to arrive at the best solution that meets criteria within constraints, it is often necessary to make trade-offs.

S6.5.2 observe patterns of change in trends or cycles and make predictions on what might happen in the future

S6.6.1 determine the criteria and constraints and make trade-offs to determine the best decision

use graphs of information for a decision making problem to determine the optimum solution

Standard 7 Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions.

S7.1 The knowledge and skills of mathematics, science, and technology are used together to make informed decisions and solve problems, especially those relating to issues of science/technology/society, consumer decision making, design, and inquiry into phenomenon.

S7.1.1 analyze science/technology/society problems and issues at the local level and plan and carry out a remedial course of action

S7.1.2 make informed consumer decisions by seeking answers to appropriate questions about products, services, and systems; determining the cost/benefit and risk/benefit tradeoffs; and applying this knowledge to a potential purchase

S7.1.3 design solutions to real-world problems of general social interest related to home, school, or community using scientific experimentation to inform the solution and applying mathematical concepts and reasoning to assist in developing a solution

S7.1.2a Students will understand the need to make informed choices when selecting goods and services by comparing several products of varying quality and price.

S7.2 Strategies and technology are used together to make informed decisions and solve problems, especially those relating to issues of science/technology/society, consumer decision making, design, and inquiry into phenomena.

S7.1.4 describe and explain phenomena by designing and conducting investigations involving systematic observations, accurate measurements, and the identification and control of variables; by inquiring into relevant mathematical ideas; and by using mathematical and technological tools and procedures to assist in the investigation

S7.2.1 Students participate in an extended, culminating mathematics, science, and technology project. The project would require students to: work effectively; gather and process information; generate and analyze ideas; observe common themes; realize ideas; present results.

S7.2.1a Working Effectively: Contributing to the work of a brainstorming group, laboratory partnership, cooperative learning group, or project team; planning procedures; identify and managing responsibilities of team members; and staying on task, whether working alone or as part of a group
S7.2.1b Gathering and processing information: Accessing information from printed media, electronic data bases, and community resources and using the information to develop a definition of the problem and to research possible solutions

S7.2.1c Generating and analyzing ideas: Developing ideas for proposed solutions, investigating ideas, collecting data, and showing relationships and patterns in the data

S7.2.1d Common themes: Observing examples of common unifying themes, applying them to the problem, and using them to better understand the dimensions of the problem

S7.2.1e Realizing ideas: Constructing components or models, arriving at a solution, and evaluating the result

S7.3.1f Presenting results: Using a variety of media to present the solution and to communicate the results

6th Grade Science Curriculum - Based on Core Knowledge

Science Standard 1 STANDARD 1--Analysis, Inquiry, and Design--Students will use scientific inquiry, as appropriate, to pose questions, seek answers, and develop solutions.

Key Ideas	Performance Indicators	Core Curriculum
S1.1 Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity.	S1.1.1 Use conventional techniques and those of their own design to make further observations and refine their explanations, guided by a need for more information.	Demonstrate appropriate safety techniques Conduct an experiment designed by others Design and conduct an experiment to test a hypothesis Use appropriate tools and conventional techniques to solve problems about the natural world, including: measuring, observing, describing, classifying, sequencing Formulate questions about natural phenomena Identify appropriate references to investigate a question Refine and clarify questions so that they are subject to scientific investigation Independently formulate a hypothesis Propose a model of a natural phenomenon Differentiate among observations, inferences, predictions, and explanations
S1.2 The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process.	S1.2.1 Formulate questions independently with the aid of references appropriate for guiding the search for explanations of everyday observations. S1.2.2 Construct explanations independently for natural phenomena, especially by proposing preliminary visual models of phenomena. S1.2.3 Represent, present, and defend their proposed explanations of everyday observations so that they can be understood and assessed by others.-	

S1.2.4 Seek to clarify, to assess critically, and to reconcile with their own thinking the ideas presented by others, including peers, teachers, authors, and scientists.

Share results with each other and compare outcomes.

Standard 2 - Students will access, generate, process, and transfer information using appropriate technologies.

S2.1 Information technology is used to retrieve, process, and communicate information and as a tool to enhance learning.

S2.1.1 use a range of equipment and software

to integrate several forms of information in order to create good quality audio, video, graphic, and text-based presentations

S2.1.2 use spreadsheets and data-base software

to collect, process, display, and analyze information. Students access needed information from electronic data bases and on-line telecommunication services systematically obtain accurate and relevant information pertaining to a particular topic from a range of sources, including local and national media, libraries, museums, governmental agencies, industries, and individuals

collect data from probes to measure events and phenomena
use simple modeling programs to make predictions

S2.2 Knowledge of the impacts and limitations of information systems is essential to its effective and ethical use.

S2.2.1 understand the need to question the accuracy of information displayed on a computer because the results produced by a computer may be affected by incorrect data entry

identify advantages and limitations of data-handling programs and graphics programs

understand why electronically stored personal information has greater potential for misuse than records kept in conventional form

use graphical, statistical, and presentation software to presents project to fellow classmates

describe applications of information technology in mathematics, science, and other technologies that address needs and solve problems in the community

explain the impact of the use and abuse of electronically generated information on individuals and families

S2.3 Information technology can have positive and negative impacts on society, depending upon how it is used.

Standard 4 - Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

Key Ideas	Performance Indicators	Core Curriculum
S4.1 Mechanical Concepts in Physics include: speed, force, work, energy and power	S4.1.1 Students will explore the concepts of speed, force, work, energy and power	Understand that speed equals how far something travels in a unit of time. Familiar units for measuring speed are miles or kilometers per hour Demonstrate comprehension that force is a push or pull that produces a change in the state of motions of an object. (eg. gravity, magnetic force.) Force is expressed in units of mass (pounds in English system and newtons in the metric system.)

S4.2 Energy exists in many forms, and when these forms change energy is conserved.

S4.2.1 Describe the sources and identify the transformations of energy observed in everyday life.

S4.3 Matter can be made to change phases by adding or removing energy.

S4.3.1 Students will examine the properties of different phases of matter.

Explain that work is a relation between force and distance ie. Work is done when force is exerted over distance. Common units for measuring work are: foot-pounds in the English system and joules in the metric system.

Understand that in physics, energy is defined as the ability to do work. Energy is distinguished from work as follows: to have energy, a thing does not have to move.

Work is the transfer of energy

Describe two main types of energy as kinetic and potential. Examples of potential energy are gravitational, chemical, elastic and electromagnetic.

Examples of kinetic energy include moving objects, heat, sound and other waves.

Know that energy is conserved in a system.

Know that the Sun is a major source of energy for Earth. Other sources of energy include: nuclear and geothermal energy.

Identify activities in everyday life that involve one form of energy being transformed into another. For example, the chemical energy in gasoline is transformed into mechanical energy in an automobile engine. Energy, in the form of heat, is almost always one of the products of energy transformations.

Report on how different forms of energy include heat, light, electrical, mechanical, sound, nuclear, and chemical. Energy is transformed in many ways.

Compare and contrast ways in which energy can be considered to be either kinetic energy, which is the energy of motion, or potential energy, which depends on relative position.

Explain three ways that heat energy can be transferred: conduction, convection, and radiation.

Expansion is adding heat energy to a substance, which causes the molecules to move more quickly and the substance to expand

Contraction is when a substance loses heat energy, the molecules slow down, and the substance contracts

Understand that water is a special case: water expands when it changes from a liquid to a solid. Know freezing and boiling points.

S4.4 The Earth and celestial phenomena can be described by principles of relative motion and perspective.

S4.4.1 Understand that gravity is an attractive force between objects

S4.5. Earth's Sun is an average-sized star. The Sun is more than a million times greater in volume than Earth.

S4.5.1 The apparent movement of the stars is caused by the rotation of the earth

S4.5.2 Students will acquire knowledge about the galaxy in which we live as well as others not yet explored

S4.6 An examination of forest life reveals closely knit interdependence between species

S4.6.1 Students will learn about the makeup and properties of trees and shrubs in forests

List changing phases: condensation; freezing; melting; boiling

Describe how substance has its own melting and boiling point

Define distillation: separation of mixtures of liquids with different boiling points

Describe Newton's Law of Universal Gravitation -

Between any two objects in the universe there is an attractive force, gravity, which grows greater as the objects move closer to each other.

Explain how gravity keeps the planets in orbit.

Exhibit understanding of Constellations

Define: stars by size; supernovas; black holes

Explain how astronomical distance is measured in light years.

Show comprehension that earth's coordinate system of latitude and longitude, with the equator and prime meridian as reference lines, is based upon Earth's rotation and our observation of the Sun and stars.

Explain daily, monthly, and seasonal changes on Earth.

Know that the phases of the moon are visible due to light reflected from the Sun

Demonstrate understanding that the Earth's rotation causes the Sun and Moon to appear to rise in the east and set in the west

Students will distinguish between the Milky Way and Andromeda Galaxies

Demonstrate understanding of quasars.

Students will show comprehension of; the difference between a tree and a shrub

		Explain the growth structure of trees and the advantages of height. Discuss stem structure including xylem, cambium, phloem, heartwood, sapwood, rays, rings, bark Define; crown as actively growing leaf area. Explore types of roots and how water gets from the ground to the top of the tree.
	S4.6.2 Students will research the various types of forests found in different parts of the world	Understand the distinguishing characteristics of the the tropical rain forest as well as species types. Describe tropical rain forests in Central and South America, Africa, Asia and Australia including rainfall vegetation, average rainfall and temperature. Comprehend Temperate hardwood forests characteristics and species types in North America, Europe and Asia. Explain the succession of trees from conifers to deciduous depending on climate and soil type. Also describe seasonal changes as well as rainfall. Understand the causes and effects of deforestation including: change of weather patterns; instability of humidity, temperature and carbon dioxide levels; and decertification
S4.7 The lives and research of scientists provide valuable information about both the process and outcome of research	S4.6.1 Students will examine the life and work of several famous scientists.	Report on the activities and finding of scientists such as: Marie Curie, Albert Einstein, Lewis Howard Latimer and Sir Isaac Newton Explore the discovery of penicillin by Alexander Fleming and discuss other antibiotics
S4.8 Organisms inherit genetic information in a variety of ways that result in continuity of structure and function between parents and offspring	S4.8.1 Students describe sexual and asexual mechanisms for passing genetic materials from generation to generation	Hereditary information is contained in genes. Genes are composed of DNA that makes up the chromosomes of cells. Each gene carries a single unit of information. A single inherited trait of an individual can be determined by one pair or by many pairs of genes. A human cell contains thousands of different genes. Each human cell contains a copy of all the genes needed to produce a human being

S4.8 Individual organisms and species change over time

S4.8.2 Students describe simple mechanisms related to the inheritance of some physical traits in offspring

S4.8.1 Students describe sources of variation in organisms and their structures and relate the variations to survival

S4.8.2 Students describe factors responsible for competition within species and the significance of that competition

In asexual reproduction, all the genes come from a single parent. Asexually produced offspring are genetically identical to the parent
In sexual reproduction typically half of the genes come from each parent. Sexually produced offspring are not identical to either parent.
In all organisms, genetic traits are passed on from generation to generation

Some genes are dominant and some are recessive. Some traits are inherited by mechanisms other than dominance and recessiveness.

The probability of traits being expressed can be determined using models of genetic inheritance. Some models of prediction are pedigree charts and Punnett squares.
The processes of sexual reproduction and mutation have given rise to a variety of traits within a species

Changes in environmental conditions can affect the survival of individual organisms with a particular trait. Small differences between parents and offspring can accumulate in successive generations so that descendants are very different from their ancestors. Individual organisms with certain traits are more likely to survive and have offspring than individuals without those traits
Human activities such as selective breeding and advances in genetic engineering may affect the variations of species.

In all environments, organisms with similar needs may compete with one another for resources

Extinction of a species occurs when the environment changes and the adaptive characteristics of a species are insufficient to permit its survival. Extinction of species is common. Fossils are evidence that a great variety of species existed in the past

S4.8.3 Students observe and describe the variations in reproductive patterns of organisms, including asexual and sexual reproduction

Students explain the role of sperm and egg cells in sexual reproduction

Students observe and describe developmental patterns in selected plants and animals (e.g., insects, frogs, humans, seed-bearing plants).

Students observe and describe cell division at the microscopic level and its macroscopic effects.

Many thousands of layers of sedimentary rock provide evidence for the long history of Earth and for the long history of changing lifeforms whose remains are found in the rocks. Recently deposited rock layers are more likely to contain fossils resembling existing species

Some organisms reproduce asexually. Other organisms reproduce sexually. Some organisms can reproduce both sexually and asexually. There are many methods of asexual reproduction, including division of a cell into two cells, or separation of part of an animal or plant from the parent, resulting in the growth of another individual

Methods of sexual reproduction depend upon the species. All methods involve the merging of sex cells to begin the development of a new individual. In many species, including plants and humans, eggs and sperm are produced.

Fertilization and/or development in organisms may be internal or external.

The male sex cell is the sperm. The female sex cell is the egg. The fertilization of an egg by a sperm results in a fertilized egg
In sexual reproduction, sperm and egg each carry one-half of the genetic information for the new individual. Therefore, the fertilized egg contains genetic information from each parent

Multicellular organisms exhibit complex changes in development, which begin after fertilization. The fertilized egg undergoes numerous cellular divisions that will result in a multicellular organism, with each cell having identical genetic information
In humans, the fertilized egg grows into tissue which develops into organs and organ systems before birth. Various body structures and functions change as an organism goes through its life cycle

In multicellular organisms, cell division is responsible for growth, maintenance, and repair. In some one-celled organisms, cell division is a method of asexual reproduction.

S4.9 Organisms maintain a dynamic equilibrium that sustains life

Students compare the way a variety of living specimens carry out basic life functions and maintain dynamic equilibrium

S4.10 Living things are both similar to and different from each other and from nonliving things.

S4.10.1 Students explain the functioning of the major human organ systems and their interactions. The emphasis in grade six is on the circulatory, lymphatic and immune systems

In one type of cell division, chromosomes are duplicated and then separated into two identical and complete sets to be passed to each of the two resulting cells. In this type of cell division, the hereditary information is identical in all the cells that result

Another type of cell division accounts for the production of egg and sperm cells in sexually reproducing organisms. The eggs and sperm resulting from this type of cell division contain one-half of the hereditary information.

Cancers are a result of abnormal cell division.

Animals and plants have a great variety of body plans and internal structures that contribute to their ability to maintain a balanced condition.

An organism's overall body plan and its environment determine the way that the organism carries out the life processes

S4.10.1a Students Demonstrate understanding that each human body system is composed of organs and tissues, which perform specific functions and interact with each other (e.g. digestion, respiration, excretion, circulation, locomotion, coordination, reproduction and protection from disease)

Understand that tissues, organs, and organ systems help to provide all cells with nutrients, oxygen, and waste removal

Demonstrate understanding that the circulatory system moves substances to and from cells, where they are needed or produced, responding to changing demands

Define lymph, lymph nodes, white cells, blood pressure, hardening and clogging of the arteries.

Explain that the immune system fights infections from bacteria, viruses, fungi.

Understand the meaning of vaccines, communicable and non-communicable diseases, epidemics.

S4.10.2 Students describe the importance of major nutrients, vitamins, and minerals in maintaining health and promoting growth, and explain the need for a constant input of energy for living organisms

Examine bacterial diseases as well as the terms; tetanus, typhoid, tuberculosis.

Understand that disease breaks down the structures or functions of an organism; some diseases are the result of failures of the system; other diseases are the result of damage by infection from other organisms (germ theory); specialized cells protect the body from infectious disease and the chemicals they produce, identify and destroy microbes that enter the body

Discuss viral diseases including: the common cold, chicken pox, mononucleosis, rabies, polio, AIDS

All organisms require energy to survive. The amount of energy needed and the method for obtaining this energy vary among cells. Some cells use oxygen to release the energy stored in food

The methods for obtaining nutrients vary among organisms. Producers, such as green plants, use light energy to make their food. Consumers, such as animals, take in energy-rich foods.

Herbivores obtain energy from plants. Carnivores obtain energy from animals. Omnivores obtain energy from both plants and animals. Decomposers, such as bacteria and fungi, obtain energy by consuming wastes and/or dead organisms

Regulation of an organism's internal environment involves sensing the internal environment and changing physiological activities to keep conditions within the range required for survival. Regulation includes a variety of nervous and hormonal feedback systems.

The survival of an organism depends on its ability to sense and respond to its external environment.

Food provides molecules that serve as fuel and building material for all organisms. All living things, including plants, must release energy from their food, using it to carry on their life processes.

5.2b Foods contain a variety of substances, which include carbohydrates, fats, vitamins, proteins, minerals, and water. Each substance is vital to the survival of the organism

S4.11 Plants and animals depend on each other and their physical environment

S4.11.1 Plants and animals depend on each other and their physical environment

S4.11.2 Students provide evidence that green plants make food and explain the significance of this process to other organisms

S4.12 Human decisions and activities have had a profound impact on the physical and living environment

S4.12.1 Students describe how living things, including humans, depend upon the living and nonliving environment for their survival

Metabolism is the sum of all chemical reactions in an organism. Metabolism can be influenced by hormones, exercise, diet, and aging

In order to maintain a balanced state, all organisms have a minimum daily intake of each type of nutrient based on species, size, age, sex, activity, etc. An imbalance in any of the nutrients might result in weight gain, weight loss, or a diseased state.

Contraction of infectious disease, and personal behaviors such as use of toxic substances and some dietary habits, may interfere with one's dynamic equilibrium. During pregnancy these conditions may also affect the development of the child. Some effects of these conditions are immediate; others may not appear for many years.

Energy flows through ecosystems in one direction, usually from the Sun, through producers to consumers and then to decomposers. This process may be visualized with food chains or energy pyramids

Matter is transferred from one organism to another and between organisms and their physical environment.

Water, nitrogen, carbon dioxide, and oxygen are examples of substances cycled between the living and nonliving environment

Photosynthesis is carried on by green plants and other organisms containing chlorophyll. In this process, the Sun's energy is converted into and stored as chemical energy in the form of a sugar. The quantity of sugar molecules increases in green plants during photosynthesis in the presence of sunlight. The major source of atmospheric oxygen is photosynthesis. Carbon dioxide is removed from the atmosphere and oxygen is released during photosynthesis.

Green plants are the producers of food which is used directly or indirectly by consumers

A population consists of all individuals of a species that are found together at a given place and time.

Populations living in one place form a community. The community and the physical factors with which it interacts compose an ecosystem

Students describe the effects of environmental changes on humans and

Given adequate resources and no disease or predators, populations (including humans) increase. Lack of resources, habitat destruction, and other factors such as predation and climate limit the growth of certain populations in the ecosystem.

In all environments, organisms interact with one another in many ways. Relationships among organisms may be competitive, harmful, or beneficial. Some species have adapted to be dependent upon each other with the result that neither could survive without the other.

Some microorganisms are essential to the survival of other living things.

The environment may contain dangerous levels of substances (pollutants) that are harmful to organisms. Therefore, the good health of environments and individuals requires the monitoring of soil, air, and water, and taking steps to keep them safe.

In ecosystems, balance is the result of interactions between community members and their environment
In ecosystems, balance is the result of interactions between community members and their environment

Overpopulation by any species impacts the environment due to the increased use of resources. Human activities can bring about environmental degradation through resource acquisition, urban growth, land-use decisions, waste disposal, etc.

Since the Industrial Revolution, human activities have resulted in major pollution of air, water, and soil. Pollution has cumulative ecological effects such as acid rain, global warming, or ozone depletion. The survival of living things on our planet depends on the conservation and protection of Earth's resources.

Standard 5 - Engineering Design - Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs

S5.1 Engineering design is an iterative process involving modeling and optimization used to develop technological solutions to problems within given constraints.

S5.1.1 Students identify needs and opportunities for technical solutions from an investigation of situations of general or social interest

S5.1.2 Students identify needs and opportunities for technical solutions from an investigation of situations of general or social interest

S5.1.3 Students consider constraints and generate several ideas for alternative solutions, using group and individual ideation techniques (group discussion, brainstorming, forced connections, role play); defer judgment until a number of ideas have been generated; evaluate (critique) ideas; and explain why the chosen solution is optimal

Students develop plans, including drawings with measurements and details of construction, and construct a model of the solution, exhibiting a degree of craftsmanship.

S5.1.4 Students in a group setting, test their solution against design specifications, present and evaluate results, describe how the solution might have been modified for different or better results, and discuss tradeoffs that might have to be made.

Standard 6 Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning.

S6.1 Through systems thinking, people can recognize the commonalities that exist among all systems and how parts of a system interrelate and combine to perform specific functions.

S6.1.1 Students describe the differences between dynamic systems and organizational systems

S6.1.2 Students describe the differences and similarities between engineering systems, natural systems, and social systems.

S6.1.1a Students will list properties of dynamic or organizational systems and compare lists.

S6.1.2a use a computer simulation to observe the process of growing vegetables or to test the performance of cars.

S6.1.3 Students describe the differences between open- and closed-loop systems

S6.1.4 Students describe how the output from one part of a system (which can include material, energy, or information) can become the input to other parts

S6.1.4a choose a mathematical model to predict the distance a car will travel at a given speed in a given time.

Standard 7 Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions

S7.1 The knowledge and skills of mathematics, science, and technology are used together to make informed decisions and solve problems, especially those relating to issues of science/technology/society, consumer decision-making, design, and inquiry into phenomena.

S7.2 Solving interdisciplinary problems involves a variety of skills and strategies, including effective work habits; gathering and processing information; generating and analyzing ideas; realizing ideas; making connections among the common themes of mathematics, science, and technology; and presenting results

S7.2.1 Students participate in an extended, culminating mathematics, science, and technology project.

S7.2.1a Students design, construct, test and draw conclusions about artificial wind-dispersed seeds in a controlled environment

S7.2.1b Solving interdisciplinary problems involves a variety of skills and strategies, including effective work habits; gathering and processing information; generating and analyzing ideas; realizing ideas; making connections among the common themes of mathematics, science, and technology; and presenting results

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7th Grade Science Curriculum - Based on Core Knowledge

Standard 1 Students will use scientific inquiry to pose questions, seek answers and develop solutions.

Key Ideas	Performance Indicators	Core Curriculum
S1.1 The study of atomic structure has ancient roots.	S1.1.1 Examine the early Greek theory of four elements: earth, air, fire, and water S1.1.2 Students will how later theories formed the core of scientific nomenclature	S1.1.1a Students will describe the theory of four basic elements proposed by the ancient Greeks S1.1.2a Exhibit understand of Democritus: everything is made of atoms and nothing else ("atom" in Greek means that which can't be cut or divided); S1.1.2b Understand the theory that atoms of the same kind form a pure "element" S1.1.2c Study examples of Alchemy in middle ages.
S1.2 Modern chemistry emerged from study and examination by many.	S1.2.1 Students will read and report on pioneers in the study of chemistry	S1.2.1a Explain Lavoisier and oxygen: the idea that matter is not gained or lost in chemical reaction S1.2.1b Examine how John Dalton revives the theory of the atom S1.2.1c Demonstrate knowledge that Mendeleev develops the Periodic Table, showing that the properties of atoms of elements come in repeating (periodic) groups S1.2.1d Research how Niels Bohr develops a model, plus the discovery of neutrons, helped explain the Periodic Table: atomic number, atomic weight, and isotopes
Standard 2 - Students will access, generate, process, and transfer information		
S2.1 Information technology is used to retrieve, process, and communicate information and as a tool to enhance learning.	S2.1.1 use a range of equipment and software to integrate several forms of information in order to create good quality audio, video, graphic, and text-based presentations	

S2.1.2 use spreadsheets and data-base software to collect, process, display, and analyze information. Students access needed information from electronic data bases and on-line telecommunication services

S2.1.3 systematically obtain accurate and relevant information pertaining to a particular topic from a range of sources, including local and national media, libraries, museums, governmental agencies, industries, and individuals

S2.1.4 collect data from probes to measure events and phenomena

S2.1.5 use simple modeling programs to make predictions

S2.2 Knowledge of the impacts and limitations of information systems is essential to its effective and ethical use.

S2.2.1 understand the need to question the accuracy of information displayed on a computer because the results produced by a computer may be affected by incorrect data entry

S2.2.2 identify advantages and limitations of data-handling programs and graphics programs

S2.2.3 understand why electronically stored personal information has greater potential for misuse than records kept in conventional form

S2.2.3a Students will use online and offline resources to access and explain information about identity theft.

S2.3 Information technology can have positive and negative impacts on society, depending upon how it is used.

S2.3.1 use graphical, statistical, and presentation software to presents projects to fellow classmates

S2.3.2 describe applications of information technology in mathematics, science, and other technologies that address needs and solve problems in the community

S2.3.3 explain the impact of the use and abuse of electronically generated information on individuals and families

S2.3.2a Students will understand the intricacies of dealing with social issues by selecting a social problem (such as pollution, conservation of resources, acid rain, etc) and conduct research to find laws, solutions and new technology that deal with the problem.

S2.3.3a Students will understand the possible outcomes of using credit over unsecured internet sites.

Standard 4 Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

Key Ideas	Performance Indicators	Core Curriculum
S4.1 Matter is made up of particles whose properties determine the observable characteristics of matter and its reactivity.	S4.1.1 Examine the properties of materials in terms of the arrangement and properties of the atoms that compose them, specifically chemical bonds and electrons.	S4.1.1a Students will understand that to get a stable outer shell of electrons, atoms either give away, take on, or share electrons S4.1.1b Understand that chemical reactions rearrange the atoms and the electrons in elements and compounds to form a chemical bonds S4.1.1c Explain that when single atoms combine with themselves or with other atoms, the result is a molecule. O₂ is a molecule of oxygen. NaCl is a molecule of salt, and because it has more than one element is called a compound
	S4.1.2 Students will examine types of chemical bonds	S4.1.2a Identify Ionic bonds - Atoms like sodium that have just one or two extra electrons are very energetic in giving them away. Elements with the same number of extra or few electrons can join with each other to make an ionic bond. Example: NaCl, table salt. S4.1.2b Identify Metallic bonds -In the metallic bond, electrons are not given away between elements, but are arranged so that they are shared between atoms. Pure metals show this sharing, and the atoms can rearrange themselves in different ways, which explains why you can pound metals into different shapes.

S4.1.3 Describe kinds of chemical reactions

S4.1.4 Explore reactions with acids and bases

S3.1.2c Explain Covalent bonds - Some atoms share electrons in a definite way, making them very stable and unreactive. Examples are H₂ and O₂. Carbon, which can take up or give away 4 electrons in covalent bonds, can help make molecules that can adopt almost any shape. It is the basis of life

S4.1.3a Describe oxidation: a chemical reaction that commonly involves oxygen. More generally, oxidation is a reaction in which an atom accepts electrons while combining with other elements. The atom that gives away electrons is said to be oxidized. Examples: rusting of iron, burning of paper. Heat is given off.

S4.1.3b Know Reduction: the opposite of oxidation. Reduction involves the gaining of electrons. An oxidized material gives them away and heat is taken up. Acids: for example, vinegar, HCl, H₂SO₄; sour; turn litmus blue -pH: acid = 0-7; base = 7-14

S4.1.4a Understand that in water solution, an acid compound has an H ion (a portion lacking an electron), and the base compound has an OH ion (with an extra electron. When two come together, they form HOH (water) plus a stable compound called "salt

S4.1.4b Students will chart how chemists describe reactions by equations, for example: $\text{HCl} + \text{NaOH} = \text{NaCl} + \text{H}_2\text{O}$

S4.1.4c Understand that a catalyst helps a reaction, but is not used up.

S4.2 Organisms inherit genetic information in a variety of ways that result in continuity of structure and function between parents and offspring.

S4.2.1 Examine Cell division, the basic process for growth and reproduction

S4.2.1a Explain tTwo types of cell division: mitosis (growth and asexual reproduction) Tmeiosis (sexual reproduction) Asexual reproduction: mitosis; diploid cells (as in amoeba) Sexual reproduction: meiosis; haploid cells; combinations of traits

S4.2.1b Explain How change occurs from one generation to another; either mutation or mixing of traits through sexual reproduction

S4.2.1c Give reasons why acquired characteristics are not transmitted

In all organisms, genetic traits are passed on from generation to generation

S4.2.2 Students describe simple mechanisms related to the inheritance of some physical traits in offspring.

Some genes are dominant and some are recessive. Some traits are inherited by mechanisms other than dominance and recessiveness

The probability of traits being expressed can be determined using models of genetic inheritance. Some models of prediction are pedigree charts and Punnett squares.

The processes of sexual reproduction and mutation have given rise to a variety of traits within a species.

Changes in environmental conditions can affect the survival of individual organisms with a particular trait. Small differences between parents and offspring can accumulate in successive generations so that descendants are very different from their ancestors. Individual organisms with certain traits are more likely to survive and have offspring than individuals without those traits.

S4.3 ndividuals and organism change over time

S4.3.1 Students describe sources of variation in organisms and their structures and relate the variations to survival

Human activities such as selective breeding and advances in genetic engineering may affect the variations of species.

S4.3.2 Research Gregor Mendel's experiments with purebred and hybrid peas

S4.3.2a Examine Dominant and recessive genes

S4.3.2b Understand Mendel's statistical analysis led to understanding that inherited traits are controlled by genes (now known to be DNA)

S4.3.3 Modern understanding of chromosomes and genes

S4.3.3a Identify double helix (twisted ladder) of DNA coding; how DNA makes new DNA

S4.3.3b Explain how DNA sequence makes proteins; one gene equals one protein

S4.3.3c Research genetic engineering using online resources and the most recent published findings.

S4.2.3d Students will construct reports on modern researchers in genetics: Francis Crick, James Watson, Severo Ochoa, Barbara McClintock

S4.4 Individual organisms and species change over time.

S4.4.1 Evolution: genetic change in a population or organisms over time

S4.4.1a Students will chart adaptation, mutation, and extinction

S4.4.2 Natural selection: the theory that life forms better adapted to their current environment have a better chance of surviving and will pass on their traits to their offspring

S4.4.2a Trace trait variation and change from generation to generation

S4.3.2b Define specification

S4.5 Many of the phenomena that we observe on Earth involve interactions among components of air, water, and land.

S4.5.1 Students will differentiate weather vs. climate

S4.5.2 Comprehend that the atmosphere is composed of gases (including water vapor), and particles.

S4.5.3 Examine the effect of solar energy; wind; different temperatures create different densities

S4.5.4 Research weather and the water cycle:

S4.5.5 Differences and similarities between fronts and storms

S4.5.1a Students will understand that "weather" refers to daily changes in temperature, rainfall, sunshine, etc., while "climate" refers to weather trends that are no longer than the cycle of seasons

S4.5.2a Study the general circulation of the atmosphere

S4.5.2b Report on the effect of earth's rotation

S4.5.3a Understand Trade winds and prevailing westerlies

S4.4.3b Describe Monsoons, seasonal reversals of wind direction
S4.4.3c Describe El Nino

S4.4.4a Define evaporation, condensation, clouds, precipitation

S.4.5.5a Identify front: boundary between areas of higher and lower atmospheric pressure
Types of storm: Thunderstorms; tornados
Tropical storms: large cyclonic patterns including hurricanes and typhoons

S4.6 It is important to learn and review the contribution of scientists and thinkers to the development of modern day science and scientific achievements.

S4.6.1 Understand the contributions of important scientists.

S4.6.1a a Report on various scientists and their work. Some notable scientists include: Charles Darwin, Antoine Lavoisier, Lise Meitner, Dmitri Mendeleev

Standard 5 Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy

S5.1 Engineering design is an iterative process involving modeling and optimization used to develop technological solutions to problems within given constraints.

S5.1.1 identify needs and opportunities for technical solutions from an investigation of situations of general or social interest

S5.1.2 locate and utilize a range of printed, electronic, and human information resources to obtain ideas

S5.1.3 consider constraints and generate several ideas for alternative solutions, using group and individual ideation techniques (group discussion, brainstorming, forced connections, role play); defer judgment until a number of ideas have been generated; evaluate (critique) ideas; and explain why the chosen solution is optimal

S5.1.5 develop plans, including drawings with measurements and details of construction, and construct a model of the solution, exhibiting a degree of craftsmanship

S5.1.6 in a group setting, test their solution against design specifications, present and evaluate results, describe how the solution might have been modified for different or better results, and discuss tradeoffs that might have to be made

S5.2 Technological tools, materials, and other resources should be selected on the basis of safety, cost, availability, appropriateness, and environmental impact; technological processes change energy, information, and material resources into more useful forms.

S5.2.1 choose and use resources for a particular purpose based upon an analysis and understanding of their properties, costs, availability, and - environmental impact

S5.2.2 use a variety of hand tools and machines to change materials into new forms through forming, separating, and combining processes, and processes which cause internal change to occur

S5.2.3 combine manufacturing processes with other technological processes to produce, market, and distribute a product

S5.2.4 process energy into other forms and information into more meaningful information

Standard 6: Interconnectedness - Students will understand the relationships and

S6.1 Through systems thinking, people can recognize the commonalities that exist among all systems and how parts of a system interrelate and combine to perform specific functions.

S6.1.1 describe the differences between dynamic systems and organizational systems.

describe the differences and similarities between engineering systems, natural systems, and social systems.

describe the differences between open- and closed-loop systems.

describe how the output from one part of a system (which can include material, energy, or information) can become the input to other parts.

S7.1.1a compare systems with internal control (e.g., homeostasis in organisms or an ecological system) to systems of related components without internal control (e.g., the Dewey decimal, solar system).

Students will understand how systems are linked. They may follow the route of rubber from a tree to a tire to road fill.

S6.2 Models are simplified representations of objects, structures, or systems used in analysis, explanation, interpretation, or design.

S6.2.1 select an appropriate model to begin the search for answers or solutions to a question or problem

S6.2.2 use models to study processes that cannot be studied directly (e.g., when the real process is too slow, too fast, or too dangerous for direct observation).

S6.2.3 demonstrate the effectiveness of different models to represent the same thing and the same model to represent different things.

S6.2.1a choose a mathematical model to predict the distance a car will travel at a given speed in a given time.

S6.2.2a use a computer simulation to observe the process of growing vegetables or to test the performance of cars

S6.2.3a compare the relative merits of using a flat map or a globe to model where places are situated on Earth.

S6.2.3b use blueprints or scale models to represent room plans.

S6.3 The grouping of magnitudes of size, time, frequency, and pressures or other units of measurement into a series of relative order provides a useful way to deal with the immense range and the changes in scale that affect the behavior and design of systems

S6.3.1 cite examples of how different aspects of natural and designed systems change at different rates with changes in scale

S6.3.2 use powers of ten notation to represent very small and very large numbers

S6.4 Equilibrium is a state of stability due either to a lack of changes (static equilibrium) or a balance between opposing forces (dynamic equilibrium).

S6.4.1 describe how feedback mechanisms are used in both designed and natural systems to keep changes within desired limits

S6.5 Identifying patterns of change is necessary for making predictions about future behavior and conditions

S6.6 In order to arrive at the best solution that meets criteria within constraints, it is often necessary to make trade-offs.

S6.4.2 describe changes within equilibrium cycles in terms of frequency or cycle length and determine the highest and lowest values and when they occur

S6.5.1 use simple linear equations to represent how a parameter changes with time

S6.5.2 observe patterns of change in trends

or cycles and make predictions on what might happen in the future

S6.6.1 determine the criteria and constraints

and make trade-offs to

determine the best decision

use graphs of information for a decision making problem to determine the optimum solution

Standard 7 Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions.

S7.1 The knowledge and skills of mathematics, science, and technology are used together to make informed decisions and solve problems, especially those relating to issues of science/technology/society, consumer decision making, design, and inquiry into phenomena.

S7.1.1 analyze science/technology/society problems and issues at the local level and plan and carry out a remedial course of action

S7.1.2 make informed consumer decisions
by seeking answers to appropriate questions about products, services, and systems; determining the cost/benefit and risk/benefit tradeoffs; and applying this knowledge to a potential purchase

S7.1.3 design solutions to real-world problems
of general social interest related to home, school, or community using scientific experimentation to inform the solution and applying mathematical concepts and reasoning to assist in developing a solution

S7.1.4 describe and explain phenomena by
designing and conducting investigations involving systematic observations, accurate measurements, and the identification and control of variables; by inquiring into relevant mathematical ideas; and by using mathematical and technological tools and procedures to assist in the investigation

S7.2 Strategies and technology are used together to make informed decisions and solve problems, especially those relating to issues of science/technology/society, consumer decision making, design, and inquiry into phenomena.

S7.2.1 Students participate in an extended, culminating mathematics, science, and technology project. The project would require students to: work effectively; gather and process information; generate and analyze ideas; observe common themes; realize ideas; present results.

