



Charter Schools Institute  
State University of New York

# ROOSEVELT CHILDREN'S ACADEMY CHARTER SCHOOL

**FINAL CHARTERED AGREEMENT**

Sec. 2852(5) Submission to the Board of Regents

VOLUME 2 OF 3

**REDACTED COPY**

**56. Offer evidence that the start-up financial plans, the annual budget and the five-year fiscal plan are sound.**

The Academy is confident that the start-up financial plans, the annual budget and its five-year fiscal plan are sound for the following reasons:

- VSI's management and its advisory Board are sophisticated in financial matters, including individuals with a long track record of business success.
- VSI's management has specific experience in budgeting and operating educational programs in public schools, including the Children Centers, which were established at East New York public elementary schools in 1993 and now educate 460 children after school each day.
- VSI has used conservative assumptions in a number of regards, including (i) no assumption for federal grants, state grants or material private donations, (ii) annual capitation growth of only 3% (which is below historical average), while salaries increase at a 5% rate, (iii) a \$50,000 "miscellaneous/cost overruns" cushion of financial safety, growing to \$100,000 per year by year five, and (iv) the ability, if need be, to defer central service payments to VSI.
- The Academy's budgets and financial plans have been reviewed for reasonableness by a number of knowledgeable advisors, including the Center for Educational Innovation; Deloitte & Touche and educational industry consultants.
- To the extent operating losses do occur in the normal course of business, the Academy's future is still sound as VSI is in a position to make up the financial shortfall.

**57. Detail the charter school's requirements for the performance of program audits and fiscal audits.**

Detail of Audits

Within 90 days of the end of each school year, a comprehensive audit of the revenues and expenditures of the charter school will be conducted in accordance with GAAP principles by a certified public accounting firm selected by the school's Board of Trustees. The results of each annual audit will then be forwarded to the Charter Schools Institute of the State University of New York and to other interested state oversight agencies.

The Academy will not only hold itself to Generally Accepted Accounting principals (GAAP), but also to Generally Accepted Government Accounting Standards (GAGAS). Under the more extensive provisions of a GAGAS audit, the Academy will demonstrate not only that financial statements accurately reflect the organization's revenues and expenses, but that spending achieved the organization's programmatic goals. Such a review will focus not simply on whether public funds were used to purchase certain "outputs" (for example, numbers of hours of classroom instruction), but rather whether or not key "outcomes" were achieved (for example, percentage of students achieving at a stated percentile on standardized tests).

Programmatic outcomes are composed of goals for student learning, student attendance and other objectives described in this application. Annually, the school will report in detail its performance against these programmatic objectives, describe deficiencies in performance, and set forth corrective actions for remediating these deficiencies. Additionally, the school will comply with any other requirements that the state might specify at a later point.

Victory Children's Academy  
Long Island Charter School

**58. Describe the insurance coverage to be carried by the charter school, including amounts of liability, property loss, and student personal injury insurance.**

Civil Liability and Insurance

The Academy intends to purchase the following level of insurance:

<u>Coverage</u>	<u>Limits of Liability</u>
Workers Compensation	Statutory
Employers Liability	\$1,000,000/\$1,000,000/\$1,000,000
Commercial Crime	\$1,000,000
Property	Insured value
General Liability	\$5,000,000/\$5,000,000 +
Non-owned Automobiles	\$5,000,000/\$5,000,000
Errors and Omissions	\$5,000,000/\$5,000,000 +

Victory Children's Academy  
Long Island Charter School

**59. Where will the charter school be located?**

The location of the facility has not yet been determined.

**60. (b) If you have not already identified a charter school facility, describe the plans for doing so.**

The cluster of towns which the Academy seeks to serve fills a large geographic area, approximately 20 square miles in size and well-served by Long Island's expressways and major roads.

The Academy's preferred real estate strategy, however, is to rent classrooms in one of the colleges in the served region. This plan would have many advantages:

- It would provide rental income to the college/host and a uniquely attractive "real world teaching laboratory" for a college's education school or social work school; college students could work as teachers' assistants at the Academy, for wages as well as tuition credits.
- The Academy's students would be able to spend time on one of the beautiful campuses on Long Island; the students would benefit from access to the college arts groups and facilities, such as seeing a college theater production.
- The idea of a college education would, over time, become a practical and accepted reality to students who may be educated on campus for many years.

If campus space is not available, the Academy would lease commercial or private school space. Several potentially appropriate commercial spaces have already been presented to the Academy for review. The Academy is confident that, within its large served area, a suitable location can be identified in a short time after the charter is granted.

**61. Will the charter school or its applicants or partners own or lease its facility?**

The Academy would prefer to lease, but will buy if appropriate.

**Describe the ownership or lease arrangement of the facility.**

The arrangement is still to be determined.

**62. Describe the layout of the school:**

The layout is still to be determined.

**63. Describe residential facilities, if any, at the charter school, such as dormitories, faculty housing, etc.**

There will be no residential facilities at the Academy.

**64. Attach a description of the transportation arrangements made for charter school students.**

Pursuant to state laws, the Academy would arrange transportation from its host school district for students living between 2 and 15 miles away from the Academy. No supplemental services would be anticipated at this time.

**65. Describe any intention to expand the charter school, including physical expansion, anticipated growth in the school's budget or other financial expansion, expansion in the grade levels served, or expected increases in the student population.**

As explained previously, the Academy intends to begin with 247 children, grades K-2, and will expand by one grade each year to allow existing students the opportunity to advance. Enrollment will increase by 75-100 students (i.e. three to four classrooms) each year as a result. The five year financial plan (Attachment IX-55, above) reflects the financial impact of this growth plan. In the future, the Academy may also consider serving "online" computer instruction as consistent with the charter law.

**66. Describe plans for the transfer of students and students' records, and for the disposition of school assets, including the satisfaction of any outstanding debts in the event of dissolution of the charter school.**

In the event of dissolution, students and student records will be promptly transferred to each individual student's home school district. School assets will be disposed at fair value, and proceeds used to retire any outstanding debts.

## APPENDIX

EMPLOYMENT ADMINISTRATION

## 1. Equal Opportunity Employer

It is the policy of this organization 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 organization'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.

## 2. Hiring

Upon employment by this organization, all employees are required to complete any and all necessary financial forms and benefit applications as deemed necessary by the Personnel Officer or by his or her designee.

All employees are required to be fingerprinted at the time of hiring and after leaves of absence of six months or greater.

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 organization or a prospective employee's likelihood of being hired.

## 3. Regular Full-Time and Temporary Employment

Employees may be hired as regular full-time employees, and as such will be placed on the organization's payroll, will be eligible for all benefits as described in this manual, and will accrue leave as described in this manual.

The organization 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. Time off work without pay for part-time employees may be granted by the Personnel Officer or his or her designee.

## 4. Adjustments to Employee Status

The Personnel Officer 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. 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.

#### 5. 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 organization. An orderly process has been established by the organization if such phase-out or elimination of positions is necessary.

Anyone whose employment with the organization is terminated because their position is eliminated or phased-out is entitled to compensation for accrued and unused leave as described in the chapter of this manual entitled "Time and Attendance."

#### 6. Unauthorized Absence

An employee who is absent for a period of at least twenty-four (24) consecutive work hours (three days) without notifying the Personnel Officer will be considered to have resigned without giving the required two-week notice, with such resignation effective on the initial date of absence. The determination of unauthorized absence will be made by the Personnel Officer.

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 Personnel Officer. Such an employee will remain eligible for any salary due.

#### 7. If You Must Leave Us

##### **Resignation**

An employee who wishes to resign is required to give to the Board of Directors, the Principal, and the Personnel Officer in writing, a minimum of two weeks notice prior to the desired resignation date, unless an exception is made by the Personnel Officer.

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, unless an exception is made by the Personnel Officer. Such an employee remains eligible for any salary due.

**Termination**

All employees serve at the will of the Board of Directors, and the authority to terminate an employee is vested with the Board of Directors or its 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 may be provided compensation for accrued vacation leave as described in the chapter of this manual entitled "Time and Attendance."



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June 1, 1999

VIA FACSIMILE AND FIRST CLASS MAIL

Mr. Robert Francis  
195 N. Brookside Avenue  
Roosevelt, NY 11575

Re: Victory Children's Academy – Long Island Charter School

Dear Mr. Francis,

We are in receipt of your application to establish the above-named charter school and are in the process of conducting, pursuant to your request, an expedited review. Please be aware that we intend to treat the above application as a confidential document until such time that the application is granted or rejected, or until ninety days have passed from the time the application is put before a panel of expert reviewers convened by the Charter Schools Institute (whichever occurs first). At such time, the application will become part of the public record.

Based on our review to date, we have determined that conducting an interview with you and members of your advisory board, as well as a site visit to the proposed school, would assist us in evaluating the instant application. Accordingly, we will be contacting you shortly to schedule an interview.

In addition, and again based on our review to date, we have identified several items in the application that require clarification and/or amendment before a determination can be made. Among the issues and questions raised by your responses are the following:

Response to Item 1 (name of school): Please amend the name of the school to remove the name of the school's proposed for-profit partner in conformance with Section 2851.2(k) of the Charter School Act.

Response to Item 5 (for-profit management): Please provide the management contract that the school proposes to enter into with Victory Schools, Inc.

Response to Item 19 (school uniforms): Please describe in greater detail the program that the school intends to put in place to provide financial assistance for families unable to afford such uniforms and indicate whether the school is prepared to expand the amount of funds available for that purpose should it prove necessary.

Response to Item 31 (other assessment tools): It is proposed that the school distribute questionnaires as an additional assessment tool for measuring the satisfaction of students, parents and teachers. In order to ensure that such questionnaires are valid and reliable indicators, they should be designed by an independent, survey research methodologist who should also be responsible for conducting the survey and tabulating the results. Is the school willing to contract for (or obtain on a pro bono basis) such a service?

It is also proposed that the school conduct internal assessments of student performance by evaluation of individual portfolios. Please indicate in detail what the application means by "perceived evidence of creativity, comprehension and skills mastery." In this regard, indicate, again in detail, how those qualities will be determined by a review of a portfolio.

Response to Item 35 (proposed members of the board of trustees): Stephen Klinsky's status as a principal of Victory Schools, Inc. prohibits him from serving on the board of trustees except as a non-voting member. Please provide assurances that the by-laws of the board will provide such restriction in regards to Mr. Klinsky or anyone else in a similar position, as well as provisions to excuse any such individual during discussions of the management company's performance.

Response to Item 39 (obligations of the board of trustees): Please provide, if identified, the name and curriculum vitae of the individual proposed to act as director of the school. Also provide (whether or not the director has been identified) the criteria that were used or that will be used to make such appointment.

Response to Item 43 (grievance procedures): The school should provide an alternate avenue for individuals not capable of expressing a complaint in writing. Vesting the school administration with the responsibility to draft such complaints creates, at the very least, the appearance of a conflict of interest. Please indicate what alternate procedure the school proposes.

Response to Item 44 (code of ethics): Describe the training, if any, that the school's officers, employees and trustees will receive regarding conflicts of interest and other related ethical issues.

Response to Item 53 (start up capital): Please provide in legally enforceable form a guarantee by Victory Schools, Inc. to provide one million dollars in start-up capital.

Response to Item 54 (operating budget): Indicated what services are provided under the line item for "General and Administrative" costs and how those services differ from the responsibilities covered under the "Management Fee."

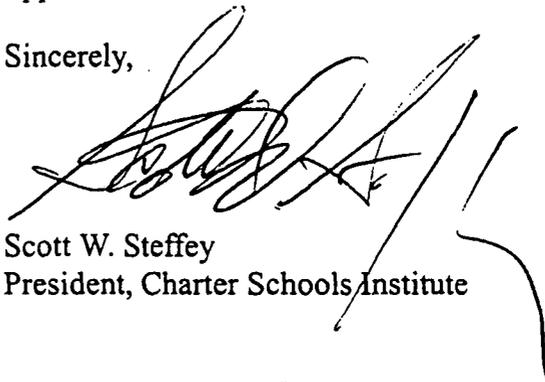
Response to Item 60 (facility): Please provide an update on whether a facility has been located and, if so, describe in detail the proposed facility.

Due to the expedited nature of the review process, we would expect that you will be able to discuss, at least preliminarily, the above identified concerns and issues at the time of the interview, with written responses and amendments to the application, where applicable, to follow shortly thereafter.

In addition, we remind you of your obligation under the Charter Schools Act to submit to us a full-set of fingerprints for the purpose of conducting a state and federal criminal records check. We will be notifying you shortly of the procedures that you will be required to follow as well as the individuals that will be required to submit fingerprints to us. We will also be forwarding to you under separate cover a letter of assurances that the information you have provided to us is accurate and that you will abide by all applicable provisions of the Charter Schools Act as well as other relevant provisions of law.

Lastly, we advise you that nothing in this letter—or provision by you of responses which address the concerns and questions raised herein—should in any way be construed as an approval, qualified or otherwise, of the application.

Sincerely,



Scott W. Steffey  
President, Charter Schools Institute

STEVEN B. KLINSKY  
767 FIFTH AVENUE  
NEW YORK, NEW YORK 10153

Scott W. Steffey  
Vice Chancellor, President  
Charter Schools Institute  
735 Anderson Hill road  
Purchase, NY 10577-1400

Dear Scott,

On behalf of Robert Francis and the proposed trustees of the Roosevelt, Long Island Charter Public School, this letter will respond to your questions of June 1.

Response to Item 1 (name of school)

The name of the school will be amended in conformance with section 285.2(k) of the Charter School Act. The new name will be the Roosevelt Children's Academy - Charter Public School.

Response to Item 5 (for profit management)

A copy of the proposed management contract between the school and Victory Schools Inc. is attached.

Response to Item 19 (school uniforms)

A special fund will be put in place to provide financial assistance for the families unable to afford uniforms. This fund expense is itemized as "Uniforms" in the "Supplies" section of the application's proposed budgets (questions 54 and 55). It amounts to \$5,000 in year 1, \$5,000 in year 2, \$7,000 in year 3, \$8,000 in year 4 and \$9,000 in year 5. It is expected that the Academy's Parent Handbook will inform parents of the existence of this fund. Parents in need will be able to speak privately with the Academy's Principal who will be delegated the power to

make the grants appropriate. The school is prepared to expand the amount of funds available should this prove necessary.

Response to Item 31 (other assessment tools)

The Academy's assessment questionnaires will be designed by an independent survey research methodologist who will also be responsible for conducting the survey and tabulating the results. The Academy is willing to contract for (or obtain on a pro bono basis) such a service.

Portfolio assessment will be made according to check lists directly tied to the (Modern Red School House) performance standards previously provided in Section III of the application's appendix. For example, in primary level Geography, Performance Statement A specifies that "Each student can use a map or globe to locate complex natural features...and regions such as the Fertile Crescent, the Great Wall of China and the European Economic Community." Therefore, students' map work, such as projects in which children create their own maps of the world and identify key spots, would be appropriate for the portfolio. Each piece would be evaluated according to four rubrics, with "4" indicating the highest understanding and "1" the lowest. In this way, progress for each child on each standard could be tracked over time for each item on the performance checklist.

A child's improvement in creativity is inherently more subjective and difficult to measure, although reasonable good faith efforts by experienced educators can be made. The Academy is seeking to develop its own set of standards suitable for this task based on Bloom's Taxonomy.

Response to Item 35 (proposed members of the board of trustees)

The by-laws of the board will provide that Mr. Klinsky or anyone else who is a principal of Victory Schools Inc. will be non-voting members of the board of trustees only, and will include provisions to excuse any such individual during discussions of the management company's performance.

Response to Item 39 (obligations of the board of trustees)

The individual proposed to act as director of the school has not yet been identified. As described in question 46 of the application, the Academy seeks a highly experienced educator who possesses the following characteristics:

- A record of leadership and sound management in a similar educational setting
- Strong interpersonal skills and experience in team building
- An understanding of the diversity and unique character of the Academy's community
- A passion for helping students attain high standards
- Consistently exceptional professional evaluations
- Outstanding references from peers, former colleagues, parents and members of the school community

The director should share the Trustees' positive vision of the curriculum model chosen and should be dedicated to creating one of the finest public schools in America through the charter school process.

Response to Item 43 (grievance procedures)

The school will provide an alternative avenue for individuals not capable of expressing a complaint in writing. If assistance from the school administration creates the appearance of a conflict of interest, the complainant may receive help from any school teacher, teaching assistant or employee. If a conflict of interest still exists, the complainant will be able to directly contact Victory Schools or the Secretary of the Board of Trustees whose phone numbers will be made available in the Parent's Handbook.

Response to Item 44 (code of ethics)

The Academy will train all school officers, employees and trustees regarding conflicts of interest and other ethical issues. The code of ethics has previously been distributed to all trustees and officers. No later than the Trustees' first official board meeting, the school's officers and trustees will be instructed on conflicts of interest and other related ethical issues by an attorney hired for this purpose, who will explain all important points and be available for questions on a group or private basis. Non-teaching employees will be instructed in the code of ethics as part of their employee orientation when hired. Teaching employees will discuss the code of ethics and ethical issues as part of summer teacher training and orientation sessions.

Response to Item 53 (start up capital)

Victory Schools Inc. will establish a \$1 million central fund backed by a guarantee to insure fulfillment of its financial commitments to the charter schools it supports. A proposed form of a guarantee is provided with this response.

Response to Item 54 (operating budget)

"General and Administrative" costs refers to all support services provided to the principal and site manager other than for curriculum development, staff supervision and legal services. It includes, for example, information technology; human resource planning; recruiting; capital campaign development; fundraising; community relations; real estate development, and so on. In contrast, the "Management Fee" is intended to compensate VSI for the capital it has invested (and which since it was given, not loaned, is not repayable in any other way); for the financial risk it is assuming; for the provision of the \$1 million guaranty; and for senior level strategic direction, such as that used in organizing the resources for this application.

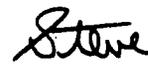
Please note that, according to research by Merrill Lynch & Co. (attached), 50% of revenues at traditional non-chartered public schools are spent outside of the classroom; for bureaucratic overhead and for other (often unknown) uses. Victory Schools intends to provide its charter public schools with a better quality of service at a lower price.

Response to Item 60 (facility)

The Academy is seeking to lease (with an option to buy) an existing school building located at 200 W. Centennial Avenue in Roosevelt, New York. The building's current occupant is a secular private school, Miss Shelley's Upward Prep ("MSUP"), who intends to sublet a small number of classrooms for one year and then to turn over occupancy in full.

The building is an ideal one for a charter school. It is located centrally in a residential area, with approximately 20 large classrooms, a gymnasium/cafeteria, stage, offices and other amenities. It is joined by a large parking lot, which can be modified to provide playground area and expansion space. The landlord is the Catholic Diocese of Rockville Center; however, there will be no religious symbolism at the school building nor any breach in the clear separation of church and state. Occupancy costs are expected to be affordable and roughly in line with the Application's original financial assumptions.

Sincerely,



*Private schools spend less money per student on average but have significantly higher SAT scores.*

*On average, only \$0.50 of every \$1.00 allocated to public education is spent in the classroom.*

*We can't think of another service industry that exists where 50% of the money is spent outside of where the service is rendered*

Private schools spend less money per student on average but have significantly higher SAT scores. Particularly noteworthy, however, is how these schools spend their money. In 1987, for example, there were 3,300 employees in the central and district offices of the Chicago public school system. By contrast, the schools of the Catholic Archdiocese of Chicago served 40% as many students in a much larger geographical area with only 36 central office administrators. In 1989, New York City had more than 6,000 administrators, compared to only 25 in the Catholic schools, though the Catholic schools served about one-fourth as many students. In California's government-run schools, only 44% of the employees are teachers, whereas in California's private schools, 86% of the employees are teachers.

On average, only \$0.50 of every \$1.00 allocated to public education is spent in the classroom. This is disheartening at best — we can't think of another service industry that exists where 50% of the money is spent outside of where the service is rendered.

**Table 38: Only \$0.50 of every \$1.00 Is Spent in the Classroom**

Revenue (17 Kids * \$6,650)	\$113,000	(a)
Teacher Salary	37,000	(a)
Books and Supplies @ 3%	3,400	(b)
Maintenance, Utilities and Transportation @ 18%	16,100	(b)
<b>Classroom Expenses</b>	<b>56,500</b>	
<b>Other Expenditures</b>	<b>\$56,500</b>	
	<b>(Where does it all go?!)</b>	

(c) Department of Education

(d) Local School Budget Profile: A Comparative Analysis, 1993-1994. Educational Research Service.

In Milwaukee, only \$0.26 of every dollar ends up in the classroom and in New York City, only \$0.29 of every tax dollar is allocated toward the in-class instruction of regular students. Almost as disturbing is the fact that most districts across the country have no idea how their expenditures trickle down to specific programs on a school-by-school basis, or even on a district level in many cases.

We see an important need for better management of public educational resources through more meaningful data collection on how money is spent and decision and policy making based on the "educational returns on investment" for those expenditures. New York City schools are a case in point—greater understanding of school finances is leading to improvements in how that school district delivers education.

**VICTORY SCHOOLS, INC.**

**CHARTER SCHOOL MANAGEMENT CONTRACT**

This Charter School Management Contract (this "Agreement") is made as of the \_\_\_\_\_ day of \_\_\_\_\_, 1999 between Victory Schools, Inc., a Delaware corporation headquartered in New York ("VSI"), and Roosevelt Children's Academy – Long Island Charter Public School Inc., a New York non-profit corporation (the "Charter School").

**PRELIMINARY STATEMENT**

WHEREAS, VSI is in the business of educating children in accordance with the philosophy set forth herein, and of operating and providing educational management services to charter schools;

WHEREAS, the Charter School is the grantee of a charter(the "Charter") from the State University of New York pursuant to the New York Charter Schools Act of 1998 (as such provisions may be amended and in effect from time to time, the "ACT") to operate as a charter school, and

WHEREAS, the Charter School desires that VSI shall undertake responsibility for all aspects of the management and operation of the Charter School, and shall provide substantially all educational services to the Charter School;

NOW, THEREFORE, in consideration of the foregoing, the mutual promises herein contained and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound, do hereby agree as follows:

**1. General Requirements.** For and during the term of this Agreement, VSI shall manage and operate the Charter School consistent with the mission, educational philosophy, school design, governance structure, fee structure, discipline policy and other items (the "Founding Design") set forth in the Academy's application for charter (the "Application"), which is attached to this agreement for reference. The Charter School and each member of the Charter School's Board of Trustees (the "Board") will actively support VSI in accomplishing the Founding Design, in maintaining full enrollment, in maintaining community support, in preventing operating deficits and in achieving the academic and financial plans set forth in the Application. VSI, the Charter School and the Board believe that educational services can be most effectively delivered in a competitive, free-market environment. The Board, parents and others involved with the Academy recognize that it is appropriate for VSI to earn a profit for its management and financial services, and is consistent with attaining the Academy's stated educational objectives.

**2. The Role of VSI.** VSI is committed to the effective education of children in a supportive, stimulating and innovative environment. In furtherance of this commitment, the role of VSI is to assume broad responsibility for the management of the educational process at the Charter School, as more specifically delineated in Section 4 of this Agreement.

**3. The Role of the Charter School.** The role of the Charter School, acting through the Board, is to oversee and monitor the operations and educational process at the Charter School. The Board's role is as follows:

- (a) To establish and protect the Charter School's mission, consistent with the Founding Design.
- (b) To hire the management contractor and monitor its performance in meeting the Charter School's goals for student learning.
- (c) To receive and review VSI's reports.
- (d) To work closely with VSI during the term of this Agreement.
- (e) To set broad policy for the Charter School, consistent with the Founding Design.
- (f) To approve the Charter School's strategic plan, consistent with the Founding Design.
- (g) To work with VSI to facilitate day-to-day operations of the Charter School.
- (h) To participate in fund raising activities for the Charter School, and to seek to prevent operating deficits.
- (i) To approve the hiring of a School Director by VSI.
- (j) To approve an annual budget in accordance with Section 4.7.
- (k) To represent the school to the local community.

**4. Rights and Obligations of VSI.** In order to assist the Charter School in carrying out the terms of the Charter and in complying with its responsibilities thereunder and under the Act and any and all other applicable laws and regulations, VSI agrees to assume full responsibility for the education of children enrolled as students in the Charter School, and in connection therewith shall have the right and the obligation to perform the following duties:

**4.1 Education of the Students.** VSI shall assume and be solely responsible for all tasks and functions associated with the educational services to be provided to the children enrolled as students at the Charter School in accordance with the terms of the

Charter, the Act and any and all other applicable laws and regulations. Such tasks and functions shall include, but shall not be limited to:

- (a) designing the educational programs and programs of instruction including rules and requirements relating to student admissions, bilingual education, student records, access to equal educational opportunities, school year and school day requirements, special education, student testing, extra-curricular and co-curricular activities and programs;
- (b) selecting and acquiring on behalf of the Charter School instructional and curriculum materials, equipment and supplies; which may be acquired from affiliated or unaffiliated entities, provided, however, that if such materials, equipment and supplies are acquired from persons or entities affiliated with VSI, the prices paid for such items shall be reasonable and fair to the Charter School in light of the nature of the items purchased;
- (c) selecting, hiring, reviewing, compensating and terminating all personnel associated with the Charter School on behalf of the Charter School, including without limitation its School Director, teachers, teaching assistants and all administrative and support staff; provided, however, that the Board shall approve the hiring of a School Director prior to VSI's hiring of the School Director;
- (d) implementing and monitoring professional development activity requirements applicable to School Directors and appropriate administrative and instructional personnel.

**4.2 Management and Operation of the Charter School.** VSI shall be responsible for, and shall have the right to control, all aspects of the management and operation of the Charter School, including without limitation performing the following functions on behalf of the Charter School:

- (a) Generally managing the business administration of the Charter School, including the preparation and maintenance of operating procedures, marketing the Charter School and providing for all aspects of the day to day operation of the Charter School;
- (b) managing all personnel and payroll functions of the Charter School for all employees of the Charter School, as more specifically described in Section 4.5 below;
- (c) contracting with public or private entities or individuals for the provision of services, which shall include but not necessarily be limited to, transportation, custodial, and food services, and which services shall be paid for in accordance with the appropriate line items in the School's budget;

- (d) purchasing or leasing real estate for use as Charter School facilities, provided that if such purchase or lease is from a person or entity affiliated with VSI the terms of such purchase or lease shall not be materially less favorable to the Charter School than comparable arrangements entered into between parties acting at arm's length;
- (e) maintaining and operating the Charter School's facilities, including making any and all such improvements thereto as VSI shall deem necessary or appropriate to the attainment of the Charter School's educational objectives;
- (f) purchasing or leasing materials, supplies, and equipment for use at the Charter School;
- (g) providing or contracting for the provision of any other services, and acquiring or contracting for the acquisition of any other property, which VSI reasonably deems necessary to the attainment of the educational goals of the Charter School; and
- (h) designing and implementing the Charter School's student recruitment and enrollment procedures.

**4.3 Payment of Expenses.** VSI shall make payment, within commercially reasonable time periods, of all expenses of operating the Charter School, out of the funds turned over to it by the Charter School pursuant to Section 5.6 of this Agreement. VSI is specifically authorized to pay to itself, out of such funds, the management fees and fees for centrally provided services, provided for in Sections 6 and 4.7.

**4.4 Funding of Operating Deficits.** In the event that the cash receipts of the Charter School are insufficient to fund all of the cash expenditures required to be made by or on behalf of the Charter School for any fiscal year. VSI shall be obligated to contribute to the Charter School the full amount of such shortfall (any such advance being referred to herein as an "Operating Deficit Contribution") up to a total of \$1 million.

**4.5 Minimum Student Outcomes.** It shall be the responsibility of VSI that students at the Charter School shall, during or prior to the last year of the Term, attain performance standards committed to by the Academy in its charter and not waived by the chartering authority or, alternatively, shall attain a level of academic performance, as measured by the outcome of standardized, national or state-wide testing, which exceeds by not less than 10 percent the average performance of students of comparable socio-economic background for comparable schools, as defined in the Application.