S7.2.1a Working Effectively: Contributing to the work of a brainstorming group, laboratory partnership, cooperative learning group, or project team; planning procedures; identify and managing responsibilities of team members; and staying on task, whether working alone or as part of a group.

S7.2.1b Gathering and processing information:
Accessing information from printed media,
electronic data bases, and community
resources and using the information to develop a
definition of the problem
and to research possible solutions

S7.2.1c Generating and analyzing ideas:
Developing ideas for proposed solutions,
investigating ideas, collecting data,
and showing relationships and patterns in the data

S7.2.1d Common themes: Observing examples of
common unifying themes, applying them to the
problem,
and using them to better understand the
dimensions of the problem

S7.2.1e Realizing ideas: Constructing components
or models, arriving at a solution, and evaluating
the
result

S7.3.1f Presenting results: Using a variety of
media to present the solution and to communicate
the
results

8th Grade Science Curriculum - Based on Core Knowledge

Standard 1 Students will use scientific inquiry to pose questions, seek answers and develop solutions

Key Ideas	Performance Indicators	Core Curriculum
S1.1 The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process.	S1.1. 1 Ask "why" questions in attempts to seek greater understanding concerning objects and events observed and heard about. SS1.1.2 Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the conventional techniques and procedures and usually requiring considerable ingenuity. SS1.1.3 The observations made while testing proposed explanations, when analyzed using conventional and invented methods, provide new insights into phenomena.	S1.1.1a Students question the explanations they hear from others and read about, seeking clarification and comparing them with their own observations and understandings. S1.1.1b Students will develop relationships among observations to construct descriptions of objects and events and to form their own tentative explanations of what they have observed. SS1.1.3a Students will organize observations and measurements of objects and events through classification and the preparation of simple charts and tables

Standard 2 - Students will access, generate, process, and transfer information using appropriate technologies.

S2.1 Information technology is used to retrieve, process, and communicate information and as a tool to enhance learning.

SS2.1.1 use a range of equipment and software to integrate several forms of information in order to create good quality audio, video, graphic, and text-based presentations

SS2.1.2 use spreadsheets and data-base software to collect, process, display, and analyze information. Students access needed information from electronic data bases and on-line telecommunication services

SS2.1.3 systematically obtain accurate and relevant information pertaining to a particular topic from a range of sources, including local and national media, libraries, museums, governmental agencies, industries, and individuals.

SS2.1.4 collect data from probes to measure events and phenomena

S2.1.5 use simple modeling programs to make predictions

S2.2.1 understand the need to question the accuracy of information displayed on a computer because the results produced by a computer may be affected by incorrect data entry identify advantages and limitations of data-handling programs and graphics programs

understand why electronically stored personal information has greater potential for misuse than records kept in conventional form

SS2.1.1a Students will access offline and online resources to construct reports, presentations and papers dealing with science topics.

SS2.2.1a Students will access online resources to find and explain erroneous information from a directed list of sites.

S2.2 Knowledge of the impacts and limitations of information systems is essential to its effective and ethical use.

S2.3 Information technology can have positive and negative impacts on society, depending upon how it is used.

use graphical, statistical, and presentation software to present project to fellow classmates

describe applications of information technology in mathematics, science, and other technologies that address needs and solve problems in the community
explain the impact of the use and abuse of electronically generated information on individuals and families

Standard 4 Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science

Key Ideas	Performance Indicators	Core Curriculum
S4.1 Energy exists in many forms, and when these forms change energy is conserved	S4.1.1 Review Basic terms and concepts (review from grade 4):	S4.1.1a Electricity is the flow of electrons in a conductor. Opposite charges attract, like charges repel. S4.1.1b Define Conductors and insulators; Open and closed circuits S4.1.1c Short circuit: sudden surge of amperage due to the reduction of resistance in a circuit; protection from short circuits is achieved by fuses and circuit breakers S4.1.1d Review Electrical safety
S4.2 Students observe and describe the properties of sound, light, magnetism, and electricity	S4.2.1 Understand properties of Electricity	S4.2.1a Identify Electricity as the flow of electrons S4.2.1b Communicate that Electrons carry negative charge; protons carry positive charge

S4.2.2 Understand Properties of Static Electricity

S4.2.3 Observe Flowing electricity

S4.2.1c Demonstrate understanding of Conductors: materials like metals that easily give up electrons

S4.2.1 d Describe Insulators: materials like glass that do not easily give up electrons

S4.2.2a Communicate-A static charge (excess or deficiency) creates an electric field

S4.4.2b Demonstrate understanding that Electric energy can be stored in capacitors (typically two metal plates, one charged positive and one charged negative, separated by an insulating barrier). Capacitor discharges can release fatal levels of energy

S4.4.2c Describe that Grounding drains an excess or makes up a deficiency of electrons, because the earth is a huge reservoir of electrons. Your body is a ground when you get shock of static electricity.

S4.4.2d Explain that Lightning is a ground of static electricity from clouds

S4.2.3a Demonstrate comprehension that Electrical potential is measured in volts

S4.2.3b Demonstrate that Electric flow or current is measured in amperes: 1 ampre = flow of 1 coulumb of charge per second (1 coulumb = the charge of 6.25 billion billion electrons)

S4.2.3cDescribe how the total power of an electric flow over time is measured in watts

S4.2.4 Examine Magnetism and Electricity

S4.2.5 Describe Practical applications of the connection between electricity and magnetism

S4.2.3d Explain that the unit of electrical resistance is the ohm. Ohm's Law: watts = amps x volts. And the corollaries: amps = watts/volts; volts = watts/amps.

S4.2.4a Communicate that Earth's magnetism is believed to be caused by movements of charged atoms in the molten interior of the planet

S4.2.4b Explain how Navigation by magnetic compass is made possible because the earth is a magnet with north and south magnetic poles

S4.2.4c Distinguish a -Connection between electricity and magnetism - Example: move a magnet back and forth in front of a wire connected to a meter, and electricity flows in the wire. The reverse: electric current flowing through a wire exerts magnetic attraction.

S4.2.4d Explain how Spinning electrons in an atom creates a magnetic field around the atom

S4.2.4e Communicat that Unlike magnetic poles attract, like magnetic poles repel

S4.2.5a Describe how an electric generator creates alternating current by turning a magnet and a coil of wire in relation to each other; an electric motor works on the reverse principle

S4.2.6 Research Electromagnetic Radiation and Light

S4.2.5b Understand that A step-up transformer sends alternating current through a smaller coil of wire with just a few turns next to a larger coil with many turns. This induces a higher voltage in the larger coil. A step-down transformer does the reverse, sending current through the larger coil and creating a lower voltage in the smaller one.

S4.2.5c Build an electromagnet and investigate the effects of using different types of core materials, varying thicknesses of wire, and different circuit types.

S4.2.6a Understand that Waves and electromagnetic radiation- Most waves, such as sound and water waves, transfer energy through matter, but light belongs to a special kind of radiation that can transfer energy through empty space.

S4.2.6b Show understanding that the electromagnetic spectrum From long waves, to radio waves, to light waves, to x-rays, to gamma rays. Called "electromagnetic" because the radiation is created by an oscillating electric field which creates an oscillating electric field at right angles, and so on, with both fields perpendicular to each other and the direction the wave is moving

S4.2.7 Compare Refraction and reflection

S4.2.6c Describe the light spectrum: from infrared (longest) to red, orange, yellow, green, blue, violet (shortest)

S4.2.6d Speed in a vacuum of all electromagnetic waves including light: 300,000 km per second, or 186,000 miles per second; a universal constant, called "c"

S4.2.7a Define Refraction: the slowing down of light in glass causes it to bend, which enables lenses to work for television, photography, and astronomy

S4.2.7b Describe how Isaac Newton used refraction of a prism to discover that white light was made up of rays of different energies (or colors)

S4.2.7c Reflection: concave and convex reflectors; focal point

S4.2.8 Explore the properties of Sound Waves

S4.2.8a Waves transfer energy by oscillation without transferring matter; matter disturbed by a wave returns to its original place. Wave properties: wavelength, frequency, speed, crest, trough, amplitude

s4.2.8b Understand that there are two kinds of waves: transverse (for example, light) and longitudinal (for example, sound) Common features of both kinds of waves: Speed and frequency of wave determine wavelength. Wave interference occurs in both light and sound. Doppler effect occurs in both light and sound.

S4.2.8c Demonstrate an understanding of sound waves: longitudinal, compression waves, made by vibrating matter, for example, strings, wood, air. While light and radio waves can travel through a vacuum, sound waves cannot. Sound waves need a medium through which to travel.

S4.2.8d Explain Speed of sound. Sound goes faster through denser mediums, that is, faster through solids and liquids than through air (gases) At room temperature, sound travels through air at about 340 meters per second (1,130 feet per second). Speed of sound = Mach number. Supersonic booms; breaking the sound barrier

S4.2.8e Communicate about Frequency of sound waves measured in "cycles per second" or Hertz (Hz) Audible frequencies roughly between 20 and 20,000 Hz The higher the frequency, the higher the subjective "Pitch"

S4.2.8f Show and understanding that Amplitude or loudness is measured in decibels (db). Very loud sounds can impair hearing or causes deafness. Reasonable, for example, the sound board of a piano, or plates of a violin

S4.3 Organisms maintain a dynamic equilibrium that sustains life.

S4.3.1 Describe the Chemistry of Food and Respiration

S4.3.1a Communicate that Energy for most life on earth comes from the sun, typically from sun, to plants, to animals, back to plants

S4.3.1b Understand that Living cells get most of their energy through chemical reactions

S4.3.1c Explain how all living cells make and use carbohydrates (carbon and water), the simplest of these being sugars. All living cells make and use proteins, often very complex compounds containing carbon, hydrogen, oxygen, and many other elements. Making these compounds involves chemical reactions which need water, and take place in and between cells, across cell walls. The reactions also need catalysts called "enzymes." Many cells also make fats, which store energy and food.

S4.3.2 Explain Energy in plants: photosynthesis

S4.3.2a Understand that Plants do not need to eat other living things for energy.

S4.3.2a Describe Main nutrients of plants: the chemical elements nitrogen, phosphorus, potassium, calcium, carbon, oxygen, hydrogen (some from soil or the sea, others from the air)

S4.3.2b Describe Photosynthesis, using chlorophyll, converts these elements into more plant cells and stored food using energy from sunlight. Leafy plants mainly get their oxygen dissolved in water from their roots, and their carbon mainly from the gas CO₂. Plant photosynthesis uses up CO₂ and releases oxygen.

S4.3.3 Explore Energy in animals: respiration

S4.3.3a Explain Animal chemical reactions do the opposite of plants – they use up oxygen and release CO₂. In animals the chief process is not photosynthesis but respiration, that is, the creation of new compounds through oxidation.

S4.3.3b Demonstrate understanding that Animals cannot make carbohydrates, proteins, and fats from elements. They must eat these organic compounds from plants or other animals, and create them through respiration.

S4.3.3c Understand that Respiration uses oxygen and releases CO₂, creating an interdependence and balance between plant and animal life

S4.3.4 Explore Human nutrition and respiration

S4.3.4a Describe that Humans are omnivores and can eat both plants and animal food.

S4.3.4b Communicate that Human respiration, through breathing, gets oxygen to the cells through the lungs and the blood.

S4.4 Individual organisms and species change over time

S4.3.5 Understand what constitutes Human health

S4.4.1 The continuity of life is sustained through reproduction and development.

S4.3.5a Explain that while many other animals can make their own vitamins, humans must get them from outside.

S.4.3.5b Describe a balanced diet: the food pyramid for humans (review); identification of the food groups in terms of fats, carbohydrates, proteins, vitamins, and trace elements

S4.4.1a Some organisms reproduce asexually. Other organisms reproduce sexually. Some organisms can reproduce both sexually and asexually.

There are many methods of asexual reproduction, including division of a cell into two cells, or separation of part of an animal or plant from the parent, resulting in the growth of another individual.

Methods of sexual reproduction depend upon the species. All methods involve the merging of sex cells to begin the development of a new individual. In many species, including plants and humans, eggs and sperm are produced.

Fertilization and/or development in organisms may be internal or external.

S4.45 Many of the phenomena that we observe on Earth involve interactions among components of air, water, and land.

S4.5.1 Examine Plate Tectonics, Earthquakes, and Volcanoes

S4.5.1a Students will report on The surface of the earth which is in constant movement. The present features of earth come from its ongoing history. After the sun was formed, matter cooled creating the planets. The continents were joined (Pangaea).

S4.5.1b Describe the layered structure of the earth. Crust: surface layer of mainly basalt or granite, 5 to 25 miles thick. Mantle: 1,800 miles thick, rock or intermediate density, moves very slowly. Outer core: liquid iron and nickel. Inner core: solid iron and nickel, 800 miles thick, about 7,000 degrees C.

S4.5.1c Research crust movements The surface of earth is made up of rigid plates that are in constant motion. Plates move because molten rock rises and falls under the crust causing slowly flowing currents under the plates. Plates move at a speeds ranging from 1 to 4 inches (5-10 centimeters) per year. Earthquakes usually occur where stress has been built up by plates moving opposite directions against each other. Earthquakes cases waves (vibrations) which have: Focus, the point below the surface where the quake begins Epicenter, the point on the surface above the focus. Energy released is measured in the Richter scale; each unit increases on the Richter scale represents a tenfold increase in energy released.

S4.5.1d Describe and report on
Volcanoes: openings in the crust where magma is released as fiery rock or lava from the mantle
Volcanoes usually occur where plates are pulling apart or coming together, but some occur at holes (hot spots) in the crust away from plate boundaries. As plates move over these hot spots, they cause chains of volcanoes and island chains like the Hawaiian Islands. Famous volcanoes: Vesuvius, Krakatoa, Mount St. Helens

S4.6 It is important to learn and review the contribution of scientists and thinkers to the development of modern day science and scientific achievements.

S4.6.1. Review the lives of various scientists

S4.6.1a Explore the lives and accomplishments of Dorothy Hodgkin, James Maxwell, Charles Steinmetz, Alfred Wegener

Standard 5 Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems to

S5.1 Engineering design is an iterative process involving modeling and optimization used to develop technological solutions to problems within given constraints.

S5.1.1 identify needs and opportunities for technical solutions from an investigation of situations of general or social interest

S5.1.2 locate and utilize a range of printed, electronic, and human information resources to obtain ideas

S5.1.3 consider constraints and generate several ideas for alternative solutions, using group and individual ideation techniques (group discussion, brainstorming, forced connections, role play); defer judgment until a number of ideas have been generated; evaluate (critique) ideas; and explain why the chosen solutions optima

S5.1.5 develop plans, including drawings with measurements and details of construction, and construct a model of the solution, exhibiting a degree of craftsmanship

S5.2 Technological tools, materials, and other resources should be selected on the basis of safety, cost, availability, appropriateness, and environmental impact; technological processes change energy, information, and material resources into more useful forms.

S5.1.6 in a group setting, test their solution against design specifications, present and evaluate results, describe how the solution might have been modified for different or better results, and discuss tradeoffs that might have to be made

S5.2.1 choose and use resources for a particular purpose based upon an analysis and understanding of their properties, costs, availability, and environmental impact

S5.2.2 use a variety of hand tools and machines to change materials into new forms through forming, separating, and combining processes, and processes which cause internal change to occur

S5.2.3 combine manufacturing processes with other technological processes to produce, market, and distribute a product

S5.2.4 process energy into other forms and information into more meaningful information

Standard 6: Interconnectedness - Students will understand the relationships and

S6.1 Through systems thinking, people can recognize the commonalities that exist among all systems and how parts of a system interrelate and combine to perform specific functions.

S6.1.1 describe the differences between dynamic systems and organizational systems.

S6.1.1a compare systems with internal control (e.g., homeostasis in organisms or an ecological system) to systems of related components without internal control (e.g., the Dewey decimal, solar system).

describe the differences and similarities between engineering systems, natural systems, and social systems.

S6.1.2.1a Students will chart differences between engineering, natural and social systems.

describe the differences between open- and closed-loop systems.

describe how the output from one part of a system (which can include material, energy, or information) can become the input to other parts.

S6.6.1a Students will understand how systems are linked. They may follow the route of rubber from a tree to a tire to road fill.

S6.2 Models are simplified representations of objects, structures, or systems used in analysis, explanation, interpretation, or design.

S6.2.1 select an appropriate model to begin the search for answers or solutions to a question or problem

S6.2.1a choose a mathematical model to predict the distance a car will travel at a given speed in a given time.

S6.2.2 use models to study processes that cannot be studied directly (e.g., when the real process is too slow, too fast, or too dangerous for direct observation).

S6.2.2a use a computer simulation to observe the process of growing vegetables or to test the performance of cars

S6.2.3 demonstrate the effectiveness of different models to represent the same thing and the same model to represent different things.

S6.2.3a compare the relative merits of using a flat map or a globe to model where places are situated on Earth.

S6.2.3b use blueprints or scale models to represent room plans.

S6.3 The grouping of magnitudes of size, time, frequency, and pressures or other units of measurement into a series of relative order provides a useful way to deal with the immense range and the changes in scale that affect the behavior and design of system

S6.4 Equilibrium is a state of stability due either to a lack of changes (static equilibrium) or a balance between opposing forces (dynamic equilibrium).

S6.5 Identifying patterns of change is necessary for making predictions about future behavior and conditions

S6.6 In order to arrive at the best solution that meets criteria within constraints, it is often necessary to make trade-offs.

S6.3.1 cite examples of how different aspects of natural and designed systems change at different rates with changes in scale

S6.3.2 use powers of ten notation to represent very small and very large numbers

S6.4.1 describe how feedback mechanisms are used in both designed and natural systems to keep changes within desired limits

S6.4.2 describe changes within equilibrium cycles in terms of frequency or cycle length and determine the highest and lowest values and when they occur

S6.5.1 use simple linear equations to represent how a parameter changes with time

S6.5.2 observe patterns of change in trends or cycles and make predictions on what might happen in the future

S6.6.1 determine the criteria and constraints and make trade-offs to determine the best decision use graphs of information for a decision making problem to determine the optimum solution

Standard 7 Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life

S7.1 The knowledge and skills of mathematics, science, and technology are used together to make informed decisions and solve problems, especially those relating to issues of science/technology/society, consumer decision making, design, and inquiry into phenomena.

S7.1.1 analyze science/technology/society problems and issues at the local level and plan and carry out a remedial course of action

S7.1.2 make informed consumer decisions by seeking answers to appropriate questions about products, services, and systems; determining the cost/benefit and risk/benefit tradeoffs; and applying this knowledge to a potential purchase

S7.1.3 design solutions to real-world problems of general social interest related to home, school, or community using scientific experimentation to inform the solution and applying mathematical concepts and reasoning to assist in developing a solution

S7.1.4 describe and explain phenomena by designing and conducting investigations involving systematic observations, accurate measurements, and the identification and control of variables; by inquiring into relevant mathematical ideas; and by using mathematical and technological tools and procedures to assist in the investigation

S7.2 Strategies and technology are used together to make informed decisions and solve problems, especially those relating to issues of science/technology/society, consumer decision making, design, and inquiry into phenomena.

S7.2.1 Students participate in an extended, culminating mathematics, science, and technology project. The project would require students to: work effectively; gather and process information; generate and analyze ideas; observe common themes; realize ideas; present results.

S7.2.1a Working Effectively: Contributing to the work of a brainstorming group, laboratory partnership, cooperative learning group, or project team; planning procedures; identify and managing responsibilities of team members; and staying on task, whether working alone or as part of a group

S7.2.1b Gathering and processing information: Accessing information from printed media, electronic data bases, and community

resources and using the information to develop a definition of the problem and to research possible solutions

S7.2.1c Generating and analyzing ideas: Developing ideas for proposed solutions, investigating ideas, collecting data, and showing relationships and patterns in the data

S7.2.1d Common themes: Observing examples of common unifying themes, applying them to the problem, and using them to better understand the dimensions of the problem

S7.2.1e Realizing ideas: Constructing components or models, arriving at a solution, and evaluating the result

S7.3.1f Presenting results: Using a variety of media to present the solution and to communicate the results

5th Grade Social Studies Curriculum

Social Studies Standard 1. The History of the United States and New York Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in the history of the United States and New York.

Key Ideas	Performance Indicators	Core Curriculum
SS1.1 The study of New York State and United States history requires an analysis of the development of American culture, its diversity and multicultural context, and the ways people are unified by many values, practices, and traditions	SS1.1.1 Students explore the meaning of American culture by identifying the key ideas, beliefs, and patterns of behavior and traditions that help define it and unite all Americans.	SS1.1.1a Students will be able to identify specific examples of cultural contributions by different ethnic, nation and religious groups to each of the nations and regions. SS1.1.1B Compare and contrast the views of different groups on the same issue, specifically Native Americans (Iroquois) and the earliest settlers from England and Holland SS1.1.1c Students show familiarity with Early Native American custom and traditions, including the Iroquois and Algonquin. SS1.1.1c Students will explore the earliest settlements of Europeans in North America and New York State. SS1.1.1d Students will be able to list the ways in which the earliest European settlers and Native Americans affected each other culturally. SS1.1.1f Use maps to identify the movement of people goods and ideas across the world. SS1.1.1G Understand that different ethnic, national, and religious groups, including Native American Indians, have contributed to the cultural diversity of these nations and regions by sharing their customs, traditions, beliefs, ideas, and languages

SS1.2 Important ideas, social and cultural values, beliefs, and traditions from New York State and United States history illustrate the connections and interactions of people and events across time and from a variety of perspectives

SS1.1. 2. Students interpret the ideas, values and beliefs contained in the Mayflower Compact, Declaration of Independence and the New York State Constitution and United States Constitution, Bill of Rights, and other important historical documents.

SS1.2.1 Students describe the reasons for periodizing history in different ways.

SS1.2.2 Students investigate key turning points in New York State and United States history and explain why these events or developments are significant

SS1.2.3 Students understand the relationship between the relative importance of United States domestic and foreign policies over time

SS1.1.1H Students will be able to define the following terms: governing; transport (verb); ship (verb); rural; urban; evidence; caption; analyze; deed (land); took passage; opened for settlement; primary source; secondary source; rights; laws; culture; supply and demand; goods; services; major turning point; relief map (physical); conservation.

SS1.1.2a Demonstrate an understanding of the ideas, values and beliefs contained in early American historical documents.

SS1.2.1a Create a chart showing periods of early American history.

SS1.2.2a Students understand and can describe what a historical turning point is, with examples.

SS1.2.3a Students can recognize and explain the difference between foreign and domestic policies.

SS1.3 Study the important roles and contributions of individuals and groups socially, politically, economically, culturally and religiously in the development of New York State and the United States.

SS1.4 The skills of historic analysis include the ability to: explain the significance of historic evidence; weigh the importance, reliability and validity of evidence; understand the concept of multiple causation; understand the importance of changing and competing interpretations of different historic developments.

SS1.2.4 Students analyze the role played by the United States in international politics, past and present.

SS1..3.1 Students investigate different ethnic, national and religious groups and their achievements and contributions to New York State and U.S. (should include Native Americans.)

SS1.3.2 Students categorize major developments regarding social, political, economic, geographic, technological, scientific, cultural or religious developments.

SS1..4.1 Students consider the sources of historic documents, narratives or artifacts and evaluate their reliability.

SS1.4.2 Students will interpret historic events and issues based on different experiences, beliefs, values, and traditions.

SS1.2.4a Trace the tension between arguments for United States isolation versus engagement during the following time periods: up to 1941, from 1941-1975, and from 1976 to the present.

SS1..3.1a Students may give oral reports concerning achievements of various ethnic, national and religious groups, in order to exchange knowledge of these groups.

SS1.3.2a Students will create a graphic organizer or some other visual demonstrating achievements and contributions of individuals and groups living in the U. S.

SS1.4.1a Compare several historical accounts of the same event in New York State or United States history and contrast the different facts included or omitted from each author and determine the different authors' points of view.

SS.1.4.1a Understand that different people living in the Western Hemisphere may view the same event or issue from different perspectives As an example students may stud broadsheets published in Canada at the time of the Revolutionary War and compare to those published in New York City or Philadelphia.

SS1.4.3 Students describe historic events and experiences through the eyes of those who were there

SS1.4.2c Students will examine and rewrite a diary based on the description of historic events.

SS1.4.1b Students may compare reports of the battle of the Alamo from both the American and Mexican perspective.

Standard 2 World History Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in world history and examine the broad sweep of history from a variety of perspectives:

Key Ideas	Performance Indicators	Core Curriculum
SS2.1 The study of world history requires an understanding of world cultures and civilizations, including an analysis of important ideas, social and cultural values, beliefs, and traditions. This study also examines the human condition and the connections and interactions of people across time and space and the ways different people view the same event or issue from a variety of perspectives	SS2.1.1 Students know the social and economic characteristics, such as customs, traditions, child-rearing practices, ways of making a living, education, and socialization practices, gender roles, foods, and religious and spiritual beliefs that distinguish different cultures and civilizations.	SS.2.1.1a Know that the migration of groups of people in the United States, Canada, and Latin America has led to cultural diffusion because people carry their ideas and ways of life with them when they move from place to place
	SS2.1.2 Students know some historic events and developments of past civilizations	SS2.1.1b Students will be able to make a chart showing the connections and exchanges between peoples of the Western Hemisphere SS2.1.2a Students may create a timeline of historic events for the Mayans, Aztecs and Incas

SS2.1.3 Students interpret and analyze historic documents and artifacts related to important developments and happenings in world history.

SS2.2 Key turning points and events in the histories of Canada, Latin America and the U.S. can be organized into different historical time periods.

SS2.2.1 Develop timelines by placing events in correct chronological order

SS2.2.2 Students measure time periods by years, decades, centuries and millennia.

SS2.1.2a Use a variety of sources to study important turning points from different perspectives and to identify varying points of view of the people involved (e.g., European settlement and the impact of diseases on Native American Indian populations, writing the Declaration of Independence and the Constitution, the Civil War, industrialization, significant reform movements, and the Cold War) Many of these source documents should be primary sources.

SS2.2.1a Students may practice using Graphic organizers to describe the growth and development of various colonies throughout North and South America

SS2.2.1a Recognize and understand the reasons for periodizing history and know some designations of historical periods; discuss the usefulness of the following periods: - Three Worlds and Their Meeting in the Americas Beginnings to 1607) - Colonization, Settlement and Communities (1607 to 1763) - The Revolution and the New Nation (1763 to 1815) - Expansion and Reform (1801 to 1861) - Crisis of the Union: Civil War and Reconstruction (1850 to 1877) - The Development of Modern America (1865 to 1920) - Modern America and the World Wars (1914 to 1945) - Contemporary America (1945 to Present)

SS2.3 Study of the major social, political, cultural and religious developments in world history involves learning about the important roles of individuals and groups.

SS2.3.1 Students investigate the roles and contributions of individuals and groups in relation to key political, cultural and religious practices

SS2.3.1a Students will prepare reports on historic figures who have made important contributions to the growth of Canada, Latin America and the United States. Through the exchange of these reports, students will gain a broader understanding of a variety of historic individuals.

Standard 3 Geography Students will use a variety of intellectual skills to demonstrate their understanding of the geography of the interdependent world in which we live—local, national, and global—including the distribution of people, places, and environments over the Earth's surface.

Key Ideas

Performance Indicators

Core Curriculum

SS3.1 Geography can be divided into six essential parts. Nations and regions of the western hemisphere can be analyzed in terms of spatial organization, places, and regions, physical settings, human systems, environment and society and the use of geography

SS3.1.1 Students map information about people, places and environments

SS3.1.1a Draw from memory a map of the world on a single sheet of paper and outline and label the major physical features (e.g., continents, oceans, major mountain ranges, significant desert regions, and river systems) and important human features (e.g., major cities of the world, imaginary lines such as the prime meridian and the equator).

SS3.1.2 Students understand the characteristics, functions and applications of maps, global aerial and other photographs, satellite produced images and models

SS3.1.2a Use maps and other information to compare and contrast data related to the geography of U.S., Canada and Latin America

SS3.1.3 Students investigate why people and places are located where they are located and what patterns can be perceived by these locations.

SS3.1.3a Understand that political boundaries change over time and place. Examine some of the boundary shifts around the area of the Great Lakes.

SS3.1.3b Give examples of changes in political boundaries in the Western Hemisphere.

SS3.1.3c Distinguish the characteristics, distribution and complexities of cultures found in the Western Hemisphere.

SS3.1.4 Students describe the relationship between people and environments and the connections between people and places.

SS3.1.4a Identify some of the geological processes that have shaped the physical environments of the U. S., Canada and Latin America.

SS3.1.4b Know the physical and human characteristics of places in the U.S., Canada and Latin America.

SS3.1.4c Students will be able to list ways in which man has altered the physical environments of the western hemisphere.

SS3.2 Geography requires the development application of the skills of asking and answering geographic questions, analyzing theories of geography, and acquiring, organizing, and analyzing geographic information.

SS3.2.1 Students present geographic information in various forms including maps, tables graphs, charts, diagrams and computer generated models.

SS3.2.1a Students will use online and print resources in order to develop and present multimedia reports on a geographic topic, issue, problem, or question (e.g., deforestation, energy consumption, resource depletion, natural hazards, major geographic events), making use of maps, graphs, photographs, videos, computer-generated models, and other appropriate sources

SS3.2.2 Students interpret geographic information by synthesizing data and developing conclusions and generalizations about geographic issues and problems.

SS3.2.2 Use a variety of research skills to locate, collect, and organize geographic data related to a geographic or environmental issue, problem, or question; organize the data in logical and meaningful ways; present written and oral reports that include geographic conclusions and generalizations supported by the data collected; propose new questions for further investigation.

SS3.2.3 Students create geographic questions and define geographic issues and problems.

SS3.2.3a Students examine issues related to environmental problems and concerns, transportation and traffic needs, land use, housing, natural resource use.

SS3.3 Students use a number of research skills (use almanacs, maps, surveys, reference works) to locate and gather geographic information about issues and problems.

SS3.3.1a Compare and contrast the physical features of the U.S., Canada and Latin America

Standard 4 Students will use a variety of intellectual skills to demonstrate their understanding of how the United States and other societies develop economic systems and associated institutions to allocate scarce resources, how major decision-making units function in the United States and other national economies, and how an economy solves the scarcity problem through market and nonmarket mechanisms

Key Ideas	Performance Indicators	Core Curriculum
SS4.1 The study of economics requires an understanding of major economic concepts and systems, the principles of economic decision making and the interdependence of economic systems throughout the world	SS4.1.1 Students explain how societies and nations attempt to satisfy their basic needs and wants by utilizing scarce capital, natural and human resources.	SS4.1.1a Students may give examples of capital, natural and human resources
	SS4.1.2 Students define basic economic concepts such as: scarcity, supply and demand, markets, opportunity costs, resources, productivity, economic growth and systems.	SS4.1.1b List economic choices that must be made as a result of limited resources. SS4.1.2a Identify the basic economic systems in place in U.S., Canada and Latin America.
	SS4.1.3 Students understand how scarcity requires people and nations to make choices which involve cost and future considerations.	SS4.1.2b Students will define and give examples of basic economic concepts. SS4.1.3a Students will understand that as the economic systems of the global community have become more interdependent, decisions made in one nation or region in the Western Hemisphere have implications for all nations or regions.

SS4.1.4 Students understand how people in the United States and throughout the world are both consumers and producers of good and services.

SS4.1.5 Students investigate how people in the U.S. and throughout the world answer the three fundamental economic questions and solve basic economic problems.

SS4.1.6 Students explain how nations throughout the world have joined with one another to promote economic development and growth

SS4.1.3b Give examples of how events in one country can impact the economy of another country.

SS4.1.1d1 Students will list transportation and communication links, trade, imports and exports that occur between the nations of North and South America.

SS4.1.5a Students will trace the different economic systems that have evolved to deal with economic decision making.

SS4.1.6a Students will investigate economic and trade agreement between north, central and south America.

SS4.1.6b Students will create a chart of positive and negative impacts of technological development giving specific examples.

SS4.1.6c Students will give examples of how events in on country can impact the economy of another country

SS4.1.6d Students will illustrate examples of resources and products that we depend on other countries to provide.

SS4.2a Investigate different societies and groups living in Africa, Asia, and the Middle East to determine their available resources, industries, and problems in meeting basic needs. List alternative ways to resolve their economic problems and evaluate the effectiveness of each proposed solution

SS4.2 Economics requires the development and application of the skills needed to make more informed and well reasoned economic decisions in daily and national life.

Standard 5 Civics, Citizenship and Government -Students will use a variety of intellectual skills to demonstrate their understanding of how the United States and other societies develop economic systems and associated institutions to allocate scarce resources, how major decision-making units function in the United States and other national economies, and how an economy solves the scarcity problem through market and nonmarket mechanisms.

Key Ideas	Performance Indicators	Core Curriculum
SS5.1 The study of civics, citizenship and government involves learning about political systems; the purposes of government and civic life and the differing assumptions held by people across time and place regarding power, authority, governance, and law	SS5.1.1 Students analyze how the values of a nation affect the guarantee of human rights and make provisions for human needs. SS5.1.2 Students consider the nature and evolution of constitutional democracies. SS5.1.3.Students explore the rights of citizens in other parts of the hemisphere and determine how they are similar to and different from the rights of American citizens. SS5.1.2 Student analyze the sources of a nation's values as embodied in its constitution, statutes and important court cases.	SS5.1.1a Use concepts such as civic life, politics and government to answer questions about what governments can and should do, how people should live their lives together and how citizens can support the proper use of authority or combat the abuse of political power. SS5.1.1bGive examples of how fifth grade students could influence a political decision. SS5.1.2a Understand that constitutions rules and laws are developed in democratic societies in order to maintain order, provide security and protect individual rights. SS5.1.2bGive examples of rules that are in your school to protect everyone. SS5.1.3a Select two other countries to compare and contrast the governments to the United States form of government. SS5.1.2a Students will construct flashcards that define justice, due process, equality and majority rule

SS5.1.3 Students explain what citizenship means in a democratic society, how citizenship is defined in the constitution and other laws of the land and how the definition of citizenship has changed in the United States and New York State over time.

SS5.1.2b Understand the legal, political, historical documents. Define the values, beliefs and principles of constitutional democracy in the United States these documents include the Declaration of Independence, the United States Constitution. In Canada these documents include the British North America Act and the Canadian Bill of Rights.

SS5.1.3a Understand that citizenship in the U.S., Canada and nations of Latin America include an awareness of the patriotic celebrations of those nations. In the U.S. these celebrations include Lincoln's Birthday, Washington's Birthday, Independence Day, Labor Day, Memorial Day, Thanksgiving, Martin Luther King Day, Veteran's Day, Election, Flag Day and Conservation Day.

6th Grade Social Studies

Standard 1 History of the United States and New York State Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in the history of the United States and New York.

Standard 2 World History Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in world history and examine the broad sweep of history from a variety of perspectives.

Key Ideas	Performance Indicators	Core Curriculum
S2.1 The study of world history requires an understanding of world cultures and civilizations, including an analysis of important ideas, social and cultural values, beliefs, and traditions. This study also examines the human condition and the connections and interactions of people across time and space and the ways different people view the same event or issue from a variety of perspectives	S2.1.1 Students know the social and economic characteristics, such as customs, traditions, child-rearing practices, ways of making a living, education, and socialization practices, gender roles, foods, and religious and spiritual beliefs that distinguish different cultures and civilizations.	S2.1.1a Know that the civilizations and cultures of the Eastern Hemisphere have contributed important ideas, beliefs, and traditions to the history of humankind.
	S2.1.2 Students know some important historical events and developments of past civilizations	S2.1.2a Distinguish different peoples views of the same event or issue from different perspectives
	S2.1.3 Students interpret and analyze documents and artifacts related to significant developments and events in world history	S2.1.3a Demonstrate an understanding that civilizations and cultures of the Eastern Hemisphere (e.g. China, India, Greece, and Rome) are explored through the arts and sciences, key documents, and other important artifacts. Discuss how these artifacts have influenced the growth of American civilization and government
S2.2 Establishing timeframes, exploring different periodizations, examining themes across time and within cultures, and focusing on important turning points in world history help organize the study of world cultures and civilizations	S2.2.1 Students develop timelines by placing important events and developments in world history in their correct chronological order.	S2.2.1a Organize key turning points and events in the histories of Eastern Hemisphere nations into different historical time periods and know that the study of Eastern Hemisphere nations should include countries from each continent
	S2.2.2 Students measure time periods by years, decades, centuries, and millennia	S2.2.2a Use years, decades, centuries, and millennia to measure time

S2.2.3Students study about major turning points in world history by investigating the causes and other factors that brought about change and the results of these changes.

S2.2.3a Know that the Neolithic Revolution was a technological development that radically changed the nature of human society

SS2.2.3b Know that internal and external factors altered civilizations in the Eastern Hemisphere and eventually contributed to their decline

SS2.2.3c Know that in Europe, the Renaissance was marked by major achievements in literature, music, painting, sculpture, and architecture

SS2.3 Study of the major social, political, cultural, and religious developments in world history involves learning about the important roles and contributions of individuals and groups

SS2.3.1 Students investigate the roles and contributions of individuals and groups in relation to key social, political, cultural, and religious practices throughout world history

SS2.3.1a Know that religious and other belief systems, animism, ancestral worship, Confucianism, Hinduism, Judaism, Christianity and Islam have played important roles and made important contributions to world History.

SS2.3.1b Know that individuals and groups in the Eastern Hemisphere have played important roles and made important contributions to world history

SS2.3.1c Know that family, clan, and tribal groups act to maintain law and order. (Old and New Stone Age and Early River Valley Civilizations)

SS2.3.2 Students interpret and analyze documents and artifacts related to significant developments and events in world history.

SS2.3.2a Students will investigate the latest developments in the discovery of the Ice Man.

SS2.3.3 Students classify historic information according to the type of activity or practice: social/cultural, political, economic, geographic, scientific, technological, and historic.

SS2.3.3a Propose a list of characteristics to define the concepts of culture and civilization, explaining how civilizations develop and change.

SS2.4 The skills of historical analysis include the ability to investigate differing and competing interpretations of the theories of history, hypothesize about why interpretations change over time, explain the importance of historical evidence, and understand the concepts of change and continuity over time.

SS2.4.1 Students explain the literal meaning of a historical passage or primary source document, identifying who was involved, what happened, where it happened, what events led up to these developments, and what consequences or outcomes followed.

SS2.4.1a Students will compare and contrast primary and secondary sources to provide evidence of more than one point of view regarding an issue.

SS2.4.2 Students analyze different interpretations of important events and themes in world history and explain the various frames of reference expressed by different historians

SS2.4.2a Understand that slavery has existed across eras and regions in the Eastern Hemisphere. Contrast this to slavery brought to the Western Hemisphere.

SS2.4.2b Compare and Contrast the role of slaves in the development of civilizations.

SS2.4.3 Students view history through the eyes of those who witnessed key events and developments in world history by analyzing their literature, diary accounts, letters, artifacts, art, music, architectural, drawings, and other documents.

SS2.4.3a Understand that across time, technological innovations have had both positive and negative effects on people, places and regions (e.g. the invention of writing made more complex civilizations and more advanced technologies possible)

SS2.4.4 Student investigate important events and developments in world history by posing analytical questions, selecting relevant data, distinguishing fact from opinion, hypothesizing cause-and-effect relationships, testing these hypotheses, and forming conclusions.

SS2.4.3b Students will experiment with a variety of written languages to understand how writing developed in early civilizations.

Standard 3 Geography. Students will use a variety of intellectual skills to demonstrate their understanding of the geography of the interdependent world in which we live—local, national, and global—including the distribution of people, places, and environments over the Earth's surface.

Key Ideas

Performance Indicators

Core Curriculum

SS3.1 Geography can be divided into five fundamental themes which can be used to analyze important historic, geographic, economic, and environmental questions and issues. These five themes include: location, description of place, human-environment interactions, movement, and regions.

SS3.1.1 Students map information about people, places, and environments

SS3.1.1a Use various grids, symbols, and notations to locate specific places and indicate distance and direction in the Eastern Hemisphere

SS3.1.1b Use various types of maps to label geographic features (rivers, mountains, etc.) Explore the existence of a land bridge connecting Asia and North America and trace possible routes for early inhabitants across the bridge.

SS3.1.2 Students understand the characteristics, functions, and applications of maps, global, aerial and other photographs, satellite-produced images, and models.

SS3.1.2a Use special purpose maps to show various geographic aspects of Earth's surface as seen in the Eastern Hemisphere

SS3.1.2b Use maps, globes, aerial and other photographs, satellite-produced images, and models to study the nations and regions of the Eastern Hemisphere

SS3.1.2c Use maps to construct T-graphs to compare and contrast various regions.

SS3.1.3 Students investigate why people and places are located where they are located and what patterns can be perceived in these locations.

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SS3.1.4 Students describe the relationship between people and environments and the connections between people and places

SS3.1.3a Understand that as the river civilizations of the Eastern Hemisphere (Mesopotamia, Egypt, China, and the Indus Valley) turned to agriculture, world populations grew (Focus on two of these

SS3.1.3b Use a Venn Diagram to compare and contrast the two River Valley Civilizations chosen

SS3.1.3c Demonstrate an understanding that the nations and regions of the Eastern hemisphere can be analyzed in terms of spatial organization, places and regions, physical settings (including natural resources), human systems, and environment and society

SS3.1.3d Know that a region is an area which is tied together for some identifiable reason, such as physical, political, economic or cultural features. The influences of the Dutch and English in the development of New York State can be compared to the growth of the Greek civilization throughout Western Europe.

SS3.1.3e Know that the migration of groups of people has led to cultural diffusion because people carry their ideas and way of life with them when they move from one place to another

SS3.1.3f Know that urbanization has been a characteristic of the civilizations and cultures of the Eastern Hemisphere

SS3.1.3g Know that political boundaries change over time and place

SS3.1.4a Know that civilizations developed where geographic conditions were most favorable

SS3.1.4b Know that geographic features and climatic conditions in the Eastern Hemisphere influence land use

SS3.1.4 c Understand that the geographic diversity of the Eastern Hemisphere has significantly influenced physical mobility and the course of human development

SS3.1.4d Know that during the late Middle Ages and Renaissance periods, new long distance trade routes emerged, linking the peoples of Africa, Asia, and Europe

SS3.2 Geography requires the development and application of the skills of asking and answering geographic questions; analyzing theories of geography; and acquiring, organizing, and analyzing geographic information

SS3.2.1 Students present geographic information in a variety of formats, including maps, tables, graphs, charts, diagrams, and computer-generated models

S3.2.2 Students interpret geographic information by synthesizing data and developing conclusions and generalizations about geographic issues and problems

S3.2.3 Students formulate geographic questions and define geographic issues and problems

S3.2.4 Students use a number of research skills (e.g. computer databases, periodicals, census reports, maps, standard reference works, interviews, surveys) to locate and gather geographical information about issues and problems

SS3.2.1a Know that the environment is affected by people as they interact with it

SS3.2.2a Understand that overpopulation and widespread poverty threaten the political stability of some nations in the Eastern Hemisphere

SS3.2.3a Plan and execute an inquiry to answer these questions about a region of the world: How does the shape of the Earth and the natural environment influence where people live? What natural processes change the shape of the Earth's surface? How has human habitation changed the surface of the Earth? Derive generalizations and conclusions supported by evidence.

Students will explain the importance of water trade in ancient civilizations and compare it with trade on the Erie Canal during the nineteenth century. Of special importance is how water trade contributes to economic growth.

Students will examine the influence of the Mississippi River in the growth of the population and formation of towns and compare this growth to one of the River Valley civilizations.

SS3.2.4a develop and present a multimedia report on a geographic topic, issue, problem, or question (e.g., deforestation, energy consumption, resource depletion, natural hazards, major geographic events), making use of maps, graphs, photographs, videos, computer-generated models, and other appropriate sources.

Standard 4 Economics Students will use a variety of intellectual skills to demonstrate their understanding of how the United States and other societies develop economic systems and associated institutions to allocate scarce resources, how major decision-making units function in the United States and other national economies, and how an economy solves the scarcity problem through market and nonmarket mechanisms.

Key Ideas	Performance Indicators	Core Curriculum
S4.1 The study of economics requires an understanding of major economic concepts and systems, the principles of economic decision making, and the interdependence of economies and economic systems throughout the world	SS4.1.1 Students explain how societies and nations attempt to satisfy their basic needs and wants by utilizing scarce capital, natural, and human resources	SS4.1.1a Know that the ways resources are used impact the economic, political, and historic aspects of life throughout the world
		SS4.1.1b Understand that people have unlimited needs and wants which they must meet with limited resources
	SS4.1.2 Students define basic economic concepts such as scarcity, supply and demand, markets, opportunity costs, resources, productivity, economic growth, and systems.	SS4.1.2a Understand that a nation with limited natural resources must interact with other nations to secure its resource
		SS4.1.2b Know that throughout the Eastern Hemisphere, there is great diversity in the standard of living
		SS4.1.2c Use concepts such as scarcity, supply and demand, markets, opportunity costs, resources, productivity, economic growth, and systems to study the economies and economic systems of the various nations of the Eastern Hemisphere
		SS4.1.2d Analyze flow chart of the development of trade
	SS4.1.3 Students understand how scarcity requires people and nations to make choices which involve costs and future considerations	SS4.1.3a Demonstrate an understanding that as the economic systems of the global community have become more interdependent, decisions made in one nation or region have implications for all regions
	SS4.1.4 Students understand how people in the United States and throughout the world are both producers and consumers of goods and service	SS4.1.4a Demonstrate an understanding that some of the nations of the Eastern Hemisphere play leadership roles in the global economy

SS4.1.5 Students investigate how people in the United States and throughout the world answer the three fundamental economic questions and solve basic economic problems

SS4.1.6 Students describe how traditional, command, market, and mixed economies answer the three fundamental economic questions

SS4.1.7 Students explain how nations throughout the world have joined with one another to promote economic development and growth.

SS4.2 Students explain how nations throughout the world have joined with one another to promote economic development and growth.

SS4.2.1 Students identify and collect economic information from standard reference works, newspapers, periodicals, computer databases, textbooks, and other primary and secondary sources.

SS4.2.2 Students evaluate economic data by differentiating fact from opinion and identifying frames of reference

SS4.1.5a Students investigate how people in the United States and throughout the world answer the three fundamental economic questions and solve basic economic problems: What goods and services shall be produced and in what quantities? How shall goods and services be produced? and For whom shall goods and services be produced?

SS4.1.5b Demonstrate an understanding that different economic systems have evolved to deal with economic decision making
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SS4.1.6a Students describe how traditional, command, market, and mixed economies answer the three fundamental economic questions

SS4.1.6b Students describe how traditional, command, market, and mixed economies answer the three fundamental economic questions

SS4.1.6c Demonstrate an understanding that in command economies, decisions regarding the control and use of the means of production and distribution are planned by the government

SS4.1.7a consider case studies comparing economic decisions and choices made by groups and nations involving questions about scarce resources.

SS4.2.1a Students will explore the economic impact caused by revolutions (French, Russian and Industrial)

SS4.2.2a Students organize and classify economic information by distinguishing relevant from irrelevant information, placing ideas in chronological order, and selecting appropriate labels for data

SS4.2.3 Students develop conclusions about economic issues and problems by creating broad statements which summarize findings and solutions.

SS4.2.3a Students present economic information by using media and other appropriate visuals such as tables, charts, and graphs to communicate ideas and conclusions

Standard 5 - Civics, Citizenship and Government Students will use a variety of intellectual skills to demonstrate their understanding of the necessity for establishing governments; the governmental system of the United States and other nations; the United States Constitution; the basic civic values of American constitutional democracy; and the roles, rights, and responsibilities of citizenship, including avenues of participation.

Key Ideas	Performance Indicators	Core Curriculum
SS5.1 The study of civics, citizenship, and government involves learning about political systems; the purposes of government and civic life; and the differing assumptions held by people across time and place regarding power, authority, governance, and law.	SS5.1.1 Students analyze how the values of a nation affect the guarantee of human rights and make provisions for human needs.	SS5.1.1a Know that as settlement patterns changed, new forms of political order developed to meet the more complex needs of societies SS5.1.1b Distinguish between the different assumptions regarding power, authority, governance, and law that the people of the Eastern Hemisphere have held across time and place SS5.1.1c Know that governments change over time and place to meet the changing needs and wants of their people SS5.1.1d1 Describe how the ideas of democracy and a republic were established in Ancient Greece and Rome. Students will compare how this legacy was implemented in the formation of the U.S. and New York State Government. SS5.1.1d Demonstrate an understanding that the values of Eastern Hemisphere nations affect the guarantee of human rights and how human needs are met SS5.1.1e Demonstrate an understanding that the values of Eastern Hemisphere nations affect the guarantee of human rights and how human needs are met SS5.1.1f Understand that the extent to which human rights are protected becomes a key issue in totalitarian societies (Use as an example- Soviet Union)
	SS5.1.2 Students consider the nature and evolution of constitutional democracies	SS5.1.2a Demonstrate an understanding that the values of Eastern Hemisphere nations are embodied in their constitutions, statutes, and important court cases

SS5.2 The study of civics and citizenship requires the ability to probe ideas and assumptions, ask and answer analytical questions, take a skeptical attitude toward questionable arguments, evaluate evidence, formulate rational conclusions, and develop and refine participatory skills

SS5.1.3 Students explore the rights of citizens in other parts of the hemisphere and determine how they are similar to and different from the rights of American citizens

SS5.1.4 Students analyze the sources of a nation's values as embodied in its constitution, statutes, and important court cases.

SS5.2.1 Students respect the rights of others in discussions and classroom debates regardless of whether or not one agrees with their viewpoint

SS5.2.2 Students explain the role civility plays in promoting effective citizenship in preserving democracy

SS5.1.2b Know that citizens of the nations of the Eastern Hemisphere have rights and responsibilities as defined by their constitutions and by other laws of their nations

SS.5.1.4a create a list of basic civic values and explore how these values are reflected in key United States Supreme Court decisions

SS5.2.1a Demonstrate an understanding that international organizations were formed to promote peace, economic development, and cultural understanding. The United Nations was created to prevent war and to fight hunger, disease, and ignorance

SS5.2.2a Use value-based dilemmas to provide students with open-ended situations (e.g., witnessing a crime, serving on a jury in a murder trial) that could force them to evaluate their feelings concerning the difficult responsibilities of citizenship.

7th & 8th Grade Social Studies

Because 7th and 8th grade Social Studies are always taught in chronological order, the approach toward the construction of the curriculum is different than that used in other subject areas and other Social Studies grade levels. We have structured this curriculum to show 7th and 8th grade correlations with the two levels next to each other on the spreadsheet.

SS Standard 1 History of the United States and New York State Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in the history of the United States and New York.

Key Ideas	Performance Indicators	7th Grade Core Curriculum: Early American History - Pre-Columbian to Early 1900's (Including New York State History)	8th Grade Core Curriculum: Pre-Civil War Era to Present (Including New York State History)
SS1.1 The study of New York State and United States history requires an analysis of the development of American culture, its diversity and multicultural context, and the ways people are unified by many values, practices, and traditions.	SS1.1.1 Discuss various types of families and how they are affected by various factors in society and history	Recognize the importance and roles of nuclear and extended families, clans, political groups and tribes in the main native American cultures and the Iroquois culture	Describe families of the North and South during the Civil War and families of immigrants. Explore specific examples in New York City and throughout New York State of draft riots during the Civil War.
	SS1.1.2 Discuss the individual's role in society and the importance and value of each person	Identify the individual roles and values in the various aspects of life in native American cultures	Explain the effect of modern technology on the family Investigate and explain immigrants' roles, women's roles and rights, the effect of western movement on Native Americans.
	SS1.1.3 Contrast the different culture in the Western Hemisphere and how they interrelate and influence each other	Compare and contrast the native American cultures of present day U.S. and the advanced Native American civilizations in Middle, Central and South America	Discuss the influence of Canadian and Mexican culture on the U.S.
	SS1.1.4 Explaining the development of the United States socially and how it evolves and changes	Compare the development of colonial culture in the 13 original colonies, accentuating patterns in New England, Middle and Southern regions	Analyze the growth of different societies in the North and South

SS1.1.5 Listing the factors that determine a group of people's culture

SS1.1.6 Examine the diversity which makes up American society and impact its culture.

SS1.1.7 The significance of art, music, and literature on American culture and society

Identify and connect our heritage as Americans to the culture of the English colonies. Specifically examine two groups of colonies (one can be New York of the middle colonies) with either southern or New England colonies.

List the factors that shaped the life of Americans in the English Colonies

Explain how American culture developed in the English Colonies

Examine and explore literature, art and music from Native American cultures and early American culture. Use the Iroquois and Algonquin tribes as examples of Native Americans.

Understand the effects of industrialization

Recognize and explain how ancestors, natural environment, technology and economics impact culture.

Describe the impact of "old" and "new" immigration in the 1800's and 1900's. Use primary sources from the immigrants entering through Ellis Island to demonstrate the changes between old and new immigration.

Investigate literature's effect on society and history (Muckrakers, Yellow Journalism and Propaganda)

Standard 2 World History Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in world history and examine the broad sweep of history from a variety of perspectives.

Key Ideas	Performance Indicators	7th Grade Core Curriculum	8th Grade Core Curriculum
SS2.1 The study of world history requires an understanding of world cultures and civilizations, including an analysis of important ideas, social and cultural values, beliefs, and traditions. This study also examines the human condition and the connections and interactions of people across time and space and the ways different people view the same event or issue from a variety of perspectives	SS2.1.1 Students know the social and economic characteristics, such as customs, traditions, child-rearing practices, ways of making a living, education, and socialization practices, gender roles, foods, and religious and spiritual beliefs that distinguish different cultures and civilizations.	Know that the civilizations and cultures of the Western Hemisphere have contributed important ideas, beliefs, and traditions to the history of humankind	Explain the effect of ancient democracies and governments on our Federal Republic. Review New York State contributions to our Federal system
	SS2.1.2 Explain the U.S. role in the Western Hemisphere and how it relates with other countries in the Hemisphere, especially relations with Canada and Mexico	Examine the impact of the American Revolution in causing change in Colonial control by European countries	Describe the effect of Westward Expansion on the following: Manifest Destiny, Monroe Doctrine, Roosevelt Corollary, Good Neighbor Policy.

SS2.1.3 The role of Native Americans in the evolution of the Western Hemisphere

SS2.1.4 The role of technology and inventions in the development of American History

SS2.1.5 Explain the causes and effects of important events that shaped the nation and the state

Develop a timeline of the earliest Americans from the Ice Age to Pre-Columbian Age

Examine the technological, economic, societal and political results on both the European colonial cultures and Native American cultures as seen in the Age of Exploration and Colonization. Identify specific explorers of New York State

Identify and examine cause and effects in relation to the; Age of Exploration, Start of the English Colonies, French and Indian War, American Revolution, Declaration of Independence, Articles of Confederation, U. S. Constitution, and New York State Constitution

Understand the impact of western movement on Native Americans

Describe the results of the loss of land on Native Americans. (Dawes Act)

Trace the effect of Thomas Edison on the age of invention

Create diagrams of the ripple effect of the car on American society.

List and explain the causes and effects on the U.S. of: Civil War, Age of Industry, World War I, World War II, the Great Depression, the Cold War, Vietnam, Fall of Communism, the first Persian Gulf War, the War with Iraq.

Standard 3 Geography Students will use a variety of intellectual skills to demonstrate their understanding of the geography of the interdependent world in which we live—local, national, and global—including the distribution of people, places, and environments over the Earth's surface.

Key Ideas	Performance Indicators	7th Grade Core Curriculum	8th Grade Core Curriculum
SS3.1 Geography can be divided into 6 essential elements which can be used to analyze important historic, geographic, economic and environmental questions and issues. These six elements include: the world in spatial terms, places and regions, physical settings (including natural resources), human systems, environment and society, and the use of geography.	SS3.1.1 Applying geographic skills and tool to locate specific places, calculate distances and identify directions.	Use and interpret the information on globes and the three types of maps (physical, political and distribution) Identify the purpose of and practice using the various parts of a map, including title, key, symbols, compass, and scales of miles or kilometers.	Demonstrate the use of various maps to make judgments about the causes of historical events. Use maps to generalize and describe basic historical trends.

SS3.2 Geography requires the development and application of the skills of asking and answering geographic questions; analyzing theories of geography and acquiring, organizing, and analyzing geographic information.

SS3.2.1 Examine the effects of geography on cultural, economic, historical and political development in the U.S.

SS3.2.2 Identifying the effects of modern culture and the development on the environment and explaining citizen responsibility in protecting the environment for future generations.

Investigate the role of environment and geography on the settlement of various Native American groups.

Report on the rise of Buffalo after the construction of the Erie Canal.
Explore the connection of the five effects on the development of the thirteen original colonies.
Study the impact of sectionalism on the development of the colonies.

Compare and contrast the beliefs of Native Americans with colonists in relation to ownership of land and conservation of resources.

Evaluate the effects of geography on: Westward Expansion, Civil War, Industrialization, Immigration, the U.S. as a World Power, World War I, and World War II.

Discover the significance of the environmental movements on society through the generations (emphasis on Rachel Carson and the formation of the Environmental Protection Agency.)

Standard 4 Economics Students will use a variety of intellectual skills to demonstrate their understanding of how the United States and other societies develop economic systems and associated institutions to allocate scarce resources, how major decision-making units function in the United States and other national economies, and how an economy solves the scarcity problem through market and non-market mechanisms.

Key Ideas	Performance Indicators	7th Grade Core Curriculum	8th Grade Core Curriculum
SS4.1 The Study of economics requires an understanding of major economic concepts and systems, the principles of economic decision making and the interdependence of economies and economic systems throughout the world.	SS4.1.1 Demonstrate the knowledge of basic economic concepts (Supply and Demand, competition and laws of scarcity, etc.)	Identify the economic activities of Native American cultures.	Describe the role and development of industries, unions and regulation. Study examples of the rise of unions in New York City.
		Compare and contrast economic patterns of the three groups of English colonies. Compare the differences between the economic practices of the Spanish, French and English colonial empires.	Define basic economic concepts such as supply and demand, competition and ripple effect.
	SS4.1.2 Explain America's role in world economics and our interdependence on other nations throughout the world.	Analyze the relationship between Great Britain and the 13 original colonies.	Compare and contrast capitalism and socialism.

SS4.1.3 Analyze the effects of economic conditions on historic events

Explore the relationship between mercantilism and the American Revolution
Explain economic problems of the new nation.

Describe the role of tariffs and their effect on international trade.

Identify the economic importance of trade as a cause of the age of exploration.

Discuss the economic causes of the following events: Civil War, factory system, United States as a world power, World War I, the Great Depression, World War II.

Investigate problems between the British and the colonies before the Revolution

Explore the economic problems with the Articles of Confederations

SS4.1.4 Explain the role of New York State in the historic and current economic development of the United States.

Identify New York's impact as a Middle Colony and its importance to the British and Americans during the Revolution

Describe the impact of New York State on financing the Civil War, the age of invention and the development of the U.S. as an industrial power.
Discuss the role of manufacturing in the rise and fall of population in New York State outside of New York City.

Standard 5 - Civics, Citizenship and Government Students will use a variety of intellectual skills to demonstrate their understanding of the necessity for establishing governments; the governmental system of the United States and other nations; the United States Constitution; the basic civic values of American constitutional democracy; and the roles, rights, and responsibilities of citizenship, including avenues of participation.

Key Ideas

Performance Indicators

7th Grade Core Curriculum

8th Grade Core Curriculum

SS5.1 The study of civics, citizenship and government involves learning about political systems; the purposes of government in civic life; and the differing assumptions held by people across time and place regarding power, authority, governance and law

SS5.1.1 Define the rights and responsibilities of citizens in a democratic society

List problems in causing the start of English colonies.

Show proficiency in understanding of amendments 13-27.

Examine the basic political principles in the Declaration of Independence
Discuss the role of political groups before the American Revolution
Study the responsibilities and rights of citizens in the Constitution, Bill of Rights, and other amendments.
Examine rights and responsibilities of New York citizens in the NY constitution.

SS5.1.2 Discover the three branches of the Federal and State governments, listing the powers and responsibilities of each branch and how they relate to one another.

SS5.1.3 Trace the development of the political system from colonial to post revolutionary times

SS5.1.4 Compare democratic form of government with other governments around the world

SS5.1.5 Explain the significance of the elastic clause and amendment process

Define: separation of powers, checks and balances, legislative process, Federalism, amendments, endurance of the documents' principles.

Trace beginnings of legislative process.

Identify strengths and weaknesses of the Articles of Confederation

Students will debate the merits of establishing New York City as the capital of the new nation
Trace the growth of the constitution in 1787
Analyze the events during the time of the earliest presidents.

Explore political reasons for the American Revolution

Compare and contrast the development of political parties in the U.S.

Investigate the uniqueness of the U.S. as a political system.

Create a timeline of voting rights from the beginning of our country to the present day. Be sure to include the Seneca Falls convention
Recognize the importance of the amendment process.

Explain the constitutional conflicts during the following: Civil War, Reconstruction, the Great Depression, New Deal, Civil Rights Movement.

Chart the process of making laws and amendments on both the Federal and State level.

Examine the pervasive spread of corruption in 19th century New York City, particularly with regard to Tammany Hall and the role of immigrants in procuring power.

Compare and contrast democracy with monarchy, dictatorship and other forms of government.

Demonstrate and understanding of the needs and effects of amendments 11-27

7th Grade Spanish

LOTE Standard 1: Communication Skills

Students will be able to use a language other than English for communication.

Key Ideas	Performance Indicators	Core Curriculum
Listening and speaking are primary communicative goals in modern language learning. These skills are used for the purpose of socializing, providing and acquiring information, expressing personal feelings and opinions, and getting others to adopt a course of action. Reading and writing are used in languages other than English for the purposes of socializing, providing and acquiring information, expressing personal feelings and opinions, and getting others to adopt a course of action.	Students can comprehend language consisting of simple vocabulary and structures in face-to-face conversation with peers and familiar adults. Students can comprehend the main idea of more extended conversations with some unfamiliar vocabulary and structures as well as cognates of English words. Students can call upon repetition, rephrasing, and nonverbal cues to derive or convey meaning from a language other than English. Students use appropriate strategies to initiate and engage in simple conversations with more fluent or native speakers of the same age group, familiar adults, and providers of common public services.	Students engage in reading and writing activities surrounding the following topics. - Personal Identification - House and Home - Family Life - Community / Neighborhood - Physical Environment - Meals / Food / Drink - Health and Welfare - Education - Earning a Living - Leisure - Public and Private Services Shopping Travel Current Events Information gathering, short texts, main ideas, simple language, cognates, and high frequency vocabulary and structures define the reading process at this stage. Authentic material is readily available by: - accessing websites; - collecting print materials while traveling and through written requests; - using slides/videos/photographs with printed captions or other samples of writing; and - retrieving materials printed in multiple languages from our own national monuments, museums, and other places of interest. Examples of print material include:

Students can understand the main idea and some details of simple informative materials written for native speakers.

- literature (poems, short stories, short books) written for young children in Spanish
- posters
- postcards
- brochures
- menus
- song lyrics
- book covers
- video titles
- charts
- surveys
- articles from newspapers, magazines, online journals, and websites
- product labels
- receipts from purchases
- maps, directories, telephone books
- tickets from museums, airplanes, movies and other performances

Students will engage in pre-reading exercises to increase their understanding

- Look at the headlines and titles to make assumptions about the reading.
- Create a list of ideas that might be found in the text from scanning headlines or titles.
- Point out pictures or other visuals that will be relevant to comprehending the material.
- On the basis of the topic and/or title, generate a list of key words that might be found in the text. Have the students copy these into a notebook.
- Highlight key words or expressions that will be new for the student and provide appropriate English equivalents. Students might be asked to highlight these words or copy them into a notebook. Words may also be written on the blackboard or on a poster for reference during class.

Scan the text to increase reading comprehension

- Look for recognizable words and cognates in the text.
- Point out new words in the target language that are cognates. Copy the new words into a notebook.

Students can compose short, informal notes and messages to exchange information with members of the target culture.

- Ask students to point out a few words that are new for them and assign appropriate English equivalents. They might also highlight these words and/or expressions and copy them into their notebooks.

Develop a writing process for Spanish communication

- Brainstorm the topic and needed vocabulary in English, if necessary, and in Spanish. Record this on the blackboard or overhead.

- Think and write and complete the task within reasonable time limits.
 - Use dictionaries and other resources.
 - Ask other students questions; use peers as resources.
 - Share first drafts with peer reviewers (other students), focusing on comprehension of message and one or two other specifics such as spelling, grammar, and punctuation.
 - Use a computer lab to produce final paper.
- Understand how to access the accent keys.

Complete certain forms in the target language such as school enrollment forms, medical forms, newspaper and magazine subscriptions, immigration and customs forms, or restaurant comment cards.

- Keep simple, personalized diaries or journals that are guided by teacher input such as, "Tonight, list in the target language the names and members of your family."

NOTE: Standard 2: Cultural Understanding
Students will develop cross-cultural skills and understandings:

Key Ideas	Performance Indicators	Core Curriculum
Effective communication involves meanings that go beyond words and require an understanding of perceptions, gestures, folklore, and family and community dynamics. All of these elements can affect whether and how well a message is received.	Students can use some key cultural traits of the societies in which the target language is spoken.	Understand the ways in which culture influences language Connect reading and writing activities to cultural practices Develop an understanding of Spanish speaking cultures Develop an awareness of the variety of Spanish speaking cultures

8th Grade Spanish

LOTE Standard 1: Communication Skills

Students will be able to use a language other than English for communication.

Key Ideas

Listening and speaking are primary communicative goals in modern language learning. These skills are used for the purpose of socializing, providing and acquiring information, expressing personal feelings and opinions, and getting others to adopt a course of action.

Reading and writing are used in languages other than English for the purposes of socializing, providing and acquiring information, expressing personal feelings and opinions, and getting others to adopt a course of action.

Performance Indicators

Students can comprehend language consisting of simple vocabulary and structures in face-to-face conversation with peers and familiar adults.

Students can comprehend the main idea of more extended conversations with some unfamiliar vocabulary and structures as well as cognates of English words.

Students can call upon repetition, rephrasing, and nonverbal cues to derive or convey meaning from a language other than English.

Students use appropriate strategies to initiate and engage in simple conversations with more fluent or native speakers of the same age group, familiar adults, and providers of common public services.

Core Curriculum

Students engage in reading and writing activities

Personal Identification
House and Home
Family Life
Community / Neighborhood
Physical Environment
Meals / Food / Drink
Health and Welfare
Education
Earning a Living
Leisure
Public and Private Services
Shopping
Travel
Current Events

Information gathering, short texts, main ideas, simple language, cognates, and high frequency vocabulary and structures define the reading process at this stage.

Authentic material is readily available by:

- accessing websites;
- collecting print materials while traveling and through written requests;
- using slides/videos/photographs with printed captions or other samples of writing; and

Students can understand the main idea and some details of simple informative materials written for native speakers.

- retrieving materials printed in multiple languages from our own national monuments, museums, and other places of interest.

Examples of print material include:

- literature (poems, short stories, short books) written for young children in Spanish
- posters
- postcards
- brochures
- menus
- song lyrics
- book covers
- video titles
- charts
- surveys
- articles from newspapers, magazines, online journals, and websites
- product labels
- receipts from purchases
- maps, directories, telephone books
- tickets from museums, airplanes, movies and other performances

Students will engage in pre-reading exercises to increase their understanding

- Look at the headlines and titles to make assumptions about the reading.
- Create a list of ideas that might be found in the text from scanning headlines or titles.
- Point out pictures or other visuals that will be relevant to comprehending the material.
- On the basis of the topic and/or title, generate a list of key words that might be found in the text. Have the students copy these into a notebook.

Students can compose short, informal notes and messages to exchange information with members of the target culture.

- Highlight key words or expressions that will be new for the student and provide appropriate English equivalents. Students might be asked to highlight these words or copy them into a notebook. Words may also be written on the blackboard or on a poster for reference during class.

Scan the text to increase reading comprehension and fluency

- Look for recognizable words and cognates in the text.
- Point out new words in the target language that are cognates. Copy the new words into a notebook.
- Ask students to point out a few words that are new for them and assign appropriate English equivalents. They might also highlight these words and/or expressions and copy them into their notebooks.

Develop a writing process for Spanish communication

- Brainstorm the topic and needed vocabulary in English, if necessary, and in Spanish. Record this on the blackboard or overhead.
- Think and write and complete the task within reasonable time limits.
- Use dictionaries and other resources.
- Ask other students questions; use peers as resources.
- Share first drafts with peer reviewers (other students), focusing on comprehension of message and one or two other specifics such as spelling, grammar, and punctuation.

- Use a computer lab to produce final paper.
Understand how to access the accent keys.
Complete certain forms in the target language such as school enrollment forms, medical forms, newspaper and magazine subscriptions, immigration and customs forms, or restaurant comment cards.
- Keep simple, personalized diaries or journals that are guided by teacher input such as, "Tonight, list in the target language the names and members of your family."

LOTE Standard 2: Cultural Understanding

Students will develop cross-cultural skills and understandings.

Key Ideas	Performance Indicators	Core Curriculum
Effective communication involves meanings that go beyond words and require an understanding of perceptions, gestures, folklore, and family and community dynamics. All of these elements can affect whether and how well a message is received.	Students can use some key cultural traits of the societies in which the target language is spoken.	Understand the ways in which culture influences language Connect reading and writing activities to cultural practices Develop an understanding of Spanish speaking cultures Develop an awareness of the variety of Spanish speaking cultures

5th Grade Arts

Arts Standard 1: Creating, Performing and Participating in the Arts

Students will actively engage in the processes that constitute creation and performance in the arts (dance, music, theatre, and visual arts) and participate in various roles in the arts.

Key Ideas	Performance Indicators	Core Curriculum
Dance Students will perform set dance forms in formal and informal contexts and will improvise, create, and perform dances based on their own movement ideas. They will demonstrate an understanding of choreographic principles, processes, and structures and of the roles of various participants in dance productions.	Students know and demonstrate a range of movement elements and skills (such as balance, alignment, elevation, and landing) and basic dance steps, positions, and patterns Students dance a range of forms from free improvisation to structured choreography Students create or improvise dance phrases, studies, and dances, alone and/or in collaboration with others, in a variety of contexts Students demonstrate the ability to take various roles in group productions and performances	
Music Students will compose original music and perform music written by others. They will understand and use the basic elements of music in their performances and compositions. Students will engage in individual and group musical and music-related tasks, and will describe the various roles and means of creating, performing, recording, and producing music.	Students compose simple pieces that reflect a knowledge of melodic, rhythmic, harmonic, timbral, and dynamic elements Students sing and/or play, alone and in combination with other voice or instrument parts, a varied repertoire of folk, art, and contemporary songs, from notation, with a good tone, pitch, duration, and loudness Students improvise short musical compositions that exhibit cohesiveness and musical expression	Understand the values of notes and rests (quarters and ties) Know the difference between forte and piano Know the lines and spaces in the treble clef Demonstrate an understanding of time signature (3/4 or 4/4) Understand a melody's tonal center Understand characteristic tone Know how to sing or play from notation with good tone and pitch Perform in ensembles from easy to moderate (as defined by: NYSSMA) musical selection

Theater

Students will create and perform theatre pieces as well as improvisational drama. They will understand and use the basic elements of theatre in their characterizations, improvisations, and play writing. Students will engage in individual and group theatrical and theatre-related tasks, and will describe the various roles and means of creating, performing, and producing theatre.

Students in performing ensembles, read moderately easy/ moderately difficult music (NYSSMA level III-IV) and respond appropriately to the gestures of the conductor

Students identify and use, in individual and group experiences, some of the roles, processes, and actions for performing and composing music of their own and others, and discuss ways to improve them

Students use improvisation and guided play writing to communicate ideas and feelings

Students imitate various experiences through pantomime, play making, dramatic play, story dramatization, storytelling, role playing, improvisation and guided play writing

Students use language, voice, gesture, movement and observation to create character and interact with others in improvisation, rehearsal, and performance

Students create props, scenery, and costumes through individual and group effort

Distinguish and respond to gestures of the conductor

Know the components of a good performance

Understand the concept of improvisation

Students identify and use, in individual and group experiences, some of the roles, processes, and actions for performing and creating theatre pieces and improvisational drama within the school/community, and discuss ways to improve them

Visual Arts

Students will make works of art that explore different kinds of subject matter, topics, themes, and metaphors. Students will understand and use sensory elements, organizational principles, and expressive images to communicate their own ideas in works of art. Students will use a variety of art materials, processes, mediums, and techniques, and use appropriate technologies for creating and exhibiting visual art works.

Students produce a collection of art works, in a variety of mediums, based on a range of individual and collective experiences

Students know and use a variety of sources for developing and conveying ideas, images, themes, symbols, and events in their creation of art

Students use the elements and principles of art to communicate specific meanings to others in their art work

Students during the creative process, reflect on the effectiveness of selected mediums or techniques to convey intended meanings

Students identify and use, in individual and group experiences, some of the roles and means for designing, producing, and exhibiting art works and discuss ways to

Arts Standard 2: Knowing and Using Arts Materials and Resources

Students will be knowledgeable about and make use of the materials and resources

Key Ideas

Performance Indicators

Music

Students will use traditional instruments, electronic instruments, and a variety of nontraditional sound sources to create and perform music. They will use various resources to expand their knowledge of listening experiences, performance opportunities, and/or information about music. Students will identify opportunities to contribute to their communities' music institutions, including those embedded in other institutions (church choirs, industrial music ensembles, etc.). Students will know the vocations and avocations available to them in music.