**4.6 Staffing.** VSI shall be responsible, in its capacity as manager of the business and affairs of the Charter School, for all aspects of the hiring, management and training

of the educational and administrative staff, including without limitation defining staff needs, hiring and firing of staff as necessary, setting compensation levels (subject to the requirements of applicable laws or regulations), directing the development and training of staff, establishing procedures for hiring substitute staff so that the Charter School is adequately staffed at all times, establishing personnel policies, establishing administrative procedures, preparing a parent handbook, establishing employee salaries and benefits, and preparing a staff handbook. The Board's approval shall be necessary to hire the School Director.

**4.7 Annual Budgets.** Not less than sixty (60) days prior to the beginning of each fiscal year, VSI shall prepare and submit to the Board for its review a proposed annual budget for such fiscal year. Not more than thirty (30) days after its receipt of the proposed annual budget, the Board shall notify VSI of any proposed amendments or revisions to the proposed budget; provided that in no event shall the Board propose to amend or revise allocations in the proposed budget for services provided centrally by VSI ("Central Services"), so long as such allocation does not exceed, in the aggregate, 15% of gross revenues of the charter school. Upon receipt of any such proposed amendments or revisions, or upon expiration of such thirty (30) day period if no proposed amendments or revisions are received, VSI shall prepare a final annual budget for such fiscal year and provide a copy thereof to the Board for its approval. Such final annual budget shall, to the extent that VSI in its discretion considers it financially prudent and in the educational interests of the students to do so, incorporate any amendments and revisions proposed by the Board. VSI shall discuss with the Board or its designee any amendments or revisions proposed by the Board that VSI does not consider it prudent to incorporate. VSI and Board or its designee shall come to agreement on the resolution of any such proposed amendments or revisions prior to offering a final budget to the Board for its approval. The Board shall have final approval of the budget, which approval shall not be unreasonably withheld. The Board will not mandate budget amendments or revisions that are inconsistent with the Founding Design or that would potentially create or increase an operating deficit payable by VSI without the consent of VSI. In the first year of operation, the budget proposed in the Application shall be deemed to have been reviewed and accepted by the Board, with no additional budgets review or comment required.

**4.8 Fees.** VSI shall charge such fees for extra services, such as after school and summer programs, as shall be customary and consistent with local practice and applicable law.

**4.9 Fund Raising.** VSI shall provide assistance in the fund raising activities of the Charter School, and the Board shall cooperate fully with any and all such fund raising efforts. In this connection, the Board shall appoint a development committee and designate its chair. The Board and the development committee shall work cooperatively with VSI's staff to solicit private donations for the Charter School.

**4.10 Complaint Procedures.** VSI shall establish an advisory grievance committee, the members of which shall be chosen by, and membership on which

committee shall be limited to, parents of students currently enrolled in the Charter School and teachers and administrators currently employed by the Charter School. The Board shall refer any complaint alleging any violation of the provisions of the Act to such committee in the first instance, and such committee shall make nonbinding recommendations to the Board concerning the disposition of any such complaint. Upon receipt of any such recommendation, the Board shall confer with VSI regarding such complaint and such recommendation, and VSI and the Board shall cooperate with one another in all reasonable ways to address such complaint and, if appropriate, VSI shall act to correct any deficiencies found to exist.

**4.11 Reporting by VSI to the Charter School.** VSI shall provide the Charter School with the following financial reports:

- (a) At the time and in the manner provided in Section 4.7, proposed and final annual budgets for the Charter School;
- (b) Within 60 days after the close of each fiscal quarter beginning December 31, 1999, unaudited financial statements of the Charter School for the fiscal quarter most recently ended.

VSI shall also cooperate with the auditors retained by the Board to prepare annual audited financial statements of the Charter School. VSI shall coordinate its work and the work of the auditors so as to allow for the delivery of such audited statements within 120 days after the close of each fiscal year.

**4.12 Compliance with Laws; Licenses; Insurance.** VSI shall manage and operate the Charter School, and shall conduct all of its other affairs, in compliance with all applicable federal, state and local statutes, rules and regulations, including without limitation requirements prohibiting discrimination in employment. VSI shall procure all licenses or other approvals necessary to the conduct of its business and the operation of the Charter School. VSI shall procure and maintain for itself and on behalf of the Charter School insurance policies covering general and specific liability of the Charter School, including worker's compensation; covering members of the Board and employees of the Charter School; and any other insurance required by applicable law or by any agreement to which VSI or the Charter School is a party.

**5. Rights and Obligations of the Charter School.** The Charter School, acting through the Board, shall be ultimately responsible for the Charter School in accordance with the Charter, the Act, the Founding Design and all applicable laws and regulations. In connection therewith the Charter School shall have the right and the obligation to perform the following duties;

**5.1 Supervision of Manager.** The Charter School shall monitor VSI's performance in the education of children at the Charter School, and VSI's compliance with the terms and provisions of this Agreement.

**5.2 Complaints.** The Charter School, acting through the Board, shall act jointly with VSI to resolve any complaints brought by parents, teachers or others relating to the Charter School's compliance with applicable legal requirements.

**5.3 Approval of Charter School Policies.** The Charter School shall cooperate with VSI in the preparation of, and shall have ultimate approval authority over, broad policies of the Charter School, including those relative to grade levels to be offered by the Charter School, and the number of students to be served by the Charter School. These policies will be consistent with the Founding Design.

**5.4 Maintenance of Charter.** The Charter School shall do, or cause to be done, all things necessary to ensure that all legal requirements, and all such conditions as may have been imposed by the authority granting the Charter, are fully complied with at all times. If the Charter School shall at any time receive notice from any public authority or other person that the Charter School is or may be in violation of the Charter, the Act or any provision of any applicable law or regulation, the Charter School shall immediately notify VSI of the asserted violation and shall thereafter work diligently with VSI to determine whether such asserted violation in fact exists, to correct any violation found to exist, and vigorously contest the asserted violation if the same is found not to exist.

**5.5 Tax Status.** The Charter School shall take all reasonable steps to establish and maintain status as a tax-exempt organization under federal and, if applicable, state law such that contributions to the Charter School are deductible to the donor for federal income tax purposes. If the Board and VSI conclude it is appropriate to do so, the Charter School may seek to establish a separate tax-exempt organization to conduct fund raising activities and receive tax deductible contributions in support of the Charter School and/or of education generally.

**5.6 Control of Funds; Payment of Expenses.** Pending their disbursement, all funds of the Charter School shall be maintained in an account or accounts belonging to the Charter School, but over which VSI or its designee shall have signature authority. VSI shall have custody of all funds received by the Charter School and the Charter School shall immediately turn over to VSI all funds or other revenue received by the Charter School from any source, including without limitation all per pupil or other payments or reimbursements received from the local school district, the state, or any other source, and all contributions received by the Charter School. VSI shall disburse such funds in the manner described in Section 4.3 except to the extent that any of such funds represent restricted gifts to the Charter School, in which event VSI shall disburse such funds in accordance with the applicable restrictions.

**6. Management Fees Payable to VSI.** As compensation to VSI for the services rendered to the Charter School pursuant to this Agreement, and for the financial risks being assumed by VSI in undertaking to bear funding deficits experienced by the Charter School, VSI shall be entitled to receive an annual management fee equal to seven percent (7%) of the gross revenue of the Charter School. Such management fees shall be payable to VSI monthly on an estimated basis, and appropriate adjustments shall be made periodically as revenue is actually

received by the Charter School. Notwithstanding VSI's obligation for Operating Deficit Contributions, if the Management Fee payable to VSI shall exceed the excess of revenues over expenses, the Charter School shall defer the payment of any such excess until such time as the excess of revenues over expenses is sufficient to permit the Charter School to make payment of such deferred Management Fee.

It is understood by both parties that all expenses incurred by VSI and its employees in the performance of this Agreement shall be included in the Management Fee and the charges for centrally provided services pursuant to Section 4.7 and shall not be reimbursable to VSI from the Charter School; provided, however, that in the event that VSI and the Charter School enter into a separate agreement or agreements whereby the Charter School commits to reimbursing VSI for certain expenses, this section shall not apply to such reimbursable expenses; and provided further, that this section shall not apply to budgeted expenses of the Charter School which are incurred by VSI rather than the Charter School for convenience or in anticipation of Charter School funds. Nothing in this section is intended to diminish VSI's responsibility to fund any Operating Deficit Contribution pursuant to Section 4.4.

## **7. Effective Date and Duration.**

7.1 This Agreement is effective on the date hereof and, unless terminated by either party under the conditions in Section 8 of this Agreement, shall continue thereafter through the fifth anniversary of the date of the Charter.

7.2 At the close of the initial contract period specified in Section 7.1, this Agreement shall automatically renew for two (2) successive five (5) year renewal periods; provided, however, that if VSI shall have failed to achieve and maintain the minimum student outcomes specified in Section 4.5, then the Charter School shall have the right, exercisable by written notice to VSI given no later than four (4) months prior to the end of the initial period or, if applicable, any subsequent renewal period, to terminate this Agreement as of the end of the then effective contract period.

## **8. Termination; Non-Solicitation.**

8.1 **Termination.** This Agreement may be terminated prior to the expiration of its term as set forth in Section 7 only under the following conditions:

- (a) if VSI shall under such laws as shall be applicable to it commence any case or proceeding, or file any petition in bankruptcy, or for reorganization, liquidation or dissolution, or be adjudicated, insolvent or bankrupt, or shall apply to any tribunal for a receiver, intervenor, conservator or trustee for itself or for any substantial part of its property; or if there shall be commenced against it any such action and the same shall remain undismissed; or if by any act it shall indicate its consent to, approval of, or acquiescence in any such proceeding, or the appointment of any receiver, intervenor, conservator or trustee for it or any substantial part of its property or shall suffer any of the same to continue

undischarged; or if it shall become subject to any intervention whatsoever that shall deprive it of the management of the aggregate of its property or any substantial part thereof; or if it shall wind up or liquidate its affairs or there shall be issued a warrant of attachment, execution, or similar process against any substantial part of its property, and such warrant, execution or process shall remain undismissed, unbounded or undischarged for a period of ninety (90) days, this Agreement shall be deemed immediately terminated upon the occurrence of such event.

- (b) If VSI is found to have made fraudulent use of funds, or if an administrative or judicial body has revoked any license which may be required for VSI to carry on its business and perform its obligations and functions under this Agreement, this Agreement shall be deemed immediately terminated upon the occurrence of such event.
- (c) If there shall occur or shall become known to either party a material breach of the other's obligations, representation, or warranties under this Agreement, such party may terminate this Agreement upon thirty (30) days written notice to the other provided that the other party may prevent termination by curing such breach within thirty (30) days of receipt of such written notice.
- (d) If there shall become known to the Board at any time after the effective day of this Agreement a material breach of VSI's obligations under this Agreement which in the Board's reasonable judgment jeopardized the safety, health, or well-being of the students at the Charter School, the Board shall have the right to suspend this Agreement immediately if, within 30 days of its receipt of written notice of the alleged breach from the Board, VSI has not either cured the breach (or, if the problem cannot reasonably be cured with such 30 day period, has not commenced and continued diligently to prosecute a cure), or established to the reasonable satisfaction of the Board that no material breach of VSI's obligations hereunder which jeopardizes the safety, health, or well-being of the students at the Charter School has in fact occurred.
- (e) If with respect to any two (2) consecutive fiscal years of the Charter School's operation VSI shall be required to make Operating Deficit Contributions under Section 4.4 of this Agreement which exceed five percent (5%) of the gross per pupil payment revenues of the Charter School for the relevant fiscal year, VSI may, upon written notice to the Charter School, terminate this Agreement effective as of the date specified in such notice, which date shall not be earlier than the later of (i) the date which is thirty (30) days after the date of such notice, or (ii) if school is in session when such notice is given, the last day of the current school year.

- (f) VSI shall have the right to terminate this Agreement, on thirty (30) days prior written notice to the Board, in the event that the Charter is revoked or not renewed, or if performance of its obligations hereunder is otherwise made impossible or impracticable by circumstances beyond VSI's control.

8.2 In the event of termination pursuant to this Article 8, neither party shall have any further obligations to the other hereunder except those which cannot be disclaimed by law, liability for amounts accrued and unpaid hereunder, and obligations expressly stated to be effective after the termination hereof.

8.3 In the event that the Board shall desire to terminate this Agreement under any provision hereof at a time when VSI has loaned funds to the Charter School, guaranteed any debt or other financial obligation of the Charter School, or provided credit support, whether in the form of a letter of credit or otherwise, to the Charter School, notwithstanding any other provision of this Agreement to the contrary such termination shall not be effective prior to the first date on which such loan has been repaid in full, such guarantee has been released by the beneficiary thereof, or such letter of credit or other credit support has been released and/or returned to VSI, it being the intention of the parties hereto that no financial arrangements between the parties hereto shall continue beyond the date of any such termination.

8.4 **Non-Solicitation.** The Charter School agrees that for a period of one (1) year after the termination of this Agreement, it shall not employ, or cause or permit any of its affiliates, agents, or independent contractors to employ, in any capacity, any person who is, or has been during the one (1) year period preceding the termination of this Agreement, engaged by VSI or any affiliate of VSI to render services as an employee or independent contractor. The restriction contained in this Section 8.2 shall not apply if this Agreement is terminated by VSI under Section 8.1(e).

## 9. **Proprietary Information.**

9.1 The Charter School agrees that VSI and its affiliates own all trademarks, copyright and other proprietary information and rights, whether developed before or after the date of this Agreement, subsisting or created in VSI's instructional materials, training materials, instructional and management methods; and any other methods and materials developed by VSI, its employees, agents or subcontractors (collectively, the "VSI Proprietary Information"). The parties hereto acknowledge that during the term of this Agreement VSI may identify and disclose to the Charter School certain VSI Proprietary Information. The Charter School agrees that except to the extent necessary to carry out the terms and provisions of this Agreement, it shall not, nor shall it permit its employees or agents, to, disclose, copy, publish, transmit or utilize in any fashion the VSI Proprietary Information, either during the term of this Agreement or after its termination, without the prior written consent of VSI.

9.2 The parties hereto recognize and agree that a portion of the management fee to which VSI is entitled hereunder represents an appropriate charge for the use by and for the benefit of the Charter School of the VSI Proprietary Information.

**10. Indemnification.** Each party hereto shall indemnify and hold harmless the other party, its directors, officers, agents, servants, and employees, from and against all demands, claims, losses and expenses, arising out of or in connection with such indemnifying party's functions under this Agreement as a result of negligence, intentional tort, fraud or criminal conduct on the part of such indemnifying party or any of such party's directors, officers, agents, servants, or employees.

**11. Arbitration.** All disputes arising out of or concerning this Agreement will be submitted to binding arbitration in accordance with the rules of the American Arbitration Association.

**12. Miscellaneous Provisions**

12.1 All communications and notices relating to this Agreement are to be delivered in writing, with confirmation of delivery, to the following address or to such other address as either party may designate from time to time.

If the Charter School, to:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Attn.:

If to VSI, to VSI in care of:

Victory Schools, Inc.  
c/o Steven B. Klinsky  
767 Fifth Avenue, 44<sup>th</sup> Floor  
New York, NY 10153

12.2 The rights and remedies of either party under this Agreement shall be cumulative and in addition to any other rights given to either party by law and the exercise of any right or remedy shall not impair either party's right to any other remedy. This Agreement shall be governed by and construed and enforced in accordance with the internal laws of the State of New York (other than the provisions thereof relating to conflicts of law).

12.3 If any provisions of this Agreement shall be held, or deemed to be, or shall, in fact, be inoperative or unenforceable as applied in any particular situation, such circumstances shall not have the effect of rendering any other provisions herein contained invalid, inoperative or unenforceable to any extent whatsoever. The invalidity of any one

or more phrases, sentences, clauses or paragraphs herein contained shall not affect the remaining portions of this Agreement or any part hereof.

12.4 This Agreement shall not be changed, modified or amended nor shall a waiver of its terms or conditions be deemed effective except by a writing signed by the parties hereto.

12.5 The parties hereto acknowledge that the management of charter schools by third parties is an area presenting numerous legal uncertainties and ambiguities, and that the arrangements contemplated by this Agreement are new and unique, and in light of these factors agree to work together in good faith to resolve, in a manner consistent with the spirit and intent of the relationship created hereby, any new or unforeseen issues which arise in carrying out the terms of this Agreement.

12.6 The failure by either party hereto to insist upon or to enforce any of its rights shall not constitute a waiver thereof, and nothing shall constitute a waiver of such party's right to insist upon strict compliance with the provisions hereof. No delay in exercising any right, power or remedy created hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right, power or remedy by any such party preclude any other or further exercise thereof or the exercise of any other right, power or remedy. No waiver by any party hereto to any breach of or default in any term or condition of this Agreement shall constitute a waiver of or assent to any succeeding breach of or default in the same or any other term or condition hereof.

12.7 The covenants and agreements contained herein shall be binding upon, and inure to the benefit of, the heirs, legal representatives, successors and permitted assigns of the respective parties hereto.

12.8 This Agreement may not be assigned by either party without the prior written consent of the other party; provided, however, that VSI may assign this contract in connection with a sale, merger or other transaction in which all or substantially all the assets of VSI are sold or exchanged.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as an instrument under seal and the day and year first above written.

VICTORY SCHOOLS, INC.

By: \_\_\_\_\_  
Steven B. Klinsky, President

ROOSEVELT CHILDREN'S ACADEMY –  
LONG ISLAND  
CHARTER PUBLIC SCHOOL

By: \_\_\_\_\_  
Name

DRAFT

GUARANTEE

GUARANTEE OF PAYMENT dated as of June \_\_, 1999 by Victory Schools Inc., a corporation organized and existing under the laws of Delaware ("Guarantor"), in favor of the State of New York (the "Guaranteed Party").

1. GUARANTEE.

(a) Scope of Guarantee. In order to induce the State of New York to grant a charter under N.Y. Educ. Law § 2851 (West 1999) to (i) the Sisulu Children's Academy - Harlem Charter Public School and (ii) certain additional public schools from time to time in the future in each case to be managed by Guarantor (each, an "Academy"; collectively, the "Academies"), and in consideration thereof, and for other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, Guarantor hereby absolutely, unconditionally and irrevocably guarantees to the Guaranteed Party the prompt and complete payment when due of the Guaranteed Obligations (as defined below); provided, however, that (a) no payment by the Guarantor shall be required hereunder with respect to any of the Guaranteed Obligations unless and until the Academies have failed to pay such Guaranteed Obligation as and when due; and (b) the maximum liability of the Guarantor hereunder shall in no event exceed the Maximum Guaranteed Amount. For purposes of this Guarantee, "Maximum Guaranteed Amount" as at any date shall mean an amount equal to (x) \$1,000,000 minus (y) all amounts contributed, loaned, advanced or otherwise provided to an Academy by Guarantor prior to such date.

(b) Guaranteed Obligations. As used in this Guarantee, "Guaranteed Obligations" means, as at any date (subject to the proviso in paragraph (a) above), collectively, the Start-Up Capital Shortfall of all of the Academies managed by Guarantor in their start-up phase. The "Start-Up Capital Shortfall" means, for a particular Academy, the amount by which (x) all indebtedness, obligations, liabilities and other cash needs of such Academy that arise out of or relate to (i) the preparation for such Academy's opening as a charter school and (ii) the operation of such Academy in its first academic year exceed (y) such Academy's annual revenues for such first academic year. Notwithstanding the foregoing, the Guaranteed Obligations shall not include the Start-Up Capital Shortfall of any Academy not managed by Guarantor or which Guarantor ceases to manage during its start-up phase.

(c) Manner of Payment. Guarantor hereby guarantees that the Guaranteed Obligations will be paid to the Guaranteed Party without set-off or counterclaim or other reduction whatsoever (whether for taxes, withholdings or otherwise) in lawful money of the United States of America at such address as the Guaranteed Party may specify to Guarantor from time to time in writing. Whenever Guarantor makes any payment to the Guaranteed Party hereunder on account of Guarantor's liability hereunder, it will notify the Guaranteed Party in writing that such payment is made under this Guarantee for such purpose.

(d) Term of Guarantee. This Guarantee shall remain in full force and effect and be binding in accordance with and to the extent of its terms upon Guarantor and the successors and assigns thereof, and shall inure to the benefit of the Guaranteed Party, and its successors, endorsees, transferees and assigns, until June \_\_, 2004.

(e) Limitation on Amount Guaranteed. Anything contained in this Guarantee to the contrary notwithstanding, if any Fraudulent Transfer Law (as hereinafter defined) is determined by a court of competent jurisdiction to be applicable to the obligations of Guarantor under this Guarantee, such obligations of the Guarantor hereunder shall be limited to a maximum aggregate amount equal to the largest amount that would not render its obligations hereunder subject to avoidance as a fraudulent transfer or conveyance under Section 548 of Title 11 of the United States Code or any applicable provisions of comparable state law (collectively, the "Fraudulent Transfer Laws"), in each case after giving effect to all other liabilities of the Guarantor, contingent or otherwise, that are relevant under the Fraudulent Transfer Laws and after giving effect as assets to the value (as determined under the applicable provisions of Fraudulent Transfer Laws) of any rights to subrogation, reimbursement, indemnification or contribution of the Guarantor pursuant to applicable law or pursuant to the terms of any agreement.

2. CERTAIN WAIVERS. Guarantor hereby expressly and irrevocably waives all rights it may have to, or with respect to, any and all of the following (and irrevocably agrees not to assert in any suit, action or other legal proceeding relating to this Guarantee or otherwise any defense to or discharge of this Guarantee based on any such rights):

(i) any and all notice of, or right to consent to, the creation, renewal, extension, accrual of, or any increase or decrease in the amount of, or any modification of, any of the Guaranteed Obligations and notice of or proof of reliance by the Guaranteed Party upon this Guarantee or acceptance of this Guarantee;

(ii) diligence, presentment, protest, demand for payment, notice of presentment, notice of protest, notice of demand for payment, and notice of default or nonpayment;

(iii) any right to require the Guaranteed Party to bring or prosecute a separate action, or proceed or make any other demand, or assert or exhaust any rights, against the Academies, any co-obligor or other guarantor or other person or entity, or any collateral or security, or under any collateral security document or guarantee or other document or right, or pursue any other rights or remedies in the Guaranteed Party's power, prior to commencing an action or making any other demand hereunder or otherwise against Guarantor or collecting any amounts owing under this Guarantee;

(iv) any other notice or demand whatsoever to or upon the Academies or Guarantor with respect to the Guaranteed Obligations;

(v) except to the extent prohibited by mandatory provisions of applicable law, status as, and any other rights of, a "debtor" under the Uniform Commercial Code as in effect from time to time in the State of New York (or any other relevant jurisdiction);

(vi) except to the extent prohibited by mandatory provisions of applicable law, notice of the terms, time and place of any public or private sale of real or personal property security held as security for the Guaranteed Obligations or this Guarantee; and

(vii) any duty on the part of the Guaranteed Party to disclose any matter, fact or thing relating to the business, operations or financial or other condition of the Academies now known or hereafter known by the Guaranteed Party.

In furtherance, but not in limitation, of the foregoing, Guarantor irrevocably waives, and agrees not to assert in any suit, action or other legal proceeding relating to this Guarantee or otherwise, any defense or discharge of this Guarantee arising by reason of the following circumstances or events: (i) any disability or other defense of the Academies, any other guarantor, or any other person or entity; (ii) the cessation or invalidity from any cause whatsoever of any or all of the Guaranteed Obligations; and (iii) any act or omission by the Guaranteed Party that directly or indirectly results in or aids the discharge of the Academies, any collateral or security, or any other guarantor or other person or entity, or any property of any of the foregoing, or any Guaranteed Obligation to the Guaranteed Party, by operation of law or otherwise.

3. RIGHT OF SUBROGATION; REIMBURSEMENT. Guarantor shall be fully subrogated to all rights of the Guaranteed Party against the Academies in respect of any amounts paid by Guarantor pursuant to the provisions of this Guarantee,

and Guarantor may seek reimbursement from the Academies, with respect to any payments made by Guarantor hereunder.

4. CERTAIN ACKNOWLEDGMENTS. Guarantor hereby agrees and acknowledges that:

(a) it has been advised by legal counsel in the negotiation, execution and delivery of this Guarantee;

(b) it is not a condition to effectiveness or enforceability of this Guarantee that any other person or entity execute and deliver this Guarantee or any other guarantee (in any form whatsoever); and

(c) there are no other conditions precedent to effectiveness of this Guarantee.

5. GUARANTOR UNDERSTANDING WITH RESPECT TO WAIVERS, ETC. GUARANTOR WARRANTS AND AGREES THAT EACH OF THE WAIVERS, AGREEMENTS AND ACKNOWLEDGMENTS SET FORTH HEREIN ARE MADE WITH GUARANTOR'S FULL KNOWLEDGE OF THEIR SIGNIFICANCE AND CONSEQUENCES AND THAT, UNDER THE CIRCUMSTANCES, SUCH WAIVERS, AGREEMENTS AND ACKNOWLEDGMENTS ARE REASONABLE AND NOT CONTRARY TO PUBLIC POLICY OR LAW. If any of such waivers, agreements and acknowledgments are determined to be contrary to any applicable law or public policy, such waivers, agreements and acknowledgments shall be effective only to the maximum extent permitted by law.

6. BANKRUPTCY; POST-PETITION INTEREST; REINSTATEMENT OF GUARANTEE.

(a) Bankruptcy. So long as any Guaranteed Obligations remain outstanding, Guarantor shall not, without the prior written consent of the Guaranteed Party, commence or join with any other person or entity in commencing any voluntary or involuntary bankruptcy, insolvency, receivership, reorganization, liquidation or arrangement proceedings of or against the Academies (all of the foregoing, collectively, "Bankruptcy Proceedings"). The obligations of Guarantor under this Guarantee shall not be reduced, limited, impaired, discharged, deferred, suspended or terminated by any Bankruptcy Proceeding or by any defense that the Academies may have by reason of any order, decree or decision of any court or administrative body resulting from or relating to any such Bankruptcy Proceeding or the existence of such Bankruptcy Proceeding.

(b) Reinstatement. If all or any portion of the Guaranteed Obligations are paid by the Academies, the obligations of Guarantor hereunder shall

continue and remain in full force and effect or be reinstated, as the case may be, if all or any part of such payment(s) are rescinded or recovered directly or indirectly from the Guaranteed Party or any of them as a preference, fraudulent transfer or otherwise, and any such payments that are so rescinded or recovered shall constitute Guaranteed Obligations for all purposes under this Guarantee.

7. REPRESENTATIONS; WARRANTIES; CERTAIN COVENANTS. Guarantor hereby represents and warrants and covenants that: (a) Guarantor is a corporation duly organized, validly existing and in good standing under the laws of the state of Delaware, and has the authority and legal right to own its property and conduct its business as now conducted or proposed to be conducted, and to execute, deliver and perform this Guarantee, and has taken all necessary corporate and legal action to authorize the guarantee hereunder on the terms and conditions hereof and to authorize the execution, delivery and performance of this Guarantee; (b) this Guarantee constitutes a legal, valid and binding obligation of Guarantor enforceable in accordance with its terms; (c) the execution, delivery and performance by Guarantor of this Guarantee will not violate any provision of law or regulation or of any judgment, order or decree of any court, arbitrator or governmental authority or of any agreement or instrument of any nature whatsoever, binding or purporting to be binding upon Guarantor or any of its assets; and (d) all filings, consents, exemptions and other actions required or advisable in connection with the execution, delivery and performance by Guarantor, and the validity or enforceability against Guarantor, of this Guarantee have been duly obtained or effected and are in full force and effect.

8. NO WAIVERS; CUMULATIVE REMEDIES; ENTIRE AGREEMENT; AMENDMENT; HEADINGS; GOVERNING LAW; SUCCESSORS AND ASSIGNS. No action, failure, delay or omission by the Guaranteed Party in exercising any rights and remedies hereunder or in respect of any of the Guaranteed Obligations or otherwise, shall constitute a waiver of, or impair, any of the rights or privileges of the Guaranteed Party hereunder. No single or partial exercise of any such right or remedy shall preclude any other or further exercise thereof or the exercise of any other right or remedy. Such rights and remedies are cumulative and not exclusive of any rights and remedies provided by law or otherwise available. No waiver of any such right or remedy shall be effective unless given in writing by the Guaranteed Party. No waiver of any right or remedy shall be deemed a waiver of any other right or remedy hereunder. This Guarantee constitutes the entire agreement of the parties relating to the subject matter hereof and there are no verbal agreements relating hereto or thereto or conditions precedent to effectiveness hereof. This Guarantee shall not be amended, modified or supplemented except by a written instrument signed by Guarantor and the Guaranteed Party. Section headings herein shall have no legal effect. This Guarantee shall be a contract under, and be governed by, the law of the State of New York without regard to conflict of laws rules. This Guarantee shall inure to the benefit of, and be enforceable by, the Guaranteed Party and its respective successors, indorsees, transferees and assigns.

Guarantor may not directly or indirectly assign or transfer any of its rights or obligations and liabilities hereunder without the prior written consent of the Guaranteed Party (which consent shall not be unreasonably withheld).

9. NOTICES. All notices, consents and other communications to Guarantor or the Guaranteed Party relating hereto to be effective shall be in writing by any means specified below and shall be deemed made (a) if by certified or registered mail, return receipt requested, when received, (b) if by telex or telecopier, when sent answerback or electronic evidence of receipt received, and (c) if by courier or messenger, when receipted for, in each case addressed to them as follows or at such other address as either of them may designate by written notice to the other:

if to the Guaranteed Party, to:

Attention:

Telecopy:

with a copy to:

if to Guarantor to:

Telecopy: ( ) -

with a copy to:

Fried, Frank, Harris, Shriver & Jacobson  
 One New York Plaza  
 New York, NY 10004  
 Attention: Robert Schwenkel  
 Telecopy: (212) 859-4000

or at such other address for a party as shall be specified by like notice.

10. SUBMISSION TO JURISDICTION; ETC. Guarantor irrevocably (a) submits to the non-exclusive personal jurisdiction of any state or federal court in the State of New York in any suit, action or other legal proceeding relating to this Guarantee; (b) agrees that all claims in respect of any such suit, action or other legal proceeding may be heard and determined in, and enforced in and by, any such court; and (c) waives any objection that it may now or hereafter have to venue in any such court or that such court is an inconvenient forum.

11. SEVERABILITY. In the event any one or more of the provisions contained in this Guarantee should be held invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby, and such remaining provisions shall remain in full force and effect. The parties shall endeavor in good-faith negotiations to replace the invalid, illegal or unenforceable provisions with valid provisions the economic and intended legal effect of which comes as close as possible to that of the invalid, illegal, or unenforceable provisions.

IN WITNESS WHEREOF, the undersigned has caused this Guarantee to be duly executed and delivered by its duly authorized officer as of the day and year first above written.

VICTORY SCHOOLS INC.

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

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## Six Promising Schoolwide Programs For Raising Student Achievement

July 1998

Why are some schools effective at educating most students, even those from disadvantaged, high-poverty areas, while others struggle fruitlessly to fulfill their academic mission? How can schools replicate the successes of their more effective counterparts?

Researchers, working for years to answer these questions, have described the characteristics of successful schools--e.g., high expectations for all students; challenging curricula; clear standards and a coherent, focused academic mission; high-quality professional development aligned to the standards; small class sizes, especially in the early grades; an orderly and disciplined learning environment; a supportive and collegial atmosphere; and an intervention system designed to ensure that struggling students can meet the standards. But, while we now know a great deal about which reforms are effective, comparatively little is known about how to achieve them.

As many schools have found out the hard way, systemic reform is extremely difficult--especially when it must occur simultaneously on many fronts, and is begun without benefit of high-quality curriculum materials, appropriate professional development, or readily available technical assistance. In fact, a number of schools--especially those that are already foundering--have found that lasting improvement is impossible without concrete, step-by-step implementation support.

According to a recent study of efforts to raise academic achievement for at-risk students (Stringfield, et al., 1996), the reform strategies that achieve the greatest academic gains are those chosen and supported by faculty, as well as administrators. Success is also dependent on the existence of a challenging curriculum, and on paying "a great deal of attention to issues of initial and long-term implementation, and to institutionalizing the reforms." This and other studies have also found that schoolwide reforms tend to be more effective than pull-out or patchwork programs and that externally developed programs--particularly those with support networks from which schools can draw strength and tangible assistance--tend to do better than local designs.

Given these and similar research findings, we developed the criteria below to help identify promising programs for raising student achievement, especially in low-performing schools. You will find descriptions of six of these programs on the following pages.

All six programs attempt schoolwide improvement and offer the kinds of materials, tools and training that increase the likelihood of effective replication. Although each particular program has its own strengths and weaknesses, all show evidence of:

**High Standards.** The program helps all students acquire the skills



and/or knowledge they need to successfully perform to high academic standards.

**Effectiveness.** The program has proven to be effective in raising the academic achievement levels of "at-risk" students in low-performing schools, based on independent evaluations.

**Replicability.** The program has been effectively implemented in multiple sites beyond the original pilot school(s).

**Support Structures.** Professional development, materials, and ongoing implementation support are available for the program, either through the program's developer, independent contractors, or dissemination networks established by schools already in the program.

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## Direct Instruction (DI)

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Direct Instruction (DI) is a highly structured instructional approach, designed to accelerate the learning of at-risk students. Curriculum materials and instructional sequences attempt to move students to mastery at the fastest possible pace. The oldest version of the program, Distar, was developed in the 1960s as part of Project Follow Through, a massive educational initiative of President Johnson's War on Poverty. Despite its success in raising student achievement levels, Distar was heavily criticized for being too rigid; concentrating too heavily on the basics; and for some vendors' poor implementation practices, such as selling it without support as a "teacher-proof" program. As DI, the original Distar program has been expanded and enriched. Although the early mastery of basic skills is still a key element, the program also addresses students' general comprehension and analytic skills. While DI has been used successfully as a schoolwide program, the reading and language arts (and sometimes math) portions of the program are more frequently purchased for separate implementations. Either way, adequate professional development, ensuring that practitioners understand what the program is and how it works, is essential for successful implementation.

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<b>Grades Covered</b>	Primarily an elementary school (pre-K-6) program, but also used successfully with secondary and adult special education and remedial students.
<b>Curriculum Materials</b>	Curricular materials, daily lessons, and teachers' guides are available for grades K-6 in reading, language arts, spelling, and math; grades 4-6 in expressive writing; grades 3-6 in science; grades 3-12 in corrective reading; and grades 4-12 in corrective math. <sup>1</sup>
<b>Instructional Support/ Professional Development</b>	This is a commercially published program; materials may be purchased by individual grade and subject, as well as in a package suitable for schoolwide implementations. Professional development and implementation support of differing levels of quality can be contracted from various providers for both single-subject and schoolwide implementations. At times, the program's scripted teachers' guides have been used in lieu of--rather than in addition to--adequate professional

	development, giving rise to criticism of the program for being "teacher proof."
<b>School Reform/ Restructuring Assistance</b>	Limited assistance can be contracted from some providers as part of their implementation-support package.
<b>Role of Paraprofessionals</b>	Trained classroom paraprofessionals are fully integrated into the program, working as instructional aides, one-on-one tutors, and small-group leaders under the direction of certified teachers.
<b>Cost of Implementation</b>	For a schoolwide first-year implementation of the K-5 reading, writing, language, and math curriculum, the estimated costs are \$150-\$200 per student, including materials, training of staff, and a part-time school facilitator/curriculum coach. <sup>2</sup> A first-year implementation of a stand-alone reading/language arts program ("Reading Mastery") is estimated at \$65-\$100 per student, professional development not included.
<b>Results*/Effect Size<sup>3</sup></b>	Language (+.49 to +.84); reading comprehension (+.07 to +.69); math (+.57 to +1.11). <sup>4</sup>  <i>* To give a sense of scale, an effect size of +1.00 would be equivalent to an increase of 100 points on the SAT scale or 15 points of IQ--enough to move a student from the 20th percentile (the normal level of performance for children in poverty) to above the 50th percentile (the norm for mainstream students).</i>

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## Direct Instruction (DI)

### Main Features

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**Scripted Lesson Plans**—Classroom scripts are a hallmark of Direct Instruction; the scripts are written, tested, rewritten, retested—polished in a cycle of classroom field-testing and revision that ends only when trials show that 90 percent of students grasp a lesson the first time around. Without proper orientation, many teachers find this level of prescriptiveness off-putting. The idea, however, is to ensure that even beginning teachers will be successful and to allow veteran educators to fill any holes in their teaching skills. With curricular and pedagogical details presented in precise relationship to each other, the program offers a template of how to teach particular skills and content. It is a template that can be applied to other curricula or modified to better suit the needs of a particular group of students, but only after the teaching methods have been learned to precision.

**Research-tested Curriculum**—In DI, skills are taught in sequence until students have fully internalized them (what cognitive researchers call "automaticity") and are able to generalize their learning in new, untaught situations. Each lesson sequence is extensively field-tested to determine the most effective and efficient way to lead students to mastery. For example, the first reading and language arts lessons focus on phonemic awareness, which are followed by increasingly complex phonics and decoding lessons, which are followed by lessons that focus on comprehension and analysis of content, etc. With each lesson building on previously mastered skills and understandings, teachers are able to dramatically accelerate the pace of learning, even for the most disadvantaged students. New material is usually introduced through teacher presentations to the whole class or small groups, followed by guided practice and frequent checks for individual student mastery. Once the skill has been learned to the point of automaticity, cognitive studies show that it is transferred from short-term to long-term memory, thus freeing children to apply their learning, attend to content, and move on to progressively more difficult and higher-order skills. Some have criticized the curriculum, particularly reading and language arts in the later grades, for not containing a broad or challenging enough selection of children's literature. The program is easily supplemented, however, especially after students have been helped to master basic decoding skills.

**Coaches/Facilitators**—Another feature of the program is the use of in-class coaches for implementation support. The coach periodically monitors each classroom and is available to assist individual teachers with any problems, perhaps taking over a part of the lesson to model pedagogical procedures. In some cases, this role has been filled by an employee of the contractor, retained to help with implementation. In some multi-school implementations within a single district, teachers are released from regular classroom duty, given special training, and assigned to assist one or two schools.

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**Rapid Pace**--Because the goal of DI is to move students to mastery as quickly as possible, a large proportion of classroom time is spent on fast-paced teacher-directed instruction, punctuated by rhythmic choral-group and individual-student responses. For instructors, this means a very full work day. For example, the DI program requires teachers to ask 300 or more questions in six small-group sessions each day and to perform reading checks every five or 10 lessons to ensure that all students reach 100 percent mastery. This level of interaction, which produces substantial achievement gains, is made possible by the use of the heavily researched, highly refined scripts.

**Achievement Grouping**--Common periods for reading and math are established across grades during which students are regrouped by performance level, with the idea that all students will progress at the fastest possible pace and no students will be left behind. In several schools, these groups are reduced in size by assigning half of the class to a paraprofessional who leads the group through guided practice for half of the period, while the teacher introduces new material to the rest of the class, and then changing places. If the program is implemented well, these should not be rigid "tracks," but flexible achievement groups, with students who are progressing quickly periodically reassigned to a faster group and immediate assistance given to students who are struggling.

**Frequent Assessments**--Frequent assessments are also built into the program as a means to ensure that all students are reaching mastery, to detect any student who might need extra help before falling too far behind, and to identify students who need to be re-grouped.

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**Direct Instruction (DI)**

**Results, Case Studies, Considerations**

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**Results**

When this program is faithfully implemented, the results are stunning, with some high-poverty schools reporting average test scores at or above grade level—in a few cases, several grades above. In the 1977 evaluation of Project Follow Through, the achievement results of high-poverty Direct Instruction students were compared to students in nine other early education programs. DI students outperformed control group students and students in the other experimental programs on every academic measure, moving from the 20th percentile (the normal level of performance for children in poverty) to about the 50th percentile (even with mainstream students). In contrast, the achievement results of students in some of the other programs actually *declined* as a result of the intervention. Follow-up studies of students taught by Direct Instruction in the early grades also show enduring benefits. One New York comparison found that more than 63 percent of DI students graduated from college, as opposed to 38 percent of the control group; mean ninth-grade test scores were higher (ES=+.41, reading; ES=+.29, math; *see footnote 3*); retention rates were lower (21 percent vs. 33 percent); and there were fewer dropouts (28 percent vs. 46 percent).

**Case Studies**

**Wesley Elementary School (Houston, Texas).** Wesley Elementary has one of the longest, continuous Direct Instruction implementations in the country. It is located in one of Houston's poorest, mostly African-American, neighborhoods and has a student population that is over 99 percent minority and 90 percent eligible for school lunch subsidies--statistics that usually signal low achievement levels. For many years, however, this school has ranked in the top tier of all schools in the state. Much of this success has been credited to the school's 1975 adoption of Direct Instruction. First piloted in a Title I reading resource room, DI was soon in use throughout the school. By 1980, Wesley students had average test scores above the 80th percentile in both reading and vocabulary, outscoring students in comparison schools by more than 40 percentile points. In many of the succeeding years, Wesley's scores have been even higher, with some classes testing up to three years above grade level.

**Utah ASAP Project.** As a part of Utah's Accelerated Student Achievement Project (ASAP) to improve poor-performing Title I schools, three elementary schools adopted schoolwide DI programs during the 1994-95 school year. The preliminary achievement data are impressive, with students in all three DI schools outperforming more advantaged control school students in two Woodcock-Johnson subtests. After two years in the program, one school moved from last to second place (out of 24 schools) in the district's annual

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## Math Olympics.

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**Considerations**

This is a highly interactive, teacher-intensive approach to education. Teachers and paraprofessionals must be informed about--and prepared for--its fast pace and the structured, repetitive nature of the program.

DI also has a history of problematic implementations. When the program's developer, former preschool teacher Siegfried Engelmann, started designing the curriculum more than 25 years ago, he included fully scripted teachers' guides, believing that they could serve as prototype demonstrations for specific teaching skills. In other words, one design objective was to provide hands-on teacher training *during* class-time, thus reducing start-up costs and at the same time ensuring that all teachers would have the skills necessary to reach the maximum achievement levels. Unfortunately, some marketers and administrators interpreted this to mean that *no* training was necessary, and that teaching skill was inconsequential to the success of the program. DI materials were sold as "teacher proof," leaving administrators who didn't understand the program to impose it in a rigid, dictatorial manner. Educator horror stories and lower-than-expected achievement levels were the predictable results. In some regions, this has left DI with a tarnished reputation that will have to be clarified and overcome. For any new implementation to be successful, proper orientation and training are vital--not only for teachers and paraprofessionals but also for administrators.

Another frequent criticism is that DI provides so much structure and regimentation that it stifles student and teacher creativity. The student results--both in higher academic achievement levels and elevated measures of self-esteem--should speak for themselves. Teacher focus groups, following DI implementation in Broward County, Florida, are also instructive. Some teachers felt that the "standardized approach actually allowed more creativity, because a framework was in place within which to innovate," and said that they could do more with content once DI had helped students acquire the necessary skills. Other teachers reported that they had initially been resistant, feeling that "even though the students thrived on it, the repetition was boring for the faculty," but, over time, had found ways "to innovate within the repetition, so that they become drawn in as well."

The Broward implementation also incorporated another important feature: advanced training for and assignment of teaching staff to act as full-time "coaches" (facilitators) for the new DI schools. By retaining their status within the bargaining unit, it was made clear that these educators were a resource for the benefit of the teaching staff, not administrators. There was always someone to turn to, on a confidential basis, for advice and assistance. Given the inevitable frustrations, glitches, and misunderstandings that arise when implementing any new curriculum, using new instructional methods, this assistance has proven invaluable.

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Information on the Direct Instruction program is available through several sources. Four leading Direct Instruction organizations have supplied AFT with the following list of schools. School visits and calls are a key component of effective program selection. Therefore, AFT has chosen to include this list, not to endorse a particular school or program implementation, but to provide educators with maximum access to schools using research-proven programs.

Each school in the list has worked with one of these organizations to implement one or more components of the Direct Instruction program. (Note: Only J/P Associates offers implementation services to other school districts, but all of these groups are excellent sources of information on implementation). This list is arranged by organization. Click on the name of a Direct Instruction organization to access a list of schools that have worked with that group (i.e. clicking on Association for Direct Instruction will bring you to a list of schools working with the Association to implement Direct Instruction.) With the exception of J/P Associates, organizations have requested that interested parties contact them before contacting individual schools.

### Alliance of Quality Schools ([click here to go to list](#))

Stuart Greenberg, Coordinator  
Alliance of Quality Schools  
600 SE 3rd Ave., 13th Floor  
Ft. Lauderdale, FL  
Tel: 954-767-8528  
Fax: 954-768-8919

### Association for Direct Instruction ([click here to go to list](#))

Brian Wickman  
Association for Direct Instruction  
P.O. Box 10252  
Eugene, OR 97440  
Tel: 800-995-2464  
E-mail: [adihome@aol.com](mailto:adihome@aol.com)

### Baltimore Curriculum Project ([click here to go to list](#))

Ms. Muriel Berkeley, Coordinator  
Baltimore Curriculum Project  
711 West 40th St., Suite 316A  
Baltimore, MD 21211  
Tel: (410) 235-0015  
Fax: (410) 235-0032

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Because of differences among study designs and assessments, this can only be considered a "rough" measure of comparison. In general, an effect size of +.25 or more is considered educationally significant.

<sup>4</sup> Data from Abt Associates' 1977 evaluation of Project Follow Through and a 1996 meta-analysis of this and more recent studies. See *Research on Direct Instruction: 25 Years beyond Distar*, by Gary L. Adams and Siegfried Engelmann.

<sup>5</sup> "Alliance of Quality Schools Evaluation Report" (August 1996). School Board of Broward County, Florida.

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### Publications/Resources

Adams, Gary L. and Engelmann, Siegfried. *Research on Direct Instruction: 25 Years beyond Distar* (1996). Seattle: Educational Achievement Systems. 206/820-6111.

*Effective School Practices*. Journal of the Association for Direct Instruction.

Gersten, Russell, et al. "Effectiveness of a Direct Instruction academic kindergarten for low-income students," *The Elementary School Journal* (November 1988).

### For more information

Direct Instruction Project, University of Oregon, College of Education, 170 Education, Eugene, Oregon 98195, or Association for Direct Instruction, P.O. Box 10252, Eugene, Oregon 98195. **Phone:** 800/995-2464. **E-mail:** ADIhome@aol.com **Internet:** <http://darkwing.uoregon.edu/~adicp/>.

<sup>1</sup> These materials are available from the SRA division of Macmillan/McGraw-Hill, 800/843-8855. In addition, several videodisc programs on math, geometry, chemistry, and earth science are available from BFA Educational Media, 800/221-1274.

<sup>2</sup> These costs are based on the budget for the Alliance of Quality Schools in Broward County, Florida, an effort to raise achievement levels of low-performing schools by implementing a DI reading and math curriculum. Estimated per-school costs were as follows: Direct Instruction materials, \$35,000; professional development (five days before school and five days during school), \$70,000; a trained teacher, assigned to act as a part-time coach/curriculum consultant for the school, \$35,600.

<sup>3</sup> An effect size is a standard means of expressing achievement gains and losses across studies, showing differences between experimental and control groups in terms of standard deviation. An effect size of +1.00 indicates that the experimental group outperformed the control group by one full standard deviation. To give a sense of scale, this would be equivalent to an increase of 100 points on the SAT scale, two stanines, 21 NCEs (normal curve equivalent ranks) or 15 points of IQ (Fashola and Slavin, 1996)—enough to move a student from the 20th percentile (the normal level of performance for children in poverty) to above the 50th percentile (in range with mainstream America).



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**Core Knowledge (CK)**

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The Core Knowledge Sequence (CK) was designed to add content to the general skills and objectives typically found in state and local curriculum guides and provide a common core of knowledge in the early grades. Originated by University of Virginia professor E.D. Hirsch, Jr., CK is being implemented in over 350 schools in 40 states around the country. As such, it represents the first articulation of many standards-based reformers' push for a model national curriculum, built around the idea that American schools need challenging academic standards to provide equal educational opportunity. Or, as one teacher describes Core Knowledge, "It's like a gifted curriculum for all kids." Designed to comprise about 50 percent of the school's curriculum, the sequence provides a detailed listing of specific content to be taught, at each grade level, in the disciplines of history, geography, mathematics, science, language arts, and fine arts.

<b>Grades Covered</b>	Elementary and Middle School/pre-K-8.
<b>Curriculum Materials</b>	Separate Core Knowledge Sequences--content guidelines--are available for Preschool, Grades K-6 and Grades 7-8, detailing what is to be taught in the areas of language arts, American and world civilizations, geography, visual arts, music, math and science. A series of resource books, What Your Kindergartner(-6th Grader) Needs to Know, are also available from the Core Knowledge Foundation, as are lesson plans prepared by Core Knowledge teachers around the country, which are assembled and disseminated as "Share the Knowledge" materials.
<b>Instructional Support/ Professional Development</b>	Inservice presentations and professional development workshops can be contracted through the Foundation. It also distributes "model" planning guides and holds an annual conference with a focus on professional development, which brings together more than 1,200 teachers and administrators from around the country.
<b>School Reform/ Restructuring Assistance</b>	Limited assistance can be contracted through the Foundation.

<b>Role of Paraprofessionals</b>	To a large extent, the deployment of classroom paraprofessionals is determined at the school level. CK recommends their use as one-on-one skill-and-content tutors for new and/or struggling students, assistants in researching and developing age-appropriate materials and resources, and sources of assistance for students in completing CK schools' many curriculum-related projects and activities.
<b>Cost of Implementation</b>	Variable. The costs for the curriculum sequence (less than \$25/teacher) and workshop training are modest. However, the costs of supplementary curricular materials, professional development, and the faculty release time necessary for properly implementing the program can make it more expensive. One study estimates start-up costs ranging up to \$26,000 per school. <sup>1</sup>
<b>Preliminary Results</b>	Preliminary results are encouraging, and a large-scale longitudinal study is currently under way. <sup>2</sup> After the third year of this five-year study, researchers found that, on average, the achievement of CK students outpaced the state average and the achievement of their peers in control schools on standardized and statewide assessments, often at educationally significant levels. Implementation was highly uneven, however, to the extent that one control school significantly outscored its CK counterpart.

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## Core Knowledge (CK)

### Main Features

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**Interesting, Detailed Curricular Content**--One measure of the success of the standards movement is that virtually every state in the nation is in the process of developing or strengthening its academic standards. Districts, in turn, are attempting to translate these state mandates into curriculum guides. Unfortunately, a majority of these state and district documents are still not clear enough to be useful at the classroom level. Many focus on the skills students are to acquire rather than on the specific content of the curriculum to be delivered. Core Knowledge seeks to fill this hole by outlining the grade-by-grade knowledge that children will be taught. For example, the first-grade history sequence asks schools to: "Introduce [students to] ancient civilizations and the variety of religions in the world, using maps of the ancient world," specifically: *Egypt* (King Tutankhamen, Nile, Pyramids, Mummies, Animal Gods, Hieroglyphics); *Babylonia* (Tigris and Euphrates, Hammurabi); *Judaism* (Moses, Passover, Chanukah); *Christianity* (Jesus); *Arabia* (Mohammed, Allah, Islam); *India* (Indus River, Brahma, Hinduism, Buddha); *China* (Yellow River, Confucius, Chinese New Year).

**Sequenced Presentation**--Cognitive research indicates that children learn new skills and knowledge by building on what they already know. Core Knowledge's developer, E.D. Hirsch, Jr., observed that this can place some American students at a perpetual disadvantage. Children from highly educated families are exposed to a rich vocabulary and knowledge base in their formative years, enabling them to acquire additional skills and knowledge at a faster pace than their less advantaged peers. The result is an achievement gap that increases through successive years of schooling. The Core Knowledge response is to expose all students, very early, to interesting and demanding subject matter, and then to build on that knowledge, year by year, in a carefully constructed sequence. Because what is to be learned is defined clearly, teachers are better able to provide students with consistent, coordinated instruction. It is also easier to monitor whether students have mastered what they need to know for the grade level and to intervene quickly when students need extra help.

**A Common Core**--Because the program stipulates exactly what is to be taught grade by grade, students advance through school on a more equal footing. All students, regardless of background or neighborhood, are exposed to a common core of learning, and the watered-down curriculum typical of many high-poverty schools is eliminated. Core Knowledge teachers also have the advantage of knowing exactly what their students have and have not learned the year before. Unlike most U.S. teachers, CK teachers don't have to waste time reteaching previously covered material or developing different lesson plans to accommodate students who already know the material or those who are far behind. Because all teachers in a specific grade level are covering the same material, they are able to work collaboratively, sharing ideas, resources and lesson plans, or even to divide up the work of developing a new unit.

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## Core Knowledge (CK)

### Results, Case Studies, Considerations

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#### Results

There are several small-scale studies of Core Knowledge that show impressive results for individual schools (i.e. the program has served to raise overall student achievement significantly, while it decreased the performance gap between advantaged and disadvantaged students). For example, after a four-year implementation of the program, Cale Elementary School - the second highest poverty elementary school in Albermarle, Va. - was performing far above expectations, with 70 percent of its students scoring above the national norm on standardized assessments.<sup>2</sup> And in San Antonio, Tex., Nathaniel Hawthorne Elementary - a school with high percentages of disadvantaged and LEP students - succeeded in raising achievement levels on state assessments beyond the aggregate performance of all other elementary schools in the district.<sup>2</sup>

In addition, preliminary data from a large-scale independent evaluation were recently released.<sup>2</sup> Researchers evaluated three years of test scores from five Core Knowledge schools and five matched control schools. Generally, the CK schools achieved gains that exceeded those of all state schools and the control sites. For example, CK schools were found to have sharply increased the percentage of third-grade students scoring "satisfactory" or better on state performance assessments of reading, math, social studies, science, writing, and language. The net mean gain for CK students was 13.9 percent, versus 8.3 for control students, and 6.8 for third-grade students statewide. However, the study also found wide variation in the degree of successful implementation - and thus achievement gain - by school, influenced by such factors as the availability and use of common planning time and the amount of care taken to orient new teachers to CK. The study also found that improvement was greater for students who began the program in the early grades, tending to corroborate Hirsch's theories about the cumulative nature of knowledge.

#### Case Studies

Although Core Knowledge offers a challenging and comprehensive grade-by-grade curriculum sequence, its implementation support--important for successful replications in low-performing schools--is not as strong as that offered by some other research-based reform models (*see "Considerations" section below*). Therefore, we offer descriptions of two promising implementation models:

**The Trinity Partnership**--In San Antonio, Texas, Trinity University has established an extensive support system for the implementation of Core Knowledge. As an outgrowth of a pre-existing university-public school

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partnership, Trinity assisted the city's first Core Knowledge school, Nathaniel Hawthorne (see above), with the implementation of the curriculum. Over the intervening years, as approximately 20 area schools attempted to replicate the program, the university created a network to support the new implementations. Support has come in a variety of forms, such as: coordinating an active network of Core Knowledge schools; offering technical and financial support, including stipends to teachers who participate in network-related activities that extend beyond normal working hours or assigned responsibilities; helping to arrange and facilitate common planning time for grade-level and subject-area teachers; supporting and designing professional development opportunities, including pre- and inservice pedagogical and content-area training; providing access to curricular material and resources, including the creation of a Core Knowledge Technology Center; and supporting "mentorship" and train-the-trainer programs specifically designed to help with the introduction of the program at new sites.

*Calvert County, Maryland*--Calvert County is the first U.S. school district to implement Core Knowledge in all elementary schools. Much of the impetus for the systemwide adoption came from parents and teachers, responding to information about Core Knowledge pilot programs that had begun in three schools. According to administrators, teacher support ("buy-in") was one of the keys to the program's successful implementation, with the only resistance coming from principals. Today, all 12 Calvert County elementary schools are using the curriculum. Because of the systemwide implementation, Core Knowledge schools in the district seem to have some clear advantages. Economies of scale are achieved by having inservice training delivered for larger groups of teachers; implementation support can be delivered by a small team of central-office "teacher-specialists"; teacher networking and the sharing of experience and information across schools is made possible at the local level; scope and sequence statements, aligned assessments, and other supporting documents are prepared by experts, with teacher input; and the central office, not individual schools or teachers, does the work of aligning the curriculum to state standards. In addition, teachers know exactly what background knowledge to expect from students who transfer from one county school to another.