Students use school and community resources to develop information on music and musicians

Know the music groups and musicians in the school

Students use current technology to create, produce and record/playback music

Know the skills, knowledge, and resources necessary to pursue interest or role in a school based group

Students identify a community-based musical interest or role and explain the skills, knowledge, and resources necessary to pursue the interest or adopt the role

Students demonstrate appropriate listening and other participatory responses to music of a variety of genres and cultures

Know the appropriate audience behaviors for a variety of musical genres and cultures
Engage in appropriate audience behaviors for a variety of musical genres and cultures

Students investigate some career options related to their musical interests

Dance

Students will know how to access dance and dance related material from libraries, resource centers, museums, studios, and performance spaces. Students will know

Students demonstrate knowledge of sources for understanding dance technologies: live, print, video, computer, etc.

various career possibilities in dance and recreational opportunities to dance. Students will attend dance events and participate as appropriate within each setting.

Students demonstrate knowledge of how human structure and function affect movement in parts of dances and dances that they know or have choreographed

Students demonstrate knowledge of audience/performer responsibilities and relationships in dance

Students demonstrate knowledge of differences in performance venue and the events presented in each

Theater

Students will know the basic tools, media, and techniques involved in theatrical production. Students will locate and use school, community, and professional resources for theatre experiences. Students will understand the job opportunities available in all aspects of theatre.

Students visit theatre technology facilities, including the local high school facility, and interact with professionals and theatre students to learn about theatre technology (e.g., lighting, staging, sound, etc.)

Students use the school or community library/media centers and other resources to develop information on various theatre-related topics

Students know about local theatrical institutions, attend performances in school and in the community, and demonstrate appropriate audience behavior

Students discuss vocations/avocations with theatre professionals and identify the skills and preparation necessary for theatre vocations/avocations

Visual Arts

Students will know and use a variety of visual arts materials, techniques, and processes. Students will know about resources and opportunities for

Students develop skills with electronic media as a means of expressing visual ideas

participation in visual arts in the community (exhibitions, libraries, museums, galleries) and use appropriate materials (art reproductions, slides, print materials, electronic media). Students will be aware of vocational options available in the visual arts.

Students give examples of adults who make their livings in the arts professions

Students develop skills with a variety of art materials and competence in at least one medium

Students use the computer and other electronic media as designing tools and to communicate visual ideas

Students take advantage of community opportunities and cultural institutions to learn from professional artists, look at original art, and increase their understanding of art

Students understand the variety of careers related to the visual arts and the skills necessary to pursue some of them

Arts Standard 3: Responding to and Analyzing Works of Art

Students will respond critically to a variety of works in the arts, connecting the Key Ideas

Performance Indicators

Music

Students will demonstrate the capacity to listen to and comment on music. They will relate their critical assertions about music to its aesthetic, structural, acoustic, and psychological qualities. Students will use concepts based on the structure of music's content and context to relate music to other broad areas of knowledge. They will use concepts from other disciplines to enhance their understanding of music.

Students through listening, analyze and evaluate their own and others' performances, improvisations, and compositions by identifying and comparing them with similar works and events

Students use appropriate terms to reflect a working knowledge of the musical elements

Understand the characteristics of a good performance
Know how to listen and analyze music using specific criteria
Evaluate characteristics of a performance (e.g. their own, peers, professional)

Evaluate music using age-appropriate terms for musical elements

Students demonstrate a basic awareness of the technical skills musicians must develop to produce an aesthetically acceptable performance

Students use appropriate terms to reflect a working knowledge of social-musical functions and uses (appropriate choices of music for common ceremonies and other events)

Students use basic scientific concepts to explain how music-related sound is produced, transmitted through air, and perceived

Students use terminology from music and other arts to analyze and compare the structures of musical and other artistic and literary works

Cite technical skills of various musicians

Know how music is used in ceremonies and celebrations

Theater

Students will reflect on, interpret, and evaluate plays and theatrical performances, both live and recorded, using the language of dramatic criticism. Students will analyze the meaning and role of theatre in society. Students will identify ways in which drama/theatre connects to film and video, other arts, and other disciplines.

Students use the techniques and vocabulary of theatre criticism, both written and oral, to discuss theatre experiences and improve individual and group performances

Students examine and discuss the use of other art forms in a theatre production

Students explain how drama/theatre experiences relate to other literary and artistic events

Dance

Students will express through written and oral language their understanding, interpretation, and evaluation of dances they see, do, and read about. Students will acquire the critical vocabulary to talk and write about a variety of dance forms.

Students demonstrate knowledge of the technical language used in discussing dance performances

Students demonstrate knowledge of choreographic principles and processes

Students express to others their understanding of specific dance performances, including perceptions, descriptions, analyses, interpretations, and evaluations

Visual Arts

Students will reflect on, interpret, and evaluate works of art, using the language of art criticism. Students will analyze the visual characteristics of the natural and built environment and explain the social, cultural, psychological, and environmental dimensions of the visual arts. Students will compare the ways in which a variety of ideas, themes, and concepts are expressed through the visual arts with the ways they are expressed in other disciplines.

Students explain how ideas, themes, or concepts in the visual arts are expressed in other disciplines (e.g., mathematics, science, literature, social studies)

Students discuss and write their analyses and interpretations of their own works of art and the art of others, using appropriate critical language

Students identify, analyze, and interpret the visual and sensory characteristics that they discover in natural and human-made forms

Students compare the ways ideas and concepts are communicated through visual art with the various ways that those ideas and concepts are manifested in other art forms

Students compare the ways ideas, themes, and concepts are communicated through the visual arts in other disciplines, and the various ways that those ideas, themes, and concepts are manifested within the discipline

Arts Standard 4: Understanding the Cultural Dimensions and Contributions of the Arts

Students will develop an understanding of the personal and cultural forces that shape artistic communication and how the arts in turn shape the diverse cultures of past and present society.

Key Ideas	Performance Indicators	
Music Students will develop a performing and listening repertoire of music of various genres, styles, and cultures that represent the peoples of the world and their manifestations in the United States. Students will recognize the cultural features of a variety of musical compositions and performances and understand the functions of music within the culture.	Students identify the cultural contexts of a performance or recording and perform (with movement, where culturally appropriate) a varied repertoire of folk, art, and contemporary selections from the basic cultures that represent the peoples of the world Students identify from a performance or recording the titles and composers of well-known examples of classical concert music and blues/jazz selections Students discuss the current and past cultural, social, and political uses for the music they listen to and perform Students in performing ensembles, read and perform repertoire in a culturally authentic manner	Understand different cultures through singing, dancing, and playing instruments Cite the elements of a particular genre or style Understand the cultural and social aspects of music from various style periods Demonstrate an understanding of special techniques or styles used to perform
Theater Students will gain knowledge about past and present cultures as expressed through theatre. They will interpret how theatre reflects the beliefs, issues, and events of societies past and present.	Students improvise scenes based on information about various cultures Students create intercultural celebrations using props, settings, and costumes Students explain how drama/theatre experiences relate to themselves and others	
Visual Arts		

Students will explore art and artifacts from various historical periods and world cultures to discover the roles that art plays in the lives of people of a given time and place and to understand how the time and place influence the visual characteristics of the art work. Students will explore art to understand the social, cultural, and environmental dimensions of human society.

Dance

Students will know dances from many cultures and times and recognize their relationship to various cultural, social, and historic contexts. Students will recognize that dance is performed in many different cultural settings and serves many functions in diverse societies.

Students demonstrate how art works and artifacts from diverse world cultures reflect aspects of those cultures

Students demonstrate the ways in which some particular art works and artifacts reflect important aspects of the diverse cultures of the United States

Students create art works that reflect a particular historical period of a culture

Students identify the major dance forms of specific world cultures past and present

Students identify some of the major dance artists from diverse cultures

Students show how specific dance forms are related to the culture from which they come

6th Grade Arts

Arts Standard 1: Creating, Performing and Participating in the Arts

Students will actively engage in the processes that constitute creation and performance in the arts (dance, music, theatre, and visual arts) and participate in various roles in the arts.

Key Ideas

Performance Indicators

Core Curriculum

Dance

Students will perform set dance forms in formal and informal contexts and will improvise, create, and perform dances based on their own movement ideas. They will demonstrate an understanding of choreographic principles, processes, and structures and of the roles of various participants in dance productions.

Students know and demonstrate a range of movement elements and skills (such as balance, alignment, elevation, and landing) and basic dance steps, positions, and patterns

Students dance a range of forms from free improvisation to structured choreography

Students create or improvise dance phrases, studies, and dances, alone and/or in collaboration with others, in a variety of contexts

Students demonstrate the ability to take various roles in group productions and performances

Music

Students will compose original music and perform music written by others. They will understand and use the basic elements of music in their performances and compositions. Students will engage in individual and group musical and music-related tasks, and will describe the various roles and means of creating, performing, recording, and producing music.

Students compose simple pieces that reflect a knowledge of melodic, rhythmic, harmonic, timbral, and dynamic elements

Students sing and/or play, alone and in combination with other voice or instrument parts, a varied repertoire of folk, art, and contemporary songs, from notation, with a good tone, pitch, duration,

Understand quarter note, half, and whole notes
Understand simple song form (e.g. ABC's, Twinkle Twinkle Little Star)
Compose a simple melody using at least three different rhythms: length is dependent on student ability (e.g. 2, 4, 8, 12 measures)
Perform composition (simple melody)

Understand characteristic tone

Know how to sing or play from notation with good tone and pitch

Students improvise short musical compositions that exhibit cohesiveness and musical expression

Students in performing ensembles, read moderately easy/ moderately difficult music (NYSSMA level III-IV) and respond appropriately to the gestures of the conductor

Students identify and use, in individual and group experiences, some of the roles, processes, and actions for performing and composing music of their own and others, and discuss ways to improve them

Perform in ensembles from easy to moderate (as defined by: NYSSMA) musical selection

Distinguish and respond to gestures of the conductor

Know the components of a good performance

Understand the concept of improvisation

Theater

Students will create and perform theatre pieces as well as improvisational drama. They will understand and use the basic elements of theatre in their characterizations, improvisations, and play writing. Students will engage in individual and group theatrical and theatre-related tasks, and will describe the various roles and means of creating, performing, and producing theatre.

Students use improvisation and guided play writing to communicate ideas and feelings

Students imitate various experiences through pantomime, play making, dramatic play, story dramatization, storytelling, role playing, improvisation and guided play writing

Students use language, voice, gesture, movement and observation to create character and interact with others in improvisation, rehearsal, and performance

Students create props, scenery, and costumes through individual and group effort

Students identify and use, in individual and group experiences, some of the roles, processes, and actions for performing and creating theatre pieces and improvisational drama within the school/community, and discuss ways to improve them

Visual Arts

Students will make works of art that explore different kinds of subject matter, topics, themes, and metaphors. Students will understand and use sensory elements, organizational principles, and expressive images to communicate their own ideas in works of art. Students will use a variety of art materials, processes, mediums, and techniques, and use appropriate technologies for creating and exhibiting visual art works.

Students produce a collection of art works, in a variety of mediums, based on a range of individual and collective experiences

Students know and use a variety of sources for developing and conveying ideas, images, themes, symbols, and events in their creation of art

Students use the elements and principles of art to communicate specific meanings to others in their art work

Students during the creative process, reflect on the effectiveness of selected mediums or techniques to convey intended meanings

Students identify and use, in individual and group experiences, some of the roles and means for designing, producing, and exhibiting art works and discuss ways to improve them

Arts Standard 2: Knowing and Using Arts Materials and Resources

Students will be knowledgeable about and make use of the materials and resources available for participation in the arts in various roles.

Key Ideas

Performance Indicators

Music

Students will use traditional instruments, electronic instruments, and a variety of nontraditional sound sources to create and perform music. They will use various resources to expand their knowledge of listening experiences, performance opportunities, and/or information about music. Students will identify opportunities to contribute to their communities' music institutions, including those embedded in other institutions (church choirs, industrial music ensembles, etc.). Students will know the vocations and avocations available to them in music.

Students use school and community resources to develop information on music and musicians

Know the music groups and musicians in the school

Students use traditional or nontraditional sound sources, including electronic ones, in composing and performing simple pieces

Perform a simple piece using traditional or nontraditional sound sources

Students use current technology to create, produce and record/playback music

Know current technologies to create, produce, and record/playback music (e.g. tape recorder, video recorder, computer with microphone)

Students identify a community-based musical interest or role and explain the skills, knowledge, and resources necessary to pursue the interest or adopt the role

Know the skills, knowledge, and resources necessary to pursue interest or role in a community group

Students demonstrate appropriate listening and other participatory responses to music of a variety of genres and cultures

Know the appropriate audience behaviors for a variety of musical genres and cultures
Engage in appropriate audience behaviors for a variety of musical genres and cultures

Students investigate some career options related to their musical interests

Know career options in music

Dance

Students will know how to access dance and dance related material from libraries, resource centers, museums, studios, and performance spaces. Students will know various career possibilities in dance and recreational opportunities to dance. Students will attend dance events and participate as appropriate within each setting.

Students demonstrate knowledge of sources for understanding dance technologies: live, print, video, computer, etc.

Students demonstrate knowledge of how human structure and function affect movement in parts of dances and dances that they know or have choreographed

Students demonstrate knowledge of audience/performer responsibilities and relationships in dance

Students demonstrate knowledge of differences in performance venue and the events presented in each

Theater

Students will know the basic tools, media, and techniques involved in theatrical production. Students will locate and use school, community, and professional resources for theatre experiences. Students will understand the job opportunities available in all aspects of theatre.

Students visit theatre technology facilities, including the local high school facility, and interact with professionals and theatre students to learn about theatre technology (e.g., lighting, staging, sound, etc.)

Students use the school or community library/media centers and other resources to develop information on various theatre-related topics

Students know about local theatrical institutions, attend performances in school and in the community, and demonstrate appropriate audience behavior

Students discuss vocations/avocations with theatre professionals and identify the skills and preparation necessary for theatre vocations/avocations

Visual Arts

Students will know and use a variety of visual arts materials, techniques, and processes. Students will know about resources and opportunities for participation in visual arts in the community (exhibitions, libraries, museums, galleries) and use appropriate materials (art reproductions, slides, print materials, electronic media). Students will be aware of vocational options available in the visual arts.

Students develop skills with electronic media as a means of expressing visual ideas

Students give examples of adults who make their livings in the arts professions

Students develop skills with a variety of art materials and competence in at least one medium

Students use the computer and other electronic media as designing tools and to communicate visual ideas

Students take advantage of community opportunities and cultural institutions to learn from professional artists, look at original art, and increase their understanding of art

Students understand the variety of careers related to the visual arts and the skills necessary to pursue some of them

Arts Standard 3: Responding to and Analyzing Works of Art

Students will respond critically to a variety of works in the arts, connecting the individual work to other works and to other aspects of human endeavor and thought.

Key Ideas

Performance Indicators

Music

Students will demonstrate the capacity to listen to and comment on music. They will relate their critical assertions about music to its aesthetic, structural, acoustic, and psychological qualities. Students will use concepts based on the structure of music's content and context to relate music to other broad areas of knowledge. They will use concepts from other disciplines to enhance their understanding of music.

Students through listening, analyze and evaluate their own and others' performances, improvisations, and compositions by identifying and comparing them with similar works and events

Evaluate, compare and contrast characteristics of performances (e.g. their own, peers, professional)

Know how to listen and analyze music using specific criteria
Evaluate characteristics of a performance (e.g. their own, peers, professional)

Students use appropriate terms to reflect a working knowledge of the musical elements

Evaluate music using age-appropriate terms for musical elements

Students demonstrate a basic awareness of the technical skills musicians must develop to produce an aesthetically acceptable performance

Cite technical skills of various musicians

Students use appropriate terms to reflect a working knowledge of social-musical functions and uses (appropriate choices of music for common ceremonies and other events)

Know how music is used in ceremonies and celebrations

Students use basic scientific concepts to explain how music-related sound is produced, transmitted through air, and perceived

Analyze and compare various forms in music to related arts

Students use terminology from music and other arts to analyze and compare the structures of musical and other artistic and literary works

Theater

Students will reflect on, interpret, and evaluate plays and theatrical performances, both live and recorded, using the language of dramatic criticism. Students will analyze the meaning and role of theatre in society. Students will identify ways in which drama/theatre connects to film and video, other arts, and other disciplines.

Students use the techniques and vocabulary of theatre criticism, both written and oral, to discuss theatre experiences and improve individual and group performances

Students examine and discuss the use of other art forms in a theatre production

Students explain how drama/theatre experiences relate to other literary and artistic events

Dance

Students will express through written and oral language their understanding, interpretation, and evaluation of dances they see, do, and read about. Students will acquire the critical vocabulary to talk and write about a variety of dance forms.

Students demonstrate knowledge of the technical language used in discussing dance performances

Students demonstrate knowledge of choreographic principles and processes

Students express to others their understanding of specific dance performances, including perceptions, descriptions, analyses, interpretations, and evaluations

Visual Arts

Students will reflect on, interpret, and evaluate works of art, using the language of art criticism. Students will analyze the visual characteristics of the natural and built environment and explain the social, cultural, psychological, and environmental dimensions of the visual arts. Students will compare the ways in which a variety of ideas, themes, and concepts are expressed through the visual arts with the ways they are expressed in other

Students explain how ideas, themes, or concepts in the visual arts are expressed in other disciplines (e.g., mathematics, science, literature, social studies)

Students discuss and write their analyses and interpretations of their own works of art and the art of others, using appropriate critical language

disciplines.

Students identify, analyze, and interpret the visual and sensory characteristics that they discover in natural and human-made forms

Students compare the ways ideas and concepts are communicated through visual art with the various ways that those ideas and concepts are manifested in other art forms

Students compare the ways ideas, themes, and concepts are communicated through the visual arts in other disciplines, and the various ways that those ideas, themes, and concepts are manifested within the discipline

Arts Standard 4: Understanding the Cultural Dimensions and Contributions of the Arts

Students will develop an understanding of the personal and cultural forces that shape artistic communication and how the arts in turn shape the diverse cultures of past and present society.

Key Ideas	Performance Indicators
Music Students will develop a performing and listening repertoire of music of various genres, styles, and cultures that represent the peoples of the world and their manifestations in the United States. Students will recognize the cultural features of a variety of musical compositions and performances and understand the functions of music within the culture.	Students identify the cultural contexts of a performance or recording and perform (with movement, where culturally appropriate) a varied repertoire of folk, art, and contemporary selections from the basic cultures that represent the peoples of the world Students identify from a performance or recording the titles and composers of well-known examples of classical concert music and blues/jazz selections
	Understand different cultures through singing, dancing, and playing instruments Cite the elements of a particular genre or style

Students discuss the current and past cultural, social, and political uses for the music they listen to and perform

Students in performing ensembles, read and perform repertoire in a culturally authentic manner

Understand the cultural and social aspects of music from various style periods

Demonstrate an understanding of special techniques or styles used to perform

Theater

Students will gain knowledge about past and present cultures as expressed through theatre. They will interpret how theatre reflects the beliefs, issues, and events of societies past and present.

Students improvise scenes based on information about various cultures

Students create intercultural celebrations using props, settings, and costumes

Students explain how drama/theatre experiences relate to themselves and others

Visual Arts

Students will explore art and artifacts from various historical periods and world cultures to discover the roles that art plays in the lives of people of a given time and place and to understand how the time and place influence the visual characteristics of the art work. Students will explore art to understand the social, cultural, and environmental dimensions of human society.

Students demonstrate how art works and artifacts from diverse world cultures reflect aspects of those cultures

Students demonstrate the ways in which some particular art works and artifacts reflect important aspects of the diverse cultures of the United States

Students create art works that reflect a particular historical period of a culture

Dance

Students will know dances from many cultures and times and recognize their relationship to various cultural, social, and historic contexts. Students will recognize that dance is performed in many different cultural settings and serves many functions in diverse societies.

Students identify the major dance forms of specific world cultures past and present

Students identify some of the major dance artists from diverse cultures

Students show how specific dance forms
are related to the culture from which they
come

7th Grade Arts

Arts Standard 1: Creating, Performing, and Participating in the Arts
Students will actively engage in the processes that constitute creation and performance in the arts (dance, music, theatre, and visual arts) and participate in various roles in the arts.

Key Ideas	Performance Indicators	Core Curriculum
Dance Students will perform set dance forms in formal and informal contexts and will improvise, create, and perform dances based on their own movement ideas. They will demonstrate an understanding of choreographic principles, processes, and structures and of the roles of various participants in dance productions.	Students know and demonstrate a range of movement elements and skills (such as balance, alignment, elevation, and landing) and basic dance steps, positions, and patterns Students dance a range of forms from free improvisation to structured choreography Students create or improvise dance phrases, studies, and dances, alone and/or in collaboration with others, in a variety of contexts Students demonstrate the ability to take various roles in group productions and performances	
Music Students will compose original music and perform music written by others. They will understand and use the basic elements of music in their performances and compositions. Students will engage in individual and group musical and music-related tasks, and will describe the various roles and means of creating, performing, recording, and producing music.	Students compose simple pieces that reflect a knowledge of melodic, rhythmic, harmonic, timbral, and dynamic elements Students sing and/or play, alone and in combination with other voice or instrument parts, a varied repertoire of	Understand the values of notes and rests (whole, half, quarter, and eighths) Develop a melodic theme to go with the natural rhythm of the text Understand complex musical form (e.g. theme and variation, rondo) Understand and recognize tone colors of instruments in orchestra Understand characteristic tone

folk, art, and contemporary songs, from notation, with a good tone, pitch,

Students improvise short musical compositions that exhibit cohesiveness and musical expression

Students in performing ensembles, read moderately easy/ moderately difficult music (NYSSMA level III-IV) and respond appropriately to the gestures of the conductor

Students identify and use, in individual and group experiences, some of the roles, processes, and actions for performing and composing music of their own and others, and discuss ways to improve them

Know how to sing or play from notation with good tone, pitch, duration, and dynamics

Perform in ensembles from easy to moderate (as defined by: NYSSMA) musical selection

Distinguish and respond to gestures of the conductor

Demonstrate an understanding of improvisation

Know the components of a good performance

Theater

Students will create and perform theatre pieces as well as improvisational drama. They will understand and use the basic elements of theatre in their characterizations, improvisations, and play writing. Students will engage in individual and group theatrical and theatre-related tasks, and will describe the various roles and means of creating, performing, and producing theatre.

Students use improvisation and guided play writing to communicate ideas and feelings

Students imitate various experiences through pantomime, play making, dramatic play, story dramatization, storytelling, role playing, improvisation and guided play writing

Students use language, voice, gesture, movement and observation to create character and interact with others in improvisation, rehearsal, and performance

Students create props, scenery, and costumes through individual and group effort

Students identify and use, in individual and group experiences, some of the roles, processes, and actions for performing and creating theatre pieces and improvisational drama within the school/community, and discuss ways to improve them

Visual Arts

Students will make works of art that explore different kinds of subject matter, topics, themes, and metaphors. Students will understand and use sensory elements, organizational principles, and expressive images to communicate their own ideas in works of art. Students will use a variety of art materials, processes, mediums, and techniques, and use appropriate technologies for creating and exhibiting visual art works.

Students produce a collection of art works, in a variety of mediums, based on a range of individual and collective experiences

Students know and use a variety of sources for developing and conveying ideas, images, themes, symbols, and events in their creation of art

Students use the elements and principles of art to communicate specific meanings to others in their art work

Students during the creative process, reflect on the effectiveness of selected mediums or techniques to convey intended meanings

Students identify and use, in individual and group experiences, some of the roles and means for designing, producing, and exhibiting art works and discuss ways to improve them

Arts Standard 2: Knowing and Using Arts Materials and Resources

Students will be knowledgeable about and make use of the materials and resources available for participation in the arts in various roles

Key Ideas	Performance Indicators	
Music Students will use traditional instruments, electronic instruments, and a variety of nontraditional sound sources to create and perform music. They will use various resources to expand their knowledge of listening experiences, performance opportunities, and/or information about music. Students will identify opportunities to contribute to their communities' music institutions, including those embedded in other institutions (church choirs, industrial music ensembles, etc.). Students will know the vocations and avocations available to them in music.	Students use school and community resources to develop information on music and musicians	Know the music groups and musicians in the school
	Students use current technology to create, produce and record/playback music	Know the skills, knowledge, and resources necessary to pursue interest or role in a school based group
	Students identify a community-based musical interest or role and explain the skills, knowledge, and resources necessary to pursue the interest or adopt the role	
	Students use school and community resources to develop information on music and musicians	Demonstrate ability to access information on music and musicians from various sources (e.g. school and community)
	Students demonstrate appropriate listening and other participatory responses to music of a variety of genres and cultures	Know the appropriate audience behaviors for a variety of musical genres and cultures Engage in appropriate audience behaviors for a variety of musical genres and cultures
	Students investigate some career options related to their musical interests	
Dance Students will know how to access dance and dance related material from libraries, resource centers, museums, studios, and performance spaces. Students will know various career possibilities in dance and recreational opportunities to dance. Students will attend dance events and participate as appropriate within each setting.	Students demonstrate knowledge of sources for understanding dance technologies: live, print, video, computer, etc.	
	Students demonstrate knowledge of how human structure and function affect movement in parts of dances and dances that they know or have choreographed	

**Students demonstrate knowledge of
audience/performer responsibilities and
relationships in dance**

**Students demonstrate knowledge of
differences in performance venue and
the events presented in each**

Theater

Students will know the basic tools, media, and techniques involved in theatrical production. Students will locate and use school, community, and professional resources for theatre experiences. Students will understand the job opportunities available in all aspects of theatre.

Students visit theatre technology facilities, including the local high school facility, and interact with professionals and theatre students to learn about theatre technology (e.g., lighting, staging, sound, etc.)

Students use the school or community library/media centers and other resources to develop information on various theatre-related topics

Students know about local theatrical institutions, attend performances in school and in the community, and demonstrate appropriate audience behavior

Students discuss vocations/avocations with theatre professionals and identify the skills and preparation necessary for theatre vocations/avocations

Visual Arts

Students will know and use a variety of visual arts materials, techniques, and processes. Students will know about resources and opportunities for participation in visual arts in the community (exhibitions, libraries, museums, galleries) and use appropriate materials (art reproductions, slides, print materials, electronic media). Students will be aware of vocational options available in the visual arts.

Students develop skills with electronic media as a means of expressing visual ideas

Students give examples of adults who make their livings in the arts professions

Students develop skills with a variety of art materials and competence in at least one medium

Students use the computer and other electronic media as designing tools and to communicate visual ideas

Students take advantage of community opportunities and cultural institutions to learn from professional artists, look at original art, and increase their understanding of art

Students understand the variety of careers related to the visual arts and the skills necessary to pursue some of them

Arts Standard 3: Responding to and Analyzing Works of Art
 Students will respond critically to a variety of works in the arts, connecting the individual work to other works and to other aspects of human endeavor and thought.

Key Ideas	Performance Indicators
Music Students will demonstrate the capacity to listen to and comment on music. They will relate their critical assertions about music to its aesthetic, structural, acoustic, and psychological qualities. Students will use concepts based on the structure of music's content and context to relate music to other broad areas of knowledge. They will use concepts from other disciplines to enhance their understanding of music.	Students through listening, analyze and evaluate their own and others' performances, improvisations, and compositions by identifying and comparing them with similar works and events
	Understand the characteristics of a good performance
	Know how to listen and analyze music using specific criteria Evaluate, compare and contrast characteristics of performances (e.g. their own, peers, professional)
	Students use appropriate terms to reflect a working knowledge of the musical elements
	Evaluate music using age-appropriate terms for musical elements
	Students demonstrate a basic awareness of the technical skills musicians must develop to produce an aesthetically acceptable performance
	Cite technical skills of various musicians
	Students use appropriate terms to reflect a working knowledge of social-musical functions and uses (appropriate choices of music for common ceremonies and other events)
	Know how music is used in ceremonies and celebrations
	Students use basic scientific concepts to explain how music-related sound is produced, transmitted through air, and perceived

Students use terminology from music and other arts to analyze and compare the structures of musical and other artistic and literary works

Theater

Students will reflect on, interpret, and evaluate plays and theatrical performances, both live and recorded, using the language of dramatic criticism. Students will analyze the meaning and role of theatre in society. Students will identify ways in which drama/theatre connects to film and video, other arts, and other disciplines.

Students use the techniques and vocabulary of theatre criticism, both written and oral, to discuss theatre experiences and improve individual and group performances

Students examine and discuss the use of other art forms in a theatre production

Students explain how drama/theatre experiences relate to other literary and artistic events

Dance

Students will express through written and oral language their understanding, interpretation, and evaluation of dances they see, do, and read about. Students will acquire the critical vocabulary to talk and write about a variety of dance forms.

Students demonstrate knowledge of the technical language used in discussing dance performances

Students demonstrate knowledge of choreographic principles and processes

Students express to others their understanding of specific dance performances, including perceptions, descriptions, analyses, interpretations, and evaluations

Visual Arts

Students will reflect on, interpret, and evaluate works of art, using the language of art criticism. Students will analyze the visual characteristics of the natural and built environment and explain the social, cultural, psychological, and

Students explain how ideas, themes, or concepts in the visual arts are expressed in other disciplines (e.g., mathematics, science, literature, social studies)

environmental dimensions of the visual arts. Students will compare the ways in which a variety of ideas, themes, and concepts are expressed through the visual arts with the ways they are expressed in other disciplines.

Students discuss and write their analyses and interpretations of their own works of art and the art of others, using appropriate critical language

Students identify, analyze, and interpret the visual and sensory characteristics that they discover in natural and human-made forms

Students compare the ways ideas and concepts are communicated through visual art with the various ways that those ideas and concepts are manifested in other art forms

Students compare the ways ideas, themes, and concepts are communicated through the visual arts in other disciplines, and the various ways that those ideas, themes, and concepts are manifested within the discipline

Arts Standard 4: Understanding the Cultural Dimensions and Contributions of the Arts

Students will develop an understanding of the personal and cultural forces that shape artistic communication and how the arts in turn shape the diverse cultures of past and present society.

Key Ideas

Performance Indicators

Music

Students will develop a performing and listening repertoire of music of various genres, styles, and cultures that represent the peoples of the world and their manifestations in the United States. Students will recognize the cultural features of a variety of musical compositions and performances and understand the functions of music within

Students identify the cultural contexts of a performance or recording and perform (with movement, where culturally appropriate) a varied repertoire of folk, art, and contemporary selections from the basic cultures that represent the peoples of the world

Identify dominant characteristics in music from various cultures (e.g. rhythm and modes)

the culture.

Students identify from a performance or recording the titles and composers of well known examples of classical concert music and blues/jazz selections

Cite music and composers from the various style periods

Students discuss the current and past cultural, social, and political uses for the music they listen to and perform

Demonstrate an understanding of the political, historical, and cultural significance of a musical selection

Students in performing ensembles, read and perform repertoire in a culturally authentic manner

Demonstrate an understanding of special techniques or styles used to perform repertoire in a culturally authentic manner

Theater

Students will gain knowledge about past and present cultures as expressed through theatre. They will interpret how theatre reflects the beliefs, issues, and events of societies past and present.

Students improvise scenes based on information about various cultures

Students create intercultural celebrations using props, settings, and costumes

Students explain how drama/theatre experiences relate to themselves and others

Visual Arts

Students will explore art and artifacts from various historical periods and world cultures to discover the roles that art plays in the lives of people of a given time and place and to understand how the time and place influence the visual characteristics of the art work. Students will explore art to understand the social, cultural, and environmental dimensions of human society.

Students demonstrate how art works and artifacts from diverse world cultures reflect aspects of those cultures

Students demonstrate the ways in which some particular art works and artifacts reflect important aspects of the diverse cultures of the United States

Students create art works that reflect a particular historical period of a culture

Dance

Students will know dances from many cultures and times and recognize their relationship to various cultural, social, and historic contexts. Students will recognize that dance is performed in many different cultural settings and serves many functions in diverse societies.

Students identify the major dance forms of specific world cultures past and present

Students identify some of the major dance artists from diverse cultures

Students show how specific dance forms are related to the culture from which they come

8th Grade Arts

Arts Standard 1: Creating, Performing and Participating in the Arts

Students will actively engage in the processes that constitute creation and performance in the arts (dance, music, theatre, and visual arts) and participate in various roles in the arts.

Key Ideas	Performance Indicators	Core Curriculum
Dance Students will perform set dance forms in formal and informal contexts and will improvise, create, and perform dances based on their own movement ideas. They will demonstrate an understanding of choreographic principles, processes, and structures and of the roles of various participants in dance productions.	Students know and demonstrate a range of movement elements and skills (such as balance, alignment, elevation, and landing) and basic dance steps, positions, and patterns Students dance a range of forms from free improvisation to structured choreography Students create or improvise dance phrases, studies, and dances, alone and/or in collaboration with others, in a variety of contexts Students demonstrate the ability to take various roles in group productions and performances	
Music Students will compose original music and perform music written by others. They will understand and use the basic elements of music in their performances and compositions. Students will engage in individual and group musical and music-related tasks, and will describe the various roles and means of creating, performing, recording, and producing music.	Students compose simple pieces that reflect a knowledge of melodic, rhythmic, harmonic, timbral, and dynamic elements Students sing and/or play, alone and in combination with other voice or instrument parts, a varied repertoire of folk, art, and contemporary songs, from notation, with a good tone, pitch, duration,	Understand chord structure Understand elements of dynamics and tempo Compose a simple melody with harmonic accompaniment Perform composition (simple melody) Understand characteristic tone Know how to sing or play from notation with good tone, pitch, duration, and dynamics

Students improvise short musical compositions that exhibit cohesiveness and musical expression

Students in performing ensembles, read moderately easy/ moderately difficult music (NYSSMA level III-IV) and respond appropriately to the gestures of the conductor

Students identify and use, in individual and group experiences, some of the roles, processes, and actions for performing and composing music of their own and others, and discuss ways to improve them

Perform in ensembles from easy to moderate (as defined by: NYSSMA) musical selection

Distinguish and respond to gestures of the conductor

Know the components of a good performance

Evaluate the roles, processes, and actions for performing and composing music in order to make improvements

Understand the many roles and functions of the individuals involved in the presentation of a concert

Understand the concept of improvisation

Theater

Students will create and perform theatre pieces as well as improvisational drama. They will understand and use the basic elements of theatre in their characterizations, improvisations, and play writing. Students will engage in individual and group theatrical and theatre-related tasks, and will describe the various roles and means of creating, performing, and producing theatre.

Students use improvisation and guided play writing to communicate ideas and feelings

Students imitate various experiences through pantomime, play making, dramatic play, story dramatization, storytelling, role playing, improvisation and guided play writing

Students use language, voice, gesture, movement and observation to create character and interact with others in improvisation, rehearsal, and performance

Students create props, scenery, and costumes through individual and group effort

Students identify and use, in individual and group experiences, some of the roles, processes, and actions for performing and creating theatre pieces and improvisational drama within the school/community, and discuss ways to improve them

Visual Arts

Students will make works of art that explore different kinds of subject matter, topics, themes, and metaphors. Students will understand and use sensory elements, organizational principles, and expressive images to communicate their own ideas in works of art. Students will use a variety of art materials, processes, mediums, and techniques, and use appropriate technologies for creating and exhibiting visual art works.

Students produce a collection of art works, in a variety of mediums, based on a range of individual and collective experiences

Students know and use a variety of sources for developing and conveying ideas, images, themes, symbols, and events in their creation of art

Students use the elements and principles of art to communicate specific meanings to others in their art work

Students during the creative process, reflect on the effectiveness of selected mediums or techniques to convey intended meanings

Students identify and use, in individual and group experiences, some of the roles and means for designing, producing, and exhibiting art works and discuss ways to improve them

Arts Standard 2: Knowing and Using Arts Materials and Resources

Students will be knowledgeable about and make use of the materials and resources available for participation in the arts in various roles.

Key Ideas

Music

Performance Indicators

Students will use traditional instruments, electronic instruments, and a variety of nontraditional sound sources to create and perform music. They will use various resources to expand their knowledge of listening experiences, performance opportunities, and/or information about music. Students will identify opportunities to contribute to their communities' music institutions, including those embedded in other institutions (church choirs, industrial music ensembles, etc.). Students will know the vocations and avocations available to them in music.