### Considerations

The Core Knowledge Sequence represents the first major effort to specify a common core curriculum for all American students. As such, it goes a long way toward addressing the low expectations for student performance and lack of challenging curricula that characterize many of the nation's low-performing schools. Although implementation assistance can be purchased through the Foundation, it is not as extensive as that offered by school-improvement programs specifically designed to help low-performing schools. While many of these elements currently are being strengthened, CK still lacks: extensive-enough professional development assistance; the school restructuring assistance needed to ensure that teachers share common planning time; readily-available high-quality curricular and other age-appropriate resource materials; and aligned performance standards and assessments. The program requires a lot of staff work during start-up, including extra time spent on researching, planning and writing new lessons. It should also be noted that CK was not designed to strengthen the teaching of basic skills, such as phonics--a priority need for many low-performing schools.

Nevertheless, several schools and school systems--including high-poverty urban schools--have found ways to fill these gaps on their own. Therefore,

before deciding whether or not to adopt the program, it is worthwhile for schools to learn how these successful implementations have been supported. The preliminary findings of a three-year quantitative and qualitative longitudinal study of Core Knowledge offer some useful clues.<sup>2</sup> According to the researchers, several factors "greatly facilitated successful early implementations": (1) extra funding for start-up, including teacher preparation, materials, etc., (2) common planning time for teachers, (3) parental and community support, (4) site-based management, which can lead to increased flexibility in the use of resources, etc., (5) district support, (6) interest and support from staff, (7) team teaching, which allows the burden of extra work to be shared, (8) sharing lessons and experience with teachers at other Core Knowledge schools, (9) assistance in finding materials, and (10) local adaptations that help serve schools' specific needs.

At the same time, researchers also detailed the benefits of Core Knowledge: (1) children gain self-confidence as they gain knowledge, (2) students connect to previously learned material, (3) students are more interested in learning and reading, (4) discipline problems decrease, (5) Core Knowledge meets the needs of all students, (6) interaction and accountability among teachers are increased, (7) teachers find their work more interesting and rewarding, and (8) parents are satisfied. The list speaks for itself.

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The Core Knowledge Foundation provided AFT with the following lists of schools. According to the Foundation, this list presents ALL schools fully implementing the Core Knowledge program. School visits and calls are a key component of effective program selection. Therefore, AFT has chosen to include this list, not to endorse a particular school or program implementation, but to provide educators with maximum access to schools using research-proven programs. The Core Knowledge Foundation has requested that interested parties contact the Foundation before contacting individual schools. The Foundation has also developed a list of exemplary Core Knowledge schools. For this list of exemplary sites and for more information, please contact:

Constance Jones, Director of School Programs  
Core Knowledge Foundation  
801 East High St.  
Charlottesville, VA 22902  
Tel: 804-977-7550  
Fax: 804-977-0021  
<http://www.coreknowledge.org>

Note: Some Core Knowledge Schools in Baltimore, Maryland are part of the Baltimore Curriculum Project. These schools, denoted by \*, are using Core Knowledge and Direct Instruction simultaneously. For more information on the Baltimore Curriculum Project, please contact:

Ms. Muriel Berkeley, Coordinator  
Baltimore Curriculum Project  
711 West 40th St., Suite 316A  
Baltimore, MD 21211  
Tel: (410) 235-0015  
Fax: (410) 235-0032  
E-mail: [bcpl@ix.netcom.com](mailto:bcpl@ix.netcom.com)

This list is arranged by state. Click on the name of a state to access a list of all Core Knowledge schools in that state.

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**ALASKA**

**Ketchikan Charter School**  
630 N. Point Higgins  
Ketchikan, AK 99901  
(907) 247-2680  
Principal: Karlene Kiffer

**ALABAMA**

**Byrd Elementary**  
625 Lapsley Street  
Selma, AL 36701  
(334) 874-1620  
Principal: Sherrill W. Parris

**ARKANSAS**

**Bentonville Public School**  
400 N W 2nd Street  
Bentonville, AR 72712  
(501) 271-1102  
FAX (501) 271-1159  
Principal: Countess Hodges

**Marked Tree Elementary School**  
703 Normandy Street  
Marked Tree, AR 72365  
(870) 358-2214  
FAX (870) 358-3953  
Principal: Kaye Adams

**Mountainburg Elementary**  
129 Highway 71 S W  
Mountainburg, AR 72946  
(501) 369-2121  
FAX (501) 369-2138  
Principal: Larry McCain

**ARIZONA**

**Challenge Charter School**  
16635 N. 51st Ave  
Glendale, AZ 85306  
(602) 938-5411  
FAX (602) 938-5393  
Principal: Greg Miller

**Grey Hawk Elementary School**  
7525 E. Grey Hawk  
Scottsdale, AZ 85255  
(602) 493-6090  
FAX (602) 493-6095  
Principal: Don Hiemstra

**CALIFORNIA**

**Immanuel's School**  
3132 Highview Ave  
Altadena, CA 91001  
(626) 794-6763  
Principal: Anne McKinlev

**Santa Susana School**  
22280 Devonshire St  
Chatsworth, CA 91311  
(818) 709-9854  
FAX (818) 709-1722  
Principal: Dr. Marilyn Luckey

**Sacred Heart Academy**  
4895 Saratoga Avenue  
San Diego, CA 92107  
(619) 222-7252  
FAX (619) 222-2836  
Principal: Bob Hamm

**COLORADO**

**Jefferson Academy**  
9955 Yarrow Street  
Broomfield, CO 80021

**Mountain View Core Knowledge**  
1016 Mystic  
Canon City, CO 81212

(303) 438-1011  
FAX (303) 438-1046  
Principal: Mike Munier

**Academy Charter School**  
809 North Park Street  
Castle Rock, CO 80104  
(303) 660-4881  
Principal: Dean Kurn

**Academic Choice For Excellence**  
2050 Forest St.  
Denver, CO 80207  
(303) 333-0152  
FAX (303) 333-0152  
Principal: Linda Grace

**Cherry Creek Academy**  
5455 So. Valentia Way  
Englewood, CO 801 11  
(303) 779-8988  
FAX (303) 779-8817  
Principal: Rodney Oosterrhouse

**Liberty Common School**  
1725 Sharp Point Drive  
Fort Collins, CO 80524  
(970) 493-1564  
Principal: Dr. Katherine Knox

**Washington Core Knowledge**  
1400 Remington Street  
Fort Collins, CO 80524  
(970) 482-1891  
FAX: (970) 416-3589  
Principal: Art Collins

**Crown Pointe Charter School**  
7281 Irving St  
Westminster, CO 80030  
(303) 428-1882  
FAX: (303) 428-1938  
Principal: BJ Buchmann

**CONNECTICUT**

**Pear Tree Point School**  
90 Pear Tree Point Road  
Darien, CT 06820  
(203) 655-0030  
FAX: (203) 655-3164  
Principal: Hazel Hobbs

**DISTRICT OF COLUMBIA**

**Anthony Hyde Elementary School**  
3219 O Street N. W.  
Washington, DC 20007  
(202) 282-0170  
FAX (202) 282-0087

(719) 275-1980  
FAX (719) 275-1998  
Principal: Dr. Shirley Squire

**The Classical Academy**  
8650 Scarborough Drive  
Colorado Springs, CO 80920  
(719) 282-1181  
FAX (719) 282-3226  
Principal: Chuck Holt

**Academy Of Charter Schools**  
601 East 64th Ave  
Denver, CO 80229  
(303) 289-8088  
FAX (303) 289-8087  
Principal: Ken Griffith

**Boltz Junior High School**  
720 Boltz Drive  
Fort Collins, CO 80525  
970-226-3333  
Principal: Mike Walz

**Spring Creek Country Day School**  
1900 Remington  
Fort Collins, CO 80525  
(970) 224-4240  
FAX: (970) 223-0980  
Principal: Rhonda Beisner

**Swallow Charter Academy**  
P O Box 7969  
Pueblo West, CO 81007  
(719) 547-1627  
Principal: Dr. Mark Levine

**Principal: Patrick Pope****FLORIDA**

**Bradenton Academy**  
6210 17th Ave. West  
Bradenton, FL 34209  
Principal: Dr. Lois Gerber

**Orangewood Elementary**  
4001 De Leon St.  
Fort Myers, FL 33901  
(941) 936-2950  
FAX: (941) 936-2134  
Principal: Ruthie Loverde

**Martha Manson Academy**  
7715 S W 14th Ave  
Gainesville FL 32607  
(352) 332-1452  
FAX: (352) 332-4945  
Principal: Kathy Gaston

**Joella Good Elementary**  
6350 N W 188 Terrace  
Hialeah, FL 33015  
(305) 625-2008  
FAX (305) 628-0460  
Principal: Rosemarie V. Jaworski

**The Keys Academy Of Marine**  
103200 Overseas Highway  
Key Largo, FL 33037  
(305) 451-2233  
FAX: (305) 451-2679  
Principal: Connie Chapell

**Coral Way Elementary**  
1950 Southwest 13th Avenue  
Miami, FL 33174  
(305)438-1011  
Principal: Migdania D. Vega

**Bryan Elementary School**  
2006 W. Oak Avenue  
Plant City FL 33567  
(813) 757-9300  
FAX: (813) 757-9304  
Principal: Dr. Eileen Myers

**Southside Elementary School**  
1901 Webber Street  
Sarasota, FL 34239  
(941) 361-6420  
FAX: (941) 361-686  
Principal: Janet Wynn

**Befton Hills Prep School**  
2205 Thomasville Road

**Charter School Of Excellence**  
12217 S E 3rd Ave.  
Fort Lauderdale, FL 33316  
(954) 522-2997  
FAX: (954) 522-3159  
Principal: Sandy Deren

**Three Oaks Elementary School**  
19600 Cypress View Dr.  
Fort Myers, FL 33912  
(941) 267-8020  
FAX: (941) 267-9559  
Principal: Vivian Posev

**Amelia Earhart Elementary**  
5987 E. Seventh Ave.  
Hialeah, FL 33013  
(305) 688-9619  
Principal: Ada Hernandez

**Caribbean Elementary**  
11990 S W 200 Street  
Miami, FL 33177  
(305) 233-7131  
FAX: (305) 238-7082  
Principal: Maria Pabellon

**The Academy At Ocean Reef**  
2 Dockside Lane  
Key Largo, FL 33037  
(305) 367-2409  
FAX: (305) 367-2055  
Principal: Sandy Merrill

**Kendale Elementary**  
10693 S W 93rd St.  
Miami, FL 33176  
(305) 274-2735  
FAX: 305-274-4792  
Principal: Dr. Joe Carbia

**Sanibel Elementary School**  
3840 Sanibel- Captiva Road  
Sanibel, FL 33957  
(941)-472-1617  
FAX: (941)-472-6544  
Principal: Barbara Ward

**McDonald Elementary**  
501 W. Pruitt Road  
Seffner, FL 33584  
(813) 744-8154  
FAX: (813) 744-8157  
Principal: Shirley Gonzalez-Day

**Mitchell Elementary School**  
205 Bungalow Park

Tallahassee, FL 32312  
 (904) 422-2464  
 FAX: (904) 386-6182  
Principal: Ilona Faust

**North Wauchula Elementary**  
 P O Box 1640 1120 N Florida Ave  
 Wauchula, FL 33873  
 (941) 773-2183  
 FAX: (941) 773-3514  
Principal: Craig Barlow

**Brigham Academy**  
 601 Ave. C S E  
 Winter Haven, FL 33880  
 (941) 291-5300  
 FAX: (941) 291-5309  
Principal: Lela Keith

### GEORGIA

**New Prospect Elementary School**  
 3055 Kimball Bridge Road  
 Alpharetta, GA 30202  
 (770) 667-2800  
 FAX: (770) 667-2843  
Principal: Charlia Faulkner

**Oglethorpe Avenue School**  
 1150 Oglethorpe Ave.  
 Athens, GA 30606-2166  
 (706) 549-0762  
 FAX: (706) 543-8488  
Principal: Dr. Robert Bluett

**Harriet Tubman Elementary**  
 2861 Lakeshore Drive  
 College Park, GA 30337  
 (404) 669-8115  
 FAX: (404) 669-8120  
Principal: Eleanor West

**Miller Core Knowledge Magnet**  
 2241 Montpelier Ave.  
 Macon, GA 31206  
 (912) 751-6762  
 FAX: (912) 751-3234  
Principal: Dr. Martha Jones

**Dunleith Elementary**  
 120 Saine Drive  
 Marietta, GA 30060  
 (770) 429-3190  
 FAX: (770) 429-3193  
Principal: Dr. Emily Lembeck

**Northwood Elementary**  
 10200 Wotten Road  
 Roswell, GA 30076  
 (770) 552-6390  
 FAX: (770) 552-6397

Tampa, FL 33609  
 (813) 872-5216  
 FAX: (813) 872-5220  
Principal: Joyce Haines, Ph.D.

**Egret Lake Elementary**  
 5115 47th Place N.  
 West Palm, FL 33417  
 (561) 688-5314  
 FAX: (561) 688-5381  
Principal: Liz Pearlman

**Alps Road Elementary**  
 200 Alps Road  
 Athens, GA 30606  
 (706) 548-2261  
 FAX: (706) 357-5281  
Principal: Dr. Joan Humphries

**Elcan - King Elementary**  
 715 E Louise Street  
 Bainbridge, GA 31717  
 (912) 248-2212  
 FAX: (912) 248-2263  
Principal: Jackie Lee

**Lockhart Academy**  
 1370 Big Shanty Road  
 Kennesaw, GA 30144  
 (770) 428-5637  
 FAX: (770) 428-2247  
Principal: Frederick J. Furtah

**Lockheed Elementary**  
 1205 Merritt Road  
 Marietta, GA 30062  
 (770) 429-3196 /3199  
 FAX: (770) 429-3184  
Principal: Marv Jo Brubaker

**A L Burruss Elementary School**  
 325 Manning Road  
 Marietta, GA 30064  
 (770) 429-3144  
 FAX: (770) 429-3146  
Principal: Jerry Locke

Principal: Dr. Ann Kingrea

**HAWAII**

**Solomon Elementary**  
Schoffield Barracks  
Wahiawa, HI 96786  
(808) 624-9955  
Principal: Bjarne Kaer

**IDAHO**

**Central Elementary School**  
102 N. Park Ave, P.O. Box 239  
Sugar City, ID 83448  
(208) 356-9351  
FAX: (208) 256-0895  
Principal: Bob Pofter

**ILLINOIS**

**Small Frye Academy**  
15446 S. Lexington Ave.  
Harvey, IL 60426  
(708) 331-5051  
FAX: (708) 331-4342  
Principal: Lisa Frye

**Benjamin Franklin Elementary**  
500 Harrison Street  
Mt. Vernon, IL 62864  
(618) 244-8085  
FAX: (618) 244-8086  
Principal: Dr. Linda Upchurch

**J. L. Buford Elementary**  
623 S. 34th St.  
(618) 244-8064  
FAX: (618) 244-8103  
Mt. Vernon, IL 62864  
Principal: Linda Hanson

**INDIANA**

**Beech Grove Central Elementary**  
1000 Main Street  
Beech Grove, IN 46107  
(317) 784-4565  
FAX: (317) 781-2930  
Principal: Clavton Collins

**Mary Bryan School**  
4355 E. Stop 11 Rd.  
Indianapolis, IN 46237  
(317) 865-2689  
FAX: (317) 865-2693  
Principal: Steve McGee

**Mary E. Castle Elementary School**  
8502 E. 82nd Street  
Indianapolis, IN 46256  
(317) 849-5672  
Principal: Cathv Dver

**Robert Frost Elementary #106**  
5301 Roxburg Rd.  
Indianapolis, IN 46226  
(317) 226-4106  
FAX: (317) 226-4551  
Principal: Dr. Sara Hindman

**Central Elementary School**  
Short Street  
Lawrenceburg, IN 47025  
(812) 537-7279  
Principal: Dan Kuebler

**Highland Heights Elementary**  
1751 E. Chester Road  
Richmond, IN 47374  
(765) 973-3408  
FAX: (765) 973-3707  
Principal: Chris Rodal

**Taylorsville Elementary**  
9711 Walnut St., Box 277  
Taylorsville, IN 47280  
(812) 526-5448  
FAX: (812) 526-2233

**Principal: Dr. John Quick****IOWA****Phillips Traditional School**

1701 Lay Street  
Des Moines, IA 50317  
(515) 265-3406

FAX: (515) 265-0475

**Principal: Linda J. Hansen****KANSAS****Minneha Core Knowledge Magnet**

701 N Webb Road  
Wichita, KS 67206  
(316) 833-2844

FAX: (316) 833-2846

**Principal: Dr. Mary Schumacher****KENTUCKY****Hopkinsville Middle School**

Koffman Drive  
Hopkinsville, KY 42240  
(502) 887-1230

FAX: (502) 887-1234

**Principal: Linda Ledford****LOUISIANA****Maggiore Elementary School**

2504 Main Ave.  
Metairie, LA 70003  
(504) 467-5609

**Principal: Debbie Milam****Creswell Elementary**

2901 Creswell Street  
Shreveport, LA 71104  
(318) 222-5935

FAX: (318) 221-1654

**Principal: Betty Lawrence****MARYLAND****Westport Elementary (K-8)\***

2401 Nevada St.  
Baltimore, MD 21230  
(410) 396-3396

**Principal: Sharon Van Dyke****Coordinator: Cathv Harris****Bainbridge Elementary**

41 Preston Drive  
Port Deposit, MD 21904

**Principal: Evelvn Jordan****Charles Carroll Barrister Elementary (K-5)\***

1327 Washington Blvd.  
Baltimore, MD 21230  
(410) 396-5973

**Principal: Billie Rinaldi**

\* denotes Baltimore Curriculum Project Schools. These schools are using Direct Instruction and Core Knowledge simultaneously.

**Arundel Elementary (K-6) \***

2400 Round Rd.  
Baltimore, MD 21225  
(410) 396-1379

**Principal: Lydia Lafferty****Coordinator: Jane Green****Calvert County Elementary**

1450 Dares Beach Road  
Prince Frederick, MD 20678  
(410) 535-7311

FAX: (410) 535-7298

**Principal: Gene Rizzo****Charles Carroll of Carrollton Elementary & Middle (K-8)\***

200 N. Central Ave.  
Baltimore, MD 21202  
(410) 396-9208

**Principal: Dr. Robert Thomas**

Coordinator: Gary Caldwell/Terry Patton

**Charlestown Elementary**  
550 Baltimore Street  
Charlestown, MD 21914  
(410) 996-62400  
FAX: (410) 996-5454  
Principal: Mike Schmook

**Collington Square Elementary (K-5)\***  
1409 N. Collington Ave.  
Baltimore, MD 21213  
(410) 396-9198  
Principal: Harold Eason  
Coordinator: Brenda Griffen

**Dickey Hill Elementary & Middle (K-8)\***  
5025 Dickey Hill Rd.  
Baltimore, MD 21207  
(410) 396-0610  
Principal: Jerome Butler  
Coordinator: Rondv Griffen

**General Wolfe Elementary (K-5)\***  
245 S. Wolfe St.  
Baltimore, MD 21231  
(410) 396-9140  
Principal: Sue Errichiello  
Coordinator: Linda Frost

**Hampstead Hill Elementary (K-5)\***  
500 S. Linwood Ave.  
Baltimore, MD 21224  
(410) 396-9146  
Principal: Sharman Rowe  
Coordinator: Kathi Sexton

**Huntingtown Elementary School**  
4345 Huntingtown Road  
Huntingtown, MD 20639  
(410) 535-7212  
FAX: (410) 535-7224  
Principal: Ramona Crowlev

**Liberty Elementary School**  
3901 Maine Avenue  
Baltimore, MD 21207  
(410) 396-0571  
FAX: (410) 396-0396  
Principal: Linda Chinnia

**Kenmore Elementary School**  
2475 Singerly Road  
Elkton, MD 21921  
(410) 996-5060

Coordinator: Dorothy Bostic

**City Springs Elementary (K-5)\***  
100 S. Caroline St.  
Baltimore, MD 21231  
(410) 396-9165  
Principal: Bernice Whelchel  
Coordinator: Anavezuka Ahidiana

**Curtis Bay Elementary**  
4301 West Bay Avenue  
Baltimore, MD 21225  
(410) 396-1397/8  
FAX: (410) 396-5263  
Principal: Marv Minter

**Federal Hill Elementary (K-5)\***  
1040 William St.  
Baltimore, MD 21230  
(410) 396-1207  
Principal: Charlotte Williams  
Coordinator: Elneeta Stewart

**Grange Elementary**  
2000 Church Road  
Baltimore, MD 21222  
(410) 887-7043  
FAX: (410) 887-7044  
Principal: Harv Belsinger

**Harford Heights Elementary**  
1919 N. Broadway  
Baltimore, MD 21213  
(410) 396-9342  
FAX: (410) 396-9060  
Principal: Goldye Sanders

**Langston Hughes Elementary (K-5)\***  
5011 Arbutus Ave.  
Baltimore, MD 21215  
(410) 396-7827  
Principal: Everett Garnett  
Coordinator: Vernadine Brooks

**Margaret Breat Elementary (K-5)\***  
100 E. 26th St.  
Baltimore, MD 21218  
(410) 396-6509  
Principal: Shuronia Jacox  
Coordinator: Marylee Vespa

**Mt. Harmony Elementary**  
900 West Mt. Harmony Road  
Owings, MD 20736  
(410) 257-1611

Principal: Dennis Catron

**North East Elementary School**  
301 Thomas Ave.  
North East, MD 21901  
(410) 996-6220  
Principal: Susan Brubaker

**Richard Henry Lee Elementary**  
400 A Street, SW  
Glen Burnie, MD 21061  
(410) 222-6435  
FAX: (410) 222-6437  
Principal: Wayne R. Bark

**Thomson Estate Elementary**  
203 E. Thomson Drive  
Elkton, MD 21921  
(510) 996-5080  
Principal: Carroll Avres

**MASSACHUSETTS**

**Morse Elementary School**  
50 Essex Street  
Cambridge, MA 02139  
(617) 349-6575  
FAX: (617) 349-6576  
Principal: James J. Coady

**South Shore Charter School**  
936 Nantasket Avenue  
Hull, MA 02045  
(617) 925-3078  
FAX: (617) 925-9818  
Principal: Timothy Anderson

**MICHIGAN**

**Island City Academy**  
103 Albers Street  
Eaton Rapids, MI 48827  
(517) 663-0111  
Principal: Tim Culver

**MINNESOTA**

**Washington Elementary**  
1200 11th Avenue N. W.  
Rochester, MN 55901  
(507) 281-6111  
Principal: Linda Stockwell

**MISSISSIPPI**

**Earl Nash Elementary School**  
P. O. Box 391, Hwy 14 West Of Hwy  
45  
Macon, MS 39341  
(601) 726-5203

FAX: (410) 257-1628  
Principal: Michael Mote

**Dr. Rayner Browne Elementary  
(K-5)\***  
1000 Montford Ave.  
Baltimore, MD 21205  
(410) 396-9239  
Principal: Doris L. Graham  
Coordinator: Danette Murrill

**Stedwick School**  
10631 Stedwick Road  
Gaithersburg, MD 20879  
(301) 840-7187  
FAX: (301) 840-7189  
Principal: Joseph Rowe

**Vienna Elementary School**  
4905 Ocean Gateway  
Vienna, MD 21869  
(410) 376-3151  
Principal: Dr. Fred Hildenbrand

**Green River Elementary School**  
60 Meridian Street  
Greenfield, MA 01301  
(413) 772-1385  
Principal: Carol Jacobs

**I.T. Montgomery Elementary**  
P.O. Box 901  
Mound Bayou, MS 38762  
(601) 741-2433  
FAX: (601) 741-2726

FAX: (601) 726-3431  
Principal: Velma Jenkins

Principal: Legora Norwood

**MISSOURI**

**Life Christian School**  
13001 Gravois  
St. Louis, MO 63127  
(314) 842-1781  
FAX: (314) 842-1784  
Principal: Pamela Davenport

**NEBRASKA**

**Millard Core Academy**  
**Elementary**  
5606 S. 147th Street  
Omaha, NE 68137  
(402) 895-8301  
FAX: (402) 895-8448  
Principal: Dr. Michael Tucker

**NEVADA**

**White Pines School**  
P O Box 150400  
East Ely, NV 89315  
(702) 289-4851  
FAX: (702) 289-3999  
Principal: Mark Shellinger

**NEW HAMPSHIRE**

**Crossroads Academy**  
95 Dartmouth College Highway  
Lyme, NH 03768  
(603) 795-3111  
FAX: (603) 795-4329  
Principal: Barclav Mackinnon, Jr

**NEW YORK**

**Mohegan School**  
2024 Mohegan Avenue  
Bronx, NY 10460  
(718) 589-8090  
FAX: (718) 589-7399  
Principal: Suzanne Mendoza

**NORTH CAROLINA**

**Holt Elementary School**  
4019 Holt School Road  
Durham, NC 27704  
(919) 560-3928  
FAX: (919) 560-3759  
Principal: Gloria Elmore

**R. N. Harris Integrated Arts/Core**  
1520 Cooper St.  
Durham, NC 27703  
(919) 560-3967  
FAX: (919) 560-3951  
Principal: Tina Hester

**OHIO**

**Crooksville Elementary**  
12400 Tunnel Hill Road  
Crooksville, OH 43731  
(614) 982-7010

**Crooksville Middle School**  
12400 Tunnel Hill Road  
Crooksville, OH 43731  
(614) 982-7010

Principal: John Toeller

**Robert F. Schultz Elementary**  
499 Applegate Lane  
Delaware, OH 43015  
(740) 363-2394  
FAX: (740) 363-4578  
Principal: Mrs. Patricia Bohmer

Principal: Bob Matthews

**OKLAHOMA**

**Arthur Elementary School**  
5100 S. Independence  
Oklahoma City, OK 73119  
(405) 685-9553  
Principal: Barbara Hess

**Bodine Elementary**  
5301 South Bryant  
Oklahoma City, OK 73129  
(405) 231-2000  
Principal: Kave D. Hicks

**Cleveland Elementary School**  
2725 N W 23rd Street  
Oklahoma City, OK 73107  
(405) 945-1150  
FAX: (405) 945-1153  
Principal: Marilyn Davis

**Gatewood Elementary**  
1821 N. W. 21st Street  
Oklahoma City, OK 73106  
(405) 524-4008  
FAX: (405) 556-5021  
Principal: Charles Burton

**Horace Mann Elementary**  
11 05 N W 45th St.  
Oklahoma City, OK 73118  
(405) 524-4885  
Principal: Maxine McNeil

**Nichols Hills Elementary**  
1301 W. Wilshire  
Oklahoma City, OK 73116  
(405) 841-3160  
FAX: (405) 841-3163  
Principal: Carol Berry

**Oakridge Elementary**  
4200 Leonhardt  
Oklahoma City, OK 73115  
(405) 231-2095  
Principal: Ann France

**Parmalee Elementary**  
6700 South Hudson  
Oklahoma City, OK 73139  
(405) 632-6773  
FAX: (405) 636-5064  
Principal: Lawrence White

**Pierce Elementary**  
2701 S. Tulsa  
Oklahoma City, OK 73108  
(405) 685-1988  
FAX: (405) 686-4033  
Principal: Dr. Wilbur House

**Quail Creek Elementary School**  
11700 Thornridge Rd.  
Oklahoma City, OK 73120  
(405) 751-3231  
Principal: Jean Hendrickson

**Sequoyah Elementary School**  
2400 N. W. 36th Street  
Oklahoma City, OK 73112  
(405) 946-2266  
FAX: (405) 945-1145  
Principal: DeAnn Davis

**Shidler Elementary**  
1415 S. Byers  
Oklahoma City, OK 73125  
(405) 632-1070  
Principal: Sharon Creager

**Spencer Elementary**  
8900 N. E. 50th  
Oklahoma City, OK 73084  
(405) 771-3246  
Principal: Linda S. Matthews

**West Nichols Hills Elementary**  
8400 N. Greystone  
Oklahoma City, OK 73120  
(405) 843-4218  
FAX: (405) 841-3124  
Principal: Roxie McBride

**Western Village Elementary**  
1508 N. W. 106th  
Oklahoma City, OK 73114

**Wheeler Elementary School**  
501 S. E. 25th Street  
Oklahoma City, OK 73129

(405) 751-1774  
Principal: Deborah Friant

**Wilson Elementary School**  
2215 N. Walker  
Oklahoma City, OK 73103  
(405) 524-1140  
Principal: Beverly Story

(405) 632-1398  
Principal: Alice Niemever

**OREGON**

**Franklin Elementary School**  
750 N W 18th Street  
Corvallis, OR 97333  
(541) 757-5747  
FAX: (541)757-5766  
Principal: Jim Schweigert

**Hamilton Creek School**  
32135 Berlin Road  
Lebanon, OR 97355  
(541) 258-6746  
FAX: (541) 258-6677  
Principal: Richard Lehnert

**PENNSYLVANIA**

**Fairfield Academy**  
R R 5 Box 220b  
Montoursville, PA 17754  
(717) 368-8231  
FAX: (717) 368-8763  
Principal: Candice Bostley

**Guion S. Bluford Elementary**  
5801 Media Street  
Philadelphia, PA 19131  
(215) 581-5502  
FAX: (215) 581-5725  
Principal: Carol Duckett

**Alexander D. Goode Elementary**  
251 North Broad Street  
York, PA 17403  
(717) 849-1314  
FAX: (717) 846-4612  
Principal: David Kochik

**Ferguson Elementary School**  
525 N. Newberry Street  
York, PA 17404  
(717) 849-1344  
FAX: (717) 846-3825  
Principal: Dennis L. Frv

**Jackson Elementary School**  
177 East Jackson Street  
York, PA 17403  
(717) 849-1223  
FAX: (717) 846-4912  
Principal: Richard E. Barlev

**Lincoln Elementary**  
559 West King Street  
York, PA 17404  
(717) 849-1305  
FAX: (717) 846-4031  
Principal: Michael E. Fogle

**McKinley Elementary**  
600 Manor Street  
York, PA 17403  
(717) 849-1312  
FAX: (717) 846-3910  
Principal: Rose Marie Woodward

**Phineas Davis Elementary School**  
300 S. Ogontz Street  
York, PA 17403  
(717) 849-1246  
FAX: (717) 849-1416  
Principal: Robert K. Bookwalter

**RHODE ISLAND**

**Carl G. Lauro Elementary**  
99 Kenyon St.  
Providence, RI 02907  
(401) 456-9391  
Principal: Dr. Kathleen Dvkstra

**Fox Point Elementary**  
455 Wickenden Street  
Providence, RI 02903  
(401) 456-9377  
FAX: (401) 453-9680  
Principal: Marv C. Brennan

**SOUTH CAROLINA**

**Laurens Academy**  
P.O. Box 425  
Laurens, SC 29360  
(864) 682-2324

Principal: Til Culbertson

**TENNESSEE****Rozelle Creative And Performing**

933 Roland  
Memphis, TN 38114  
(901) 722-4612  
FAX: (901)722-4613  
Principal: Dr. Vivian Dillihunt

**TEXAS****Coleman Elementary**

920 West Hill Drive  
Cleburne, TX 76031  
(817) 556-5675  
FAX: (817) 556-5679  
Principal: Susie Sarchet

**Converse Elementary**

102 School Street  
Converse, TX 78109  
(210) 658-6336  
FAX: (210) 658-8162  
Principal: Ted Havnes

**Everette L. De Golyer**

3453 Flair Drive  
Dallas, TX 75229  
(214) 904-1265  
FAX: (214) 904-1268  
Principal: Thelma Jones

**Rosemont Elementary**

719 N. Montclair Ave.  
Dallas, TX 75208  
(214) 944-3500  
FAX: (214) 944-3507  
Principal: Cvnthia Goodsell

**Roscoe Wilson Elementary**

2507 25th Street  
Lubbock, TX 79410  
(806) 766-0922  
FAX: (806) 766-0525  
Principal: Dr. Sam Avers

**Hawthorne Elementary School**

115 West Josephine  
San Antonio, TX 78212  
(210) 733-1321  
FAX: (210) 733-1495  
Principal: Linda Hollomon

**Schertz Elementary**

701 Curtiss Street  
Schertz, TX 78154  
(210) 945-6075  
FAX: (210) 945-6077  
Principal: Linda Bassett

**Irving Elementary**

1108 North Anglin  
Cleburne, TX 76031  
(817) 556-5656  
Principal: Dr. Lvnda Ballard

**Thompson Shelter School**

Boysville, P. O. Box 369  
Converse, TX 78109  
(210) 659-1901  
Principal: Charles Neumever

**H. C. Withers School**

3959 Northaven Road  
Dallas, TX 75229  
(214) 904-1255  
FAX: (214) 904-1263  
Principal: Ms. Rogers

**William B. Travis Elementary**

3001 McKinney Avenue  
Dallas, TX 75204  
(214) 720-73606  
FAX: (214) 720-7369  
Principal: Angelina Trevino

**Jackson - Roosevelt Elementary**

1512 Jackson  
Port Lavaca, TX 77979  
(512) 552-3317  
FAX: (512) 552-1132  
Principal: Mitzy Macaffe

**Serna Elementary**

2569 N E Loop 410  
San Antonio, TX 78217  
(210) 650-1500  
FAX: (210) 650-1508  
Principal: Shirley Hasting

**Coronado Village Elementary**

213 Amistad Blvd.  
Universal City, TX 78148  
(210) 658-6329  
FAX: (210) 659-0579  
Principal: Nancy Robinson

**UTAH**

**Carden Christian Academy**  
 3120 W. Pinebrook Road  
 Park City, UT 84098  
 (801) 649-2791  
Principal: Fran Johnson

**VIRGINIA**

**Hybla Valley Elementary**  
 3415 Lockheed Blvd.  
 Alexandria, VA 22306  
 (703) 765-4553  
 FAX: (703) 765-7314  
Principal: Dr. Pat Zissios

**Shreewood Elementary**  
 7525 Shreve Road  
 Falls Church, VA 22043  
 (703) 645-6600  
 FAX: (703) 204-9223  
Principal: Shirlev McCov

**Sudley Elementary School**  
 9744 Copeland Drive  
 Manassas, VA 22110  
 (703) 361-3444  
 FAX: (703) 361-8795  
Principal: Richard Clark, II

**Cale Elementary**  
 1757 Avon Street Extended  
 Charlottesville, VA 22902  
 (804) 293-7455  
 FAX: (804) 293-2067  
Principal: Gerald Terrell

**Forestville Elementary**  
 1085 Ufterback Store Road  
 Great Falls, VA 22066  
 (703) 430-4350  
 FAX: (703) 430-1437  
Principal: Dave Kulp

**WASHINGTON**

**Columbia Elementary**  
 Box 548  
 Burbank, WA 99323  
 (509) 547-9393  
 FAX: (509) 545-6382  
Principal: Lori Butler

**Vista Elementary**  
 1701 N. Young  
 Kennewick, WA 99336  
 (509) 734-3590  
 FAX: (509) 734-3595  
Principal: Chuck Watson

**North Hill Primary School**  
 19835 8th Avenue South  
 Seattle, WA 98148  
 (206) 433-2137  
 FAX: (206) 433-2263  
Principal: Judy Longstreth

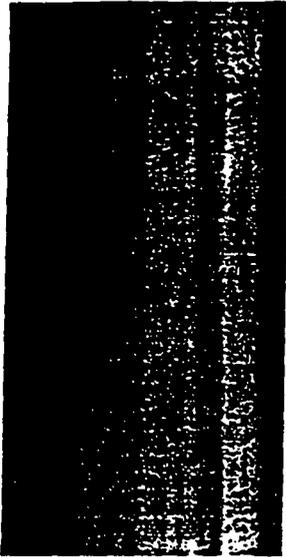
**Ridge View Elementary**  
 7001 West 13th  
 Kennewick, WA 99337  
 (509) 734-3651  
 FAX: (509) 734-3652  
Principal: Ted Mansfield

**Washington Elementary**  
 105 W. 21st Avenue  
 Kennewick, WA 99337  
 (509) 736-2160  
Principal: Dave Montague

**WISCONSIN**

**Fitchburg Core Knowledge**  
 Savanna Oaks School/5890 Lacy  
 Road  
 Fitchburg, WI 53711  
 (608) 278-0755  
Principal: Chris Uelmen

**St. John's Lutheran Academy**  
 403 W. Foster Street  
 Port Washington, WI 53074-2111  
 (414) 284-2131  
 FAX: (414) 284-3935  
Principal: Rev. John E. Klieve



**Peace Lutheran Academy**  
W240 N6145 Maple Avenue  
P. O. Box 123  
Sussex, WI 53089  
(414) 247-3200  
Principal: Rev. Peter C. Bender

**WYOMING**

**Fort Caspar Academy**  
2000 Casper Street  
Casper, WY 82604  
(307) 77-4531  
FAX: (307) 577-4534  
Principal: Norm Carrell

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### Core Knowledge (CK)

### Publications/Resources, For More Information

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### Publications/Resources

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"Core Knowledge schools take root across the country," (Winter 1996-97). *American Educator*.

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### For more information

Core Knowledge Foundation, 2012-B Morton Drive, Charlottesville, VA 22901. Phone: 800/238-3233. Fax: 804/977-0021. E-mail: [coreknow@www.comet.net](mailto:coreknow@www.comet.net) Internet: <http://www.coreknowledge.org>

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<sup>6</sup> See footnote 1.

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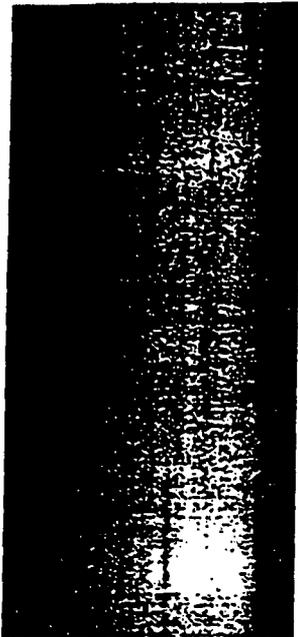
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## Note on Program Selection Methods

The purpose of this series of program profiles is to provide background information about research-based programs that, when properly implemented, show promise for raising student achievement significantly. For this effort, we solicited program recommendations from experts in the field and reviewed the published records of the National Diffusion Network, materials found through the library of the Office of Educational Research and Improvement, and recent research reviews. We then attempted to obtain descriptive information and copies of all published evaluations—including study designs, field test data, and replication histories—from the developers of all programs, thus identified.

All available materials were then reviewed against the following criteria:

When properly implemented, the program helps students acquire the skills and/or knowledge they need to successfully perform to high academic standards.

The program has been effective in raising academic achievement levels, especially for "at risk" students, based on *independent* evaluations.

The program has been effectively implemented in multiple sites beyond the original pilot school(s).

Professional development, materials and ongoing implementation support are available for the program, either through the program's developer, independent contractors, or dissemination networks established by schools already in the program.

The standards by which program effectiveness was gauged are as follow:

Evaluations demonstrate that the program can help produce educationally significant student achievement gains, as measured in effect sizes. An effect size is a standard means of expressing achievement gains and losses across studies, showing differences between experimental and control groups in terms of standard deviation. An effect size of +1.00 indicates that the experimental group outperformed the control group by one full standard deviation. To give a sense of scale, this would be equivalent to an increase of 100 points on the SAT scale, two stanines, 21 NCEs (normal curve equivalent ranks) or 15 points of IQ (Fashola and Slavin, 1996)—enough to move a student from the 20th percentile (the normal level of performance for children in poverty) to above the 50th percentile (in range with mainstream America). Because of differences among study designs and assessments, this can only be considered a "rough" measure of comparison. In general, an effect size of +.25 or more is considered to be educationally significant.

Ideally, evaluations include findings from matched comparison or

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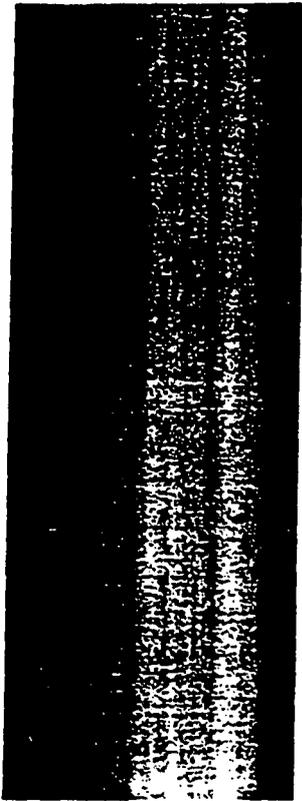
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large randomly assigned control group studies--or, failing this, compare the standardized test gains of program students to appropriate state- or nationally normed samples.

Evaluations include data from third-party researchers using independently developed assessments, not only from program developers using program-designed tests.

Evaluations include and/or compare data from multiple replication sites.

For programs in each category--in this case, schoolwide academic programs--profiles were prepared only for those that came closest to meeting the above criteria. It should be noted, however, that there may be additional programs that qualify for inclusion but for which we were unable to locate adequate data; we hope to be able to include additional profiles for any such programs in future editions. It should be noted, as well, that in an effort to present a broader selection of programs, a few were included that did not quite meet the above criteria. Where this is the case, the preliminary nature of the data has been noted in the profile text.

Finally, both as a courtesy and as a check for accuracy, a draft of each program profile was sent to the appropriate publisher or developer for review. Any new information provided to us during this review process has been incorporated.

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BROOKLYN BUREAU OF COMMUNITY SERVICE

GARY KLINSKY CHILDREN CENTERS

PROGRAM EVALUATION

THE BROOKLYN BUREAU OF COMMUNITY SERVICE  
GARY KLINSKY CHILDREN CENTERS  
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JIM HOOD, ASSISTANT EXECUTIVE DIRECTOR

**BROOKLYN BUREAU OF COMMUNITY SERVICE**  
**GARY KLINSKY CHILDREN'S CENTER**  
**PROGRAM EVALUATION - P.S. 149**  
**1996-1997**

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**INTRODUCTION**

In July 1997, the Gary Klinsky Children's Center completed its fourth year of operation at P.S. 149 in East New York. Established in the belief that a public school education of superior quality should be guaranteed for every child who seeks one, the mission of the Gary Klinsky Children's Center is to provide a supportive, developmentally appropriate and enjoyable environment, with opportunities for children to improve reading and academic skills and to develop an enhanced sense of self-esteem.

The strategy of the Gary Klinsky Children's Center is to establish "clubhouses" in public school buildings, which operate from 2:30 until 6:30 p.m. on days when school is in session. The supplemental education hours provided to children by the Center increases the learning day by over 50% – the equivalent of over four full years of extra classroom hours for children who attend steadily grades K through six. Such extra personalized instruction for children who voluntarily seek it, applied consistently over a period of years, will produce demonstrable and life-long improvements in their academic ability, enjoyment of learning and self-esteem.

Building on the success of the first three years of the Gary Klinsky Children's Center, the program at P.S. 149 was, this year, expanded to serve 80 children in grades K through six. Of these children, 29 were enrolled during the previous school year. Children are assigned to one of four groups each consisting of up to twenty children, according to grade level. Each group is staffed with a teacher and a teacher's aide, enabling a staff-student ratio of 1:10. The goals of the program are achieved through the implementation of thematic curricula, which combine rigorous academic studies with art, dance, poetry and music in a creative and enjoyable manner. Field trips and special events are organized to supplement classroom activities. The program is strengthened through active parental involvement and

guidance from an Advisory Committee comprised of parents, community leaders and school administrators.

The Gary Klinsky Children's Centers are supported entirely by private funds.

## YEAR-FOUR EVALUATION

September 1996 to July 1997

### SUMMARY OF MAJOR FINDINGS

- The average score of Klinsky participants on standardized reading tests administered in May 1997 was 116% higher than the average score for the P.S. 149 general school population and 20% higher than the cumulative average score for all public schools in District 19.
- The average score on standardized reading tests for children in the Klinsky program for two or more years was 141% higher than the average score for the P.S. 149 general school population and 34% higher than the cumulative average score for all public schools in District 19.
- The average score on standardized reading tests for children in the program for three years was 171% higher than the average score for the P.S. 149 general school population and 50% higher than the cumulative average score for all public schools in District 19.
- 85% of all Klinsky children and 90% of children in the program for two or more years scored above the school average on standardized reading tests administered in May 1997.
- Children in the program for two or more years increased their reading scores in May 1997 by 9% over their scores in May 1996. Children in the program for three full

years increased their reading scores in May 1997 by 26% over their scores in May 1995.

- The average score of Klinsky participants on standardized math tests administered in April 1997 was 35% higher than the average score of the P.S. 149 general school population. There was no statistical difference between Klinsky scores and the average cumulative score for all public schools in District 19.
- The average score for children in the Klinsky program for two or more years on standardized math tests administered in April 1997 was 38% higher than the average score for the P.S. 149 general school population and slightly higher (2%) than the cumulative average for all public school in District 19.
- The average score on standardized math tests of Klinsky children in the program for three full years was 80% higher than the average score for the P.S. 149 general school population and 32% higher than the average cumulative score for all public schools in District 19.
- 85% of Klinsky children scored above the school average on standardized math tests administered in April 1997.

PART I  
PROGRAM DESIGN

Enrollment and Grouping

There were no changes in the program's enrollment policy. Participation in the Gary Klinsky Children's Center was open to all children in P.S. 149 with priority given to children enrolled in the previous years(s) and to children of parents who are employed or in a school, training or rehabilitation program and in need of after school care for their children.

Twenty nine children who attended the program in 1995-96 re-enrolled in the program for the 1996-1997 school year. Of this number, one child was in the program since 1993-1994 school year; 15 children were enrolled since the 1994-95 school year and; 13 children since 1995-96 school year. Fifty-nine new students were referred by teachers and parents.

To enroll their children parents were required to meet with program staff and agree to program policies and procedures: pick up their children before 6:00p.m. every day, designate two persons who are authorized to pick up their children on their behalf, attend parent council meetings, and participate in program activities to the extent possible.

As a result of the proven success of the program and to accommodate more children the program was expanded in the 1996-1997 school year to serve 80 children.

Children were assigned to one of four groups according to grade level. Group one consisted of 14 kindergarten children and seven first graders; Group two consisted of one first grader, eighteen second grade children and three children in the third grade; Group Three was comprised of eight third grade students and nine children in the fourth grade, and; thirteen children in the fifth grade and 7 in the sixth grade were assigned to Group IV.

### Staffing and Curriculum

The staffing pattern for the expanded program consisted of a program director, four teachers and four teacher's assistants. Substitute teachers and assistants were available for fill-ins as necessary.

The program director left the agency in January 1997 and the director of the East New York Family Center assumed the responsibility for managing the program for the remainder of the school year.

Staff continued the use of the integrated thematic curriculum organized around the five general areas of 1) language arts and library; 2) health, science and discovery; 3) social studies and geography; 4) creative arts and crafts, and; 5) music. Learning activities in each of the curricular areas were integrated around a common theme with emphasis focused on the advancement of reading and math skills. A part of each day was set aside for homework completion and special projects and activities related to the current integrating theme. An average of two special activities were organized each month.

### Parent Participation

Parent participation helps ensure that the goals of the Gary Klinsky Children's Center are reinforced in the home and the community. Parents participate by attending Parent Council meetings, volunteering in the classroom, and helping to plan, organize, and supervise special events and field trips. Parents also interact with staff when they pick up their children at the end of the day. The level of parent participation increased over last year's level, as more parents attended special events and volunteered in the classroom. Increased parent participation was partially the result of a new practice to designate one day each month as Parent Involvement Day.

PART II  
OUTCOME EVALUATION

The same evaluation plan that was used in previous years was used in the 1996-97 evaluation. Progress was measured in the areas of reading and vocabulary skills; homework skills; cognitive skills, school attendance; enjoyment of learning; active learning, and; self-esteem.

The outcome evaluation consisted of the following major activities:

1. Comparisons on standardized reading and math tests to measure individual and group progress.
  - Comparisons of Klinsky participant's scores with cumulative average scores of the P.S. 149 general school population and all public schools in District 19.
  - Comparison of 1997 scores on standardized tests with scores in 1996 and 1995 for Klinsky children in the program for two or more years.
2. Analysis of progress of Klinsky Children in reading and math through comparison of scores on pre-test and re-tests administered in the program.
3. Comparison of the Center's attendance rate with the attendance rate of P.S. 149.
4. Analysis of responses from teachers, parents and children on questionnaires distributed at the end of the 1996-97 school year.

## SUMMARY OF FINDINGS

### A. COMPARISON OF READING AND MATH SCORES ON STANDARDIZED TESTS.

#### 1. Reading

Standardized reading tests are administered in May of each year to all public school children in grades 3-6. In May 1997, the average score on standardized tests taken by children in the Gary Klinsky program was 38.9:

- 116% higher than the average score for P.S. 149 (18).
- 20% higher than the average cumulative score for District 19 (32.5).
- 12% higher than the Klinsky average in May 1996.

The average score for children who have been in the Klinsky program for two or more years was (43.4) 141% higher than the average score for the P.S. 149 general school population and 34% higher than the cumulative average for all public schools in District 19. Children who were in the program for three full years scored (48.8) 171% higher than the average score for the P.S. 149 general school population and 50% higher than the cumulative District average. Eighty-five % (85%) of all Klinsky children and 90% of those in the program for two or more years scored above the school average. Children in the Klinsky program for two or more years increased their scores in May 1997 by 9% over their scores in May 1996. Children in the program for three full years increased their scores in May 1997 by 26% over their scores in May 1995.

#### GRADE 3 (11 students)

The average reading score for third grade children in the Klinsky program was 33.7, 87% higher than the cumulative average for the school and 4% higher than the cumulative average for the district. Two children scored at or above grade level. Eight children scored above the school average and five scored above the district average.

**GRADE 4 (9 students)**

The average reading score for fourth grade children in the Klinsky program was 51.8, 188% higher than the school average and 59% higher than the district average. Five children who were in the program for two or more years, increased their scores in May 1997 by 24% over their scores in May 1996.

The average score for all Klinsky children in the fourth grade was 37% higher in 1997 than in 1996. All Klinsky children in the fourth grade scored above the school average and 3 children scored at or above grade level.

**GRADE 5 (13 students)**

The average score on reading tests for Klinsky 5th graders was 44, 144% higher than the school average and 64% higher than the cumulative district average. Children in the program for two or more years increased their scores in May 1997 by 2% over their scores in May 1996.

The average cumulative score for all Klinsky children in the fifth grade was 13% lower than their average score in May 1996. Twelve of thirteen fifth grade children in the Klinsky program scored above the school average, ten scored above the district average, and five scored at or above grade level.

**GRADE 6 (7 students)**

The average reading score for Klinsky children in the sixth grade was 31.8, 77% higher than the school average and 2% lower than the district average. Children in the program for two or more years increased their scores in May 1997 by 5% over their scores in May 96. For all Klinsky children in the sixth grade there was no change in the average cumulative score from May 1996 to May 1997. Three sixth graders scored above the school average and one scored above the district average. No sixth graders scored at or above grade level.

**Note:** Data was not available to compare scores of Klinsky children with those of the P.S. 149 general school population on a grade-by-grade basis.

**COMPARISON OF CUMULATIVE SCORES  
ON STANDARDIZED READING TESTS**

PROGRAM	SCORE	GKCC VARIANCE
GKCC (ALL STUDENTS)	38.9	
P.S. 149	18	+116%
DISTRICT 19 PUBLIC SCHOOLS	32.5	+ 20%

**AVERAGE KLINSKY SCORES BY GRADE LEVEL**

GRADE	SCORE 5/97	SCORE 5/96	% CHANGE
3	33.7	NA	NA
4	51.8	37.8	+37%
5	44	50.5	-13%
6	31.8	29.2	+ 9%

**AVERAGE SCORE BY GRADE LEVEL IN KLINSKY  
PROGRAM FOR 2 OR MORE YEARS**

GRADE	SCORE 5/97	SCORE 5/96	% OF CHANGE
3	43.4	NA	NA
4	42	34	+24%
5	46.9	45.7	+ 2%
6	37.7	36.0	+ 5%

**% OF STUDENTS READING  
AT OR ABOVE GRADE LEVEL**

<b>GKCC - ALL STUDENTS</b>	<b>27%</b>
<b>GKCC - 2 YEARS</b>	<b>40%</b>
<b>GKCC - 3 YEARS</b>	<b>23%</b>
<b>P.S. 149</b>	
<b>DISTRICT 19</b>	

**2. Math**

Standardized math tests are administered to all public school children in grades 3-6 each year during the month of April. In April 1997, the average score on standardized math tests taken by children in the Klinsky program was 44.6:

- 35% higher than the average score for P.S. 149 (33).
- No statistical difference when compared to district average (44.9)
- 18% higher than the Klinsky average in April 1996.

The average score for children in the program for two or more years was 45.5, 38% higher than the school average and 2% higher than the district average. The average math score of children who were in the program for 3 full years was 80% higher than the school average and 32% higher than the district average. 85% of all Klinsky children and 56% children in the program for two or more years scored above the school average. Children in the program for two or more years increased their scores in April 1997 by 2% over their scores in April 1996. There was no statistical difference between April 96 and April 97 scores for children in the program for 3 full years.

**GRADE 3** (11 students)

The average math score on standardized tests for third grade children in the Klinsky program was 47.8, 45% higher than the average for the school and 6.4% higher than the district average. Six children scored at or above grade level; 9 children scored above the school average, and; 7 children scored above the district average.

**GRADE 4** (9 students)

The average math score for Klinsky 4th graders was 51.3, 55% higher than the school average and 14% higher than the district average. Five children in the program for two or more years increased their scores in May 1997 by 71% over their scores in May 1996.

The average score for all Klinsky children in the 4th grade was 78% higher in 1997 than in 1996. Four children scored above the school average, and 6 children scored at or above grade level.

**GRADE 5** (13 students)

The average math score of Klinsky 5th graders was 47.8, 45% higher than the school average and 6% higher than the district average score. Children in the program for two or more years decreased their scores by 14% compared to their scores in April 1996.

The average score for all Klinsky children was 16% lower than their average score in April 1996. Nine of thirteen fifth graders scored above the school average, eight scored above the district average, and four scored at or above grade level.

**GRADE 6** (7 students)

The average math score for 6th graders was 36.2, 10% higher than the school average, and 24% lower than the district average. Children in the program for two or more years decreased their scores in April 1997 by 9% compared to their scores in April 1996. For all Klinsky sixth graders, there was a 10% decrease in the April 1997 compared to the

Two sixth graders scored above the school average and one scored above the district average. One child scored at or above grade level.

**COMPARISON OF CUMULATIVE SCORES  
ON  
STANDARDIZED MATH TESTS**

PROGRAM	AGGREGATE SCORE	GKCC VARIANCE
GKCC	44.6	NA
P.S. 149	33	+35%
DISTRICT 19	44.9	0

**B. ANALYSIS OF PROGRESS IN READING AND MATH AS MEASURED ON PRE-TESTS AND RE-TESTS ADMINISTERED BY THE PROGRAM**

Test to measure individual progress in reading and math have been developed by the Gary Klinsky Children's Center staff. Pre-tests are administered in October and Re-Tests are administered in June to chart student's progress. The highest possible score is 100.

**1. Reading**

Sixty-five of eighty children in the program completed both the pre-test and the re-test during the 1996-97 school year. The average score increased by 21% from 58 on the pre-test to 70.1 on the re-tests.

The following chart presents a breakdown by grade level and shows the percentage of change for each grade.

**GKCC PRE-TEST/RE-TEST  
READING SCORES**

GRADE	PRE-TEST SCORE	RE-TEST SCORE	% CHANGE
K	44.3	76.6	+73%
1	71.5	90.8	+27%
2	66.3	73.7	+11%
3	56.4	58.4	+ 4%
4	46.1	50.5	+10%
5	65.6	71.3	+ 9%
6	55.5	69.5	+25%

2. Math

Sixty-five children completed both the pre-test and re-tests in math. Their average score increased by 40% from 40% to 62.8. The following chart provides a breakdown of math scores by grade level and shows the percentage of change for each grade.

**GKCC PRE-TESTS/RE-TESTS  
MATH SCORES**

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GRADE	PRE-TEST SCORE	RE-TESTS SCORE	% CHANGE
K	42.5	64.4	+ 52%
1	42.8	89.6	+110%
2	76.5	81.7	+ 7%
3	46.8	50.2	+ 7%
4	48.3	57	+ 18%
5	35.5	34	- 4%
6	21.5	62.5	190%

**C. COMPARISON OF CENTER'S ATTENDANCE WITH THE P.S. 149 AND DISTRICT 19 ATTENDANCE RATES**

The cumulative attendance rate of Gary Klinsky Children's Center participants was 93.4 for the 1996-97 school year, 6.1 percentage points higher than the school average of 87.3, and 4.4 percentage points higher than the district average of 89. The 1996-97 attendance rate increased over the 1995-96 rate by 1.5 percentage point and is the highest rate since the program opened in the 1993-94 school year.