Students use school and community resources to develop information on music and musicians

Students use traditional or nontraditional sound sources, including electronic ones, in composing and performing simple pieces

Students use current technology to create, produce and record/playback music

Students identify a community-based musical interest or role and explain the skills, knowledge, and resources necessary to pursue the interest or adopt the role

Know the music groups and musicians in the school

Use a traditional sound source to compose a simple piece
Perform a simple piece using traditional or nontraditional sound sources

Know current technologies to create, produce, and record/playback music (e.g. midi instruments, midi software, sequencing software)

Know the skills, knowledge, and resources necessary to pursue interest or role in a school based group

Students demonstrate appropriate listening and other participatory responses to music of a variety of genres and cultures

Students investigate some career options related to their musical interests

Know the appropriate audience behaviors for a variety of musical genres and cultures
Engage in appropriate audience behaviors for a variety of musical genres and cultures

Evaluate career options based on musical interests

Dance

Students will know how to access dance and dance related material from libraries, resource centers, museums, studios, and performance spaces. Students will know various career possibilities in dance and recreational opportunities to dance. Students will attend dance events and participate as appropriate within each setting.

Students demonstrate knowledge of sources for understanding dance technologies: live, print, video, computer, etc.

Students demonstrate knowledge of how human structure and function affect movement in parts of dances and dances that they know or have choreographed

Students demonstrate knowledge of audience/performer responsibilities and relationships in dance

Students demonstrate knowledge of differences in performance venue and the events presented in each

Theater

Students will know the basic tools, media, and techniques involved in theatrical production. Students will locate and use school, community, and professional resources for theatre experiences. Students will understand the job opportunities available in all aspects of

Students visit theatre technology facilities, including the local high school facility, and interact with professionals and theatre students to learn about theatre technology (e.g., lighting, staging, sound, etc.)

theatre.

Students use the school or community library/media centers and other resources to develop information on various theatre-related topics

Students know about local theatrical institutions, attend performances in school and in the community, and demonstrate appropriate audience behavior

Students discuss vocations/avocations with theatre professionals and identify the skills and preparation necessary for theatre vocations/avocations

Visual Arts

Students will know and use a variety of visual arts materials, techniques, and processes. Students will know about resources and opportunities for participation in visual arts in the community (exhibitions, libraries, museums, galleries) and use appropriate materials (art reproductions, slides, print materials, electronic media). Students will be aware of vocational options available in the visual arts.

Students develop skills with electronic media as a means of expressing visual ideas

Students give examples of adults who make their livings in the arts professions

Students develop skills with a variety of art materials and competence in at least one medium

Students use the computer and other electronic media as designing tools and to communicate visual ideas

Students take advantage of community opportunities and cultural institutions to learn from professional artists, look at original art, and increase their understanding of art

Students understand the variety of careers related to the visual arts and the skills necessary to pursue some of them

Arts Standard 3: Responding to and Analyzing Works of Art

Students will respond critically to a variety of works in the arts, connecting the individual work to other works and to other aspects of human endeavor and thought.

Key Ideas

Performance Indicators

Music

Students will demonstrate the capacity to listen to and comment on music. They will relate their critical assertions about music to its aesthetic, structural, acoustic, and psychological qualities. Students will use concepts based on the structure of music's content and context to relate music to other broad areas of knowledge. They will use concepts from other disciplines to enhance their understanding of music.

Students through listening, analyze and evaluate their own and others' performances, improvisations, and compositions by identifying and comparing them with similar works and events

Know how to listen and analyze music using specific criteria
Evaluate, compare and contrast characteristics of performances (e.g. their own, peers, professional)

Students use appropriate terms to reflect a working knowledge of the musical elements

Evaluate music using age-appropriate terms for musical elements

Students demonstrate a basic awareness of the technical skills musicians must develop to produce an aesthetically acceptable performance

Cite technical skills of various musicians

Students use appropriate terms to reflect a working knowledge of social-musical functions and uses (appropriate choices of music for common ceremonies and other events)

Know how music is used in ceremonies and celebrations

Students use basic scientific concepts to explain how music-related sound is produced, transmitted through air, and perceived

Understand sound production as it pertains to instruments and voices

Students use terminology from music and other arts to analyze and compare the structures of musical and other artistic and literary works

Demonstrate understanding of form as it applies to music and related arts

Theater

Students will reflect on, interpret, and evaluate plays and theatrical performances, both live and recorded, using the language of dramatic criticism. Students will analyze the meaning and role of theatre in society. Students will identify ways in which drama/theatre connects to film and video, other arts, and other disciplines.

Students use the techniques and vocabulary of theatre criticism, both written and oral, to discuss theatre experiences and improve individual and group performances

Students examine and discuss the use of other art forms in a theatre production

Students explain how drama/theatre experiences relate to other literary and artistic events

Dance

Students will express through written and oral language their understanding, interpretation, and evaluation of dances they see, do, and read about. Students will acquire the critical vocabulary to talk and write about a variety of dance forms.

Students demonstrate knowledge of the technical language used in discussing dance performances

Students demonstrate knowledge of choreographic principles and processes

Students express to others their understanding of specific dance performances, including perceptions, descriptions, analyses, interpretations, and evaluations

Visual Arts

Students will reflect on, interpret, and evaluate works of art, using the language of art criticism. Students will analyze the visual characteristics of the natural and built environment and explain the social, cultural, psychological, and environmental

Students explain how ideas, themes, or concepts in the visual arts are expressed in other disciplines (e.g., mathematics, science, literature, social studies)

dimensions of the visual arts. Students will compare the ways in which a variety of ideas, themes, and concepts are expressed through the visual arts with the ways they are expressed in other disciplines.

Students discuss and write their analyses and interpretations of their own works of art and the art of others, using appropriate critical language

Students identify, analyze, and interpret the visual and sensory characteristics that they discover in natural and human-made forms

Students compare the ways ideas and concepts are communicated through visual art with the various ways that those ideas and concepts are manifested in other art forms

Students compare the ways ideas, themes, and concepts are communicated through the visual arts in other disciplines, and the various ways that those ideas, themes, and concepts are manifested within the discipline

Arts Standard 4: Understanding the Cultural Dimensions and Contributions of the Arts

Students will develop an understanding of the personal and cultural forces that shape artistic communication and how the arts in turn shape the diverse cultures of past and present society.

Key Ideas

Performance Indicators

Music

Students will develop a performing and listening repertoire of music of various genres, styles, and cultures that represent the peoples of the world and their manifestations in the United States. Students will recognize the cultural features of a variety of musical compositions and performances and understand the functions of music within

Students identify the cultural contexts of a performance or recording and perform (with movement, where culturally appropriate) a varied repertoire of folk, art, and contemporary selections from the basic cultures that represent the peoples of the world

Identify dominant characteristics in music from various cultures (e.g. rhythm and modes)

the culture.

Students identify from a performance or recording the titles and composers of well-known examples of classical concert music and blues/jazz selections

Cite music and composers from the various style periods

Students discuss the current and past cultural, social, and political uses for the music they listen to and perform

Demonstrate an understanding of the political, historical, and cultural significance of a musical selection

Students in performing ensembles, read and perform repertoire in a culturally authentic manner

Demonstrate an understanding of special techniques or styles used to perform repertoire in a culturally authentic manner

Theater

Students will gain knowledge about past and present cultures as expressed through theatre. They will interpret how theatre reflects the beliefs, issues, and events of societies past and present.

Students improvise scenes based on information about various cultures

Students create intercultural celebrations using props, settings, and costumes

Students explain how drama/theatre experiences relate to themselves and others

Visual Arts

Students will explore art and artifacts from various historical periods and world cultures to discover the roles that art plays in the lives of people of a given time and place and to understand how the time and place influence the visual characteristics of the art work. Students will explore art to understand the social, cultural, and environmental dimensions of human society.

Students demonstrate how art works and artifacts from diverse world cultures reflect aspects of those cultures

Students demonstrate the ways in which some particular art works and artifacts reflect important aspects of the diverse cultures of the United States

Students create art works that reflect a particular historical period of a culture

Dance

Students will know dances from many cultures and times and recognize their relationship to various cultural, social, and historic contexts. Students will recognize that dance is performed in many different cultural settings and serves many functions in diverse societies.

Students identify the major dance forms of specific world cultures past and present

Students identify some of the major dance artists from diverse cultures

Students show how specific dance forms are related to the culture from which they come

EXHIBIT D

**BY-LAWS
of the
ACHIEVEMENT ACADEMY CHARTER SCHOOL**

ARTICLE I: NAME

The name of the Corporation is the Achievement Academy Charter School (hereinafter "the Corporation").

ARTICLE II: MEMBERSHIP

The Corporation has no members. The rights which would otherwise vest in the members vest in the Directors of the Corporation (hereinafter the "Trustees") of the Charter School. Actions which would otherwise require approval by a majority of all members or approval by the members require only approval of a majority of all Trustees or approval by the Board of Trustees (hereinafter the "Board").

ARTICLE III: BOARD OF TRUSTEES

A. Powers. The Board shall conduct or direct the affairs of the Corporation and exercise its powers, subject to provisions of applicable Education Law, Not-for-Profit Corporation Law, the Corporation's Charter and these Bylaws. The Board may delegate the management of the activities of the Corporation to others, so long as the affairs of the Corporation are managed, and its powers are exercised, under the Board's ultimate jurisdiction.

Without limiting the generality of the powers hereby granted to the Board, but subject to the same limitations, the Board shall have all the powers enumerated in these Bylaws, and the following specific powers:

1. To elect and remove Trustees;
2. To select and remove Officers, agents and employees of the Corporation; to prescribe powers and duties for them; and to fix their compensation;
3. To conduct, manage and control the affairs and activities of the Corporation, and to make rules and regulations;
4. To enter into contracts, leases and other agreements which are, in the Board's judgment, necessary or desirable in obtaining the purposes of promoting the interests of the Corporation;
5. To carry on the business of operating the Charter School and apply any surplus that results from the business activity to any activity in which the Corporation may engage;

6. To act as trustee under any trust incidental to the Corporation's purposes, and to receive, hold, administer, exchange and expend funds and property subject to such a trust;

7. To acquire real or personal property, by purchase, exchange, lease, gift, devise, bequest, or otherwise, and to hold, improve, lease, sublease, mortgage, transfer in trust, encumber, convey or otherwise dispose of such property;

8. To borrow money, incur debt, and to execute and deliver promissory notes, bonds, debentures, deeds of trust, mortgages, pledges, hypothecations and other evidences of debt and securities;

9. To lend money received only from private sources and to accept conditional or unconditional promissory notes therefore, whether interest or non-interest bearing, or secured or unsecured; and

10. To indemnify and maintain insurance on behalf of any of its Trustees, Officers, employees or agents for liability asserted against or incurred by such person in such capacity or arising out of such person's status as such, subject to the applicable provisions of the Not-for-Profit Corporation Law and the limitations noted in these Bylaws.

B. Number of Trustees. The number of Trustees of the Corporation shall be not fewer than seven (7) and shall not exceed fifteen (15). The Board shall fix the exact number of Trustees, within these limits, by Board resolution or amendment of the Bylaws.

C. Election of Trustees.

1. Election. The Board shall elect the Trustees by the vote of a majority of the Trustees then in office, whether or not the number of Trustees in office is sufficient to constitute a quorum, or by the sole remaining Trustee. Trustees-elect assume office subject to approval by the Charter Entity.

2. Eligibility. The Board may elect any person who in its discretion it believes will serve the interests of the Corporation faithfully and effectively.

3. Interested Persons. Not more than 49% of the persons serving on the Board may be interested persons. An "interested person" is: (1) any person currently being compensated by the Corporation for services rendered to it within the previous 12 months, whether as a full-time or part-time employee, independent contractor or otherwise; or (2) any sister, brother, ancestor, descendant, spouse, sister-in-law, brother-in-law, daughter-in-law, son-in-law, mother-in-law or father-in-law of any such person.

3-a. Ex-officio trustee(s). At least one seat on the Board shall be reserved for a parent of a child enrolled in the Corporation; and one seat shall be reserved for a trustee teaching at the Amistad Academy.

4. Term of Office.

a. The Trustees elected shall be divided into three classes for the purpose of staggering their terms of office. All classes shall be as nearly equal in number as possible.

b. The terms of office of the Trustees initially classified shall be as follows: that of the first class shall expire at the next annual meeting of the Trustees, the second class at the second succeeding annual meeting and the third class at the third succeeding annual meeting. Following the expiration of these designated terms, the term of each Trustee shall continue for three (3) years, except the term of any Trustee who is a parent of a child enrolled in the charter school or the designated representative of any partner organization shall be one (1) year.

c. The term of office of a Trustee elected to fill a vacancy in these Bylaws begins on the date of the Trustee's election, and continues: (1) for the balance of the unexpired term in the case of a vacancy created because of the resignation, removal, or death of a Trustee, or (2) for the term specified by the Board in the case of a vacancy resulting from the increase of the number of Trustees authorized.

d. A Trustee's term of office shall not be shortened by any reduction in the number of Trustees resulting from amendment to the Charter, the Bylaws, or other Board action.

e. A Trustee's term of office shall not be extended beyond that for which the Trustee was elected by amendment of the school's charter or the Bylaws or other Board action.

5. Time of Elections. The Board shall elect Trustees whose terms begin on July 1st of a given year at the Annual Meeting for that year, or at a Regular Meeting designated for that purpose, or at a Special Meeting called for that purpose.

D. Removal of Trustees. The Board may remove a Trustee in accordance with the applicable provisions of the Education Law and the Not-for-Profit Corporation Law.

E. Resignation by Trustee. A Trustee may resign by giving written notice to the Board Chairman or Secretary. The resignation is effective upon receipt of such notice, or at any later date specified in the notice. The acceptance of a resignation by the Board Chairman or Secretary shall not be necessary to make it effective, but no resignation shall discharge any accrued obligation or duty of a Trustee.

F. Vacancies. A vacancy is deemed to occur on the effective date of the resignation of a Trustee, upon the removal of a Trustee, upon declaration of vacancy pursuant to these Bylaws, or upon a Trustee's death. A vacancy is also deemed to exist upon the increase by the Board of the authorized number of Trustees.

G. Compensation of Trustees. Trustees shall serve without compensation. However, the Board may approve reimbursement of a Trustee's actual and necessary expenses while conducting Corporation business.

ARTICLE IV: PRINCIPAL OFFICE

The Corporation's principal office shall be at the following address: Achievement Academy Charter School, c/o: [address to be determined]; or at such other place as

the Board may select by resolution or amendment of the Bylaws. The Secretary shall note any change in office on the copy of the Bylaws maintained by the Secretary.

ARTICLE V: MEETINGS OF THE BOARD

A. Place of Meetings. Board Meetings shall be held at the Corporation's principal office or at any other reasonably convenient place as the Board may designate.

B. Annual Meetings. An Annual Meeting shall be held in the month of June of each year for the purpose of electing Trustees, making and receiving reports on corporate affairs, and transacting such other business as comes before the meeting.

C. Regular Meetings. A minimum of six Regular Meetings shall be held each year on dates determined by the Board.

D. Special Meetings. A Special Meeting shall be held at any time called by the Chairman, or by any Trustee upon written demand of not less than one-half of the entire Board.

E. Adjournment. A majority of the Trustees present at a meeting, whether or not a quorum, may adjourn the meeting to another time and place.

F. Notices. Notices to Trustees of Board Meetings shall be given as follows:

1. Annual Meetings and Regular Meetings may be held without notice if the Bylaws or the Board fix the time and place of such meetings.
2. Special Meetings shall be held upon four days' notice by first-class mail or 48 hours' notice delivered personally or by telephone, facsimile or e-mail. Notices will be deemed given when deposited in the United States mail, addressed to the recipient at the address shown for the recipient in the Corporation's records, first-class postage prepaid; when personally delivered in writing to the recipient; or when faxed, e-mailed, or communicated orally, in person or by telephone, to the Trustee or to a person whom it is reasonably believed will communicate it promptly to the Trustee.

G. Waiver of Notice. Notice of a meeting need not be given to a Trustee who signs a waiver of notice or written consent to holding the meeting or an approval of the minutes of the meeting, whether before or after the meeting, or attends the meeting without protest prior to the meeting or at its commencement, of the lack of notice. The Secretary shall incorporate all such waivers, consents and approvals into the minutes of the meeting.

ARTICLE VI: ACTION BY THE BOARD

A. Quorum. Unless a greater proportion is required by law, a majority of the entire Board of Trustees shall constitute a quorum for the transaction of any business or of any specified item of business.

B. Action by the Board.

1. Actions Taken at Board Meetings . Except as otherwise provided by statute or by these Bylaws, the vote of a majority of the Board present at the time of the vote, if a quorum is present at such time, shall be the act of the Board. If at any meeting of the Board there shall be less than a quorum present, the Trustees present may adjourn the meeting until a quorum is obtained.

2. Board Participation. In all events, a quorum of Trustees must be present to lawfully conduct a Board Meeting of the Charter School. To the extent permitted by Article 7 of the Public Officers Law, trustees participating by means of video-conferencing may be counted toward achieving a quorum. Trustees participating by means of videoconferencing shall do so from a site at which the public may attend, listen, and observe. Once a quorum is present, additional Trustees may participate in a Board meeting through conference telephone or similar communication equipment, provided that all Trustees participating in such meeting can hear one another and there is no objection from any Trustee or any person in the public audience. Trustees other than those in-person or participating by live video-conferencing shall not vote.

C. Committees.

1. Appointment of Committees. The Board may create committees for any purpose, and the Chairman of the Board shall appoint members to and designate the chairs of such committees. A Board Committee will consist of not fewer than three Trustees, who shall serve at the pleasure of the Chairman of the Board, except that any executive committee of the Board shall comprise not fewer than five trustees

2. Standing Committee. The Board shall have a standing Finance Committee, chaired by the Treasurer. Additional members of the Finance Committee will be appointed by the Chairman of the Board.

3. Authority of Board Committees. The Chairman of the Board may delegate to a Board committee any of the authority of the Board, except with respect to:

- a. The election of Trustees;
- b. Filling vacancies on the Board or any committee which has the authority of the Board;
- c. The fixing of Trustee compensation for serving on the Board or on any committee;
- d. The amendment or repeal of Bylaws or the adoption of new Bylaws; and
- e. The appointment of other committees of the Board, or the members of the committees.

4. Procedures of Committees. The Board may prescribe the manner in which the proceedings of any Board Committee are to be conducted. In the absence of such prescription, a Board Committee may prescribe the manner of conducting its proceedings, except that the regular and special meetings of the Committee are

governed by the provisions of these Bylaws and the Open Meetings Law with respect to the calling of meetings.

D. Standard of Care.

1. Performance of Duties. Each Trustee shall perform all duties of a Trustee, including duties on any Board Committee, in good faith and with that degree of diligence, care and skill, including reasonable inquiry, as an ordinary prudent person in a like position would use under similar circumstances.

2. Reliance on Others. In performing the duties of a Trustee, a Trustee shall be entitled to rely on information, opinions, reports or statements, including financial statements and other financial data, presented or prepared by:

a. One or more Officers or employees of the Corporation whom the Trustee believes to be reliable and competent in the matters presented;

b. Legal counsel, public accountants or other persons as to matters that the Trustee believes are within that person's professional or expert competence; or

c. A Board Committee on which the Trustee does not serve, duly designated in accordance with a provision of the Corporation's Charter or Bylaws, as to matters within its designated authority, provided the Trustee believes the Committee merits confidence and the Trustee acts in good faith, and with that degree of care specified in Paragraph D.1., and after reasonable inquiry when the need is indicated by the circumstances, and without knowledge that would cause such reliance to be unwarranted.

3. Investments. In investing and dealing with all assets held by the Corporation for investment, the Board shall exercise the standard of care described above in Paragraph D.1. and shall consider among other relevant considerations the long and short term needs of the Corporation in carrying out its purposes, including its present and anticipated financial requirements. The Board may delegate its investment powers to others, provided that those powers are exercised within the ultimate direction of the Board.

E. Rights of Inspection. Every Trustee has the right to inspect and copy all books, records and documents of every kind and to inspect the physical properties of the Corporation, provided that such inspection is conducted at a reasonable time after reasonable notice, and provided that such right of inspection and copying is subject to the obligation to maintain the confidentiality of the reviewed information, in addition to any obligations imposed by any applicable federal, state or local law.

F. Participation in Discussions and Voting. Every Trustee has the right to participate in the discussion and vote on all issues before the Board or any Board Committee, except that any Trustee shall be excused from the discussion and vote on any matter involving such Trustee relating to: (a) a self-dealing transaction; (b) a conflict of interest; (c) indemnification of that Trustee uniquely; or (d) any other matter at the discretion of a majority of the Trustees then present.

G. Duty to Maintain Board Confidences. Every Trustee has a duty to maintain the confidentiality of all Board actions which are not required by law to be open to the

public, including discussions and votes which take place at any Executive Sessions of the Board. Any Trustee violating this confidence may be removed from the Board.

ARTICLE VII: OFFICERS

A. Officers. The Officers of the Corporation consist of a Chairman (hereinafter "Chairman"), Vice Chairman (hereinafter "Vice Chairman"), a Secretary and a Chief Financial Officer (hereinafter "Treasurer"). The Corporation also may have such other officers as the Board deems advisable.

1. **Chairman** . Subject to Board control, the Chairman has general supervision, direction and control of the affairs of the Corporation, and such other powers and duties as the Board may prescribe. If present, the Chairman shall preside at Board meetings.

2. **Vice Chairman** . If the Chairman is absent or disabled, the Vice Chairman shall perform all the Chairman's duties and, when so acting, shall have all the Chairman's powers and be subject to the same restrictions. The Vice Chairman shall have other such powers and perform such other duties as the Board may prescribe.

3. **Secretary** . The Secretary shall: (a) keep or cause to be kept, at the Corporation's principal office, or such other place as the Board may direct, a book of minutes of all meetings of the Board and Board Committees, noting the time and place of the meeting, whether it was regular or special (and if special, how authorized), the notice given, the names of those present, and the proceedings; (b) keep or cause to be kept a copy of the Corporation's Charter and Bylaws, with amendments; (c) give or cause to be given notice of the Board and Committee meetings as required by the Bylaws; and (d) have such other powers and perform such other duties as the Board may prescribe.

4. **Treasurer** . The Treasurer shall: (a) keep or cause to be kept adequate and correct accounts of the Corporation's properties, receipts and disbursements; (b) make the books of account available at all times for inspection by any Trustee; (c) deposit or cause to be deposited the Corporation's monies and other valuables in the Corporation's name and to its credit, with the depositories the Board designates; (d) disburse or cause to be disbursed the Corporation's funds as the Board directs; (e) render or cause to be rendered to the Chairman and the Board, as requested but no less frequently than once every fiscal year, an account of the Corporation's financial transactions and financial condition; (f) prepare or cause to be prepared any reports on financial issues required by an agreement on loans; (g) serve as Chairperson of the Finance Committee; and (h) have such other powers and perform such other duties as the Board may prescribe.

B. Election, Eligibility and Term of Office.

1. **Election**. The Board shall elect the Officers annually at the Annual Meeting or a Regular Meeting designated for that purpose or at a Special Meeting called for that purpose, except that Officers appointed to fill vacancies shall be elected as vacancies occur.

2. **Eligibility**. A Trustee may hold any number of offices, except that neither the Secretary nor Treasurer may serve concurrently as the Chairman.

3. Term of Office. Each Officer serves at the pleasure of the Board, holding office until resignation, removal or disqualification from service, or until his or her successor is elected.

C. Removal and Resignation. The Board may remove any Officer, either with or without cause, at any time. Such removal shall not prejudice the Officer's rights, if any, under an employment contract. Any Officer may resign at any time by giving written notice to the Corporation, the resignation taking effect upon receipt of the notice or at a later date specified in the notice.

ARTICLE VIII: NON-LIABILITY OF TRUSTEES

The Trustees shall not be personally liable for the Corporation's debts, liabilities or other obligations.

ARTICLE IX: INDEMNIFICATION OF CORPORATE AGENTS

The Charter School may, to the fullest extent now or hereafter permitted by and in accordance with standards and procedures provided by Sections 721 through 726 of the Not-for-Profit Corporation Law and any amendments thereto, indemnify any person made, or threatened to be made, a party to any action or proceeding by reason of the fact that he, his testate or intestate was a Director, Officer, employee or agent of the Corporation, against judgments, fines, amounts paid in settlement and reasonable expenses, including attorneys' fees.

ARTICLE X: SELF-DEALING TRANSACTIONS

The Corporation shall not engage in any self-dealing transactions, except as approved by the Board. "Self-dealing transaction" means a transaction to which the Corporation is a party and in which one or more of the Trustees has a material financial interest ("interested Trustee(s)"). Notwithstanding this definition, the following transaction is not a self-dealing transaction, and is subject to the Board's general standard of care:

A transaction which is part of a public or charitable program of the Corporation, if the transaction (a) is approved or authorized by the Board in good faith and without unjustified favoritism; and (b) results in a benefit to one or more Trustees or their families because they are in a class of persons intended to be benefited by the program.

ARTICLE XI: OTHER PROVISIONS

A. Fiscal Year. The fiscal year of the Corporation begins on July 1 of each year and ends June 30.

B. Execution of Instruments. Except as otherwise provided in these Bylaws, the Board may adopt a resolution authorizing any Officer or agent of the Corporation to enter into any contract or execute and deliver any instrument in the name of or on behalf of the Corporation. Such authority may be general or confined to specific instances. Unless so authorized, no Officer, agent or employee shall have any power to bind the Corporation by any contract or engagement, to pledge the Corporation's credit, or to render it liable monetarily for any purpose or any amount.

C. Checks and Notes. Except as otherwise specifically provided by Board resolution, checks, drafts, promissory notes, orders for the payment of money, and other evidence of indebtedness of the Corporation may be signed by the Chairman of the Board, the Head of School, or Treasurer. Such items for amounts of \$5,000.00 or greater must be signed by two of these individuals.

D. Construction and Definitions . Unless the context otherwise requires, the general provisions, rules of construction, and definitions contained in the Not-for-Profit Corporation Law and the Education Law shall govern the construction of these Bylaws. Without limiting the generality of the foregoing, words in these Bylaws shall be read as the masculine or feminine gender, and as the singular or plural, as the context requires, and the word "person" includes both a corporation and a natural person. The captions and headings in these Bylaws are for reference and convenience only and are not intended to limit or define the scope or effect of any provisions.

E. Conflict of Interest. Any Trustee, Officer, or Committee member having an interest in a contract, other transaction or program presented to or discussed by the Board or Board Committee for authorization, approval, or ratification shall make a prompt, full and frank disclosure of his or her interest to the Board or Committee prior to its acting on such contract or transaction. Such disclosure shall include all relevant and material facts known to such person about the contract or transaction that may reasonably be construed to be adverse to the Corporation's interest. The body to which such disclosure is made shall thereupon determine, by majority vote, whether the disclosure shows that a conflict of interest exists or can reasonably be construed to exist. If a conflict is deemed to exist, such person shall not vote on, nor use his or her personal influence on, nor be present during the discussion or deliberations with respect to, such contract or transaction (other than to present factual information or to respond to questions prior to the discussion). The minutes of the meeting shall reflect proceedings, including the disclosure made, the vote thereon and, where applicable, the abstention from voting and participation. The Board may adopt formal policies requiring:

1. Regular annual statements from Trustees, Officers and key employees to disclose existing and potential conflicts of interest; and,
2. Corrective and disciplinary actions with respect to transgressions of such policies. For the purpose of this section, a person shall be deemed to have an "interest" in a contract or other transaction if he or she is the party (or one of the parties) contracting or dealing with the Corporation, or is a Director, Trustee or Officer of, or has

a significant financial or influential interest in the entity contracting or dealing with the Corporation.

F. Interpretation of Charter. Whenever any provision of the Bylaws is in conflict with the provisions of the Charter, the provisions of the Charter shall control.

ARTICLE XII: AMENDMENT

A majority of the Trustees may adopt, amend or repeal these Bylaws subject to approval by the Charter Entity.

CERTIFICATE OF THE SECRETARY

The undersigned does hereby certify that the undersigned is the Secretary of the Charter School, an education Corporation duly organized and existing under the laws of the State of New York; that the foregoing Bylaws of said Corporation were duly and regularly adopted as such by the Board of Trustees of said Corporation; and that the above and foregoing Bylaws are now in full force and effect.

_____, Secretary Dated: _____

EXHIBIT E**POLICY FOR COMPLIANCE WITH
FREEDOM OF INFORMATION LAW**

Requests for public information must be in writing and submitted to the Achievement Academy Charter School's Records Access Officer who shall be designated by the Head of School. Upon the receipt of a request for School records and information, the request will be responded to in the following manner: Within five business days of receipt of a written request, the Charter School will, depending on the requested information, either make the information available at the Charter School's principal location during normal business hours to the person requesting it, deny the request in writing, or provide a written acknowledgment of receipt of the request that supplies an approximate date for when the request will be granted or denied.

If the person requesting information is denied access to a record, he or she may, within 30 days, appeal such denial to the Head of School or his or her designee (such designee shall not also serve as the School Records Access Officer). Upon timely receipt of such an appeal, the School will, within 10 business days of the receipt of the appeal, fully explain, in writing, the reasons for further denial or provide access to the record(s) sought. The Charter School also will forward a copy of the appeal, as well as its ultimate determination, to the New York State Committee on Open Government.

In the event an appeal for records is denied, the person requesting the information may bring a proceeding for review of such denial in pursuant to Article 78 of the Civil Practice Law and Rules.

The Charter School may deny access to requested records for one or more of the following grounds:

- Such records are specifically exempted from disclosure by state or federal statute;
- Such access would constitute an unwarranted invasion of personal privacy;
- Such records, if disclosed, would impair present or imminent contract awards or collective bargaining negotiations;
- Such records are trade secrets or are submitted to the School by a commercial enterprise or derived from information obtained from a commercial enterprise and which if disclosed would cause substantial injury to the competitive position of such enterprise;
- Such records are compiled for law enforcement purposes and which, if disclosed, would meet the conditions set forth in Public Officers Law § 87 (2)(3);
- Such records, if disclosed, would endanger the life or safety of any person;
- Such records are computer access codes;
- Such records are inter-agency or intra-agency materials that are not statistical or factual tabulations of data, instructions to staff that affect the public, or a final policy or external audits.
- Examination questions or answers

The Charter School shall maintain:

1. A record of the final vote of each trustee in every proceeding in which the trustees vote;
2. A record setting forth the name, public office address, title and salary of every officer or employee of the education corporation; and
3. A reasonably detailed current list, by subject matter, of all records in the Education Corporation's custody or possession.

The Charter School may charge a copying fee for each page requested to be copied. The fee can be no more than the fee allowed by State law.

EXHIBIT F**POLICY FOR COMPLIANCE WITH
OPEN MEETINGS LAW**

The Achievement Academy Charter School Board of Trustees meetings and Trustee committee meetings shall be open to the general public.

Public Notice

1. A calendar of all board meeting dates will be posted at the Charter School at all times.
2. The School will provide notice of the time and place of any board meeting that is *scheduled at least one week in advance* to the news media and shall conspicuously post such notice in one or more public locations at least 72 hours in advance of the scheduled meeting.
3. The School will provide notice of the time and place of any board meeting that is *scheduled less than one week in advance* to the news media (to the extent practicable) and shall conspicuously post such notice in one or more public locations at a reasonable time in advance of the scheduled meeting. To the extent possible, the School will publicly post notices of Board of Trustees meetings immediately after each meeting date is determined.
4. Trustees may participate in board meetings in person or by videoconferencing. The Board of Trustees shall provide an opportunity for the public to attend at any site where a member participates. If videoconferencing is to be used, then the public notice must say so, identify the locations from which members will participate, and state that the public has a right to attend at any of these locations.

Minutes of Meetings

1. The Secretary of the Board of Trustees will take minutes at all open sessions. All minutes will contain the date of the meeting, a summary of all motions, proposals, resolutions and any other matter formally voted upon as well as a record of how each board member voted.
2. Minutes from open meetings will be made available to the public within two weeks of the meeting date. Minutes from executive sessions will be available within one week. Minutes will be available at the School.

Executive Sessions

The Charter School shall conduct all executive sessions as part of an open meeting; they are not considered separate meetings per se. An executive session may be called via motion and majority vote by the Board of Trustees to enter an executive session. The motion must specifically identify the general area or areas of the subjects to be considered. All Board members may participate in executive sessions, and the Board may authorize others to attend as well. An executive session shall only be conducted by the Board of Trustees for one or more of the following matters:

1. Matters which will imperil the public safety if disclosed;
2. Any matter which may disclose the identity of a law enforcement agent or informer;
3. Information relating to current or future investigation or prosecution of a criminal offense which would imperil effective law enforcement if disclosed;
4. Discussions regarding proposed, pending or current litigation;
5. When such law applies to charter school employees, collective negotiations that are within the scope of Article 14 of the Civil Service Law;
6. The medical, financial, credit or employment history of a particular person or corporation, or matters leading to the appointment, employment, promotion, demotion, discipline, suspension, dismissal or removal of a particular person or corporation;
7. The preparation, grading or administration of examinations; and
8. The proposed acquisition, sale or lease of real property or the proposed acquisition of securities, or sale or exchange of securities held by such public body, but only when publicity would substantially affect the value.

In no case shall public funds be appropriated during an executive session.

Exemptions

The following matters are exempted from the Open Meetings Law and therefore need not be discussed at open meetings:

1. Judicial or quasi-judicial proceedings (for example, suspension hearings and employee grievance hearings); and
2. Any matter made confidential by State or federal law (for example discussions regarding a particular student's records or children with handicapping conditions in violation of the federal Family Educational Rights and Privacy Act).

Enforcement

Any individual wishing to assert a violation of the New York State Open Meetings Law has standing to bring a proceeding in accordance with Article 78 of the Civil Practice Law and Rules and/or action for declaratory or injunctive relief.

EXHIBIT G

**-- DRAFT --
PERSONNEL POLICIES
OF THE
ACHIEVEMENT ACADEMY CHARTER SCHOOL**

INTRODUCTION

All personnel and employment policies and procedures of the Achievement Academy Charter School set forth herein are presented only as a matter of information. These policies and procedures may be changed or deleted and new policies or procedures may be added by the organization at any time, subject to Article 56 of the New York Education Law and other applicable laws, rules and regulations. This manual and the policies and procedures set forth herein are not intended to create or constitute a contract between this organization and its employees or to change the nature of the employment relationship between the organization and its employees, which is at will.

EMPLOYMENT ADMINISTRATION**I. Equal Opportunity Employer**

It is the policy of this School to seek and employ the best qualified personnel without regard to race, religion, color, creed, national origin, citizenship, age, sex, marital status, or disability. It is further this school's policy to ensure equal opportunity for the advancement of staff members and equal treatment in the areas of upgrading, training, promotion, transfer, layoff, and termination.

II. Hiring

Upon employment by this School, all employees are required to complete any and all necessary financial forms and benefit applications as deemed necessary by the Head of School or by his or her designee.

Employment qualifications as stated by an employee or prospective employee on an employment application or related information may be verified, and falsification of such information may jeopardize an employee's standing with this school or a prospective employee's likelihood of being hired.

III. Regular Full-Time and Temporary Employment

Employees may be hired as regular full-time employees, and as such will be placed on the School's payroll, will be eligible for all benefits as described in this manual, and will accrue leave as described in this manual.

The School also may hire part-time staff. Part-time staff are those who are employed for less than 40 hours per work week. Part-time employees are not eligible for benefits or leave accruals as stated in this manual, unless specially arranged and provided for

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by the Head of School as a condition of employment. Time off work without pay for part-time employees may be granted by the Head of School or his or her designee.

IV. Adjustments To Employee Status

The Head of School may at any time, but for specified reasons, adjust the salary, benefits (excluding any benefits required by law to be provided), leave accruals, titles, privileges, or other personnel policies for any employee either upwards or downwards, within parameters established by the Board of Trustees. Adjustments to employee status may be based upon, but in no way are restricted to, promotions, demotions, changes in job duties, disciplinary actions, and performance adjustments.

V. Phasing-Out And Elimination Of Positions

From time-to-time, it may be necessary to phase-out or eliminate certain positions previously established within the school. An orderly process will be established by the school to guide such phase-out or elimination of positions if necessary.

Anyone whose employment with the School is terminated because their position is eliminated or phased-out is entitled to compensation for accrued and unused leave as eligible and described in the chapter of this manual entitled "Time And Attendance."

VI. Unauthorized Absence

An employee who is absent for a period of at least three days without notifying the Head of School will be considered to have resigned without giving the required two-week notice (see Section VII of this chapter), with such resignation effective on the initial date of absence. The determination of unauthorized absence will be made by the Head of School.