The following chart is a grade-by-grade comparison of attendance levels in the Klinsky program for the four years since the program has been operating.

**GRADE-BY-GRADE COMPARISON OF  
GKCC ATTENDANCE LEVELS  
1993-94 TO 1996-97**

GRADE	93-94	94-95	95-96	96-97
K	NA	NA	NA	89.9%
1	86.0%	93.0%	87.8%	94.6%
2	93.5%	89.0%	92.5%	91.7%
3	89.4%	92.3%	92.9%	94%
4	91.5%	93.5%	91.6%	94.6%
5	91.2%	93.0%	91.4%	94.7%
6	90.1%	94.3%	95.4%	94.6%
<b>TOTAL</b>	<b>90.3%</b>	<b>92.5%</b>	<b>91.9%</b>	<b>93.4%</b>

**D. ANALYSIS OF RESPONSES ON QUESTIONNAIRES**

Teachers at P.S. 149, parents of participating children, and children in the program were asked to complete questionnaires to assess the effectiveness of the Gary Klinsky Children's Center program. Surveys were administered in June 1997 using the same instrument that has been used in previous years.

**1. TEACHER'S QUESTIONNAIRE**

Four classroom teachers during the regular school day with a total of 17 children who participate in the Gary Klinsky after school program completed and returned the teacher's survey. Teachers were asked if they were satisfied with the way children are chosen for enrollment, two said yes, one responded that she was not sure, and one said "no." The teacher who responded negatively said that children should be selected "based on academic need and not behavioral problems." No other suggestions or recommendations were offered regarding enrollment.

All four respondents stated that they feel the Gary Klinsky Children's Center is good for the school because children are exposed to activities that classroom teachers do not have time to offer, it helps children with their homework and teaches new skills. One teacher suggested that the program should be shortened from three to two hours a day because it makes the school day very long for the students. Another teacher suggested that there should be better communication between classroom teachers and after school teachers.

When asked if they felt the program should be expanded to serve more children, three teachers said yes and one misinterpreted the question. One teacher recommend that there should be at least one extra class for each grade, and another teacher commented that more of her class could benefit from being involved in such a program.

Two teachers said they feel the program should run during the summer months because many children need extra help in keeping up with their academic skills, particularly in reading and math. One teacher commented that a summer program would take students away from Board of Education programs.

Two teachers reported that they have received feedback from parents of children in the Gary Klinsky program but did not comment on the nature of the feedback. Three teachers reported that they have received various comments from students enrolled in the Gary Klinsky program reporting that they like and enjoy the experience.

Three of the four teachers responded to a question asking if there has been any effect on the classroom or the school by the presence of the Gary Klinsky Children's Center. All three teachers responded that the program has a positive impact because it "really helps the students," offers new experiences, and teaches new skills.

Teachers were asked to rate children in eleven behavioral and academic categories using a scale of -3 (negative change) to +3 (positive change). A summary of their cumulative ratings appears below.

**POSITIVE/NEGATIVE CHANGES IN STUDENTS  
AS RANKED BY TEACHERS**

CATEGORY	NEGATIVE			NO CHANGE		POSITIVE		CUMULATIVE RATINGS
	-3	-2	-1	0	+1	+2	+3	AVERAGE
1. Behavior					4			1
2. Social Skills					3	1		1.25
3. Feeling about self					2	3		1.6
4. Feeling about school mates					3	1		1.25
5. Feeling about teacher				1	2		1	1.25
6. Feeling about school work				1		1		1
7. Reading skills				1	1	2		.75
8. Verbal skills					2	2		1.5
9. Math skills			1		1	2		.50
10. Science Skills				1	11		1	1.25
11. Homework			1	1	11			.25

\* ONLY A VERY SMALL PERCENTAGE OF TEACHERS RESPONDED TO THE SURVEY. THE RESPONSES ABOVE REFLECT RATINGS FOR ONLY 21% OF CHILDREN ENROLLED IN THE GARY KLINSKY CHILDREN'S CENTER

## 2. PARENTS QUESTIONNAIRE

Questionnaires were distributed to parents during the last two weeks in June as they picked up their children at dismissal.

Fifteen parents representing 26 children responded to the parent questionnaire. When asked to identify their expectations of the program. The majority (75%) of parents listed improvement in school, progress in reading and math and help with homework. Other significant responses included help with child development and exposure of children to different cultures. All fifteen parents reported that their expectations are being met and described the program as "wonderful," "very good," and "helpful."

Fourteen parents reported that they have noticed changes in their children's hobbies and interests, citing such behaviors such as getting along better with other children, learning

new skills, developing new interests and showing greater interest in school as notable changes. Several parents commented that their children have developed new interests in dance and music.

When asked to identify their responsibilities as a parent of a child enrolled in the program, most parents described their role as supportive, listing encouragement of children, respect for and consultation with teachers and checking homework as their major responsibilities. Only 20% of parents said they were involved in the program, although an additional 60% said that they would like to be more involved. Most of the latter said that their work is the major factor preventing participation. Approximately 30% of parents stated that they would become more involved if there were more trips and special events such as shows and field trips.

In response to a question asking how their children spent the afternoon before their enrollment in the Gary Klinsky Children's Center, parents cited playing, watching television and staying at home as major activities. One parent reported that her child was enrolled in a day care program and another said she is very grateful for the program because her child was lazy prior to her participation and as a result of the program has become productive and is doing better in school.

Parents were asked to note positive and negative changes in their children, since attending the Gary Klinsky Children's Center using a scale from -3 to +3 in eight behavioral and academic categories. A summary of their cumulative ratings appears below.

BEHAVIOR	NEGATIVE		NO CHANGE		POSITIVE		CUMULATIVE RATINGS	
	-3	-2	-1	0	+1	+2	+3	AVERAGE
1. Attitude toward going to school				1		5	9	2.5
2. Attitude toward doing homework				1	1	6	7	2.3
3. Attitude towards teachers				1		6	8	2.4
4. Attitude towards peers				1	3	6	5	2.
5. Attitude towards home life				1	1	3	8	2.3
6. Attitude towards siblings				2	1	6	6	2.1
7. Reading				2	3	5	5	1.9
8. Math ability				1	3	5	6	2.1

Attitudes towards going to school and towards teachers received the highest overall ratings.

### 3. STUDENTS QUESTIONNAIRE

Forty-six students responded to a questionnaire that was distributed to program participants at the end of the school year. Children in grades K-2 received assistance from their teachers in interpreting questions and recording their responses. Students were asked to respond to 10 questions eliciting feedback regarding their feelings about school and their participation in the Gary Klinsky program.

Ninety-one percent of students responded that they like coming to school and attending the Gary Klinsky Children's Center; eight percent said they do not like coming to school or attending the Gary Klinsky Children's Center, and; the remaining one percent said they sometimes like coming to school and attending the Center.

Students were given eight activities from which to choose their favorites. The majority of students selected reading and art. These choices were followed by music, homework, science, dancing, math and poetry, in the order stated. Other choices mentioned included games, computer and writing a newsletter.

Ninety-six percent (96%) of students said that Gary Klinsky teachers were helpful, citing that they are nice, kind and have a good sense of humor. The majority of these respondents said their teachers were especially helpful with homework.

When asked to identify the best thing about the Gary Klinsky Children's Center, students named a variety of activities, many of which were related to having fun and participating with friends in group activities. Children also said they like their teachers and enjoy reading and books.

Student responses to a question asking if there is anything about the program they don't like were extremely varied with no single response mentioned by more than two children. (Two children commented that they sit too much and there are too few physical activities, and two others said the program should end earlier in June).

When asked how they would change the program, the most frequently mentioned responses were related to the addition of more physical activities and more opportunities to go outside.

An overwhelming majority of students said that the purpose of the program is to provide help with their homework. The second most frequent response was to provide care while their parents are at work.

Ninety-three percent of children (93%) said that the program has helped them with their reading, and the following comments were offered:

"I read the paper better"

"I know more and longer words"

"I can read better and know a lot more words"

"I am a better speller now"

"I can do my homework better"

Eighty-three percent (83%) of children said the program has helped them in their ability to do math. Several students said "math is easy now,"

Several other commented that math has become "fun", and one child said they can now play Uno better.

## SECTION II

### P. S. 174

#### Introduction

Tony's Place, a second Gary Klinsky Children's Center, opened at P.S. 174 in late November 1995. Modeled after the highly successful program at P.S. 149, Tony's Place initially served 40 children in grades Pre-K through two. Because Pre-K children have difficulty with long days and adapting to the after school format, the program design was modified in September 1996 to serve children in grades K through three. The program continued to serve 40 children.

The program design (structure, curriculum, staffing and parent participation), with a few minor exceptions, is the same for the P.S. 174 program as it is for the program at P.S. 149.

This evaluation addresses progress in the P.S. 174 program from January 1996 through June 1997, using the same evaluation design that was used in the evaluation of the program at P.S. 149.

#### Major Findings

##### Performance on Standardized Tests

Standardized tests in reading and math are administered to all children in grades 3-8 attending New York City public and middle schools.

In the Spring of 1997, ten third grade children in the Gary Klinsky Children's program at P.S. 174 took the tests in reading and math. Because this was the first time they took the tests, comparison of scores to chart progress was not possible.

The cumulative average score of the Klinsky children on the standardized reading test administered in April 1997 was 39.2, 18% higher than the average score for third graders in the general school population (33.2).

The cumulative average score of Klinsky third graders on the standardized math test was 23.1, 103% lower than the average score for third grade students in the general school population (46.7).

Comparison of Scores on Pre-tests and Post-tests  
Administered by the Program

Kindergarten (2 children)

Only two children in the kindergarten were enrolled in the program. There is no data on pre-tests and post-tests for these children.

Grade One (18 children)

Eighteen first grade children were enrolled in the Gary Klinsky Children's Center. Of these, seven enrolled in the program in January 1996. For these students, scores on the pre-test taken in January 1996 were compared with scores on the post-test taken in June 1997.

The average reading score on the pre-test was 48.6. The average score on the post-test increased to 85.6, an improvement rate of 76%.

The average math score on the pre-test was 42. The average score on the post-test increased to 78.1, and improvement rate of 86%.

Eleven first grade children enrolled in the program in September 1996. For these children, scores on the pre-test taken in October 1996 were compared with scores on a post-test taken in June 1997.

The average reading score on the pre-test was 70.7. The average score on the post-test was 81.7, an improvement rate of 16%.

The average math score on the pre-test was 38.4. The average score on the post-test increased to 71.9, an improvement rate of 87%.

### Grade Two (10 children)

Seven of ten children in the second grade enrolled in the Klinsky program in January 1996. Their average cumulative score on a pre-test taken in January 1996 was 82.7. On the post test, taken in June 1997, the average increased to 85.3, an improvement rate of 3%.

The average math score on the pre-test was 70.5. The average score on the post-test increased to 85.3, an improvement rate of 30%.

Three second grade children enrolled in the Klinsky program in September 1996. For these children scores on a pre-test taken in October 1996 were compared with scores on a post-test taken in June 1997.

The average reading score on the pre-test was 63. The average score on the post-test increased to 79, an improvement rate of 25%.

The average math score on the pre-test was 75.5. The average score on the post-test increased to 90, an improvement rate of 19%.

### Grade Three (10 students)

Six of ten third grade children enrolled in the Klinsky program in January 1996. For these children, scores on a pre-test taken in January 1996 were compared with scores on a post-test taken in June 1997.

The average reading score on the pre-test was 43.5. The average score on the post-test increased to 56.1, an improvement rate of 29%.

The average math score on the pre-test was 86.1. The average on the post-test dropped to 58, a decrease of 33%.

Four children in the third grade enrolled in the Klinsky program in September 1996. Their average reading score on a pre-test taken in October 1996 was 28. The average on the post-test taken in June 1997 was 33, an improvement rate of 18%.

The average math score on the pre-test was 25. The average score on the post-test increased to 33.5, an improvement rate of 34%.

### School Attendance

There is no 1996-97 attendance data for Klinsky children enrolled in kindergarten, grade one and grade two. The average attendance rate for children in the third grade was 91.6, 4% higher than the average attendance rate (88.5) for all third grade children who attended P.S. 174 in 1996-97.

### Analysis of Responses on Questionnaires

#### TEACHER'S QUESTIONNAIRE

Eight regular classroom teachers representing 26 different students responded to the Teacher's Questionnaire.

Seven of eight responded that they are satisfied with the way children are chosen to participate in the program. The teacher who was not satisfied stated that children should be chosen on the basis of their need for additional academic help. Other suggestions/concerns expressed by teachers related to the capacity of the program and the need to expand to accommodate more children.

When asked if they felt the Gary Klinsky program is good for the school, all eight teachers responded favorably. They commented that "pupils are more motivated," the program helps families in which the parents have to go to work, the program provides extra

academic help for students, and that it is "nice to see children get along with one another and help each other out."

All eight teachers said they feel the program should be expanded because there are so many children who need the services and that it is a positive experience that is "good for everyone involved." Teachers also suggested that the program should be offered to children in the upper grades. One teacher described the Klinsky environment as a "rich educational environment in a relaxing atmosphere."

Seven of eight teachers said the program should be offered during the summer months, but several qualified their responses by suggesting that the summer program should be more relaxed, feature fewer academic and more recreational activities.

Five teachers said that parents have provided them with feedback on the program, stating that parents are pleased with the program, particularly since their children appear to be more interested in school.

Six teachers said that children have provided positive feedback, reporting that they like the center, "the beautiful things it has," and the opportunity to play with their friends.

Seven teachers said that the program has had a positive impact on the classroom and the school, noting particularly that the level of motivation seems to be higher.

Teachers were asked to note positive and negative changes in children since attending the Klinsky Center, using a scale from -3 (most negative) to +3 (most positive) in eleven behavioral and academic categories. A summary of their findings appears below:

Behavior	+1
Social Skills	+1.25
Feelings About Self	+1.5
Feelings about School Mates	+1.5
Feelings about Teachers	+1.6
Feelings about school work	+1.6
Reading skills	+1.4
Verbal skills	+1.6
Mathematics	+1.25
Science	+1.1
Homework	+1.2

#### Parents Questionnaire

Twenty-one parents representing 26 children responded to the Parent Questionnaire.

When asked to identify their expectations of the program, the majority of parents said they expect the program to help children to improve their academic skills and to build self-confidence. All parents responding to the survey said that their expectations are being met

Parents were asked if they have noticed changes in their children's hobbies or interests since enrollment in the program. A majority of parents reported that their children like to read more and are doing better in school. Several parents said that their children have greatly expanded their interests, and several others commented that their children have developed new interests in music and singing.

Only three parents said they are involved in the program, but all of them said they would like to become more involved if there were time. Many parents are working, but said they would participate more if there were more special events, field trips and similar activities.

When asked to describe their responsibilities as a parent of a child enrolled in the

Klinsky Program, parents commented that their role should be supportive, helping to reinforce the good work of teachers, ensuring that their children show up for school, and assisting their children with homework.

The majority of parents said that prior to enrollment in the Klinsky Center their children spent the afternoon watching television, or playing. Only two parents identified constructive activities: reading and baby sitting.

Parents were asked to chart positive and negative changes in children since their enrollment in the program, using the same scale that was used on the Teacher's Questionnaire. A summary of their responses follows:

Category	Average Rating
Attitude toward going to school	+2.3
Attitude towards doing homework	+2.3
Attitude towards teachers	+2.6
Attitude towards peers	+2.4
Attitude towards home life	+2.6
Attitude towards siblings	+2.4
Reading ability	+2.4
Reading on his/her own	+2.4
Math ability	+2.3

#### CHILDREN'S QUESTIONNAIRE

Twenty-two children responded to the questionnaire distributed at the end of the school year. Children in the lower grades received assistance from teachers in interpreting and responding to the questions.

All twenty-two children said they like coming to school and attending the Gary Klinsky Children's Center.

Children were given eight activities from which to choose their favorites. The majority of students (81%) selected reading. Math (77%) and homework (68%) also received high ratings, followed by art (63%), music (54%), and dancing (45%). Three children selected science and only two selected poetry. Outside activities and writing were listed in the "other" category.

In response to a question asking them to list other activities they would like the program to have, children most frequently listed more trips and outside activities and more sports, recreation and gym. Foreign languages, computers, and more plays and shows also made the list.

All twenty-two children said they found the staff to be helpful, citing that Klinsky staff help with homework and reading and provide a sense of security.

Reading was most frequently cited as the "best thing about the program," followed by art, snacks, dancing, cooking, playing and projects, in the order stated.

Nineteen children said they were satisfied with the program and there was nothing they didn't like. Two children said there was too much emphasis on homework and one child said she didn't like the fat crayons. Only three children offered suggested changes for the program. Two suggested that there should be a homework-free day, and one said that more important people should be invited to speak at the Center.

A clear majority of students stated that the purpose of the program is to help with home work. Several children said the program is supposed to help them with their problems.

All twenty-two children said the program has help them with their ability to read. Children commented that they are reading and writing better and that they know more words. All children also reported that the program has helped them with math. They said they know how to count better and to do numbers.

The evaluation outcomes indicate that the Gary Klinšky Children's Centers continue to provide effective after school programming for children. There is strong evidence, as supported by scores on standardized reading and math tests, that children who remain in the program for two or more years benefit more than children who enroll for one year or less.

Teachers, parents and children alike are enthusiastic about the Centers, as indicated in their responses to the questionnaires. Parents seem to be particularly appreciative and supportive, especially with regard to improved reading and other academic skills of their children. Parents and teachers alike believe that the program should be extended to operate during the summer months, and teachers feel that the program should be expanded during the school year to accommodate more children.

Each of the above have implications for planning as the program continues to attract funding and moves forward to promote its goals and objectives.

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May 4, 1998

/SGP

## BROOKLYN BUREAU OF COMMUNITY SERVICE

### VIA FACSIMILE

**MEMO TO:** Steve Klinsky

**FROM:** Jim Hood 

**DATE:** May 4, 1999

**SUBJECT:** Revised Comparative Performance Data

Using the scores on standardized tests for students who attended the after-school program at P.S. 149 in 1996, 1997 and 1998 we were able to make the following comparisons to published information pertaining to the percentage of students in the school performing at or above grade level (a score of 50% or better) in math and reading.

	1996	1997	1998
% GKCC at or above Grade Level in Reading	27.0	30.0	31.4
% PS 149 at or above Grade Level in Reading	21.0	17.6	23.0
% GKCC at or above Grade Level in Math	32.4	43.8	41.0
% PS 149 at or above Grade Level in Math	28.0	30.0	28.0

In both reading and math, the percentage of children in the program performing at or above grade level has consistently exceeded the totals for the school. In 1998, 8.4% more of the children in the program were reading at or above grade level compared to the school in general and 13% more were performing at or above grade level in math.

As you know, we have been unable to obtain the average test scores for the school or the district. Tony Deluccia at District 19 said they do not routinely distribute those scores and advised against using them because the battery of tests may be different.

Please call if you have any questions.

Thanks.

cc: Donna Santarsiero  
 Danny Rosenthal  
 Clare Longo

## Philosophy and Consequences:

The most important way to help children develop self control and discipline, and to care for one another, is to create an environment where they are expected to behave and to care. We want to make rules and expectations as clear and consistent as possible so that children know what is expected of them.

At the Family Academy, we deal with misbehavior through consequences rather than punishment. A consequence is something that logically happens after someone does something. Positive actions that build up the community have good consequences. Negative actions that hurt the community or its members have bad or unpleasant consequences.

Consequences are designed to return the environment to being one that is safe for all students. Usually, consequences come in the form of a "time-out" where a student who can't control her or himself is taken out of the activity or group for a little while. The goal is to give a student time to calm down and think about the behavior that caused the problem. Time outs usually last from five to fifteen minutes, or until the child has calmed down and is ready to return to the group.

If one student hurts another student or is disrespectful of another person, there will need to be a discussion of how better to handle the situation and an apology. The Family Academy aims to maintain a safe and healthy environment, and we do not feel that there is any place for physical violence in the life of a school. Children may have to protect themselves or prove themselves physically outside, but in school there must be adults there to take care of problems and to keep all the children safe. Nobody wants their child in a school where the children feel free to hurt one another.

Physical fighting will not be tolerated at The Family Academy. If and when such fights occur, all parties involved will find themselves in trouble, whether they were initial instigators or not. Of course those who start the fights are dealt with more severely (phone calls home, in-house and/or formal suspensions, superintendent suspensions, and so on), but anyone involved in a fight will experience consequences.

What follows are a set of rules that we expect all members of the school community to follow. We believe that adults are the most important examples for children. We ask that all adults in the school community respect these rules while they are in the building or with the school on trips.

## School Expectations:

### 1. WE TAKE CARE OF ONE ANOTHER:

- We help each other out.
- We are friendly and courteous.
- We do not bully or tease other children.
- We do not tell others that they can't play in our games.

### 2. WE SHOW RESPECT FOR LEARNING:

- We arrive at school on time.
- We are prepared for class.
- We pay attention and listen carefully.
- We do our own homework carefully and with good thought.
- We treat other's work with respect.
- We do not disrupt the class.

**-We take care of materials and keep the classroom in order.**

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**3. WE TRY TO SETTLE OUR DIFFERENCES WITH TALKING AND PEACEFULLY:**

**-We do not fight with, hit, kick, bite or in any way hurt another person, no matter how angry we feel.**

**-We talk about our feelings and problems, and try to solve them instead of trying to hurt.**

**4. WE MOVE SAFELY THROUGH THE SCHOOL AND ON TRIPS:**

**-We remember that others are working, so we go quietly and in an orderly way through the school.**

**-We do not play in bathrooms.**

**-We do not run in the halls or up and down stairs.**

**-We take care of our line partners on trips.**

**-We walk in a calm and orderly way through the streets.**

**-We wait away from the tracks in the subway and sit still on trains or buses.**

**5. WE USE APPROPRIATE LANGUAGE AT ALL TIMES:**

**-We do not curse or tease with mean words.**

**-We speak to each other with respect.**

**-We never boo anybody who is performing for us.**

**-We clap to show that we like something that has been performed or said when we are the audience.**

**6. WE LISTEN TO THE DIRECTIONS OF THE ADULTS IN CHARGE:**

**-We do not talk back to adults.**

**-We do not leave an area without adult permission.**

**7. WE RESPECT OTHER PEOPLE'S PROPERTY AND THEIR BODIES:**

**-We do not take anything that belongs to another person or to the school.**

**-We do not touch other people without asking first.**

**-We do not touch other people in a harmful way.**

**8. WE PLAY SAFELY IN THE GYM, THE PARK OR THE PLAY YARD:**

**-We share the area with others nicely and fairly.**

**-We do not play fight or wrestle, push, shove, or play rough.**

**-We do not throw anything at other people.**

**-We clean up and return equipment at the end of play.**

**9. WE PRACTICE GOOD CONDUCT WHILE EATING:**

**-We wait for each other before we start eating.**

**-We thank the people who helped us have the food.**

**-We eat in a calm way with our best manners.**

**-We NEVER throw food or utensils.**

**-We try at least a taste of new kinds of foods.**

**MODEL STUDENT DISCIPLINARY CODE**

This Code sets forth the \_\_\_\_\_ Charter School’s policy regarding how students are expected to behave when participating in school activities, on and off school grounds, and how the school will respond when students fail to behave in accordance with these rules.

In all disciplinary matters students will be given notice and will have the opportunity to present their version of the facts and circumstances leading to the imposition of disciplinary sanctions to the staff member imposing such sanctions. Depending on the severity of the infraction, disciplinary responses include suspension (short or long term), involuntary transfer, detention, exclusion from extracurricular activities, and expulsion. Where appropriate, school officials also will contact law enforcement agencies.

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# I. DEFINITIONS

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For purposes of this Code:

- ***“short term suspension”*** shall refer to the removal of a student from school for disciplinary reasons for a period of five or fewer days;
- ***“long-term suspension”*** shall refer to the removal of a student from school for disciplinary reasons for a period of more than five days; and
- ***“expulsion”*** shall refer to the permanent removal of a student from school for disciplinary reasons.

## II. SHORT-TERM SUSPENSIONS

A student who is determined to have committed any of the infractions listed below shall be subject *minimally* to a short term suspension, unless the principal or Board of Directors determines that an exception should be made based on the individual circumstances of the incident and the student’s disciplinary record. Such student also may be subject to any of the disciplinary measures set forth in Part IV of this Code, and, depending on the severity of the infraction, a long-term suspension also may be imposed and referrals to law enforcement authorities may be made.

### *Disciplinary Infractions*

- Attempt to assault any student or staff member.
- Vandalize school property causing minor damage.
- Endanger the physical safety of another by the use of force or threats of force which reasonably places the victim in fear of imminent bodily injury.
- Engage in conduct which disrupts school or classroom activity or endanger or threaten to endanger the health, safety, welfare, or morals of others.
- Engage in insubordination.
- Fail to complete assignments, carry out directions, or comply with disciplinary sanctions.
- Cheat on exams or quizzes, or commit plagiarism.
- Use forged notes or excuses.
- Steal, attempt to steal, or possess property known by the student to be stolen.
- Commit extortion.

- Engage in gambling.
- Drive recklessly on school property.
- Trespass on school property.
- Abuse school property or equipment.
- Use obscene or abusive language or gestures.
- Engage in acts of sexual harassment, including but not limited to sexually related physical contact or offensive sexual comments.
- Make a false bomb threat or pull a false emergency alarm.
- Possess tobacco or alcohol.
- Possess radios, "walkmans," pagers, beepers or portable/cellular telephones not being used for instructional purposes.
- Wear inappropriate, insufficient, or disruptive clothing or attire, and/or violate the student dress code, if one exists.
- Refuse to identify himself or herself to school personnel.
- Repeatedly commit minor behavioral infractions which, in the aggregate, may be considered an infraction subject to formal disciplinary action.
- Commit any other act which school officials reasonably conclude warrants a disciplinary response.

### **Procedures for Short Term Suspensions**

The principal or Board of Directors may impose a short-term suspension. Before imposing a short term suspension, the principal or Board shall verbally inform the student of the suspension, the reason or reasons for it, and whether it will be served in school or out of school. The student shall be given an opportunity to deny or explain the charges.

The principal or Board also shall immediately notify the parent(s) or guardian(s) in writing that the student has been suspended from school. Written notice shall be provided by personal delivery, express mail delivery, or equivalent means reasonably calculated to assure receipt of such notice within 24 hours of suspension at the last known address. Where possible, notification also shall be provided by telephone if the school has been provided with a contact telephone number for the parent(s) or guardian(s). Such notice shall provide a description of the incident or incidents which resulted in the suspension and shall offer the opportunity for an immediate informal conference with whoever has imposed the suspension. The notification and informal conference shall be in the dominant language used by the parent(s) or guardian(s).

### III. LONG-TERM SUSPENSIONS

A student who is determined to have committed any of the infractions listed below shall be subject *minimally* to a long-term suspension, unless the principal or Board of Directors determines that an exception should be made based on the circumstances of the incident and the student's disciplinary record. Such student may also be subject to any of the disciplinary measures set forth in Part IV, to referral to law enforcement authorities, and/or to expulsion.

#### Disciplinary Infractions

- Possess, use, attempt to use, or transfer any firearm, knife, razor blade, explosive, mace, tear gas, or other dangerous object of no reasonable use to the student at school.\*
- Commit or attempt to commit arson on school property.
- Possess, sell, distribute or use any alcoholic beverage, controlled substance, imitation controlled substance, or marijuana on school property or at school sponsored events.
- Assault any other student or staff member.
- Intentionally causes physical injury to another person, except when the student's actions are reasonably necessary to protect himself or herself from injury.
- Vandalize school property causing major damage.
- Commit any act which school officials reasonably conclude warrants a long term suspension.

In addition, a student who commits any of the acts listed in Part II which would ordinarily result in a short-term suspension may, instead or in addition, be subject to a long-term suspension at the principal's or Board of Director's discretion.