If an employee is absent unauthorized as described above, that employee will forfeit compensation for any unused accrued vacation leave as described in the chapter of this manual entitled "Time And Attendance," unless an exception is made by the Head of School. Such an employee will remain eligible for any salary due.

VII. Separation

Resignation

An employee who wishes to resign is required to give to the Head of School, in writing, a minimum of two weeks notice prior to the desired resignation date, unless an exception is made by the Head of School.

Regular full-time employees who resign in accordance with the provisions of this section may be provided with compensation for accrued and unused leave as described in the chapter of this manual entitled "Time And Attendance."

If an employee fails to give a minimum of two weeks notice prior to the desired resignation date, that employee shall forfeit compensation for any unused accrued

vacation leave he or she may have, unless an exception is made by the Head of School. Such an employee remains eligible for any salary due.

Termination

All employees serve at the will of the Head of School, and the authority to terminate an employee is vested with the Head of School or his or her designee, and may include but is in no way limited to a decision based upon a violation of any of the policies, procedures, regulations, or restrictions set forth in this manual.

Terminated regular full-time employees eligible to accrue vacation leave may be provided compensation for accrued vacation leave as described in the chapter of this manual entitled "Time and Attendance."

TIME AND ATTENDANCE

I. Work Days and Work Week

Unless otherwise provided for or as approved by the Head of School, all employees are required to work a minimum of 8 hours each day, Monday through Friday, and a minimum total of 40 hours each week not including lunch and break times. Unless otherwise provided for by the Head of School, all employees are expected to work at least from 7:30 a.m. to 5:15 p.m. each work day. Additionally, classroom instructional staff are expected to work such hours that ensures the timely start of the School day, an orderly process for ending the school day, and sufficient interaction with other instructional staff and administrators to help support the educational mission of the school.

A 45-minute non-working lunch break may be taken by each employee each day, around which the minimum daily work hour requirement must be met.

No time used for any personal endeavor within the work day is to be counted towards the daily or weekly minimum work hour requirements. Further, any employee wishing to engage in such personal activities must receive the prior approval of the Head of School or his or her designee.

II. Pay Periods

Pay periods are two weeks (14 calendar days) in length, and run from Monday through the second Friday. All regular full-time employees are subject to a lag payroll equal to one pay period. Other employees, subject to a determination by the Head of School, also may be subject to the lag payroll.

BENEFITS: PAID LEAVE

I. Vacation Leave

Administrative Staff: Accrual

Unless otherwise provided for or as approved by the Head of School, Vacation Leave for regular full-time administrative employees – where “Administrative employees” includes all non-instructional staff – shall be accrued as follows:

Each employee is granted up to ten days of paid Vacation Leave per year, with one day of Vacation Leave accrued at the end of each of the first ten calendar months every year of employment.

No accrual of Vacation Leave will occur for a new employee before that employee has completed five full calendar months of employment, at which time such employee will be granted five days of Vacation Leave, and then will begin the stated pattern of accrual.

Unused vacation leave may be rolled-over from year to year, with a maximum accumulation of twenty days.

Administrative Staff: Use

Unless otherwise provided for or as approved by the Head of School, Vacation Leave is to be used by regular full-time administrative employees in accordance with the following provisions:

Vacation Leave may be used for any purpose of an employee's choosing. Vacation Leave is time off of work with pay.

Unless an exception is made by the Head of School, all employees must request of the Head of School the use of accrued Vacation Leave, and the granting of such leave is conditional upon the approval of the Head of School or his or her designee. Denial of a leave request may consist solely of the fact that School is in session for the time period requested.

Vacation Leave is to be used in increments of one-half work day, except as provided below.

Any employee whom the Head of School has determined to be eligible to accrue “Comp” Time Leave (see Section VII) may use accrued Vacation Leave in increments of one-half (0.5) hour.

Instructional Staff

Vacation Leave for regular full-time instructional employees – where “instructional employees” includes all classroom teaching staff and aides – shall be provided only when classes are not in session, and is time off work with pay. The Head of School will annually prepare the school session calendar, noting which days instructional staff are

not expected to report. For the school year _____, such Vacation Leave shall include the following 40 days (8 weeks):

1. One day in September (___th);
2. One day in November (___th);
3. Nine days in late December / early January (Dec. ___ - ___; Jan. ___ - ___)
4. Four days in February (___th - ___th);
5. Three days in April (___th - ___th);
6. Two days in June (___th - ___th);
7. Nine days in July (___th - ___th);
8. Eleven days in August (___th - ___th).

II. Holiday Leave

In addition to the eight weeks of Vacation Leave provided as noted, the School shall observe official government holidays, and school will be closed and all staff will not be expected to report to work. For the school year, this includes the following ten Holidays: Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, Christmas Day, New Year's Day, Martin Luther King Jr. Day, Presidents Day, Memorial Day, and Independence Day.

Any staff member is free to choose to work any of these Holidays, conditional upon prior approval of the Head of School. Only employees determined to be eligible to accrue "Comp" Time Leave (see Section VII) shall be able to receive any compensation for this extra work, and such compensation shall be in the form of accrued Comp Time Leave.

III. Weather Days and Other Closures

The school may be closed due to inclement weather or other situations. An orderly process for notification of public media outlets and, if practical, parents shall be developed and implemented if necessary. At the discretion of the Head of School, any classroom days lost to closure due to inclement weather or other reasons may be made up by adding an equal number of days to what was scheduled to be the end of the school year.

IV. Personal Leave

Accrual

Unless otherwise provided for or as approved by the Head of School, Personal Leave for regular full-time employees shall be accrued as follows:

- Each employee is granted three days of Personal Leave on September 1 of each year to be available for use over the following 12 months.
- Employees hired after September 1 in any given year are granted a *pro rata* portion of the three days of Personal Leave for that 12-month period immediately upon the first day of employment, rounded up to the next highest ½-day increment.
- Unused Personal Leave may not be rolled-over from year to year.

Use

Unless otherwise provided for or as approved by the Head of School, Personal Leave is to be used by regular full-time administrative employees in accordance with the following provisions:

Personal Leave may be used for purposes determined by the employee (appointments, errands, etc.) but is not to be used as a substitute for or as a supplement to Vacation Leave. Personal Leave is time off work with pay.

Unless an exception is made, all administrative employees must request of the Head of School the use of Personal Leave, and the granting of such leave is conditional upon the approval of the Head of School or his or her designee.

Instructional employees shall make every reasonable attempt to use Personal Leave only when the use of such leave would not conflict with classroom instruction time. Personal Leave is to be used in increments of one-half work day.

Any employee whom the Head of School has determined to be eligible to accrue "Comp" Time Leave (see Section VII of this chapter) may use accrued Personal Leave in increments of one-half hour.

V. Sick Leave**Accrual**

Unless otherwise provided for or as approved by the Head of School, Sick Leave for regular full-time employees shall be accrued as follows:

- Each employee is granted five days of Sick Leave on September 1 of each year.
- Employees hired after September 1 in any given year are granted immediately upon the first day of employment a *pro rata* portion of the five days of sick leave for that school year, rounded up to the next highest ½-day increment.
- Unused sick leave may not be rolled-over from year to year.

In the case of extended illness or justifiable depletion of available accrued sick leave, additional sick time may be granted at the discretion of the Head of School. The Head of School retains the right to require the use of other accumulated leave, the enactment of Medical Leave, and/or the granting of leave without pay prior to the granting of additional sick leave (see also Section VII, "Medical Leave").

Use

Unless otherwise provided for or as approved by the Head of School, Sick Leave is to be used by regular full-time employees in accordance with the following provisions:

Sick Leave is to be used only in the event of illness of the employee, or of the employee's immediate family, and for no other purpose. Misuse of Sick Leave is cause for termination of employment. For the purposes of this section, "immediate family" is

defined as a spouse, child, sibling, parent, grandparent, any other relative permanently residing with the employee, or any other person as defined by the Head of School.

Notice of absence from work due to illness should be provided to the Head of School or his or her designee by 6:00 a.m. on the day of illness, if possible, or as soon thereafter as is reasonable, allowing reasonably enough time for the Head of School to find a substitute teacher, in the instance of instructional employees, or temporary help, in the instance of administrative staff.

When possible, such as in the event of foreseeable extended illnesses and planned medical procedures, advance notice of the use of Sick Leave should be given to the Head of School or his or her designee.

Notice of total Sick Leave used should be provided to the Head of School or his or her designee upon an employee's return to work. Sick Leave shall be used in increments of one-half work day.

VI. Overtime and Compensatory Time Leave

Exempt Employees

Exempt Employees, as defined by law or other regulation and including all instructional employees, are not eligible to automatically earn compensatory time leave ("Comp" Time Leave) because of working more than the required minimum work day or minimum work week. Although all hours worked should be noted on an employee's time sheet, Exempt Employees will not be paid for such "overtime."

Non-Exempt Employees

Non-Exempt Employees, as defined by law or other regulation, are eligible to earn overtime pay. "Overtime" is defined as any time outside of normal and required business hours when a Non-Exempt Employee works at the express request of his or her supervisor. Non-Exempt Employees may not work overtime unless they receive the express prior approval of the Head of School.

For each half hour of approved overtime worked in a given week, Non-Exempt Employees will be compensated for any at a rate of time-and-a-half, earning one and one-half hours of available time off for each hour of approved overtime worked.

VII. Medical Leave of Absence

Employees who have completed at least ninety (90) days of continuous employment with the school are eligible for an unpaid Medical Leave of Absence due to illness, injury, or pregnancy-related disability. Employees may request a Medical Leave of Absence by providing the Head of School or his or her designee with a written notice of their disability, including a doctor's certificate stating the nature of the disability, the date until which the employee will be able to work, and the expected date of return to work.

Medical Leaves of Absence will be granted for a period of up to one month, but may be extended with the approval of the Head of School on a month-to-month basis for a maximum of three months. An employee wishing an extension of a Medical Leave of Absence must submit to the Head of School a written request prior to the beginning of each month with proof of continued disability from an attending health care provider.

The School will continue to provide health insurance coverage for any employee on an authorized Medical Leave of Absence through the first full calendar month from the date that the Leave began. After that period, employees may continue health insurance coverage by making arrangements with the school for payment of the appropriate monthly premium.

Employees on Medical Leaves of Absence should provide the school with at least one week's written notice of their intended return to work. Included in this notice should be a doctor's certification stating the ability to return to work. The school reserves the right to require a medical examination by a physician of the school's choosing prior to an employee's resumption of duties.

The School will make a reasonable effort to return an employee on a Medical Leave of Absence to the same or similar job as held prior to the Leave upon his or her return to work, subject to staffing needs and school needs that may exist.

An employee's continued absence from work beyond the Leave granted, without other arrangement made with an approved by the Head of School, will be deemed a voluntary resignation from employment.

VIII. General Leave With Or Without Pay

General Leave with or without pay may be granted at the discretion of the Head of School according to an orderly process established for such purpose.

IX. Head of School

Leave policies for the Head of School differ from that offered to other employees, subject to a determination by the Board of Trustees and applicable laws.

X. Jury Duty

Full-time employees who are called to serve on a jury panel will be eligible to receive \$15.00 per day for the first three days of jury duty. Thereafter, for the extent of the jury duty, employees will be granted unpaid leave. Subject to the approval of the Head of School or his or her designee, an employee may request the use of accrued leave of any type instead of or in combination with the leave provisions noted in this section.

Any employee called to jury duty should present to the Head of School a copy of his or her jury duty papers as soon as they are received. Leave arrangements may be made as soon as possible thereafter.

XI. Statement Of Leave Status

Statements of the status of each employee's accrual and use of leave may be provided periodically to that employee by the Head of School or by his or her designee. Any employee may request of the Head of School a status report on his or her leave use to date, available leave accruals, or similar information, at any time.

XII. Other Leave

The Head of School retains the right to at any time declare a "School Holiday," whereby classes shall be canceled and employees will be granted a day off work with pay without charge to any leave accruals. The declaration of a "School Holiday" shall be communicated by the Head of School to all employees, students, and parents.

XIII. Unused Leave Accruals

Unless otherwise provided for or as approved by the Head of School, no payment will be made as compensation for unused Sick or Personal Leave remaining at the time of an employee's resignation or termination, or if an employee is dismissed because he or she holds a position that is phased-out or eliminated. For instructional employees, no payment will be made as compensation for Vacation periods falling after the date of resignation or termination.

Administrative employees who resign, are terminated, or are in positions that have been eliminated or phased-out and are dismissed are eligible to be compensated for a maximum amount of accrued but unused Vacation Leave, as determined by the Head of School.

BENEFITS: INSURANCE**I. Medical Insurance**

The Head of School or his or her designee will select a medical insurance plan, which may include more than one option of provider or provider networks that the school will provide to each full-time regular employee. Employee co-payment for health care coverage will be required, and will vary depending upon the level of coverage selected by the employee (individual; individual plus spouse; family; etc.). Employee contributions for health care coverage will be automatically withheld from employee paychecks, in an amount in accordance with a schedule maintained by the Head of School or his or her designee.

II. Dental Insurance

The Head of School or his or her designee will select a dental insurance plan that the school will provide to each employee. The school will fully cover the costs of an individual or family plan.

III. Life Insurance

The Head of School or his or her designee will select life insurance and long-term disability insurance policies that the school will provide to each employee, in an amount and of a type determined by the Head of School and in accordance with applicable law.

IV. Vision Care

The Head of School or his or her designee may select or devise a vision care plan that the school will, if developed, provide to each employee, in an amount and of a type determined by the Head of School and in accordance with applicable law.

V. Workers' Compensation Insurance

Injury resulting from accidents that occur while performing official duties on behalf of this school are covered by workers' compensation insurance. Any employee who suffers an injury as a result of such an accident must file a report with the Head of School or his or her designee as soon as possible. Such employee is responsible for filing any other necessary forms, applications, or other information as required by applicable government policies.

VI. Disability Insurance

The School carries short-term disability insurance in accordance with New York State law. Such insurance allows payment in the event of certain injuries, illnesses or other disabilities occurring outside of the workplace, including pregnancy. Any employee wishing to claim disability pay must file appropriate reports and forms with the Head of School or his or her designee. Such employee also is responsible for filing any other necessary forms, applications, or other information as required by applicable government policies.

VII. Declination of Insurance Benefits

Any employee who wishes not to accept any of the insurance benefits offered by the school is required to submit such a request in writing to the Head of School or his or her designee.

BENEFITS: OTHER BENEFITS

I. Retirement

Upon determination by the Board of Trustees, the School may submit an application join the Teachers Retirement System and the New York State and Local Employee Retirement System, and if accepted, all teachers, substitute teachers, business administrators, guidance counselors, nurse teachers, and teacher assistants shall be eligible for membership in the System.

The School will assume all obligations of participating employers as determined by the System, including liabilities for employer payments and recordkeeping.

II. Deferred Compensation

The School may, subject to approval by the Head of School and the Board of Trustees, offer a deferred compensation (403(b)) program either just to employees who are not eligible to join the Teachers Retirement System or to all employees. Under such program, employees may opt to defer a portion of their current gross pay, having that portion of pay invested in accordance with applicable federal and state guidelines governing deferred compensation programs and with procedures established by the Head of School.

Employees may join the deferred compensation program only on the first pay day in September or on the first pay day in March, and the amount of income to be deferred

must be the same for each pay period throughout that half school year. Employees may opt out of the program at any time, subject to sufficient notification to the Head of School or his or her designee.

In accordance with federal guidelines, employees are subject to a maximum limit per year on deferred compensation. Employees shall take every reasonable precaution to ensure that the per-paycheck amount of income requested to be deferred will not cause such limits to be exceeded in any given year.

III. Tuition Payments

The School may make payments relating to the continuing education of its employees. Such payments shall be for tuition costs, professional development expenses, and similar fees.

An employee shall submit a request for tuition or other payments in advance and in writing to the Head of School, and such request shall include a declaration of how such education or training will benefit the school. Payments shall be authorized to be made only upon approval of this request by the Head of School. Payment by the school for such employee education or training can range up to full payment, depending upon factors including but not limited to a determination by the Head of School of how beneficial the requested education will be to the school, relevance to job performance, and the percentage coverage requested by the employee. Total payments for an employee may be subject to an annual limit.

IV. Unemployment Compensation

This School contributes to the Unemployment Compensation plan administered by the State of New York.

V. Head of School's Benefits

The insurance coverage and benefits package offered to the Head of School may differ from that offered to other employees, subject to a determination by the Board of Trustees, and consistent with applicable state, federal, or other laws.

VI. Reservation of Rights

This school reserves the right to alter the benefits package made available to employees at any time, consistent with all applicable laws. Each employee will be notified of any alteration in the benefits package.

REIMBURSEMENTS

I. Travel

Employees are eligible for reimbursement from the School for expenses incurred while in travel status on official business for the school. To be eligible for travel expense reimbursement, travel status must be approved and granted by the Head of School or his or her designee. All requests for travel reimbursement must appear on a form provided by the Head of School or his or her designee for such purpose.

Unless otherwise provided for by the Head of School, all employees traveling on approved business are required to abide by the following guidelines:

Transportation

The most reasonable mode and class of travel -- considering factors such as cost, time efficiency, and convenience -- should be selected by each employee at all times. All such expenses must be listed on a form provided by the Head of School for such purposes.

Lodging

Reasonable charges for lodging while in approved travel status will be paid by the school, subject to the approval of the Head of School. Other reasonable related lodging expenses, such as business telephone call charges, also may be paid by the school. An attempt to acquire the most reasonable rates for appropriate lodging-related expenses should be made by such employees, and all such expenses must be listed on a form provided by the Head of School for such purposes.

Meals

To be eligible for reimbursement for the cost of meals, an employee must be in approved travel status and is subject to any restrictions established by the Head of School. Employees seeking reimbursement for meal expenses must list on a form provided by the Head of School all reasonable and appropriate expenses.

II. Mileage

Business Use of Personal Vehicle

Employees are eligible for reimbursement from the school for business use of their personal vehicle while in travel status on official business for the school. To be eligible for travel expense reimbursement, travel status must be approved and granted by the Head of School or his or her designee. Regular commuting time and mileage is not to be reimbursed. Reimbursement for approved and authorized travel shall be at the IRS and/or state rate as determined by the Head of School. All requests for travel reimbursement must be listed on a form provided for such purpose, unless an exception is made by the Head of School.

Personal Use of School Vehicles

Employees are liable for reimbursement to the school for personal use of a vehicle owned, leased, or otherwise provided by the school. Such liability to the school shall reflect the IRS and/or state rate as determined by the Head of School. Any employee incurring such liabilities is required to reimburse the school in full by the end of the calendar month immediately following the month in which such liabilities were billed to the employee, unless an exception is made by the Head of School.

Personal mileage incurred by an employee on a vehicle owned, leased, or otherwise provided by the school must be documented on a form provided for such purpose by the Head of School, unless an exception is made by the Head of School.

III. Personal Telephone Calls

Employees shall not charge personal long-distance telephone calls to the school, unless an exception is made by the Head of School. Employees are liable for the costs of any personal phone calls he or she may make which are billed to the school.

IV. Other Reimbursements

Employees are eligible for reimbursement from the school for business expenses paid with their personal funds. All such expenses, if anticipated in advance, must be approved by the Head of School or his or her designee. Requested reimbursement for such expenses must be specified in writing to the Head of School or his or her designee. Such request must list each expense, and receipts (or copies of receipts) for each item must be attached to the request.

The final decision on whether to reimburse an employee for any such expenses is vested with the Head of School or his or her designee.

V. School Credit Cards

Any employee who is authorized to use a school credit card is not allowed to charge personal expenses of any kind on the card, unless an exception is made by the Head of School. Each employee charging any purchases to the school credit card is required to provide to the Head of School or his or her designee timely accounting of such charges, including all necessary receipts and justification for such expenditures.

SEXUAL HARASSMENT

I. School Policy

It is the policy of this school to prohibit sexual harassment from occurring in the workplace or at any other place where a School-sponsored event takes place. The purpose of this policy is not to regulate personal morality, or to encroach on employees' personal lives, but to demonstrate this school's commitment to maintaining a workplace environment that is free of harassment of and by its employees.

It is the responsibility of all management and all employees to assure that this policy is understood, implemented, and adhered to without exception.

II. Defining Harassment

Unwelcome sexual advances, requests for sexual favors, and other verbal, physical, or visual conduct of a sexual nature constitute harassment when:

- Submission to such conduct is made, either explicitly or implicitly, a term or condition of an individual's employment with this school;
- Submission to or rejection of such conduct by an employee is used as the basis for an employment decision affecting that employee; or

- Such conduct has the purpose or the effect of unreasonably interfering with an employee's work performance, or of creating an intimidating, hostile, or offensive work environment.
- Sexual harassment may include such actions as: repeated offensive or unwelcome sexual flirtations and advances; verbal comments, jokes, or innuendo of a sexual nature; words or gestures of a sexual nature used to describe a person or depict a situation; or the display of sexually suggestive objects or pictures.

III. Investigation and Remediation

If an employee believes that he or she has experienced sexual harassment, or believes that he or she has witnessed sexual harassment, that employee should immediately notify the Head of School, his or her designee, or any other school official with whom that employee feels comfortable.

All reports of sexual harassment will be promptly investigated by the Head of School, or his or her designee who is not involved in the alleged harassment, and will be kept confidential to the extent possible.

If an investigation confirms that harassment has occurred, the Head of School, as directed by the Board of Trustees, shall take appropriate corrective action which may, upon a determination by the Head of School, include, but not be limited to, an official memorandum in an employee's personnel file, salary adjustment, or the termination of the offending employee.

No employee shall be subject to employment-based retaliation, intimidation, or discipline as a result of making a complaint of sexual harassment. However, disciplinary action up to and including termination also may be taken against anyone who knowingly makes a false, meritless, or malicious claim of sexual harassment.

EVALUATIONS AND PROBLEM-SOLVING PROCEDURES

I. Employee Evaluations

Written evaluations of employees may be performed annually, on or about an employee's anniversary date or on or about a fixed annual date, subject to a determination by the Head of School. Evaluations will be conducted by the Head of School or his or her designee, with input from an employee's immediate supervisor, if applicable. These evaluations will be maintained in the personnel file for each employee.

The format of the evaluation will be determined by the Head of School. Such evaluation may include: the date of the evaluation, the time period covered by the evaluation, and an assessment of the employee's work performance during that time period. The employee will be notified of any changes in salary, whether up or down, that are warranted based on this evaluation.

Written evaluations as described above need not be performed for officers of the school upon a determination of the Board.

II. Problem-Solving Procedures

Any employee wishing to formally complain about a procedure, action, or directive of another employee or supervisor should notify his or her supervisor or the Head of School at the employee's discretion, as soon as possible after such procedure, action, or directive has occurred. The Head of School or his or her designee shall be the investigator and final arbiter of all such grievances.

In the event that the complaint involves a procedure, action, or directive of the Head of School, an employee may file a written complaint with the President of the Board of Trustees. In such instances, the President of the Board of Trustees or his or her designee will be the investigator and final arbiter of the complaint.

MISCELLANEOUS

I. Confidentiality

Employees of this school shall not, in any way, release any information about this school, its activities, or the activities of its personnel except as normally required by their duties, expressly permitted by the Head of School, and in conformity with the requirements of applicable Freedom of Information laws.

No employee shall publish, disclose, or use, or authorize anyone else to publish, disclose, or use, or in any way cause to be published, disclosed, or used, any private or proprietary information which such employee may in any way acquire, learn, develop, or create by reason of employment with this school, unless otherwise provided by the Head of School. Any document or other material containing such information is required to be returned to the Head of School upon an employee's termination or resignation.

II. Personnel Inquiries

No one in this school other than the Board of Trustees, Head of School, or a designee is authorized to respond either verbally or in writing to personnel inquiries of any type about any employee of this school.

III. Return Of Office Materials

An employee who is terminated or who resigns must return all office keys, identification, security cards and codes, and office materials and supplies in such employee's possession to the Head of School. No information or copies of information, including but in no way limited to files, memos, computer-stored items, lists, Rolodex items, or other similar information, may be taken by such employee without the express permission of the Head of School.

IV. Ban On Acceptance Of Gifts

The Head of School and other school employees are not permitted to accept gifts of any kind of a value exceeding fifty dollars (\$50.00) -- including but not limited to money, goods, food, entertainment, or services -- directly or indirectly from: (a) individuals, schools, or companies serving as vendors or potential vendors for this school; (b) elected officials or their representatives; (c) candidates for public office or their representatives; or (d) political party officials or their representatives. Exceptions may be made by the Head of School, including in instances where such gifts intended for and will be used by the school. Offers of such gifts in excess of \$50.00, even when refused, must be communicated immediately by the employee receiving such an offer to the Head of School.

V. Change Of Personnel Status

Employees are required to notify as soon as possible the Head of School and any other person designated by the Head of School of any change in name, family status, address, telephone number, or other information affecting personnel data held or used by this school.

VI. Examination Of Personnel Files

Any employee may examine his or her personnel file(s) at any time but only in the presence of the Head of School or his or her designee. Such employee may take written notes about the contents of the file, and may add comments for inclusion in the file at any time. No personnel file is to be removed from the office unless expressly provided for by the Head of School or his or her designee.

VII. Copyrights

Copyrights, payments and/or royalties which occur as a result of a project of any employee or employees of this school remain the property of the school. The Head of School may assign copyrights, royalties, or other payments to the author or authors or project participants.

APPROVED:

Head of School

Date

CERTIFICATION OF RECEIPT OF PERSONNEL MANUAL BY EMPLOYEE

I have received a copy of the school's *Personnel Manual* and understand that I am responsible for becoming familiar with the policies described in it. I understand that the information contained in it represents management guidelines only, which may be modified from time to time. I understand that neither the *Manual's* policies nor any representations made by a management representative, at the time of hire or subsequently, are to be interpreted as a contract between the school and any of its

employees. I further understand that my employment is voluntarily entered into, that I am free to resign at any time and that the School may terminate the employment relationship whenever it determines that it is in its best interest to do so.

Employee Signature

Date

ACHIEVEMENT ACADEMY CHARTER SCHOOL EMPLOYEE RESPONSIBILITIES AND QUALIFICATIONS

The Achievement Academy Charter School shall ensure that all personnel meet any applicable certification requirements set forth in Article 56 of the Education Law, but generally will not impose any certification requirements beyond what is mandated by law.

Outlined below are the qualifications the school seeks in candidates for the Head of School, teachers, and other school employees. A single individual may assume the responsibilities of multiple positions, which especially may be appropriate in the initial years of the school's operation.

HEAD OF SCHOOL-- PRINCIPAL

Responsibilities

- Provide leadership and direction to staff (including business and operations manager, consultants, administrative assistant, and all teachers);
- Hire, evaluate, and terminate staff; except that such action with respect to the business and operations manager position shall be subject to review and/or approval by the Board of Trustees;
- Administer scheduling, enrollment and curriculum;
- Facilitate parent education and involvement;
- Make formal reports to the Board of Trustees and charter entity;
- Implement and follow policies and procedures;
- Provide a safe environment for learning;
- Ensure proper budgeting, accounting, auditing, and financial planning.

Qualifications

- Demonstrated successful leadership in a senior administrative position in a public or private school, preferably but not necessarily as a Head of School;
- Demonstrated successful teaching experience;
- Exhibited leadership in working with professional staff, students, and the community;
- Agreement with the academic goals and philosophy of the charter school;
- Demonstrated willingness to implement merit pay approach for teachers;
- Commitment to accountability, including a rigorous student testing regime;
- Demonstrated success in encouraging parental involvement.

BUSINESS AND OPERATIONS MANAGER

Responsibilities

- Coordinate all financial transactions, including revenue activities, expenditures, record keeping, reporting, auditing, etc.;

- Coordinate all administrative transactions, including the provisions of personnel services, record keeping, reporting, inventory, purchasing, etc.;
- Coordinate the collection of any data required for the preparation of reports to the chartering entity and other appropriate bodies.

Qualifications

- Demonstrated organizational skills;
- Prior experience in an operations manager position.

TEACHERS ("Classroom" and "Specialty")

Responsibilities

- Maintain and enrich their expertise in the subject area they will teach;
- Develop lesson plans that ensure the attainment of state learning standards and the additional specific grade-by-grade learning standards set forth in the charter;
- Coordinate lesson plans with other teachers to maximize possibilities for teaching similar topics in the same general time frame, thus reinforcing student knowledge on an interdisciplinary basis;
- Provide direct and indirect instruction;
- Long and short-term planning addressing individual needs of students;
- Prepare students adequately for all required assessments;
- Evaluate students' progress;
- Prepare monthly individual student achievement reports for parents;
- Provide an inviting, exciting, innovative, learning environment;
- Engage in effective and appropriate classroom management;
- Serve as advisors to students;
- Report directly to the Head of School;
- Perform other duties, as deemed appropriate, by the Head of School.

Qualifications

- Demonstrated expertise in the subject they will teach, as evidenced by personal skills and knowledge, an undergraduate major or minor or graduate degree in the subject they will teach, or direct subject-area teaching experience;
- If not covered by any of the exemptions provided under New York's charter-school law, possess any required state teaching certification and meet any other applicable credentialing requirements including the federal Elementary and Secondary Education Act, as amended.
- Demonstrated experience working with young children (examples include, but are not limited to: parenting, babysitting, involvement with community youth organizations, supervisory roles in the Boy Scouts or Girl Scouts, and mentorships);
- Demonstrated communication skills;
- Demonstrated ability to engage the interest of young children;
- Flexibility and sense of humor;
- Demonstrated ability to work with diverse children, including those with special needs;

- Teaching experience in a public or private school, preferably in an urban setting;
- Demonstrated ability to work well with parents;
- Demonstrated ability to work effectively as a team member;
- Demonstrated ability to evaluate tests and measurements of achievement; and
- Demonstrated willingness to be held accountable for student results.

SPECIAL EDUCATION COORDINATOR & SPECIAL EDUCATION TEACHER

Responsibilities

- Provide direct and indirect instruction;
- Long and short-term planning addressing individual needs of students;
- Evaluate students' progress;
- Teach a multi-model approach;
- Provide an inviting, exciting, innovative, learning environment;
- Establish and maintain classroom management procedures;
- Report to the Head of School;
- Prepare written reports accurately and submit in a timely manner;
- Effectively communicate with teachers, parents, and administrators to facilitate the IEP process;
- Effective consultation with parents, students, teachers, and administration;
- Effective professional liaison between school and home when necessary;
- Serve as advisors to students;
- Remain current on rules set forth in special education law and regulations (Coordinator position only);
- Maintain privacy of student records and information (Coordinator position only);
- Serve as primary liaison with CSE of students' district of residence (Coordinator position only).

Qualifications

- Appropriate state certification as a special education teacher and any other credentialing required and applicable;
- Demonstrated ability to communicate and work effectively with parents;
- Demonstrated ability to adapt to individuals specific needs;
- Demonstrated ability to adapt to differences and changes in characteristics of students, programs, leadership, staff, and community;
- Demonstrated ability to utilize varied teaching methodologies to accommodate students' unique learning styles;
- Demonstrated ability to evaluate tests and measures of achievement;
- Demonstrated ability to work effectively as a team member;
- Demonstrated administrative or organizational ability (Coordinator position only).

CLASSROOM AIDE

Responsibilities

- Work with teachers to address the individual needs of students;

- Provide an inviting, exciting and innovative, learning environment;
- Demonstrated ability to relate the young children;
- Use materials effectively and keep lesson focused on objective;
- Keep students on task and give feedback about performance;
- Serve as advisors to students;
- Other duties may be determined.

Qualification

- Applicable credentialing requirements;
- A minimum of 2 years of successful experience as an aide in a classroom setting, or equivalent (unless matriculating in higher education teaching program);
- Demonstrated ability to communicate and work effectively with staff and parents;
- Demonstrated ability to provide tutoring services;
- Ability to adapt to constantly changing needs; and,
- Demonstrated ability to work with a diverse student population.

ADMINISTRATIVE ASSISTANT

Responsibilities

- Maintaining attendance records;
- Assisting in purchasing, transportation, travel arrangements, and field trips;
- Performing scheduling duties;
- Collecting data required for the preparation of reports to the charter entity and other appropriate bodies;
- Answering phones;
- Welcoming parents, children, and guests to the school;
- Coordinating mailings and copying;
- Other duties, as assigned.

Qualifications

- Demonstrated organizational skills;
- Prior experience in an administrative assistant position;
- Demonstrated ability to relate well to adults and children.

EXHIBIT H

Additional information on the proposed Achievement Academy Charter School is provided in following Appendices:

1. Copy of Agreement Letter between Achievement Academy Charter School and Achievement First, Inc. to provide leadership training; curriculum standards and assessment; and for a faculty member to serve on the School's Board of Trustees (referenced in Attachment 8).
2. Additional background information on the Amistad Academy, located in New Haven, Connecticut, including student achievement results (referenced in Attachment 8).
3. A summary of the findings of a comprehensive public opinion survey conducted by the federally-funded Brighter Choice Public School Choice Project evidencing strong parental interest and support for additional public middle school options in Albany (referenced in Attachment 23).
4. Request for Information questionnaires, filled out and signed, by each of the proposed members of the Board of Trustees, as well as their respective resumes (referenced in Attachment 26).
5. Signatures evidencing community support for or interest in the Achievement Academy Charter School (referenced in Attachment 23).

Appendix 1**Partner Organization Commitment/Agreement Letter**

The letter follows this page.

~~180-227-1000~~

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February 26, 2004

Doug McCurry
Achievement First

REDACTED

Doug,

Per yesterday's conversation, here is the outline of a partnership proposal:

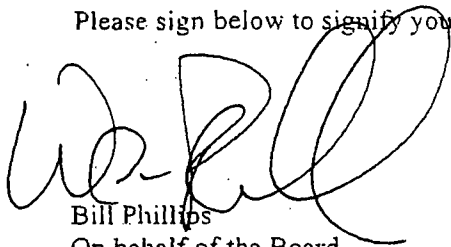
Amistad Charter School will provide the following to Achievement Academy Charter School:

- Access to the Amistad Academy Charter School curriculum, standards, and assessment materials for grades 5-8. These items will be updated annually, and are only for the use of Achievement Academy Charter School.
- Leadership training for the school leader. It is expected that this training would occur from August - December 2004. The training would take the form of a residency where the leader both trained with and would learn from Amistad staff. (This would include allowing the Albany charter school leader to participate in Amistad's teacher training.) The leader would also be expected to take on specific school responsibilities including teaching one class. We will cover the salary and expenses of the school leader.
- To meet our mutual interest for quality assurance in the operations of the new school, Achievement Academy will save a board seat for one faculty representative of the Amistad Academy Charter School.

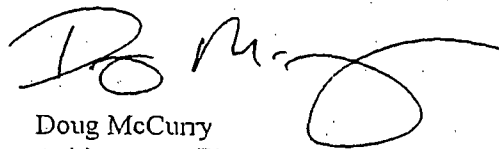
An estimated schedule of payments from the charter school to Achievement First is listed below.

ACTIVITY	2004-05	2005-06	2006-07	2007-08	2008-09
Amistad Charter School curriculum, standards, assessment	5,000	5,000	5,000	5,000	5,000
Leadership Training Fee	15,000				
TOTAL	20,000	5,000	5,000	5,000	5,000

Please sign below to signify your agreement with the partnership proposal.



Bill Phillips
On behalf of the Board
of Achievement Academy Charter School



Doug McCurry
Achievement First

Appendix 2

Additional Background on Amistad Academy of New Haven, CT

The Amistad Academy is considered one of the most successful and highly regarded charter schools in the country. The School opened in 1999 in New Haven and now serves approximately 250 students in grades five through eight. Nearly all the students are African-American or Latino (98 percent) and qualify for the federal free lunch program (84 percent).

Amistad provides a rigorous, standards-based, college-preparatory curriculum implemented over a longer school day running from 7:30 a.m. – 5:00 p.m., fully three hours longer than the New Haven public school day. Teachers at Amistad receive ongoing professional development and make use of regular student performance data to effectively target instruction.

Amistad's program has produced impressive academic results as students have outperformed their New Haven public school counterparts on the Connecticut Mastery Tests in Reading, Writing and Math administered in the sixth and eighth grades. In fact, Amistad students outperformed the statewide averages on these exams, and on the writing test outperformed more affluent school district students in Greenwich, Madison and Westport.

The tables on the following page capture this performance for eighth grade Amistad students during the previous school year (fall 2002), and also show the dramatic growth in academic performance of those students since taking the comparable state tests in sixth grade two years prior.

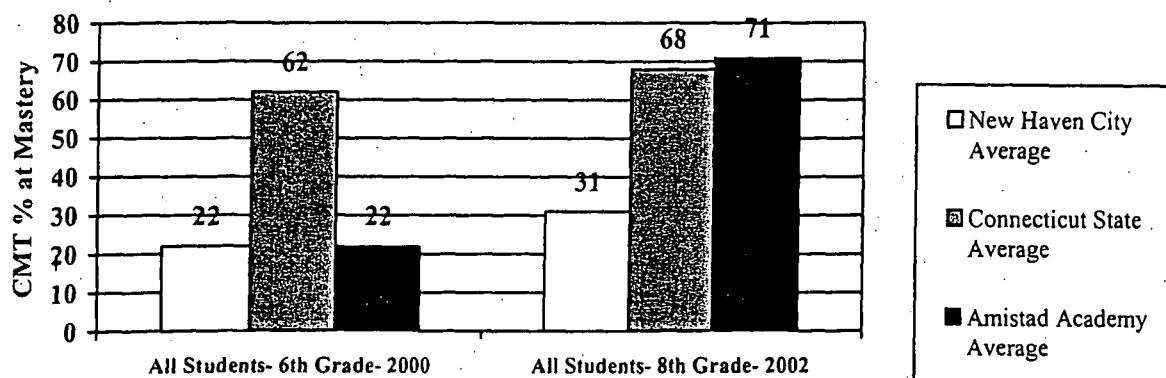
Most eighth grade graduates of Amistad in the past two years have been accepted either to full scholarship programs in rigorous private high schools across the country (e.g., Canterbury, Choate Rosemary Hall, The Gunnery) or admitted to the honors, college preparatory programs at area public high schools.

An additional sign of school success is seen by New Haven's parents as Amistad Academy during last year's enrollment had 455 applicants for 65 spots for new students.

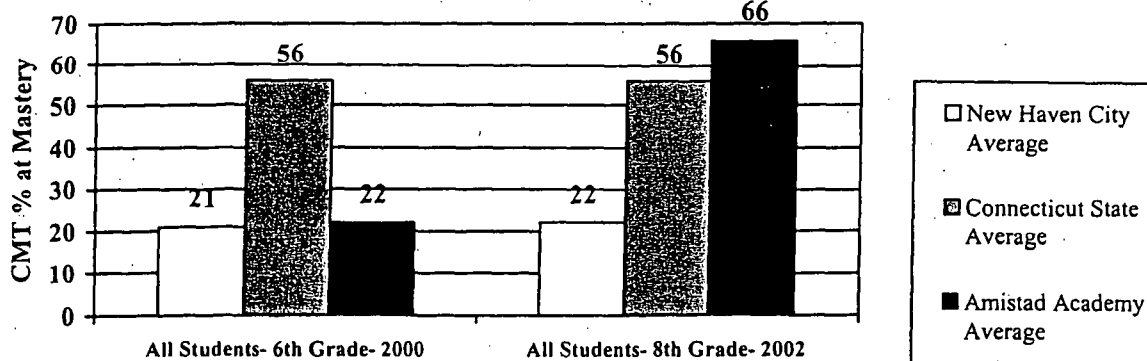
The founders of the Amistad Academy were driven by the desire to prove that urban students can perform at the same high levels of their suburban peers if given the proper instruction and support. We, the Founders of the Achievement Academy Charter School, share this view and are prepared to employ the same successful design and implementation that will produce academic excellence, responsible citizenship and school reform for the students and residents of the City of Albany.

Amistad Academy Student Achievement

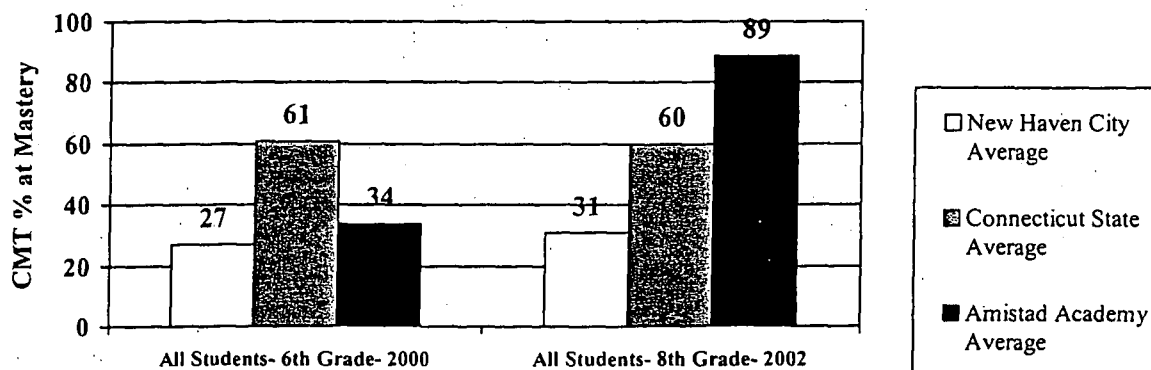
CMT Reading Performance



CMT Math Performance



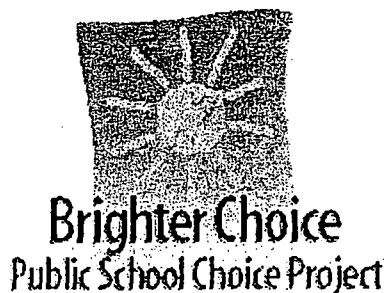
CMT Writing Performance



Appendix 3

Evidence of Community Interest and Support

The summary of the comprehensive public opinion survey discussed in Attachment 23 begins on the following page.

**FOR IMMEDIATE RELEASE:**

Monday, January 20, 2003

CONTACT:

Tom Carroll, Project Director

Office: 518-383-2977

Cellular: [REDACTED]

SURVEY OF ALBANY PARENTS: STRONG SUPPORT FOR "NO CHILD LEFT BEHIND" OPTIONS

A startling 71 percent of the parents in three poorly performing Albany public schools do not realize that their children are attending schools on the State Education Department's roster of failing public schools, according to a new survey of Albany parents. The federal No Child Left Behind Act, signed into law one year ago, grants children in failing public schools the right to transfer to better schools or receive free tutoring and other supplemental educational services.

"If parents don't know their children are attending a failing school, then they are not likely to avail themselves of the federal right to transfer to a better public school or the right to free tutoring services," explained Tom Carroll, the project director for the Brighter Choice Public School Choice Project. Carroll also serves as the chairman of the Brighter Choice Charter Schools.

The state released its "failing school" list at the beginning of the current school year, and designated three Albany schools as failing: Arbor Hill Elementary School, William S. Hackett Middle School, and Philip Livingston Magnet Middle School.

The first-ever survey of Albany parents with children in failing schools was commissioned by the Brighter Choice Public School Choice Project, an Albany-based project. The project is funded through a \$4.4 million grant from the U.S. Department of Education.

Once told that their children presently are attending a failing school, 79 percent indicated that they would transfer their children to another school and 92 percent said they would seek the free tutoring services to which they are entitled under federal law. Based on the latest published student data for the three failing schools, this means that approximately 1,600 students would transfer to a better school and approximately 1,800 students would seek free tutoring and other supplemental services.

"These results underscore the need for a much more aggressive campaign to inform Albany parents about their rights under the No Child Left Behind Act," said Carroll.

-MORE-

REDACTED

A plurality of parents identified "improving our schools" as the number one priority facing Albany, surpassing crime, jobs and the economy, and property taxes.

For Albany's almost 1,300 middle-school students, the New Covenant Charter School is the only existing alternative to the district's two failing middle schools, yet New Covenant does not have the capacity to serve this number of additional students.

"With a planned new middle school mired in neighborhood politics, the district needs to consider the full array of options under the No Child Left Behind Act," explained Tom Carroll. "Students can't be left trapped in state-designated failing schools."

Under federal No Child Left Behind regulations, districts that offer only failing schools at particular grade levels face several options: converting a failing district school into a charter school (an option specifically authorized under New York's charter-school law); creating new or alternative schools to serve the same grades; restructuring failing schools; providing supplemental services; or establishing agreements with neighboring school districts to transfer students to better public schools in neighboring districts.

According to the survey, one popular alternative to Albany's failing public schools is the creation of additional charter schools. By a 2-to-1 margin, parents favored the creation of more charter schools in Albany. A majority also favored converting Albany's failing public schools into charter schools "as a way to provide a better education to Albany's students." Assemblyman John McEneny, for example, previously suggested converting a poorly performing district school in Albany into a charter school.

By an almost 3-to-1 margin, parents voiced support for the innovative Brighter Choice Charter School, which opened this year. The school offers a 9-to-5 school day, 200-day extended school year, separate classes for boys and girls, computers in every classroom, expert teachers for each academic subject, extensive art and music programs, a brand new state-of-the-art school building, and school uniforms.

The survey was conducted by *the polling company*TM, inc., headed by Kellyanne Conway, with offices in New York City and Washington, D.C. Other clients of *the polling company*TM, inc. include *New York* magazine, *National Journal's Hotline*, *The New York Post*, *Ladies Home Journal*, Spelling Entertainment, Major League Baseball, Grocery Manufacturers of America, Safeway Stores, and The Limited, Inc.

A total of 274 parents in Albany were interviewed from January 7 to January 13, 2003. This included only parents of children attending William S. Hackett Middle School, Philip Livingston Magnet Middle School, or Arbor Hill Elementary School. The margin of error for the overall survey data is +/- 5.2% at the 95% confidence level, meaning that the results obtained would differ by no more than 5.2 percentage points in either direction if the entire population of parents with children enrolled in the three designated schools had been surveyed.

#####

To:

Brighter Choice Public School Choice Project

From: Kellyanne Conway, President and CEO
Karen Watts, Special Projects Manager
the polling company™, inc

Date: December 12, 2003

Re: Survey of Parents of Public School Students in Albany, NY

the polling company™, inc. is pleased to present the Brighter Choice Public School Choice Program the results of your recent survey of parents in Albany City School District. The results demonstrate that parents in Albany are open to, and supportive of, alternatives to the current educational system.

Methodology

The survey was fielded from November 4-26, 2003, with computer-assisted telephone interview (CATI) technology at a supervised data collection center.

Respondents were randomly selected for participation by targeting specific geographic areas, as well as households with minority parents. Once selected for prospective participation, a trained interviewer screened the respondent to determine whether or not the parent did, in fact, have a child, or children, currently enrolled in a public school in the Albany City School District.

After qualifying for participation, each respondent was administered a client-approved series of questions by a trained interviewer. Rotational patterns were employed to ensure that any type of ordering bias was limited. The original survey instrument was drafted by the polling company™, inc. specifically for this project. It contained 52 questions, including demographic queries.

Sampling controls were used to ensure that a proportional and representative number of people were interviewed and included according to key demographic attributes such as race, income, and school level (elementary, middle or high school).

The margin of error for the survey is calculated at $\pm 6.2\%$ at the 95% confidence level, meaning, that the results obtained would differ by no more than 6.2 percentage points in either direction in roughly 19 out of 20 cases had the entire population districtwide been surveyed. The margin of error increases when specific subgroups of the population are considered separately.

Key Findings

Albany City School District's Middle Schools Don't Make the Grade. Nearly half (49%) of parents described the quality of district middle schools as "mediocre," with an additional 22% saying they are of low quality. *A majority (51%) would transfer their students if money were no object.*

Nothing to Write Home About. Parents district-wide offered a low rating to Albany, NY's public school district, assigning it a grade point average of 2.65, which falls in the "B" to "C" range. Albany teachers fared slightly better, with a mean G.P.A. slightly above a "B" (3.03). These scores are marginally higher than those measured in our January survey of parents with children in failing schools, in which the district scored a mean 2.19 rating, and teachers a 2.65.

Champions of Charters. Like their counterparts in failing schools, parents district-wide have a favorable opinion of charter schools and believe that more of them should be offered. Nearly two-thirds (65%) of parents support allowing the creation of charter schools, and half (50%) believe schools that are currently failing in Albany should be converted to charters.

Principal for a Day. If parents were in charge, their biggest priorities for public schools would be a greater emphasis on reading and math skills, as well as zero-tolerance for drugs and gangs. Stronger discipline, computers in every classroom, and foreign language instruction beginning in elementary school rounded out the list of features that at least nine-in-ten parents said were important.

Stuck in the Middle. Fully 62% of parents would prefer to send their child to an alternative middle school, rather than one in the public school district. This includes more than two-thirds (67%) of elementary school parents, who soon will be facing the decision about whether to leave their children in traditional public schools or consider other alternatives.

Kelton and KIPP. Nearly three-quarters (74%) have a favorable opinion toward the proposed KIPP Tech Valley Charter School, and 60% would be likely to send a middle-school aged child there. More than three in four (76%) believe that the proposed Kelton Court Middle School should accept students from all parts of the city.

Parents Say Few Left Behind. More than four-in-five (81%) parents say they would be likely to use the free math and English tutoring services afforded to Albany middle school students by the federal No Child Left Behind Act, and with strong intensity (72% very likely). Among parents of middle schoolers, this number jumps to 85%, with 78% very likely to use the services.

Analysis of Findings

The Brighter School Public School Choice Project (BSPSCP) should find a great deal of promise in these survey findings. Parents in Albany recognize the shortcomings apparent in their school district, and appear supportive and open toward educational alternatives for their children.

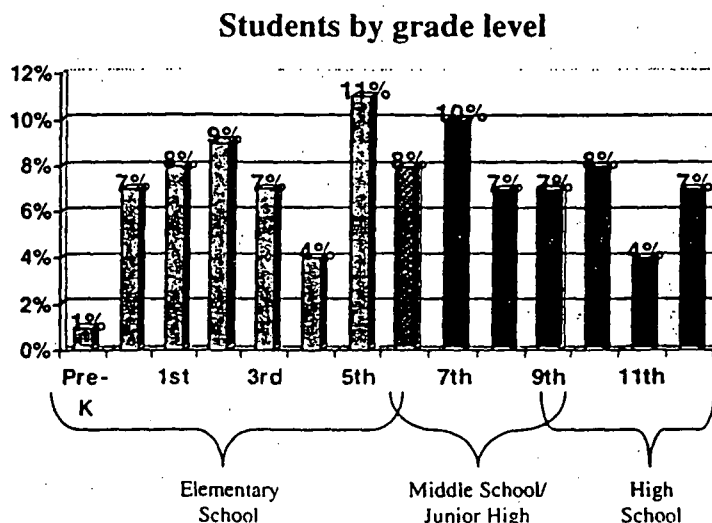
Meet the Parents...

Parents contacted in the survey come from a wide variety of backgrounds, and were sampled carefully to provide diversity in race and income.

- In accordance with racial breakdowns from the school district, 65% of responses are from Black parents, 22% from Whites, and 10% from Hispanics.
- With respect to income, 30% of the sample falls below a \$25,000 annual income, with half (50%) of the sample likely qualifying for free or reduced school lunches at an annual income of less than \$40,000.
- A plurality (38%) of respondents are Albany natives (30+ years), with more than half of the total sample (51%) having resided in Albany for 20 years or more.

...and their children.

The 233 parents included in this study account for a total of 315 students who attend public schools in the Albany School District. The distribution of students closely mirrored the schools in the district, with 56% of children in elementary schools, 21% in middle schools, and 26% in high schools.



Schools Included in Survey (by number of children)

56%	ELEMENTARY SCHOOL (NET)
5%	Arbor Hill
11%	Albany School of Humanities
2%	Giffen
7%	Montessori Magnet School
8%	Philip Schuyler
8%	Thomas O'Brien Academy of Science Technology
2%	School 16
5%	School 18
5%	School 19
2%	School 20
1%	School 27
21%	MIDDLE SCHOOL (NET)
10%	Hackett Middle School
10%	Livingston Magnet Academy
-	Middle School Alternative Program
1%	TOPS
26%	HIGH SCHOOL (NET)
23%	Albany High School
-	Abrookin Vocational & Technical
3%	Harriet Gibbons High School
-	Tennae Mothers Program (TAM)

Albany Brings Home a Bad Report Card

Only 18% of Albany parents assigned the school district a grade of "A." A plurality (40%) ranked the schools solidly in the "B" range, and the average score overall fell in the "B" to "C" range (2.65 out of 4 grade points). Slightly fewer than one-in-ten (8%) gave the district a below average grade of "D" or "F."

Parents in this survey were slightly more positive about the school district than parents in the failing schools survey, who gave the school district a 2.19 average score, which falls dangerously close to "C" range. In that survey, parents were roughly split between grades of "B" (32%) and "C" (31%).

Groups most likely to give the school district a failing grade in the present study included (5% overall):

- Would transfer child to religious school 13%
- High school education or less 10%
- Believe only those in the neighborhood should attend Kelter Court Middle School 10%
- Unmarried parents 9%
- Women 7%

Albany teachers earn a slightly higher grade than the schools that they work for, and were the only group to do better than a "B" average in either survey with a mean grade point average of 3.02 out of four. This is not surprising considering that teachers often have names and faces (i.e. Suzie's homeroom teacher), where districts are thought of more as entities.

Groups rating Albany Teachers as failing were (2% overall):

- Rated district middle schools as "low quality" 10%
- Residents for 10 years or less 8%
- Oppose creating more schools like Brighter Choice 8%
- Parents with two children 6%
- Professionals 6%

It is notable that 23% of those who graded the school district itself with a "D" or lower gave the district's teachers a "B," and an additional 23% graded teachers with a "C."

Question: Suppose the *public schools* themselves, in Albany, were graded in the same way. What grade would you give the public schools in Albany - A, B, C, D, or Fail?

January 2003	November 2003	
11%	18%	A
32%	40%	B
31%	30%	C
13%	3%	D
11%	5%	FAIL
2%	4%	DON'T KNOW
1%	*	REFUSED
2.19	2.65	Mean G.P.A.

Question: And what grade would you give the Albany public school teachers- A, B, C, D, or Fail?

January 2003	November 2003	
22%	33%	A
38%	40%	B
21%	16%	C
10%	4%	D
5%	2%	FAIL
3%	5%	DON'T KNOW
1%	*	REFUSED
2.65	3.02	Mean G.P.A.

Moving On Up

Frustration with the Albany City School District appears to be at a critical mass. A majority of people would transfer their children to a different school if money were no object (51%). This number was actually higher in the recent survey of parents district-wide than in the January survey of parents, which was limited to parents in failing schools (44% would transfer in the January survey).

Groups most eager to transfer their children included (51% overall):

- Believe teachers are failing (D or below) 92%
- Believe schools are failing (D or below) 86%
- Younger parents age 18-34 75%
- Residents of Albany for less than 10 years 70%
- Blue collar occupation 66%
- Parents of middle schoolers 64%
- Work part time 63%
- Have three or more children 60%

The reasons parents gave for wanting to transfer their children or leave them in their current schools ranged from the quality of education and a desire for broader course offerings in subjects like art and computers to dissatisfaction with teachers and violence in schools.

For those who Would Transfer their child:

31% NET: ACADEMIC IMPROVEMENTS
 19% BETTER QUALITY EDUCATION
 7% FEWER STUDENTS PER CLASSROOM
 2% HOMEWORK LOAD
 2% PERSONALIZED TEACHING
 1% ASSISTING CHILD WITH LEARNING DISABILITY

16% NET: UNHAPPY WITH STAFF/ADMINISTRATION
 12% UNHAPPY WITH TEACHERS OR STAFF
 4% LACK OF DISCIPLINE
 * SCHOOL BOARD

9% NET: GENERAL ENVIRONMENT
 4% VIOLENCE/SAFETY ISSUES
 2% BETTER FACILITIES
 2% NEGATIVE INFLUENCES
 1% PARENTAL INVOLVEMENT/GUIDANCE
 * MORAL VALUES

7% NET: GENERAL NEGATIVE
 6% GENERAL NEGATIVE
 * OBJECT TO SCHOOL TESTING

4% NET: PREFER OTHER TYPES OF SCHOOLS
 3% PREFER RELIGIOUS SCHOOLS
 1% PREFER PRIVATE SCHOOLS

3% NET: CLASSES AND PROGRAMS
 1% MORE CREATIVE ART/MUSIC PROGRAMS
 1% MORE COMPUTER CLASSES
 1% MORE LANGUAGE CLASSES

For those who Would Not Transfer their child:

28% NET: OTHER/ENVIRONMENT

- 10% OTHER, NOT SPECIFIC
- 8% DIVERSITY OF PUBLIC SCHOOL
- 6% CONVENIENCE/LOCATION
- 4% KIDS LIKE CURRENT SCHOOL

21% NET: NO NEED/SATISFIED

18% NET: SCHOOL DISTRICT/SCHOOL SYSTEM

- 6% NO DIFFERENCE BETWEEN PUBLIC/PRIVATE
- 4% SUPPORTER OF PUBLIC SCHOOL SYSTEM
- 3% POSITIVE COMMENT ABOUT ALBANY SCHOOL DISTRICT
- 3% NEGATIVE COMMENT ABOUT ALBANY SCHOOL DISTRICT
- 1% COST OF PRIVATE SCHOOLS
- 1% PREFER PUBLIC SCHOOLS TO PRIVATE

12% NET: EDUCATION AND CURRICULUM

- 7% RECEIVING GOOD QUALITY EDUCATION
- 3% TUTORING PROGRAMS/EXTRA HELP
- 2% PERSONAL ATTENTION
- 2% CHALLENGING CLASSES
- * COLLEGE PREP OPPORTUNITIES

10% NET: CLASSES AND PROGRAMS

- 4% BETTER PROGRAMS/ CLASSES/ OPPORTUNITIES
- 3% VARIETY OF PROGRAMS/CLASSES
- 3% EXTRACURRICULAR PROGRAMS/ SPORTS
- * MUSIC/ART/THEATER PROGRAMS

9% NET: TEACHERS/STAFF

- 5% HELPFUL/GOOD QUALITY TEACHERS
- 3% SUPPORTIVE ADMINISTRATION
- 1% PARENT-TEACHER COMMUNICATION

"My wife and I prefer Catholic Schools because they are more structured. These new charter schools seem to have that same structure. We very much would like to see these new schools come into Albany."

"In regards to the middle schools, their math scores are very low. I also do not agree with all the policies in regards to disciplining the children. I think they are very unfair."

"I don't think she is getting a good enough education."

"I believe that parents need to keep their children in public schools or they may get worse."

"It's the children's job to learn. If the school is performing badly, it is the child taking his education for granted. All schools are good, it's the kids who don't learn."

"Their safety. I'm dealing with a lot of issues as far as fighting on the way to school, and the threats of violence during school hours. It's something my children should not have to deal with."

"Her choice. We sat down with the child and decided on the best schools together. She likes drama and music and her choice of public school has the best programs. My other children are in private school."

"I think he would be taught better at a private school."

"After 6th grade, if I had the money, he would go to a private school. I have heard the middle schools are rough in a lot of ways."

"I would transfer my children to a different school if that new school would give my kids a better education and a more strict way of learning. I like the idea of uniforms. I like the idea of better classes for art and music."

Types of Schools

Given the choice, parents who would move their children to a different school are sharply divided between religious (20%) and non-religious (20%) private schools, with other public schools (5%) and home schooling (3%) trailing behind as less desirable options. However, leaving children in their current public school led the pack, garnering responses from nearly half (49%) of the parents in the survey.

These numbers are notably different from those measured in our January survey of parents in failing schools. In that survey, parents were much less likely report that they would leave their child in their current public school (only 35% of those in failing schools, vs. 49% among parents district-wide), choosing instead private non-religious schools (31%) and religious schools (17%).

Notably, parents who believe that the public schools themselves are failing were most likely to choose a private non-religious school, while those who believed the teachers were failing were most likely to choose a religious alternative.

There were no significant differences between White and Black parents, however Hispanics strongly preferred non-religious schools.

Most likely to stay in their current school (49% overall)

Believe middle schools are "high quality"	69%
Believe the district should not create additional charters	65%
Parent of high school student	62%
Professional	62%
Graded public schools "A" or "B"	61%
Completed some 2-year college	59%
College Graduate	58%
Income \$50,000	58%
Resident for 26+ years	56%

Most likely to choose a religious school (20% overall):

Believe teachers are failing	69%
Blue collar occupation	57%
Three or more children	31%
Parent age 18-34	30%
Income \$50,000	30%
Two children	29%
Support converting failing schools	29%
Support creating additional charter schools	28%
Unmarried	25%

Most likely to choose a private non-religious school (20% overall):

Hispanic/Latino	47%
Believe Schools are failing	41%
Parent of a middle school student	41%
Would transfer if money was no object	33%
White collar occupation	32%
Have only one child	31%
Support creating more schools like Brighter Choice	25%

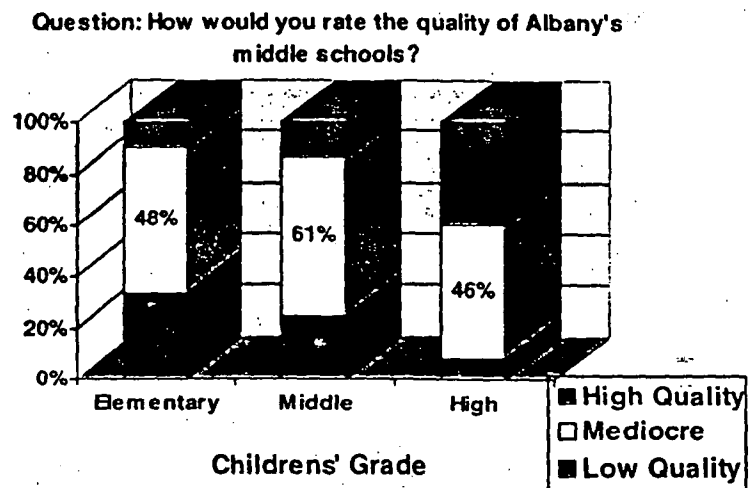
Middle Schools

Although the weakness of the Albany Public School District poses problems for all parents, those with middle school-aged children likely suffer most, since Albany's two largest middle schools have both been designated "failing" by the standards in the No Child Left Behind Act.

When asked specifically about whether they would send their children to a public high school in Albany or to another alternative, fully 61% of parents say they would abandon the public school, including 60% of parents of middle schoolers.

Among elementary school parents, who may soon be deciding whether to brave public middle schools or seek other alternatives, 68% say they will look elsewhere.

The age of respondents' children had significant impact on their perception of middle school quality in the survey, with elementary school parents having the lowest overall opinion of Albany middle schools.



Other groups that gave Albany middle schools a particularly low rating included (71% overall low or mediocre):

- Blue collar occupation 87%
- Would transfer to religious school 87%
- Would prefer another alternative over Albany public middle schools 78%
- Non-Married 78%
- Income less than \$50,000 78%
- Support creating more schools like Brighter Choice 76%
- Mothers 74%

With respect to violence in Albany middle schools, some parents see it as an extreme problem, while others do not. On a scale of one to five, with one indicating "an extreme problem," parents gave the violence in Albany middle schools a middling score of 3.25.

Charter Schools

Given the low marks that Albany public schools earned with these parents, it is not surprising that they professed strong support for the creation of additional charter schools in their area. Nearly two-thirds (65%) of parents in the survey support allowing the creation of charter schools, including 40% who would strongly support these academic alternatives.

The level of support for charter schools shown in this survey was similar to the support parents of students in failing schools showed in our January survey (66% support among parents in failing schools survey vs. 65% in the current district-wide survey).

Groups most supportive of charter school creation in general included (65% overall):

- Those who would send their child to a religious school 81%
- Blue collar workers 78%
- Hispanics 77%
- High school education or less 74%
- Residents for more than 25 years 73%
- Residents for less than 10 years 72%

Notably, parents who would choose to send their child to a religious school were more supportive than average of charter schools (81%), while parents who would choose to send their child to a private, non-religious school were more likely than average to oppose the creation of charter schools (31% vs. 25% overall).

When parents are asked about the creation of charter schools to *supplement* the Albany school district specifically, their support wanes slightly, dropping from 65% support in the generic question to 57% in the Albany-specific question.

Parents of elementary school students were most supportive of creating additional charter schools to expand the options available to Albany parents (66%), while parents of middle and high-schoolers were less supportive on average (37% and 44%, respectively).

Significant racial differences emerged for this survey item, with Black (65%) and Hispanic parents (73%) most supportive of creating additional charter schools and Whites were least supportive (31% support).

Those with incomes less than \$50,000 were much more supportive of charter school creation than those with incomes greater than \$50,000 (71% vs. 51% support).

In fact, even when parents are faced with the possibility of their childrens' own schools being closed down and replaced, fully half (50%) continue their support and agree that the school district should convert its failing public schools to charter schools.

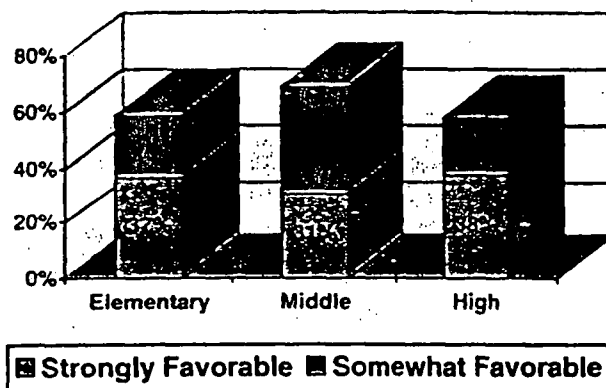
The strongest supporters of replacing failing public schools with charter schools were (50% overall):

- Those who believe the schools are failing 85%
- Those who believe the teachers are failing 94%
- Parents with a high school education or less 75%
- Those who would transfer their child to a religious school 71%
- Blue collar occupation 71%
- Income less than \$50,000 63%
- Hispanics 62%

A Bright Future

Albany parents report a positive view of the new Brighter Choice Charter School, with less than one quarter reporting an unfavorable opinion. This number is comparable to the results from the survey of parents in failing schools (64% favorable in PCFS survey, vs. 61% in district-wide survey).

Opinion of the Brighter Choice Charter School, by child's grade level



It is not surprising, given their strong favorability toward Brighter Choice, that 63% of Albany parents would like to see more charter schools like Brighter Choice brought into their area.

This desire was particularly strong for parents of middle school students, 71% of whom would appreciate having an additional education option like brighter choice. Other groups that showed high support for creating more charter schools include Blacks (72%), Hispanics (74%), blue-collar workers (74%), and those making less than \$50,000 annually (72%).

Kelton Court Middle School

Parents from all different psychographic and demographic backgrounds overwhelmingly believe that the proposed Kelton Court Middle School should open its doors to students from all over the city, rather than just from its surrounding neighborhood (76%). This view was held by a majority of respondents from every group analyzed in the survey, and was particularly strong among those making \$50,000 or less (84%), as well Hispanics (89%) and those who would consider transferring their students to a different school if money were not a concern (86%).

KIPP Tech Valley

The proposed KIPP Tech Valley school, which would focus on academic achievement and college preparation, and which would require strict standards for student conduct and dress, enjoys very strong support among Albany parents. Nearly three quarters (74%) express a favorable opinion when they are read a description of the school, including 43% who would be “strongly favorable” toward such a school. Only one-in five parents (20%) say they are unfavorable toward the KIPP school endeavor.

Not surprisingly, many parents also report that they would consider sending their middle school aged children to the KIPP Tech Valley school if they were old enough (60%).

Groups most likely to consider sending their children to KIPP (38% very likely overall) include:

- Those who would send their children to a religious school 65%
- Residents for 10 or fewer years 58%
- Blue-collar workers 56%
- Hispanics 53%
- Those with three or more children 51%
- Support creating more charter schools 51%
- High school education or less 49%

Albany Takes Advantage of Tutoring

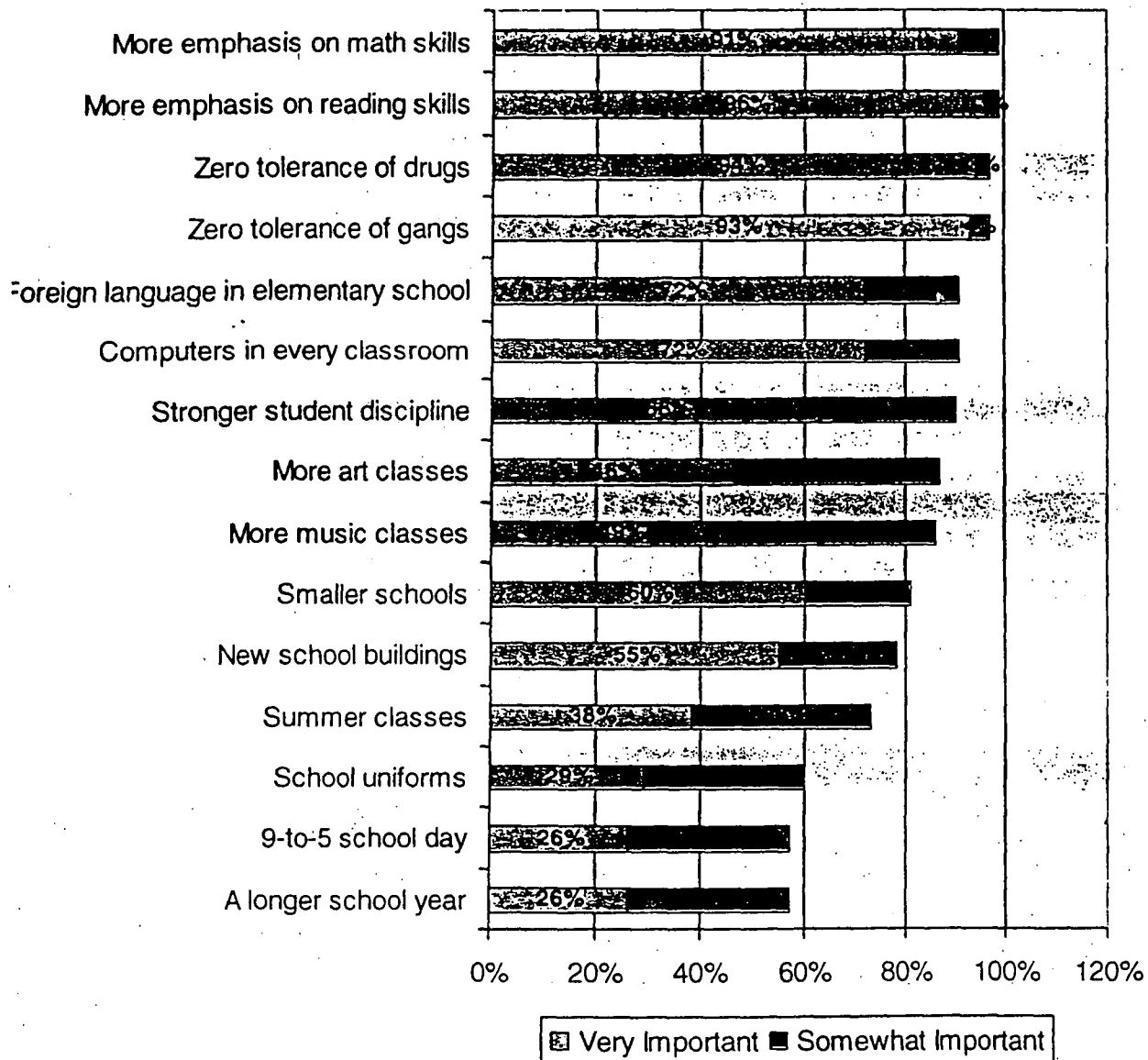
The No Child Left Behind Act guarantees Albany middle school students the opportunity to receive free tutoring in math and English, and most parents say they are likely to take advantage of the offer. More than seven-in-ten (71%) parents say they would be “very likely” to utilize these free tutoring services, including 78% of the parents of middle school students who are currently eligible.

The groups that report that they would be likely to use the free tutoring have demographic and psychographic traits that closely match those of charter school supporters, with the most likely groups being lower income (less than \$50,000 – 85% likely), Black (81%), Hispanic (83%), or blue-collar workers (85%).

Despite significant differences between them in other areas, parents who would send their kids to religious schools and those who would send them to private, non-religious schools both agree that they are likely to take advantage of tutoring (87% and 88%, respectively).

If You Build it, They Will Come: Attributes and Features Testing

When parents in the survey were asked to rate the importance of 14 different attributes that charter schools frequently offer, their overwhelming message was “we want it all.” Each and every attribute tested gained the distinction of being “important” from at least half of parents. Despite this trend, though, the basics like reading, math, and safety clearly topped the list, while options offering additional classtime, either through longer school days or an extended school year, trailed behind.



Appendix 4

Board of Trustee Request for Information Questionnaires and Resumes

Additional information and background required of proposed members of the Board of Trustees begins on the following page.

ACHIEVEMENT ACADEMY CHARTER SCHOOL

Request for Information from Prospective Charter School Board Members

BOARD MEMBER NAME: Orville M. Abrahams

BACKGROUND

1. Please provide your educational and employment history. You may do so by attaching a resume.

See resume attached.

2. Please indicate that you will be at least eighteen years old by January 1 of the year in which the proposed charter school would open.