- The Federal Gun-Free Schools Act of 1994, which applies to public schools, states that a student who is determined to have brought a weapon to school must be suspended for at least one calendar year. This suspension requirement may be modified by school administrators, however, on a case-by-case basis. Weapon as used in this law means a "firearm," as defined by 18 USC §8921, and includes firearms and explosives. New York Education Law §3214(3)(d) effectuates this federal law.

#### Procedures for Long-Term Suspensions

The principal or Board of Directors may impose a long-term suspension. Such a suspension may be imposed only after the student has been found guilty at a formal suspension hearing. In extreme circumstances, the principal or Board may expel the student from school. Upon determining that a student's action warrants a possible long-term suspension, the principal or Board shall verbally inform the student that he or she is being suspended and is being considered for a long-term suspension (or expulsion) and state the reasons for such actions.

The principal or Board also shall immediately notify the student's parent(s) or guardian(s) in writing. Written notice shall be provided by personal delivery, express mail delivery, or equivalent means reasonably calculated to assure receipt of such notice within 24 hours of suspension at the last known address. Where possible, notification also shall be provided by telephone if the school has been provided with a contact telephone number for the parent(s) or guardian(s). Such notice shall provide a description of the incident or incidents which resulted in the suspension and shall indicate that a formal hearing will be held on the matter which may result in a long-term suspension (or expulsion). The notification provided shall be in the dominant language used by the parent(s) or guardian(s). At the formal hearing, the student shall have the right to be represented by counsel, question witnesses, and present evidence.

If the suspension proceeding has been initiated by the principal, the principal shall personally hear and determine the proceeding or may, in his discretion, designate a hearing officer to conduct the hearing. The hearing officer's report shall be advisory only and the principal may accept or reject all or part of it. The principal's decision after the formal hearing to impose a long-term suspension or expulsion may be appealed first to the Board of Directors, next to the chartering entity, and finally to the State Commission on Charter Schools. If the proceeding has been initiated by the Board, the Board shall hear and determine the proceeding. The Board's decision after the formal hearing to impose a long-term suspension (or expulsion) may be appealed to the chartering entity and finally to the State Commission on Charter Schools.

#### **IV. ADDITIONAL DISCIPLINARY MEASURES**

The disciplinary measures listed below may be imposed in addition to short-term or long-term suspensions or, if an exception has been made by the principal or Board of Directors to the imposition of a minimum suspension, in place of such suspension. Behavior not listed in Part II or Part III of this Code but determined by appropriate school staff to warrant disciplinary action, including but not limited to missing classes without permission and arriving late to class without a reasonable excuse, also may be subject to the additional disciplinary measures noted below.

In-school suspensions, suspensions of transportation, and involuntary transfers may be imposed only by the principal or Board of Directors. All other disciplinary measures may be imposed by the principal, the Board of Directors, or a teacher, who must inform the principal of such action within a reasonable time.

##### **BEHAVIORAL CONTRACT:**

School staff may design written agreements with students subject to punishment under this code to identify target behaviors, define expectations, and describe consequences, provided that the affected student and his or her parent(s) or guardian(s) are informed that the decision to enter into such a contract is voluntary.

##### **DETENTION:**

After notice to the student and parent(s) or guardian(s), and provided that there is no objection from the parent(s) or guardian(s) and the student has appropriate transportation home, a student may be detained after school in detention.

**LOSS OF SCHOOL PRIVILEGES:**

After notice to the student and parent(s) or guardian(s), a student may be suspended from participation in extracurricular activities, including athletics. The student and parent(s) or guardian(s) shall be given an opportunity to meet informally with the principal or teacher involved. If possible, the principal or teacher involved shall hold any requested meeting prior to imposing the suspension from participation in extracurricular activities.

**IN-SCHOOL SHORT TERM SUSPENSION:**

Students may be temporarily removed from the classroom and placed in another area of the school where the student will receive substantially equivalent education. The student and his or her parent(s) or guardian(s) must be given a reasonable opportunity for an informal conference regarding such suspension with whomever was involved in imposing the suspension.

**SUSPENSION FROM SCHOOL TRANSPORTATION:**

As the result of misconduct occurring on a bus or other means of student transportation and after notice to the student and his or her parent(s) or guardian(s), a student may be suspended from school transportation. When such suspension amounts to a suspension from attending school because of the distance between home and school and the absence of alternative public or private means of transportation, the school must make appropriate arrangements to provide for the student's education.

**INVOLUNTARY TRANSFER:**

Non-handicapped students may be transferred involuntarily to another school by the principal. Before a student may be involuntarily transferred, the principal shall provide written notice to the student and his or her parent(s) or guardian(s) that the student is being considered for transfer to another school. Such notice also shall set a time and place for an informal conference with the principal and shall inform the parent(s) or guardian(s) of their right to be accompanied by counsel or an individual of their choice. If, following the informal conference, the principal maintains that the student would receive an adequate and appropriate education in another school program, the principal shall issue a recommendation of transfer to the school's Board of Directors, which shall include a description of the behavior and/or academic problems indicative of the need for transfer, a description of alternatives explored, and prior action taken to resolve the problem. A copy of such recommendation shall be sent to the student and his or her parent(s) or guardian(s). Upon receipt of the principal's recommendation for transfer, the Board of Directors shall notify the student and the parent(s) or guardian(s) of the opportunity for a fair hearing where the student may be represented by counsel, present evidence, and question witnesses. Such notification shall list community agencies and free legal assistance which may be of assistance to the student. The written notice shall include a statement that the student or his or her parent(s) or guardian(s) has 10 days to request a hearing and that the proposed transfer shall not take effect until the 10-day period has lapsed, or, if a hearing is requested, until after a formal decision following the hearing is rendered, whichever is later.

## VII. DISCIPLINARY PROCEDURES FOR STUDENTS WITH DISABILITIES

Students with disabilities have the same rights and responsibilities as other students, and may be disciplined for the same behavioral offenses. Discipline of a student identified as having a disability, however, will be in accordance with the following:

1. Students for whom the Individualized Educational Plan ("IEP") includes specific disciplinary guidelines will be disciplined in accordance with those guidelines. If the disciplinary guidelines appear not to be effective or if there is concern for the health and safety of the student or others if those guidelines are followed with respect to a specific infraction, the matter will be immediately referred to the Committee on Special Education ("CSE") for consideration of a change in the guidelines.
2. Students for whom the IEP does not include specific disciplinary guidelines may be disciplined in accordance with standard school policy relating to each infraction. The CSE must be notified immediately of any suspension from classes, and will arrange appropriate alternate instruction.

If there is any reason to believe that the infraction is a result of the student's disability, the student must be immediately referred to the CSE. If a connection is found, no penalty may be imposed. The CSE will consider a possible program modification.

If a student identified as having a disability is suspended during the course of the school year for a total of eight days, such student must be immediately referred to the CSE for reconsideration of the student's educational placement. Such a student may not be suspended for a total of more than 10 days during the school year without the specific involvement of the CSE prior to the 11th day of suspension since such suspensions are considered to be a change in placement.

In considering the placement of students referred because of disciplinary problems, the CSE will follow its ordinary policies with respect to parental notification and involvement.

3. The CSE shall meet within seven school days of notification of any of the following, for the purpose of considering a change in placement for the student involved:
  - a. The commission of an infraction by a student with a disability who has previously been suspended for the maximum allowable number of days.
  - b. The commission of any infraction which is a result of the student's disability.
  - c. The commission of any infraction by a disabled student, regardless of whether the student has previously been suspended during the school year if, had such infraction been committed by a non-disabled student, the principal would seek to impose a suspension in excess of five days.

## MODEL POLICY OF MAINTENANCE OF PUBLIC ORDER ON SCHOOL PROPERTY

The following rules shall govern the conduct of students, teachers, staff, licensees, invitees, and other persons, whether or not their presence is authorized, on all property or facilities operated under the auspices of the \_\_\_\_\_ Charter School.

These rules and penalties are not to be considered exclusive or to preclude in any way the prosecution and conviction of any person for the violation of any federal, State or local law, rule, regulation or ordinance, or the imposition of a fine or penalty provided for therein. Additionally, these rules and regulations should not be construed to limit, but rather to exist in conjunction with, any other codes of conduct established for the school, such as a disciplinary code and/or a bill of student rights and responsibilities.

### I. Prohibited Conduct

No person, either singly or in concert, shall:

- A. Willfully cause physical injury to any other person, or threaten to use force which would result in such injury.
- B. Physically restrain or detain any other person, nor remove such person from any place where he or she is authorized to remain, except as necessary to maintain the established educational process.
- C. Willfully damage or destroy school property, nor remove or use such property without authorization.
- D. Without permission, express or implied, enter into any private office or classroom of an administrative officer, teacher, or staff member.
- E. Enter or remain in any building or facility for any purpose other than its authorized use or in such a manner as to obstruct its authorized use by others.
- F. Without authorization, remain in any building or facility after it is normally closed, nor without permission enter any building or facility prior to its normal opening.
- G. Refuse to leave any building or facility after being required to do so by the principal or an authorized administrative officer or his or her designee.
- H. Willfully obstruct or interfere with the free movement of persons and vehicles.

- I. Deliberately disrupt or prevent the peaceful and orderly conduct of classes, lectures, and meetings or deliberately interfere with the freedom of any person to express his or her views, unless such disruption is necessary to maintain order of the educational process.
- J. Possess on school property any rifle, shotgun, pistol, revolver, knife, chain, club or other weapon, whether or not the person has a license to possess such weapon. Further, it is the duty of the principal to inform the police of the presence or use of any such weapon or implements used as weapons on school property.
- K. Commit acts which threaten the safety and welfare of persons on school property.
- L. Violate any federal or State statute or regulation, local ordinance or school policy.
- M. Possess, use or distribute alcohol, drugs or drug paraphernalia.
- N. Harass or coerce any person.
- O. Refuse or fail to comply with a lawful order or direction of a school official in the performance of his or her duty.
- P. Distribute or post on school property any written material, pamphlets or posters without the prior approval of the principal.

## II. Penalties and Enforcement

Penalties for violations of these rules include, but are not limited to:

- the withdrawal of authorization to remain upon school property;
- ejection;
- arrest;
- for students, suspension or other disciplinary action; and
- for school employees, dismissal or other disciplinary action.

Staff members are required to report known violations of these rules to the principal and to make reasonable efforts to stop the prohibited conduct. The principal is responsible for the enforcement of these rules.

# MODEL BILL OF STUDENT RIGHTS & RESPONSIBILITIES

## I. Participation in School Activities

All students have the following rights:

- A. To have the opportunity to take part in all school activities on an equal basis regardless of race, sex, national origin, creed, or disability.
- B. To address the school on the same terms as any citizen.

Similarly, all students are bound by the same rules for exclusion from school activities and public address.

## II. Records

The Family Education Rights and Privacy Act of 1974 (FERPA) requires a school to protect a student's privacy. The school will not disclose any information from the student's permanent records except as authorized pursuant to FERPA, or in response to a subpoena, as required by law. The parent(s) or guardian(s) of a student under 18 years of age, or a student 18 years of age or older, is entitled to access to the student's school records by submitting a written request to the principal. Further information concerning the disclosure of student information and limitations on such disclosure may be found in FERPA.

## III. Freedom of Expression

- A. Students are entitled to express their personal opinions verbally, in writing, or by symbolic speech. The expression of such opinions, however, shall not interfere with the freedom of others to express themselves, and written expression of opinion must be signed by the author. Any form of expression that involves libel, slander, the use of obscenity, or personal attacks, or that otherwise disrupts the educational process, is prohibited. All forms of expression also must be in compliance with the Student Discipline Code, violations of which are punishable as stated in such Code.
- B. Student participation in the publication of school sponsored student newsletters, yearbooks, literary magazines and similar publications is encouraged as a learning and educational experience. These publications shall be supervised by qualified faculty advisors and shall strive to meet high standards of journalism. In order to maintain consistency with the school's basic educational mission, the content of such publications is controlled by school authorities.

No person shall distribute any printed or written materials on school property without the prior permission of the principal. The principal may regulate the content of materials to be distributed on school property to the extent necessary to avoid material and substantial interference with the requirements of appropriate discipline in the operation of the school. The principal may also regulate the time, place, manner and duration of such distribution.

#### **IV. Search and Seizure**

- A. A student and/or the student's belongings may be searched by a school official if the official has a reasonable suspicion to believe that a search of that student will result in evidence that the student violated the law or a school rule. Items which are prohibited on school property, or which may be used to disrupt or interfere with the educational process, may be removed from the student by school authorities.
- B. Student lockers and desks remain the property of the school. However, the school is not responsible for books, clothing or valuables left in lockers or desks. A student shall not place, keep or maintain in a locker or desk any article or material which is of a non-school nature and may cause or tend to cause the disruption of the lawful mission of the school.
- C. The following rules shall apply to the search of school property assigned to a specific student and the seizure of illegal items found therein:
  - 1. School authorities will make an individual search of a student's locker or desk only when there is reasonable suspicion to believe that a student is in the possession of an item which is prohibited on school property or which may be used to disrupt or interfere with the educational process.
  - 2. Searches shall be conducted under the authorization of the school principal or his/her designee.
  - 3. Items which are prohibited on school property, or which may be used to disrupt or interfere with the educational process, may be removed from student lockers or desks by school authorities.

#### **V. Off-Campus Events**

Students at school sponsored off-campus events shall be governed by all the rules and regulations of the school and are subject to the authority of school officials. Failure to obey the lawful instructions of school officials shall result in a loss of eligibility to attend school sponsored off-campus events and may result in additional disciplinary measures in accordance with the Student Disciplinary Code.

#### **VI. Discipline**

- A. Prohibited conduct and acceptable school responses to such conduct are set forth in the Student Disciplinary Code. In all disciplinary matters, students shall have the opportunity to present their version of the facts and circumstances leading to the imposition of disciplinary sanctions to the professional staff member imposing such sanctions.
- B. A student may be suspended from instruction only after his or her rights to due process have been observed.

**English Language Arts Standards  
Primary Level**

**A. Performance Statement:** Each student can decode unknown words through a variety of strategies.

*Standards:*

1. Each student can pronounce and decode unknown words using letter-sound relationships and knowledge of word structures.
2. Each student can infer the meaning of unknown words in an unfamiliar reading passage by examining known words, syntax, or grammar in the context of the passage.
3. Each student can use a dictionary.

**B. Performance Statement:** Each student can identify facts, place events in sequence, draw inferences, make judgments, and describe the details and content of a variety of literary and non-literary texts, including narratives, stories, poetry, expository texts, articles, and instructions.

*Standards*

1. Each student can distinguish fiction from nonfiction, realistic fiction from fantasy, biography from autobiography, and poetry from prose.
2. Each student can recall events in order, identify the main ideas, describe the setting, and summarize critical details from a variety of classic and contemporary children's literature.
3. Each student can draw from a reservoir of archetypal stories—including major myths, folk tales, and narratives from the United States and cultures worldwide—in order to describe conventional characters, plots, and themes; understand common allusions and metaphorical phrases; make predictions; and relate experiences to his or her own life.
4. Each student can draw from a reservoir of general knowledge about the world and familiarity with common forms of written communication—such as newspapers, instructions, maps, and textbooks—in order to derive meaning from and respond appropriately to texts.
5. Each student can combine ideas drawn from classic and contemporary stories, identify cause and effect, and compare and contrast characters or events, relating these to other works and student's own experience—for example, by discussing the messages of *Beauty and the Beast* or Dickens's *Scrooge*.

6. Each student can use common allusions from fairy tales, fables, biographies, etc. (e.g., the Emperor's clothes, the boy who called "wolf") when writing or speaking about other topics.
7. Each student can describe personal reactions to literature, citing reasons ("I like this book because ...") and comparisons to other works.
8. Each student can select and read a text for information, summarize it, and connect new information to prior knowledge.
9. Each student can describe the author's voice in a text (e.g., first-person narrative, an editorial) and infer the author's purpose and the main ideas expressed.

**C. Performance Statement:** Each student can construct meaning from oral messages communicated in various setting for various purposes, including speeches, lectures, and group discussions.

*Standards:*

1. Each student can identify and explain the purpose of an oral communication.
2. Each student can respond to one or more speakers by expressing appropriate ideas, opinions, and questions.
3. Each student can select and summarize accurately the key points and main ideas from an oral presentation such as a story or speech.
4. Each student can explain how a speaker has used inflection, eye contact, and gestures to reinforce the speaker's message.

**D. Performance Statement:** Through writing, each student can communicate opinions, ideas, information, and messages using various forms, including letters, simple reports, narratives, and essays. Each student can write creatively and expressively.

*Standards:*

1. Each student can write for a variety of audiences following the conventions of standard English and/or by using informal language as appropriate.
2. Each student can write a report, essay, or letter which has a clearly identifiable purpose; is well organized; recalls events or situations accurately, clearly, and sequentially; and contains illuminating details and descriptions
3. Each student can write from draft to final product, revising content when necessary to clarify or make improvements.

4. Each student can write a narrative that describes a complete experience, is well developed, contains descriptive words and phrases, and has a beginning, middle, and end.
5. Each student can write a story that establishes a main character distinct from other characters, has a clearly defined plot, contains a setting, and has details which advance the plot.
6. Each student can create simple poems using different forms including rhymed couplets, haiku, limericks, and free verse.

**E. Performance Statement:** Each student can orally communicate information, opinions, and ideas effectively to various audiences, in various contexts, and for various purposes.

*Standards*

1. Given a choice of familiar topics, each student can speak extemporaneously, volunteering an organized set of appropriate ideas, opinions, and/or questions in response.
2. Each student can construct and present a report which summarizes ideas and information about a specific topic.
3. Each student can give instructions, relate a personal experience, and/or create a fictional story using concrete details and descriptive language.
4. Each student can participate in discussion by listening attentively, respecting the opinions and feelings of other people, and responding coherently.
5. Each student can use inflection, eye contact, and gestures to reinforce his or her message.

**F. Performance Statement:** Each student, working individually or in groups, can form a question, conduct an investigation, and report the results coherently and accurately with convincing evidence.

*Standards*

1. Each student can formulate a question on a topic of interest and plan and conduct an investigation which attempts to answer it.
2. Each student can use more than one source or method of investigation, including library resources, interviews, and computer databases.

**G. Performance Statement:** Each student can demonstrate a basic knowledge of the structure of English.

**Standards:**

1. Each student can distinguish between formal and informal English and use the different forms appropriate to situation and purpose.
2. Each student can edit his or her own work for accurate spelling and proper use of standard English.
3. Each student can create and edit written work on a computer.

**English Language Arts  
Intermediate Level**

**A. Performance Statement:** Through oral and written responses, each student can demonstrate the ability to analyze the structure and construct the meaning of a variety of literary and non-literary texts written for various purposes at various times in history, including literature of interest to students and other printed materials they encounter in everyday life.

*Standards.*

1. Given an unfamiliar passage to read, each student can identify and explain the type of information conveyed, the main ideas, the way the text is organized, and the relationship of parts to the whole.
2. Each student can read for a variety of purposes—to make a decision, follow directions, select and record information, analyze an argument, gain understanding, or enjoy a good story, for example—and use strategies of reading and note-taking appropriate for each purpose.
3. Given a purpose for reading and responding to a text, each student can select, summarize, paraphrase, analyze, and evaluate relevant passages.
4. Each student can draw on a broad base of prior knowledge about the genres of literature—the structure and conventions of essays, epics, fables, myths, plays, poems, short stories, and novels, for example—when constructing the meaning of a text.
5. Each student can draw on a broad base of knowledge about the themes, ideas, and lessons of religious texts and classical literature—for example, knowledge of the Bible, the Koran, and works by such authors as Homer, Cervantes, Shakespeare, Dickens, and Twain—when reflecting about life and literature.
6. Each student can evaluate the reliability of information conveyed in a text, using external criteria—such as knowledge of the author, topic, or context—and internal criteria—such as analysis of logic, evidence, propaganda, or diction.
7. Each student can explain how an author has used figures of speech, information, incidents, character, and conflict to create an effect, thesis, or theme.
8. Each student can describe conflict and the resolution of conflict in literature both in concrete terms related to plot and in abstract terms related to theme.

9. Each student can explain and defend critical opinions about a text, informally in a discussion with peers and formally in a well-organized speech or essay.
10. When asked to read and respond to the writing of other students, each student can provide helpful information at various stages of the writing process.

**B. Performance Statement:** Through oral and written responses, each student can demonstrate the ability to analyze the structure and construct the meaning of oral discourse delivered in various contexts for various purposes, including speeches, lectures, and discussions on topics of current interest to students.

*Standards:*

1. After hearing an oral communication for the first time, each student can identify and explain the type of information conveyed, the main ideas, the way in which the communication was structured, and the relationship of parts of the whole.
2. Each student can listen for a variety of purposes and use strategies of listening and note-taking appropriate for each purpose.
3. When constructing the meaning of an oral communication, each student can employ prior knowledge about the speaker or speakers, the content, and the context in which the communication takes place.
4. Given a purpose for listening and responding to an oral communication, each student can select, summarize, and analyze appropriate segments.
5. Each student can evaluate the reliability of information conveyed in speech, using external criteria—such as knowledge of the speaker, topic, or context—and internal criteria—such as analysis of logic, evidence, propaganda, or diction.
6. Each student can explain how a speaker has used figures of speech, information, rhetorical techniques, and non-verbal cues to create an effect, thesis, or theme.
7. Each student can explain and defend critical opinions about an oral communication informally in a discussion with peers and formally in a well-organized speech or essay.
8. When asked to listen and respond to practice speeches delivered by other students, each student can provide helpful information at various stages of composition.

**C. Performance Statement:** Each student can communicate information, opinions, and experiences effectively when writing for various audiences, in various genres, for various purposes.

**Standards:**

1. Each student can employ a variety of strategies—lists, freewriting, word maps, and outlines, for example—to evaluate, revise, and develop a topic within permissible limits.
2. Each student can determine the purpose of a piece of writing, identify an appropriate audience, and develop a plan to fulfill the purpose.
3. Each student can choose a genre—story, poem, letter, personal narrative, or persuasive essay, for example—and use the conventions of the genre to further the purpose of the writing.
4. Each student can develop a composition through a series of drafts, using critical reading and responses of others to guide the process of revision.
5. Each student can produce a coherent and complete composition, containing sufficient detail to fulfill its purpose, language appropriate for its audience, and a structure revealed through clear coordination and subordination of ideas.
6. Each student can write narratives showing a sequence of events through concrete detail and descriptive language, yet at the same time illustrating a more abstract insight or theme.
7. Each student can write stories that contain major and minor characters and a coherent plot, all realized in narrative and descriptive detail.
8. Each student can use literary and cultural allusions, imagery, and various figures of speech to communicate actual or imagined experiences to an audience.
9. Each student can construct a coherent argument and cite reliable evidence.
10. Each student can use a computer for writing and revising drafts, integrating graphic and numerical information into text, and sending and receiving files.

**D. Performance Statement:** Each student can communicate information, opinions, and experiences effectively when speaking to various audiences, in various contexts, for various purposes.

**Standards:**

1. Each student can participate in a discussion by listening attentively, respecting the opinions of other people, using language appropriate to the context, responding coherently, and otherwise contributing to the purpose of the group.
2. Each student can employ a variety of strategies—lists, freewriting, word maps, and outlines, for example—to evaluate, revise, and develop a topic within permissible limits.
3. Each student can determine the purpose for speaking in various contexts, appraise the needs and expectations of an audience, and develop a plan to fulfill the purpose.
4. Each student can make appropriate decisions about substance and style and use the conventions of public speaking to help fulfill the purpose of a speech.
5. Each student can develop a speech or lecture through a series of drafts, using practice delivery and the responses of a trial audience to guide the process of revision.
6. Each student can produce a coherent and complete presentation, containing sufficient detail to fulfill its purpose, language appropriate for its audience, appropriate visual aids, and a structure revealed through clear coordination and subordination of ideas.
7. Each student can relate narrative showing a sequence of events through concrete detail and descriptive language, yet at the same time illustrating a more abstract insight or theme.
8. Each student can use literary and cultural allusions, imagery, various figures of speech, inflection and tone of voice, non-verbal devices and gestures, humor, and visual aids to reinforce the message of a speech or lecture.
9. Each student can construct and deliver a coherent argument that accurately summarizes the ideas and opinions of other people, evaluates those ideas and opinions, advances the student's own ideas and opinions, and cites supporting evidence.
10. Each student can use a computer for planning a speech or lecture, integrating graphic and numerical information, and projecting visuals during delivery.

**E. Performance Statement:** Each student can formulate questions that might be answered through various methods of investigation, organize and conduct an investigation, and integrate discovered information into oral and written reports using appropriate conventions for preparing a manuscript.

*Standards:*

1. Each student can formulate questions and conduct an investigation that produces relevant information.
2. Each student can use the research tools made available in the school and other local libraries, including encyclopedias, almanacs, dictionaries, card catalogs, indexes to periodicals, and computerized databases.
3. Each student can take notes, keep track of sources, and formulate alternative strategies for finding and recording information.
4. Each student can follow conventions for the preparation of a manuscript.

**F. Performance Statement:** Each student can demonstrate knowledge of the structure and history of English through reading, listening, writing, and speaking.

*Standards:*

1. Each student can evaluate the use of words and phrases according to the context and purpose of a communication.
2. Each student can evaluate the use of syntax, figurative language, and rhetorical structures according to context, purpose, and related linguistic conventions.
3. Each student can find information that is helpful in evaluating the use of English by consulting dictionaries, style sheets, handbooks, editing software, and other sources of information.
4. Each student can proofread, edit, and revise a manuscript.
5. Each student can describe parts of speech and fundamental rules of syntax and apply this knowledge in written and oral work.

**English Language Arts  
Upper Level**

**A. Performance Statement:** Through oral and written responses, each student can demonstrate the ability to analyze the structure, language, and content of complex literature written in various countries during various historical periods and to read critically the non-literary documents and articles associated with other disciplines.

**Standards:**

1. Each student can draw on a broad base of knowledge about American, British, European, and non-European literature and recognize the conventions associated with the literature of certain historical periods and cultures.
2. Each student can draw on a broad base of knowledge about the great themes of literature—for example, themes of initiation, love and duty, heroism, illusion and reality, salvation, death and rebirth—and explain how these themes are developed in specific works from various historical periods and cultures.
3. Each student can draw on a broad base of knowledge about great works—images and ideas, episodes, characters, quotations, and so on—when reflecting about life and literature.
4. Given an unfamiliar work of literature, each student can identify details of language, setting, point of view, plot, character, and conflict and explain how the author has organized these details to produce a dominating effect, impression, or theme.
5. Each student can explain the structure of certain passages of literature from various historical periods and cultures, illustrating the authors' use of syntax, images, figures of speech, literary and cultural allusions, symbols, irony, and other devices in the context of history, cultures, and literary style.
6. Given an essay, each student can identify its central idea or ideas and explain how the author has developed the essay through coordination and subordination.

7. Each student can distinguish fact from opinion in an article, identify propaganda techniques and fallacious reasoning, and integrate knowledge from the article into prior knowledge about the topic.
8. Each student can identify a topic of personal interest, identify major authors who have written about the topic, develop an agenda for reading, and become knowledgeable not only about the topic itself, but also about the language and conventions of discourse in which discussion of the topic is framed.
9. When asked to read and respond to the writing of other students, each student can provide helpful critiques, suggestions, and informed appreciation at various stages of the writing process.

**B. Performance Statement:** Through oral and written responses, each student can demonstrate the ability to analyze the structure, language, and content of oral discourse delivered in various contexts for various purposes, including speeches, lectures, and discussions in other disciplines.

*Standards*

1. After listening to a speech, lecture, or discussion, each student can identify the central ideas and explain how these ideas were developed through related constituent ideas.
2. Each student can distinguish fact from opinion in a speech, lecture, or discussion, identify propaganda techniques and fallacious reasoning, and integrate knowledge gained into prior knowledge of the topic. By asking questions, each student can elicit information to help this process of understanding and integration.
3. Each student can identify a topic of personal interest and seek out speeches, lectures, or discussions about the topic, either recorded or live. Through listening and reading, each student can become knowledgeable not only about the topic, but also about the language and conventions of discourse in which discussion of the topic is framed.
4. When asked to listen and respond to practice speeches delivered by other students, each student can provide helpful critiques, suggestions, and informed appreciation at various stages of composition.