I affirm that I will be at least 18 years old by January 1, 2005.

3. Please indicate how you became aware of the proposed charter school and the opportunity to serve as a member of its board if chartered?

Like many Albanians, I believe that there should be more high-quality educational choices for middle school students. Because I am a member of the Brighter Choice Charter School Board, I came into contact with Mr. Phillips at the New York Charter Schools Association. As he already had the same concern, we agreed to apply for and create a middle school for Albany that would be based on an existing high-performing model.

4. Please explain why you wish to serve on the board.

The idea of an achievement based academic setting appears to be a very promising concept in light of the present absence of such a public learning setting. I believe that students held to higher standards for performance and behavior would respond accordingly if given opportunity, encouragement and guidance.

As a graduate of the Albany City School system and a lifelong resident of this community, I strongly believe that more educational choices and opportunities in public education for students like myself would serve to increase scholastic aptitude and achievement at a more significant rate than current public educational systems in this community.

I look forward to using my skills, experience and knowledge as a community member, board volunteer and public school product having an opportunity to bring about this type of innovation to my community.

5. Please indicate if you have previously served on a board of a school district or not-for-profit corporation (including the board of a non-public school) and describe any relevant experience. If you have not had any previous service, please discuss why you wish to serve in this capacity.

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I have served on the board of directors of the Albany Boys and Girls Club. I currently serve on the Advisory Board for the Schenectady Chamber Leadership Program and the Brighter Choice Charter School.

6. Please indicate your understanding of the appropriate role of a public charter school board member.

I understand that my role as a public charter school board member will include governance, policy formation, goal setting and administrative and fiscal oversight of the organization.

7. Please indicate specifically, the knowledge and experience that you would bring to the board.

My contribution to the board would consist of my 13 years of employment experience at an operational and administrative level working in the non-for profit sector both at the Albany Housing Authority and the Capital District YMCA. In both these organizations I worked closely with families and children in a community setting. I also bring six plus years of experience as a board volunteer with the Albany Boys and Girls Club and a start up of a school.

As a lifelong community member and public school graduate, I bring the unique perspective regarding the educational ambitions of the community.

8. Please provide a forecast of where you see the school in one year and then again four years.

Contingent upon the approval of the charter application, the following year would be devoted to securing a well-qualified leader for the school and a location for the school building. Another major focus would be preparation for the opening of the school in 2005.

In four years time, the first students would be graduating. The Amistad model would have been in use for four years with successful results as in Connecticut.

9. How would you handle a situation in which you believe one or more members of the school's board are involved in self-dealing (working on their own benefit, or the benefit of their friends and family)?

As a member of the board it would be my duty to ensure that my fellow board members are serving on the board to further the mission of the Achievement Academy Charter School and for no other reason. Any involvement other than that would not be tolerated. If I believed one or more members of the board were involved in self-dealing, I would bring it to the attention of the entire board via

CONFLICT OF INTEREST

10. If you or your spouse knows any of the other prospective board members, please so indicate the relationship.

I do not know any of the other prospective board members.

11. If you or your spouse know any people already known to be prospective school employees, please so indicate and describe the relationship.

I do not know any of the prospective school employees.

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12. If you or your spouse know anyone that plans to do business with the school, please indicate and describe the relationship and the nature of the potential business:

I do not expect to do business with the school.

13. If the school proposes to partner with an education service provider, please indicate if you or your spouse knows any employees, owners or agents of that provider. If your answer is yes, please indicate the individuals you know and the nature of the relationship.

I do not know any employees of an education service provider.

14. If the school will partner with an educational service provider, please indicate whether you or your spouse has a direct or indirect ownership, employment, contractual or management interest in the educational service provider.

I have no direct or indirect ownership, employment, contractual or management interest in an education service provider.

15. Please indicate if you anticipate conducting any business with an educational service provider, the school or both. If so, please describe the potential relationship:

I do not anticipate conducting any business with an educational service provider, the school or both.

16. Please indicate if you foresee any potential ethical or legal conflicts of interests should you serve on the board.

I do not foresee any potential ethical or legal conflicts or interest arising from my service on the board.

EDUCATIONAL PHILOSOPHY

17. Please provide your understanding of the school's mission and / or philosophy.

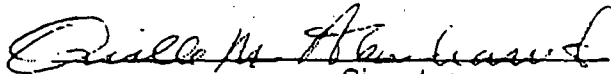
The mission of the Amistad Academy Charter School is to implement, the Amistad Model, a proven model of success for public middle school students in grades five through eight. This success is documented by assessment results in the key areas of math, reading and writing which are the pillars of successful learning in all other areas.

18. Please indicate if you are familiar with the educational program that the school proposes to utilize.

I have read about the Amistad Academy and I have examined the results of the school model that is utilized at that school. It is a very successful program in which the students achieve testing scores at or above the levels of their counterparts in much wealthier and prestigious school districts.

19. Please indicate what you believe to be the characteristics of a successful school. What specific steps do you think the board of the school will need to ensure that this school is successful?

A successful school produces successful students. The students have opportunities to thrive academically in an environment that is instructional, demanding and supportive, respectful and resourceful. The board will act to ensure that teachers and administrators are of the best caliber and are well trained in the Amistad model. The board will implement the Amistad model, which is standards based instruction. The teachers make sure that each lesson has clear standards-based aim and that the instruction used is the most effective, efficient and engaging way of getting the student to master the standard. The model. The board will ensure that the students are held to standards of behavior that are just as demanding as the academic standards. School uniforms will be mandatory and just as in the Amistad model; the Achievement Academy Charter School board will ensure that each student receives the support of two teachers who serve as advisors.


Signature

3/1/2004
Date

PROFESSIONAL EXPERIENCE:

Jan. 2003 – Present: Capital District YMCA
151 Vly Road
Albany, NY 12640

Position: Associate Executive Director

Present duties include assisting in the development of annual operating objectives and budget; supervision of staff including recruitment, training and scheduling; supporting and participating in organizational fund raising efforts; recruiting and developing new program initiatives; customer service.

Aug. 1990 – Dec. 2002 Albany Housing Authority
4 Lincoln Square
Albany, New York 12202

Position: *Housing Authority Development Manager 90'-98'*
Hope VI Community Manager 99'-present'

Managed 10-24 acre public housing sites and all facets of real property management including collection of \$55,000 monthly rent. Supervised 13 maintenance/custodial staff. Developed resident security job training program.

Oct. 1994 – May 1999 JCPenney
Crossgates Mall
Albany, New York 12203

Position: *Sales Associate*

Provided retail customer service. Participated in commissioned sales. Conducted yearly inventory.

Jan. 1990 – Aug. 1990 Mohawk Opportunities
218 Nott Terrace
Schenectady, New York 12307

Position: *Community Service Coordinator*

Supervised 4-6 mentally ill clients in semi-independent supportive living conditions. Monitored medicinal usage. Coordinated business and social activities. Monitored expenditure and disbursement of client funds.

Jun. 1986 – Jan. 1990 State University of New York Central Administration
Office of Capital Facilities
State University Plaza
Albany, New York 12207

Position: *Student Assistant*

Assisted Facilities Engineers and support staff in the operations of the Capital Facilities main office. Prepared memoranda, filed documents, answered telephones, directed inquiries and other clerical duties.

Mar. 1984 – Mar. 1990 United States Army Reserve
Headquarters and Headquarters Company 464th Engineer Battalion
1201 Hillside Avenue
Schenectady, New York 12308

Position: *Administration Specialist and Retention NCO*

Supervised squad sized (5 man) activities involving readiness training. Conducted basic military administrative functions. Conducted recruitment and re-enlistment activities for retaining and increasing unit strength. Participated in leadership training and team building programs.

EDUCATION AND TRAINING:

Jan. 2003-Present Master of Business Administration Student
State University of New York, University Center at Albany School of Business

Jan. 2003 – Jun. 2003 Schenectady Leadership, Class of 2003
The Chamber of Schenectady County

Sept. 1998 – Jun. 1999 Capital Leadership, *Class of 1999*
Albany-Colonie Regional Chamber of Commerce

Sept. 1993 – Jun. 1994 *Center Fellow*
The Center for Strategic Urban Community Leadership

REDACTED

Dec. 1989

Bachelor of Arts: Psychology
State University of New York
University Center at Albany

CIVIC AFFILIATIONS:

Advisory Board, The Chamber of Schenectady County Leadership Program 2003-Present

Board of Directors, Brighter Choice Charter School 2001-Present

Board of Directors, Albany Boys and Girls Club Jan. 1998 – June 2000

Project Business Consultant, Junior Achievement of the Capital District 1995-97

COMPUTER TRAINING:

Microsoft Office Suite

ACHIEVEMENT ACADEMY CHARTER SCHOOL
Request for Information from Prospective Charter School Board Members

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BOARD MEMBER NAME: William A. Phillips

BACKGROUND

1. Please provide your educational and employment history. You may do so by attaching a resume.

See resume attached.

2. Please indicate that you will be at least eighteen years old by January 1 of the year in which the proposed charter school would open.

I affirm that I will be at least 18 years old by January 1, 2005.

3. Please indicate how you became aware of the proposed charter school and the opportunity to serve as a member of its board if chartered?

Due to the nature of my current job, I am acutely aware of the need for high-quality middle schools in Albany. Through conversations with Brighter Choice staff, I became aware that Mr. Abrahams shared my concerns about the middle school choices for Albany's children. Consequently, Mr. Abrahams and I agreed to work together to create high-performing middle school in Albany.

4. Please explain why you wish to serve on the board.

I have spent the past six years creating and supporting better educational opportunities for children, especially those at risk of failure in traditional school districts. I cannot accept that children are denied the opportunity for a high quality education on the basis of economic ability. While the general scenario I describe exists in most urban and rural areas, it is particularly acute for Albany's middle school students. I view service on this board as an opportunity to bring a high-quality school to these students.

I am also looking forward to bringing my skill and experience in Board service to this project, as well as the opportunity to "refresh" my charter school governance skills.

5. Please indicate if you have previously served on a board of a school district or not-for-profit corporation (including the board of a non-public school) and describe any relevant experience. If you have not had any previous service, please discuss why you wish to serve in this capacity.

I was a school committee member of the North Attleborough, MA School Committee from 1996-99. I also served as a member of the SABIS-Foxborough Regional Charter School Board from 1997-98, and the St. Mary's Academy Advisory Board from August 2002 until February 2004. I currently serve as a member of the Immaculate Conception Parish Council. (St. Mary's Academy and Immaculate Conception Parish are in Hoosick Falls, NY.)

6. Please indicate your understanding of the appropriate role of a public charter school board member.

I understand my role as a board member to include governance of the organization, including working towards fulfilling its mission and Charter while providing oversight of financial and legal matters.

We will accomplish this through setting appropriate policies and procedures, hiring and evaluating a school leader, providing for various audits, and raising financial support as need be. I do not expect to be a part of day-to-day school operations.

7. Please indicate specifically, the knowledge and experience that you would bring to the board.

I have in-depth knowledge concerning school operations and governance.

I have served on a traditional school board, a nonpublic school board, and a charter school board. I also have direct experience with opening charter schools. Finally, I have direct knowledge of the challenges faced by operating charter schools.

8. Please provide a forecast of where you see the school in one year and then again four years.

We expect to open our school in 2005. As a result, one year from now, we expect to have identified and trained our school leader and to have identified our future location. Our Board will be working to ensure a smooth opening and the best possible experience for our students, their parents, and our employees.

After four years, we will graduate our first class of students. I certainly expect that we will be on our way to replicating the success of the Amistad model through standardized test scores, other measures of academic success, and the outstanding behavior of our students.

9. How would you handle a situation in which you believe one or more members of the school's board are involved in self-dealing (working on their own benefit, or the benefit of their friends and family)?

It is critical that Board Members act in the best interests of the organization. Any conflict of interest or self-dealing, or the perception of these, is detrimental to the Board and the school. Depending on the severity of the issue, I would most likely first discuss it with the person/people involved to see if they would acknowledge the issue and stop the behavior. If they did not, I would refer the matter to the Board, the Executive Committee, or Board Development Committee for appropriate action. I am prepared to remove board members involved in such activity.

CONFLICT OF INTEREST

10. If you or your spouse knows any of the other prospective board members, please so indicate the relationship.

My spouse and I know fellow board member, Ms. Rogers due to my work on public school choice activities. I also knew Mr. Abrahams due to his membership on the Board

of Brighter Choice Charter School. My spouse and I did know any of the other board members prior to proposing Achievement Academy Charter School.

11. If you or your spouse know any people already known to be prospective school employees, please so indicate and describe the relationship.

My spouse and I do not know any prospective school employees.

12. If you or your spouse know anyone that plans to do business with the school, please indicate and describe the relationship and the nature of the potential business:

I know Mr. McCurry of Achievement First. I met him in the process of creating Amistad partnership agreement.

13. If the school proposes to partner with an education service provider, please indicate if you or your spouse knows any employees, owners or agents of that provider. If your answer is yes, please indicate the individuals you know and the nature of the relationship.

The school does not plan to partner with an education service provider.

14. If the school will partner with an educational service provider, please indicate whether you or your spouse has a direct or indirect ownership, employment, contractual or management interest in the educational service provider.

The school does not plan to partner with an education service provider.

15. Please indicate if you anticipate conducting any business with an educational service provider, the school or both. If so, please describe the potential relationship:

I do not anticipate conducting any business with an education service provider or the school.

16. Please indicate if you foresee any potential ethical or legal conflicts of interests should you serve on the board.

There is a potential conflict of interest due to my role as President of the New York Charter Schools Association (NYCSA). NYCSA charges membership dues and provides for-fee services to charter schools. In any instance where Achievement Academy Charter School and NYCSA propose to do business, I will declare the conflict and recuse myself from voting.

EDUCATIONAL PHILOSOPHY

17. Please provide your understanding of the school's mission and / or philosophy.

As is mentioned throughout the application, we are proposing to model Achievement Academy on Amistad Academy Charter School in New Haven, CT. Therefore we will provide a rigorous public charter school that "helps its students achieve dramatic breakthroughs in academic achievement and personal conduct, and puts them firmly on the college bound path."

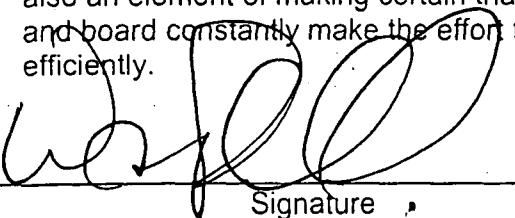
I cannot help but notice that all high-performing schools first succeed in changing the expectations about student success. Specifically, they do not accept excuses from adults about the ability of children to provide high-quality work. Moreover, they are extraordinarily demanding about the quality of effort provided by children, parents, and staff. While I hold no illusions about the exhaustive nature of the work to be undertaken by the school, I believe my role as a board member is to keep the organization's "momentum" by constantly pointing to the vision of providing a college-prep education to students who do not currently have such a benefit.

18. Please indicate if you are familiar with the educational program that the school proposes to utilize.

I believe myself to be sufficiently familiar with the educational program the school proposes to utilize. I have visited the school and I have read quite a bit about the Amistad program, its philosophy, and its results during the last 5 years.

19. Please indicate what you believe to be the characteristics of a successful school. What specific steps do you think the board of the school will need to ensure that this school is successful?

Fundamentally a successful school pushes students to achieve academically and socially beyond what they themselves expected. The successful school also minimizes the impact of negative influences that might detract from student reaching his full potential. I think the effort of keeping the vision and high standards is primary. Obviously, there is also an element of making certain that the school community believes that the leadership and board constantly make the effort to obtain necessary resources and use them efficiently.


Signature

3-1-04
Date

WILLIAM A. PHILLIPS

REDACTED

(h)

(w)

WORK EXPERIENCE

2002-present
Albany, NY

PRESIDENT, New York Charter School Association

Responsible for the strategic and operational management of the organization. Work with the Board of Trustees on initiatives that lead to operational success of, and public support for New York's charter schools' initiative. Primary responsibility for fundraising and public image of the organization. Oversee the implementation of multi-year initiatives by staff and contractors.

2001-2002
Albany, NY

EXECUTIVE DIRECTOR, New York Charter School Association

Responsible for daily operations of the Association including budget management, personnel/contractors, and general technical assistance to member schools.

1999-2001
Westboro, MA

DIRECTOR OF BUSINESS DEVELOPMENT, Beacon Education Mgmt.,

Responsible for charter school development for the Eastern United States. Identified opportunities for new schools, and work with Board's of Trustees during the application process and school start-up. Liaison between Board of Trustees and company. Majority of work during this period was in New York State.

1998-1999
Eden Prairie, MN

BUSINESS DEVELOPMENT MANAGER, SABIS Educational Systems,

Responsible for charter school development for the Eastern United States. Identify opportunities for new schools, and work with Board's of Trustees during the application process and school start-up. Liaison between Board of Trustees and company.

1997-1998
Taunton, MA

MARKETING /SALES MANAGER, Synertron Incorporated,

Responsible for new business development as well as maintenance of existing accounts.

1988-1997
Attleboro, MA

MARKETING SPECIALIST, Texas Instruments,

Responsible for the marketing management of industry segment's global electronic strategy. Focus on research, planning and closure of new product introductions. Additional responsibility for coordination of engineering and manufacturing efforts necessary to maintain base customer business. During time position listed, also held positions as manufacturing supervisor, and quality engineer. Also, requested and received 2-year leave of absence to obtain graduate degree.

WILLIAM A. PHILLIPS

page 2

EDUCATION

1990-93

MASTERS IN PUBLIC ADMINISTRATION

The George Washington University, Washington, D.C.

1984-88

B.S. INDUSTRIAL ENGINEERING

Lehigh University, Bethlehem, PA

ACTIVITIES & INTERESTS

Parish Council Member, Immaculate Conception Church

Hoosick Falls Recreation League Basketball Coach

Advisory Board Member, St. Mary's Academy (Hoosick Falls, NY)

Founding Board Member SABIS-Foxborough Regional Charter School

North Attleborough, MA Local Government: School Committee, Finance

Committee, Representative Town Meeting Member

Bible Study Facilitator, Sacred Heart Church (North Attleborough, MA)

C.C.D. Teacher, Sacred Heart Church

Brennan Middle School Mentor (Attleboro, MA)

North Attleborough Recreation League Basketball Coach

REFERENCES

Furnished upon request.

ACHIEVEMENT ACADEMY CHARTER SCHOOL

Request for Information from Prospective Charter School Board Members

BOARD MEMBER NAME: Andrea Lynn Rogers

BACKGROUND

1. Please provide your educational and employment history. You may do so by attaching a resume.

See attached resume.

2. Please indicate that you will be at least eighteen years old by January 1 of the year in which the proposed charter school would open.

I affirm that I will be at least 18 years old by January 1, 2005.

3. Please indicate how you became aware of the proposed charter school and the opportunity to serve as a member of its board if chartered?

As a researcher with the Foundation for Education Reform & Accountability, I frequently am in contact with Bill Phillips, President of the Charter Schools Association. During one of our discussions he asked about my interest in serving as a board member for the planned Achievement Academy, an opportunity I immediately accepted.

4. Please explain why you wish to serve on the board.

As an education researcher I have followed school-choice movements in New York State and nationally, including charter schools. I firmly believe in the ability of charter schools to improve educational opportunities for students.

I also closely follow the educational environment in the city of Albany, analyzing such information as academic performance, governance, and parental satisfaction levels, and I am convinced that small and intimate middle schools with solid academics are critically needed.

5. Please indicate if you have previously served on a board of a school district or not-for-profit corporation (including the board of a non-public school) and describe any relevant experience. If you have not had any previous service, please discuss why you wish to serve in this capacity.

I believe my familiarity with charter schools and expertise in education policy should be put into action, contributing directly to the governance of a successful school.

I have not previously served as a board member of a not-for-profit corporation or school district.

6. Please indicate your understanding of the appropriate role of a public charter school board member.

As a member of the board I understand that I will not be involved in the day-to-day operations of the school. I will serve, along with my fellow board members, to make

decisions and govern the school toward the successful implementation of its charter. I will help make policy and management decisions that will lead the school to replicate the success of its model, the Amistad Charter School in New Haven, Connecticut.

I understand that the board will be responsible for the hiring and evaluation of the performance of the school leader, will ensure the maintenance of information necessary to complete all required reports to the authorizer, and will provide guidance on a variety of other issues as they arise.

7. Please indicate specifically, the knowledge and experience that you would bring to the board.

I am familiar with school choice and education policy on a broad level, having conducted research on school choice movements, educational policy implementation, and techniques used to improve student performance in underserved communities. I am also familiar with specific details of various charter schools and how they operate.

Also, based on research and observation, I understand the current shortcomings of the Hackett and Livingston middle schools run by the Albany City School District, and have heard the desires of parents within the community for alternatives.

8. Please provide a forecast of where you see the school in one year and then again four years.

In one year, the board will be concentrating on fulfilling all necessary requirements for a successful opening in 2005. We will have secured a location and have a proven school director committed to lead our school.

In four years, the board will be actively ensuring that the goals of the school, as defined in the charter and school mission, have been and continue to be met. The first class of students will be preparing for high school, and will have received a solid academic education that leaves them confident and prepared for future endeavors.

9. How would you handle a situation in which you believe one or more members of the school's board are involved in self-dealing (working on their own benefit, or the benefit of their friends and family)?

Any perceived conflicts of interest will immediately be addressed, first by alerting other members of the board, and then by questioning the member directly. I am fully prepared to vote off of the board any member who does not prioritize the best interest of the school and is free of conflicts of interest.

CONFLICT OF INTEREST

10. If you or your spouse knows any of the other prospective board members, please so indicate the relationship.

I know Bill Phillips of the Charter Schools Association, having the opportunity to work with him on a professional level since I began working with the Foundation for Education Reform & Accountability.

I know of the other prospective board members through mutual friends and colleagues.

11. If you or your spouse know any people already known to be prospective school employees, please so indicate and describe the relationship.

None

12. If you or your spouse know anyone that plans to do business with the school, please indicate and describe the relationship and the nature of the potential business:

None

13. If the school proposes to partner with an education service provider, please indicate if you or your spouse knows any employees, owners or agents of that provider. If your answer is yes, please indicate the individuals you know and the nature of the relationship.

None

14. If the school will partner with an educational service provider, please indicate whether you or your spouse has a direct or indirect ownership, employment, contractual or management interest in the educational service provider.

None

15. Please indicate if you anticipate conducting any business with or another educational service provider, the school or both. If so, please describe the potential relationship:

None.

16. Please indicate if you foresee any potential ethical or legal conflicts of interests should you serve on the board.

None.

EDUCATIONAL PHILOSOPHY

17. Please provide your understanding of the school's mission and / or philosophy.

The Academy's mission will be to provide a rigorous and effective education to all students regardless of their socio-economic background. All students will be well prepared for successfully completing even the best area high schools, and the preparatory curriculum will provide an exceptional foundation upon which to build a successful term at an institution of higher learning. On-going feedback and strict behavioral and academic expectations will be expected of all students.

The REACH values (Respect, Enthusiasm, Achievement, Citizenship, and Hard Work) will be the foundation of the school.

18. Please indicate if you are familiar with the educational program that the school proposes to utilize.

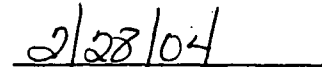
The school will replicate Amistad's standards-based curriculum, focused on the core academic subjects with three hours of reading and writing daily. Subjects will be taught in six week cycles, and will incorporate assessments to provide important diagnostic feedback. This curricular program, and the extended instructional day and year, will help to ensure that Albany students meet and exceed the New York State learning standards. The school culture will emphasize responsible behavior.

I am familiar with this model and am confident that Achievement Academy will be as successful as Amistad Academy.

19. Please indicate what you believe to be the characteristics of a successful school. What specific steps do you think the board of the school will need to ensure that this school is successful?

A successful school expects success from all students and has the management style, quality of instruction, and availability of resources needed to support this expectation. The board will ensure that the school leader believes in the mission of the school and has a proven ability to create a learning environment that meets these expectations. Successful schools also have the ability to change in order to meet the needs of students. The New York State Charter Schools Act provides the flexibility and innovation for Achievement Academy's board to make decisions and govern the school without unnecessary restrictions. The board will use this flexibility to focus on sustaining a rigorous academic program and fiscally sound school.


Signature


Date

Andrea Lynn Rogers

Work Ph: [REDACTED]

Personal Ph: [REDACTED]

EXPERIENCE**Foundation for Education Reform & Accountability**

October 2002-present

Research Associate

Clifton Park, New York

Conduct research on a variety of education reform public policy issues, including the implementation of the federal *No Child Left Behind* Act, charter schools, and strategies to improve the achievement of disadvantaged students.

U.S. General Accounting Office

January 2002-October 2002

Policy Analyst

Washington, D.C.

Conducted research and wrote reports on tax and community development public policy at the request of Congress. Assisted in the administration and analysis of a survey of federal employees, traveled to witness and document the use of Community Development Block Grant funds in Los Angeles, and participated in a congressional briefing.

EDUCATION**Rockefeller College of Public Affairs, University at Albany**

Albany, New York

Master of Arts in Public Policy

December 2001

Concentration: Urban Policy

Honors: Pi Alpha Alpha Honor Society

University at Buffalo

Buffalo, New York

Bachelor of Arts in Anthropology, Magna Cum Laude

May 2000

Departmental Honors with Distinction

Honors and Awards: Phi Beta Kappa Honor Society, Golden Key National Honor Society, Award for Outstanding Senior in Anthropology 2000, Award for Outstanding Junior in Anthropology 1999

ACTIVITIES**Volunteer Mentor for Rockefeller College**

September 2003-present

Phi Beta Kappa Upper Hudson Association member

February 2003-present

The Rockefeller College Review Development Committee

2001

COMPUTER SKILLS

Microsoft Word, Excel, PowerPoint, ArcView GIS

REDACTED

ACHIEVEMENT ACADEMY CHARTER SCHOOL

Request for Information from Prospective Charter School Board Members

649

BOARD MEMBER NAME: [REDACTED]

BACKGROUND

1. Please provide your educational and employment history. You may do so by attaching a resume.

See resume attached.

2. Please indicate that you will be at least eighteen years old by January 1 of the year in which the proposed charter school would open.

I affirm that I will be at least 18 years old by January 1, 2005.

3. Please indicate how you became aware of the proposed charter school and the opportunity to serve as a member of its board if chartered?

Through a friend who is familiar the Achievement Academy proposal.

4. Please explain why you wish to serve on the board.

Traditional public school education has been failing our inner city youth, and indirectly our country. We are now seeing the second generation emerging from a system that is dooming our youth to a life of despair and poverty. While I have the opportunity to give my children a better education, many have no choice but keep their children in inferior schools.

5. Please indicate if you have previously served on a board of a school district or not-for-profit corporation (including the board of a non-public school) and describe any relevant experience. If you have not had any previous service, please discuss why you wish to serve in this capacity.

I served on the Messiah Academy Steering committee; a committee that was designed to develop a Christian high school in the Capital District.

As an attorney and a certified public accountant I have a great deal of knowledge on the governance of organizations under the Not-For-Profit Corporation Law.

I want to serve on the Board to share my knowledge of governance issues, as well as my philosophy on education.

6. Please indicate your understanding of the appropriate role of a public charter school board member.

To provide oversight and guidance to the administration of the school in strict compliance with the charter granted to it. To ensure accountability and good stewardship of the resources entrusted to the school. To provide governance to the school. To set policy

REDACTED

for the school. Ultimately to ensure that the children receive a good education; achieving their maximum academically.

7. Please indicate specifically, the knowledge and experience that you would bring to the board.

As indicated above I am an attorney with a great deal of experience in corporate governance; both organizations established as business, or for profit, entities, and Not – For – Profit Corporations. As a certified public accountant I also bring a great deal of knowledge on forecasting, budgeting and financial management.

8. Please provide a forecast of where you see the school in one year and then again four years.

The first year will be a dramatic readjustment for both student and teacher. I look forward to unbridled enthusiasm on the part of both. The opportunity to participate in the formative years of a new charter school operating under a new paradigm should energize teachers, and that will be exciting to watch. I believe the parents and students will have that same unbridled enthusiasm. Harnessing that enthusiasm will produce immediate and dramatic results for the individual students compared to their respective base line.

By year four I see the school being coveted by parents, students and teachers alike. At the end of four years the first group of cohorts will be graduating. These graduates will show dramatic improvement when compared to their base line. I believe these graduates will also show superior academic achievement when compared to both similar demographic groups and to all demographic groups. I believe this will dramatically reduce the drop out rate amongst the charter school students when compared to other groups.

9. How would you handle a situation in which you believe one or more members of the school's board are involved in self-dealing (working on their own benefit, or the benefit of their friends and family)?

I would address the apparent conflict of interest directly with the board member. If the problem persists I would bring the matter to the attention of the entire board for appropriate action; particularly if there is an apparent violation of either the law or the schools charter.

CONFLICT OF INTEREST

10. If you or your spouse knows any of the other prospective board members, please so indicate the relationship.

Neither my spouse nor I know any of the other prospective board members.

11. If you or your spouse know any people already known to be prospective school employees, please so indicate and describe the relationship.

Neither my spouse nor I know any of the other prospective employees.

12. If you or your spouse know anyone that plans to do business with the school, please indicate and describe the relationship and the nature of the potential business:

Neither my spouse nor I know anyone that plans to do business with the school.

13. If the school proposes to partner with an education service provider, please indicate if you or your spouse knows any employees, owners or agents of that provider. If your answer is yes, please indicate the individuals you know and the nature of the relationship.

Neither my spouse nor I know any of the employees, owners or agents of an education service provider.

14. If the school will partner with an educational service provider, please indicate whether you or your spouse has a direct or indirect ownership, employment, contractual or management interest in the educational service provider.

Neither my spouse nor I know has a direct or indirect ownership, employment, contractual or management interest in the educational service provider.

15. Please indicate if you anticipate conducting any business with an educational service provider, the school or both. If so, please describe the potential relationship:

Neither my spouse nor I anticipate conducting any business with an educational service provider, the school or both.

16. Please indicate if you foresee any potential ethical or legal conflicts of interests should you serve on the board.

I foresee no potential ethical or legal conflicts of interest should I serve on the board.

EDUCATIONAL PHILOSOPHY

17. Please provide your understanding of the school's mission and / or philosophy.

I believe that the mission of the Achievement Academy Charter School is to provide a structured academic environment to underprivileged children. It is anticipated that many of the children will be significantly below grade level in one or more of the fundamentals: reading, writing and mathematics. Accordingly the school's primary mission will be elevating student performance in these fundamental areas.

18. Please indicate if you are familiar with the educational program that the school proposes to utilize.

I am not familiar with the educational program that the school proposes to utilize at this time. I am familiar with, and wholeheartedly support, the philosophy of charter school public education.

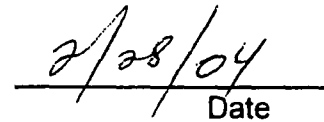
19. Please indicate what you believe to be the characteristics of a successful school. What specific steps do you think the board of the school will need to ensure that this school is successful?

19. Please indicate what you believe to be the characteristics of a successful school. What specific steps do you think the board of the school will need to ensure that this school is successful?

One of the characteristics of a successful school is the focus on core academic skills, or building blocks. This will provide them with the requisite tools for learning at higher grades and in other subjects. For instance, learning phonetics will assist the students in reading, spelling and writing. Without these core skills students cannot be expected to excel in Social Studies, History and English.

Another characteristic of a successful school is discipline amongst the student population. My understanding is that school policy will call for either uniforms or a strict dress code. This is one element of discipline that (anecdotal) leads to greater discipline. The students will be held to strict codes of conduct and behavior. This will also lead to greater discipline. Together these policies will lead to fewer disruptions of class time.


Signature


Date

RESUME

REDACTED

I. EDUCATION

- A. STATE UNIVERSITY OF NEW YORK at Albany. Masters of Science in Accounting May of 1983.
- B. ALBANY LAW SCHOOL of Union University, Albany, New York. Juris Doctorate May of 1981. Held an academic scholarship equivalent to one-half tuition and fees all three years.
- C. COLUMBIA COLLEGE of Columbia University, New York, New York. A.B. Cum Laude May of 1978.

II. SPECIAL SKILLS

- A. Admitted to the practice of law in New York State in January of 1982. (Also admitted to Federal District, U.S. Tax Court, U.S. Claims Court and United States Supreme Court.)
- B. Licensed as a certified public accountant in New York State in January of 1985.
- C. Computer Experience: Lexis - Nexis on line electronic legal research, WordPerfect for Windows version 6.0a, Microsoft Excel version 5.0 and Word 6.0, Lacerte Tax Software.

III. EMPLOYMENT

- A. HISCOCK & BARCLAY, LLP, Attorneys At Law. Of Counsel and former Chair of the Tax Practice Group. September, 2000 to present.
- B. PHILIP J. VECCHIO, P.C. Attorneys At Law. Practice of law concentrated in tax planning and tax litigation, business formation, estate planning and administration, real estate law and commercial litigation. From December of 1991 to September of 2000.
- C. BOLLAM, SHEEDY, TORANI & CO., C.P.A.'s Albany, New York. Tax Manager with responsibility for estate planning, supervising and reviewing fiduciary, estate, and trust filings, drafting tax opinions, drafting and filing of corporate documents for filing with the Secretary of State, drafting model agreements and various documents, and representation of clients in U.S. Tax Court as well as before New York State Tax Tribunal. Member of the firm's Marketing Committee. From January of 1989 to the December of 1991.
- D. EDWARD, WILLIAMS, MCMANUS, RICCIARDELLI & COFFEY, C.P.A.'s Glens Falls, New York. Tax Supervisor on the management team with responsibility for reviewing complex individual, fiduciary, estate, partnership and corporate returns, and for drafting opinions on tax issues. From December of 1987 to January of 1989.
- E. TEAL, BECKER, & CHIARAMONTE, C.P.A.'s, P.C. Albany, New York. Tax Specialist with responsibility for drafting opinions on federal and state tax issues, representation of clients before federal and state tax audits, and drafting and filing

of corporate documents for filing with the Secretary of State. From July of 1986 to July of 1987.

- F. COOPERS & LYBRAND, Albany, New York. Tax Associate with responsibility for compiling and preparing all types of tax returns, and for drafting opinions on federal and state tax issues. From September of 1983 to June of 1986.

IV. OTHER ACTIVITIES

- A. Messiah Academy Steering Committee. Chair of the Organization and Governance subcommittee.
- B. Third Judicial Department designated Small Claims Assessment Review hearing officer, under New York Real Property Tax Law §730, and assigned arbitrator for the Rensselaer County Supreme and County Courts pursuant to Rules of the Chief Judge (22 NYCRR Part 28).
- C. Former member of the N.Y.S.S.C.P.A.'s Estate Planning Committee.
- D. Former member of the adjunct faculty of the SUNY Albany School of Business.
- E. Frequent lecturer for Lorman Education Services on complex issues such as Like Kind Exchanges and New York Sales & Use Taxation. Formerly lectured for the Foundation for Accounting Education of the N.Y.S.S.C.P.A.'s.
- F. Author of articles on taxation published in the CPA Journal.

V. REFERENCES

- A. Steven J. Evans, CPA, KPMG Peat Marwick, L.L.P. 74 North Pearl Street, Albany, New York 12207 (518) 462-9651.
- B. Michael P. Mahoney, CPA, KPMG Peat Marwick, L.L.P. 74 North Pearl Street, Albany, New York 12207 (518) 462-9651.
- C. David L. Evans, Esq., C.P.A. Urbach, Kahn & Werlin P.C. 66 State Street, Albany, New York 12207 (518) 449-3166.
- D. Jack Murphy, Chief Financial Officer, and Jeffrey Spaulding, Vice President, Arrow Financial Corporation. 250 Glenn Street, Glens Falls, New York 12801 (518) 745-1000 Ext. 203 or 299
- E. Gordon M. Enfield, formerly President of Tri-State Retail Systems, Inc. 7 Vatrano Lane, Loudonville, New York 12211 (518) 432-7831.
- F. Richard J. Bartlett, Esq. Bartlett, Pontiff, Stewart & Rhodes, P.C. 1 Harlem Street, Glens Falls, New York 12801 (518) 792-2117.
- G. Paul Curtis, C.P.A., Curtis, Murphy & Jeffries, C.P.A.'s Queensbury, Falls, New York 12803.
- H. James H. Tully, Jr. DeGraff, Foy, Holt-Harris & Kunz, LLP. 90 State Street, Albany, New York 12207-1780. (Former Commissioner of the New York State Department of Taxation and Finance).

Appendix 5

Petition Evidence of Community Interest and Support

The following pages contain petition signatures evidencing community interest and support for the Achievement Academy Charter School, discussed in Attachment 23.