**C. Performance Statement: Each student can communicate information, opinions, and experiences effectively when writing for various audiences, in various genres, for various purposes.**

**Standards:**

1. Each student can employ a variety of strategies for developing and organizing ideas, resulting in knowledge, opinions, or insights that are worth communicating to an intended audience.
2. Each student can develop a piece of writing that conveys knowledge, opinions, or experiences to an intended audience, using rhetorical structures that divide complex thoughts into simpler thoughts, transitions to help an audience follow the logic, and language the audience can understand.
3. Each student can summarize verbal and numerical information, expand or reduce the summary by adding or omitting detail, and incorporate information at an appropriate level of generality into an essay or report, using relevant conventions of documentation and format.
4. Each student can construct a coherent argument that advances an opinion, accurately summarizes an opposing opinion, refutes the opposing opinion, and cites persuasive evidence.
5. Each student can write stories with a coherent plot, distinct characters, and conflict resolved through the action characters.
6. Each student can write in a mature style characterized by adequate vocabulary, an unaffected "voice," a variety of sentence structures, clear coordinating and subordination of ideas, and rhetorical devices that reinforce meaning.
7. Each student can develop a composition through a series of drafts, using critical reading and the responses of others to guide the process of revision.
8. Each student can use a computer for writing and revising drafts, integrating graphic and numerical information into text, sending and receiving files, and laying out a publication.

**D. Performance Statement: Each student can communicate information, opinions, and experiences effectively when speaking to various audiences, in various contexts, for various purposes.**

**Standards:**

1. Each student can participate in or lead a discussion effectively by being prepared, understanding the purpose of the discussion, listening attentively and respectfully to others, asking questions, and offering relevant and reliable information.
2. Each student can employ a variety of strategies for developing and organizing ideas, resulting in knowledge, opinions, or insights that are worth communicating to an intended audience.
3. Each student can develop a lecture or a speech that conveys knowledge, opinions, or experiences to a selected audience, using rhetorical structures that divide complex thoughts into simpler thoughts, transitions to help an audience follow the logic, language the audience can understand, and figures of speech that reinforce meaning.
4. Each student can deliver a lecture or a speech with confidence and poise, using eye contact, gestures, visual aids, and appropriate interaction with members of the audience through questions and answers.
5. Each student can summarize verbal and numerical information, expand or reduce the summary by adding or omitting detail, and incorporate information at an appropriate level of generality into a speech or a lecture using relevant conventions of documentation and format.
6. Each student can construct a coherent argument that advances an opinion, accurately summarizes an opposing opinion, refutes the opposing opinion, and cites persuasive evidence.
7. Each student can use a computer and presentation software for preparing and enhancing the delivery of a speech or a lecture.

**E. Performance Statement:** Each student can formulate questions that might be answered through various methods of investigation, organize and conduct an investigation, and integrate discovered information into oral and written reports using appropriate conventions for preparing a manuscript.

*Standards:*

1. Each student can formulate questions and conduct an investigation that produces relevant information.
2. Each student can use the research tools made available in school and college libraries, take notes, keep track of sources, and formulate alternative strategies for finding and recording information.
3. Each student can conduct interviews, take notes or otherwise record oral information, and summarize or transcribe oral information as needed.
4. Each student can write and administer questionnaires, organize data received from questionnaires, and employ statistics to support all inferences drawn.
5. Each student can incorporate verbal, visual, and numerical data into oral and written reports, citing sources according to convention, and taking care to distinguish between data and inferences drawn from data.

**F. Performance Statement:** Each student can demonstrate knowledge of the structure and history of English through reading, listening, writing, and speaking.

*Standards*

1. Each student can evaluate the use of diction, syntax, figurative language, rhetorical structures, and linguistic conventions according to the context and purpose of a communication.
2. Each student can edit a manuscript to correct problems of usage, grammar, spelling, punctuation, format, and style.
3. Each student can find information that is helpful in evaluating the use of English by consulting dictionaries, style sheets, handbooks, editing software, and other sources of information.

4. Each student can summarize the history of English using specific words and literary changes that have taken place.
5. Each student can draw inferences about values, attitudes, and point of view by analyzing a writer's or a speaker's use of English.
6. Each student can edit and revise a manuscript to improve content and organization.

## **Geography Standards Primary Level**

**A. Performance Statement:** Each student can locate particular places on earth, identify spatial patterns on the earth's surface, and describe physical characteristics and human processes that shape these patterns.

### *Standards*

1. Each student can construct models or sketch maps of his or her own state, the United States, and the world; and label continents and oceans of the world, and the countries and major cities of North America on unmarked maps.
2. Each student can compare and contrast information on maps drawn to different scales.
3. Each student can use fundamental geographic vocabulary to identify basic geographic patterns and phenomena and to describe a cultural or environmental issue from more than one perspective.
4. Each student can use number and letter grids to plot specific locations, sketch simple maps, and describe and/or draw landscapes.
5. Each student can use aerial and other photographs, satellite images, maps and globes, media, and computers to solve simple problems.
6. Each student can identify major land and water formations on a map of the student's state, using appropriate terminology.

**B. Performance Statement:** Each student can explain how earth's natural and human systems are connected and interact.

### *Standards*

1. Each student can identify and describe basic human systems (for example, political, economic, transportation) that are located in different parts of the student's city or community.
2. Each student can illustrate ways people depend upon, adapt to, and modify the environment (for example, farming, commercial fishing) and explain positive and negative consequences of both physical and man-made changes.
3. Each student can compare ways humans have adapted to different climates, focusing on clothing, housing, methods for heating and cooling, etc.

4. Each student can locate the habitats of certain plant and animal species on a world map, show where their populations are either flourishing or are in decline, and give reasons for their health or endangerment.
5. Each student can describe some environmental, economic, and/or cultural issues in own community; identify arguments both for and against; and take and justify a position.
6. Each student can examine a natural catastrophe (hurricane, earthquake, flood, brush fires, etc.) and describe its impact on individuals and communities.
7. Each student can compare past and present technologies related to energy, transportation, and communications in own community, and describe and evaluate the effects of the changes on people's lives.

**C. Performance Statement:** Each student understands how spatial connections among people, places, and regions affect the movement of people, goods, and ideas.

*Standards*

1. Each student can give examples of the movement of people, goods, services, and ideas from one place to another; give reasons for current and historical migration; and, working in groups, map immigration into own community over time.
2. Each student can explain how people and communities are both independent and interdependent.
3. Each student can identify occupations and industries in different parts of own state and give geographical reasons for their presence.
4. Each student can explain the causes and effects of major migrations.
5. Each student can describe characteristics and regional interconnections that define the student's own region of the United States.
6. Each student can describe distinguishing characteristics of urban, suburban, and rural areas, focusing on how people's needs are met.

## Geography Intermediate Level

**A. Performance Statement:** Each student can locate particular places on earth, identify spatial patterns and arrangements around the earth's surface, and describe the physical and human characteristics and processes that shape these geographical features.

*Standards:*

1. Each student can use a map or globe to locate natural regions such as mountain ranges, deserts, and rivers; human regions—such as nations or cities; and patterns of climate and vegetation.
2. Each student can use geographic vocabulary and references (distance, direction, proximity, boundaries, scale, latitude and longitude, and different map projections) to locate and describe specific places and regions.
3. Each student can define and give examples of the physical characteristics of places—for example, land forms, coastline, soils, flora and fauna.
4. Each student can define and give examples of the human characteristics of places—for example, languages, religion, politics, economics, and social structure.
5. Each student can use maps, globes, atlases, and almanacs to identify and assemble geographic information about a particular place or region.
6. Each student can analyze geographic information about a particular place or region to understand the impact of its physical characteristics on its human history.

**B Performance Statement:** Each student can explain how the earth's natural systems (hydrosphere, lithosphere, biosphere, and atmosphere) and human systems (economic, social, political, and religious) are interrelated.

*Standards:*

1. Each student can locate selected natural resources (minerals, plants and animals, forests, fossil fuels, among others) on a map and identify their worldwide distribution.
2. Each student can identify and describe the world's major ecosystems (rain forest, savanna, desert, for example) and the range of human adaptations (nomadic pastorals, terrace farming, shifting cultivation, etc.) which provide food, clothing, and shelter from these ecosystems.

3. Each student can identify, research, analyze, and present a case study examining the effects of technology on the local environment—for example, a new highway that brings economic vitality along with more automobile emissions.
4. Each student can illustrate the widespread, systemic nature of environmental change through the examination of a major environmental modification—for example, the eruption of Mount Pinatubo in the Philippines and its effect on world climate, or the impact of the construction of Disney World in Orlando on the surrounding areas of Florida.

**C. Performance Statement:** Each student can trace the movement of people, goods, and ideas around the globe and discuss the ways through which this motion continuously defines and/or connects the world's regions.

*Standards*

1. Each student can follow the migration of a population, a resource, a commodity, a disease, or an ideology around the globe while identifying the "push-and-pull" factors that either accelerated or impeded the process.
2. Each student can explain, with the help of diagrams and maps, how linkages are created through movement, using local (e.g., school bus routes), state (e.g., high school basketball broadcasts), or national (e.g., the sale of commodities) examples.
3. Each student can define and explain the characteristics of a region (the school district, township, "The Rust Belt," or Appalachia, for example) as well as those elements that distinguish the home region from other comparable regions.
4. Each student can describe, explain, and map relationships among local regions—for example, among neighborhoods in a town, or among regions producing various crops.

## Geography Upper Level

**A. Performance Statement:** Each student can locate particular places on earth, identify spatial patterns and arrangements around the earth's surface, and describe the physical and human characteristics and processes that shape these geographical features.

*Standards:*

1. Each student can use a map or globe to locate complex natural features (such as river systems, continental divides, and watersheds), historic and cultural features, and regions (such as the Fertile Crescent, the Great Wall of China, and the European Economic Community).
2. Each student can use geographic vocabulary to describe basic physical structure (such as continental drift, plate tectonics, volcanism) and human population (such as demographic characteristics, birth and death rates, doubling time, emigration and immigration) of a place or region.
3. Each student can compare and contrast the physical characteristics of places and regions in different parts of the world (for example, mountains and plains, humid and dry areas, hot and cold regions) and the physical patterns and processes (for example, atmospheric winds, ocean currents, weathering and erosion) that shape them.
4. Each student can compare and contrast the human characteristics of places in different parts of the world and the cultural processes (for example, enculturation, acculturation, assimilation, diffusion) that shape them.
5. Each student can use demographic tables and charts, primary and secondary sources, and special purpose maps and projections to identify and assemble historical and contemporary geographic information about a particular place or region.
6. Each student can analyze historical and contemporary information about a place or region, develop hypotheses to explain its physical and human changes over time, and organize an argument with narrative and cartographic evidence.

**B. Performance Statement:** Each student can explain how the earth's natural systems (hydrosphere, lithosphere, biosphere, and atmosphere) and human systems (economic, social, political, and religious) are interrelated.

*Standards:*

1. Each student can locate concentrations of selected natural resources on a map and show how their unequal distribution generates trade, encourages interdependence, and shapes economic patterns.
2. Each student can identify major human adaptations to the world's many ecosystems and can discuss the cultural systems (economic, social, political, and religious) that have developed and evolved to meet changing environmental conditions throughout history.
3. Each student can identify, research, analyze, and present a balanced national or international case study (historical or contemporary) that demonstrates the intended and/or unintended effects of technology on the environment—for example, the economic and environmental effects of moving from deep-shaft to strip mining in Appalachia.
4. Each student can demonstrate how an environmental change in one region can affect other places around the globe—for example, the impact of El Nino on commercial fishing and agriculture in the western hemisphere.

**C. Performance Statement:** Each student can trace the movement of people, goods, and ideas around the globe and discuss ways through which this motion continuously defines and connects the world's regions.

*Standards*

1. Each student understands the general dynamic of geographic movement and can predict the changes resulting from a major population relocation, an epidemic, a natural disaster, a media broadcast, or the transportation of raw materials and finished goods.
2. Each student can produce a flow map showing both the rate and scope of movement of a particular product (for example, oil tankers, wheat exports) around the globe during a specific period of time.
3. Each student can produce a sequence of flow maps, charts, and diagrams to demonstrate historic changes through time, such as the traffic on a major trade route, the quantity of a commodity moving from place to place, and the dissemination of an ideal or a belief like capitalism or Christianity.
4. Each student can identify and explain the many criteria (physiography, vegetation, politics, economics, administration, among others) that define a region and draw multiple maps of the world using a series of these regional locators.

## History Standards Primary Level

**A. Performance Statement** Each student understands what is meant by historical inquiry, recognize major historical events and place them in chronological order, understand and explain various perspectives concerning major historical events, and obtain historical information from different sources.

### *Standards:*

1. Each student can use reference books, maps, and interviews to examine historical events, and present findings in a variety of ways, such as photographs, paintings, cartoons, architectural drawings, models, graphs, charts, or maps—as well as in essays or oral presentations.
2. Each student can obtain historical data, organize historical information chronologically; distinguish between past, present, and future time; explain simple cause-and-effect relationships; and evaluate conflicting evidence about an historical event.
3. Each student can identify present economic, social, and political conditions in his or her own town, region, or state and compare them to the past.
4. Each student can trace the history of an important public or school issue, identify and summarize opposing views, and explain reasoning for each.

**B. Performance Statement** Each student can identify characteristics and accomplishments of major world civilizations in such places as Europe, Africa, the Americas, and Asia. Each student can show an understanding of how selected cultures are represented in the beliefs and practices of the United States and how they have helped to form a national heritage.

### *Standards*

1. Each student can show a basic understanding of North, Central, and South American, European, African, and Asian cultures as seen through their literature, customs, art, religion, and history by describing, for example, the form and purpose of such things as the Great Pyramids, the Roman roads, the Crusades, the English Parliament, the Great Wall, and the League of the Iroquois.
2. Each student can describe the contributions of various world cultures including their folklore, holidays, and ceremonies to the student's state and national history and show also an understanding of the world's major migrations of people and their effects on state and national heritage.

3. Each student can describe similarities, differences, and relations among the various cultures in the community and can compare the present community with one found in earlier civilizations.
4. Each student can show a basic understanding of the role played by religion and civic values in the history of his or her own state and nation and describe how that role is similar to, or different from, an ancient civilization, such as Greece or Egypt, and a feudal society found in Europe or China.
5. Each student can describe some major discoveries in science and technology and show an understanding of their social and economic effects.

**C. Performance Statement** Each student understands how democratic values came to be, along with the essential institutions at the federal, state and local levels that preserve and support these values, including especially those embodied in the U.S. Constitution, local and state frameworks of government, and the rights and responsibilities of citizenship.

*Standards*

1. Each student understands the significance of key U.S. documents—such as the Mayflower Compact, the Declaration of Independence, the Constitution and Bill of Rights, and the Emancipation Proclamation—and important American symbols, like the flag and the Statue of Liberty—and can discuss the central democratic values and ideas embodied in both documents and symbols.
2. Each student can discuss the contributions of major national figures—such as Washington, Jefferson, Lincoln, and Martin Luther King Jr.—and show a basic understanding of how these individuals helped promote democratic values and ideas.
3. Each student can explain important local, state, and federal governmental functions and the roles of the executive, legislative and judicial branches of government.
4. Each student can identify ways citizens of the United States can influence and participate in governmental decisions at the local, state, and national levels—for example, by running for office, voting in general elections, signing an initiative, speaking at hearings, etc.
5. Each student can give examples of ordinary people—such as James Armistead, Lydia Darragh, Sybil Ludington, and Nathan Beman—who have displayed particular courage or sense of responsibility in helping the common good in the community.

**D. Performance Statement** Each student can identify major figures and events in American history and that of their own state, and can show a basic understanding of their significance.

**Standards:**

1. Each student can relate the contributions of major historical figures in the United States—including leaders in politics, civil rights, economy, international affairs, science, arts, and exploration—and put them in the proper time and place. Each student can discuss the biographies of a few such figures.
2. Each student can compare present life in own community or region to life in the remote and more recent past, beginning with the life of indigenous peoples and discuss how and why it has changed.
3. Each student can place his or her state or region's history into the context of major events in American history, for example, the period of exploration, the Revolution, Civil War, industrialization, etc.

**History Standards  
Intermediate Level**

**A. Performance Statement** Each student can gather historical information from a variety of primary and secondary sources, evaluate the sources, analyze and evaluate different points of view, and construct coherent narratives explaining historical continuity and change over time.

*Standards:*

1. Each student can construct a chronology of major events in American and world history.
2. Each student can collect, interpret, organize, and evaluate information about a specific issue or problem in American or world history from a variety of primary and secondary sources.
3. Each student can construct, evaluate, and revise an argument to explain the causes and consequences of an important event in American or world history.
4. Each student can describe broad themes or patterns in American and world history and explain the significance of these themes by referring to specific events.
5. Each student can generate an historical question of personal interest, develop and demonstrate understanding of the historical context in which an answer might be found, and construct a coherent written narrative to answer the question.
6. Using appropriate computer technology, each student can incorporate visual and quantitative data into oral and written presentations.

**B. Performance Statement** Each student can make comparisons to demonstrate understanding of the social, cultural, religious, and ethnic heterogeneity of American and world societies, past and present; outline the beliefs and practices of principal religions; and show how ideas, beliefs, attitudes, and values are projected through representative works of art, science, and literature.

*Standards:*

1. Each student can identify and describe ideas, ideals, practices, traditions, and beliefs that unify the civic culture of the United States and compare such concepts to their counterparts in other nations.
2. Each student can identify the periods of immigration for various ethnic and cultural groups, their destinations, and their reasons for coming to the United States.

3. Each student can describe the contributions of various ethnic, social, and cultural groups to American life and how they have helped to form a shared national heritage and civic culture.
4. Each student can identify, describe, and compare ideas, ideals, practices, and beliefs of selected cultures and nations in various regions of the world.
5. Each student can outline beliefs and practices of the principal religions of the world and assess their influence on American society.
6. Each student can describe and explain beliefs, ideals, and viewpoints expressed in important examples of art and literature in the United States and compare such works to those of people in other countries.

**C. Performance Statement** Each student can describe and explain the political, legal, and constitutional heritage of the United States, referring to important events and documents, and explain the roles played in a representative democracy by political and legal institutions, their officers, and individual citizens.

*Standards*

1. Each student can distinguish and summarize the powers of federal, state, and local governments in the United States and the roles of the legislative, executive, and judicial branches.
2. Each student can identify the essential debates throughout U.S. history regarding the proper jurisdiction—federal, state, or local—for certain social and economic issues and suggest their implications for current political debates.
3. Each student can describe and explain the effects of important historical events, people, and demographic changes on American law and government.
4. Each student can identify important historical events and judicial decisions that affect contemporary political ideas, policies, and legal practices.
5. Each student can identify the rights and responsibilities of citizenship in the United States and compare them with those of another democratic nation.
6. Each student can describe and discuss the significant instances of tensions and collaborations among various majorities and minorities in the United States.

**D. Performance Statement** Each student can compare and contrast major economic systems, summarize the economic development of the United States, describe how the nation responded to fluctuations in economic well being in the past, and provide examples of interdependence and competition in the international economy.

*Standards:*

1. Each student can identify different economic systems, and can explain and evaluate how each addresses such basic economic questions as: what is produced? how is it produced? and for whom is it produced?
2. Using the basic economic questions, each student can describe the historical changes in the U.S. economic system and their relation to other historical events.
3. Each student can summarize and discuss the positive and negative effects of important scientific discoveries and technologies on the quality of life, the environment, and the economy.
4. Each student can recognize and describe complex competitive and interdependent economic relationships among modern nations.

**E. Performance Statement** Each student can understand issues and events in United States history from the perspectives of people past and present and recall, select, and apply relevant and accurate historical knowledge.

*Standards*

1. Each student can recall, select, and apply knowledge of New World exploration which linked people from Europe, Africa, and the Americas.
2. Each student can recall, select, and apply knowledge of the American Revolution, focusing on events which precipitated the move towards independence.
3. Each student can recall, select, and apply knowledge of the major individuals, issues, and events leading to a federal system of government in the Constitution and its subsequent application and modification in the Early Republic, including the development of a two-party system.
4. Each student can recall, select, and apply knowledge of the events which contributed to growth during the first half of the Nineteenth Century of various American regions—North, South, and West—each with its distinct geography, economy, and way of life.
5. Each student can recall, select, and apply knowledge of major individuals, issues, and events of the Civil War, the end of slavery, and Reconstruction.

6. Each student can recall, select, and apply knowledge of post-Civil War industrialization.
7. Each student can recall, select, and apply knowledge of the migration to the American West and the relations of migrating people to indigenous people.
8. Each student can recall, select, and apply knowledge of the response of national reform movements—Populists, Progressives, Grangers, American Federation of Labor, Knights of Labor, etc.—to rapid American urban and economic growth.
9. Each student can recall, select, and apply knowledge of the emergence of the United States as a world power in the Spanish-American War and the two World Wars.
10. Each student can recall, select, and apply knowledge of major individuals, issues, and events that influenced American character and lifestyle during the Twenties and the Great Depression.
11. Each student can recall, select, and apply knowledge of major individuals, issues, and events of the Cold War between the United States and the Soviet Union.
12. Each student can recall, select, and apply knowledge of the expansion of civil rights in the 19th and 20th centuries.

## History Standards Upper Level

**A. Performance Statement** Each student can choose a topic of interest, generate historical questions about it, gather relevant information from a variety of primary and secondary sources, evaluate the sources, analyze and evaluate different points of view, then develop, write, and present an historical paper.

### *Standards:*

1. Given a set of primary and secondary documents related to a significant historical question, each student can analyze the documents, assess their relevance and value, make comparisons, integrate knowledge of the documents with prior knowledge, and come to a reasoned conclusion about the issue.
2. Each student can gather data from a variety of sources (e.g., letters, diaries, newspaper, speeches) that express different points of view on the same issue or event and incorporate these data into a reasoned summary.
3. Each student can select certain historical events and, using data gathered from a variety of sources, explain their relationship to or effect on the modern world.
4. Each student can select people, documents, works of literature, cultural artifacts, and art objects and explain their importance to political, economic, social, or cultural trends.
5. Using information gathered from primary and secondary sources, each student can develop a historical paper on a topic of interest and present the paper for review by teachers and fellow students.
6. Using computer technology, each student can incorporate visual and quantitative data into historical analysis.

**B. Performance Statement** Each student can make comparisons to demonstrate understanding of social, cultural, religious, and ethnic heterogeneity of American and world societies, past and present; outline the beliefs and practices of principal religions; and show how ideas, beliefs, attitudes, and values are projected through representative works of art, science, and literature.

*Standards:*

1. Each student can explain the origins, central ideas, and global influence of major religious traditions, including Buddhism, Islam, Hinduism, Judaism, and Christianity.
2. Each student can describe and analyze beliefs, ideals, and viewpoints expressed by important works of art and literature in other societies, place them in historical context, and compare them to works of American art and literature.
3. Each student can describe patterns of scientific development in various regions of the world and discuss how these developments reflect variations in beliefs, attitudes and values.
4. Each student can describe and analyze the ways cultural and social groups are defined, identify contributions by certain groups, discuss how the definition and structures of groups have changed over time, and make explicit comparisons to similar groups elsewhere in the world.

**C. Performance Statement** Each student can describe and analyze the legal, political, and constitutional heritage of the United States; refer to important events, ideas, and documents; analyze the roles played in the American political system by political and legal institutions, their officers, and individual citizens; and compare the American system to various political systems in the past and present.

*Standards*

1. Each student can identify, cite, and discuss important historical documents that have influenced government in the United States and explain the nature of their influence.
2. Each student can identify significant features of governmental and political processes in the United States and summarize the historical development of these features including federalism; the party system; the electoral, legislative, and judicial processes; and the presidency.
3. Each student can compare significant features of the American political system to those of selected political systems in the past and present.

4. Each student can summarize major Supreme Court decisions—such as *Marbury v. Madison*, *Fletcher v. Peck*, *Dred Scott v. Sanford*, *Plessy v. Ferguson*, *Schechter v. United States*, *Brown v. Board of Education*, and *Roe v. Wade*—and analyze their impact on United States history.
5. Each student can illustrate, through the development of case studies, how institutions, their officers, and individual citizens have interacted to create and resolve conflict in United States history—particularly in areas of tension between freedom and equality, liberty and order, region and nation, individual and community, law and conscience, diversity and civic unity.
6. Each student can summarize, discuss, and analyze some of the important and continuing debates that run through American history, particularly those regarding democracy, liberty, and equality.

**D. Performance Statement** Each student can compare and contrast major economic systems and their goals, discuss and analyze how nations have responded to fluctuation in economic well-being in the past, and describe international economic interdependence and competition.

*Standards*

1. Each student can identify and explain basic economic concepts—such as supply and demand; production, distribution, and consumption; labor and capital; inflation and deflation—and use these concepts to compare economies regionally, nationally, locally, and historically.
2. Each student can compare, contrast, and evaluate different types of economies (traditional, command, market, and mixed) and discuss their relationships to the social and political systems of particular cultures.
3. Each student can compare and contrast the characteristics of these general economic eras: Paleolithic (hunting), Neolithic (farming), mercantile, industrial, and post-industrial (information and services).
4. Each student can demonstrate an understanding of cause and effect by analyzing the impact of industrialization, urbanization, population growth, and technological change.
5. Each student can describe and explain global economic interdependence and competition, using examples to illustrate their influence on national policies.

**E. Performance Statement** Each student can describe the evolution of increasingly complex political systems—beginning with autonomous tribal bands and, continuing through confederacies and city-states, and culminating with modern nation-states and international alliances.

*Standards:*

1. Each student can describe and evaluate ideas of how society should be organized and how political power should be exercised, including the ideas of monarchism, anarchism, socialism, fascism, and communism; compare those ideas to those of representative democracy; and analyze how each idea has or has not worked in practice.
2. Each student can describe and analyze frequent causes of conflict within, between, and among nations, and those formal and informal mechanisms—from war to mediation—that aim at resolution.
3. Each student can discuss and analyze how different political systems define and protect (or fail to protect) individual human rights.
4. Each student can describe the purpose and effects of treaties, alliances, and international organizations that characterize today's world—for example, the United Nations, the North Atlantic Treaty Organization, the North American Free Trade Agreement, the World Bank, and the International Monetary Fund.

**F. Performance Statement** Each student understands complex issues and events in United States history from the perspectives of people past and present and recall, select, apply, and analyze relevant and accurate historical knowledge.

*Standards*

1. Each student can recall, select, apply, and analyze knowledge of New World exploration which linked the people from Europe, Africa, and the Americas.
2. Each student can recall, select, apply, and analyze knowledge of the American Revolution, focusing on events which precipitated the move towards independence.
3. Each student can recall, select, apply, and analyze knowledge of the major individuals and events leading to the formation of a federal system of government in the Constitution and its subsequent application and modification in the Early Republic, including the development of a two-party system.
4. Each student can recall, select, apply, and analyze knowledge of the events which contributed to growth during the first half of the Nineteenth Century of various American regions—North, South, and West—each with its distinct geography, economy, and way of life.

5. Each student can recall, select, apply, and analyze knowledge of major individuals and events of the Civil War, the end of slavery, and Reconstruction.
6. Each student can recall, select, apply, and analyze knowledge of post-Civil War industrialization.
7. Each student can recall, select, apply, and analyze knowledge of the migration to the American west and the relations of migrating people to indigenous people.
8. Each student can recall, select, apply, and analyze knowledge of the response of national reform movements—Populists, Progressives, Grangers, American Federation of Labor, Knights of Labor, etc.—as a response to rapid American urban and economic growth.
9. Each student can recall, select, apply, and analyze knowledge of the emergence of the United States as a world power in the Spanish-American War and two World Wars.
10. Each student can recall, select, apply, and analyze knowledge of major individuals and events that influenced American character and lifestyle during the Twenties and the Great Depression.
11. Each student can recall, select, apply, and analyze knowledge of the major events of the Cold War between the United States and the Soviet Union.
12. Each student can recall, select, apply, and analyze knowledge of the expansion of civil rights in the 19th and 20th centuries.

**G. Performance Statement** Each student can understand complex events and issues in world history from the perspectives of people past and present, and can recall, select, apply, and analyze relevant and accurate historical knowledge.

*Standards*

1. Each student can recall, select, apply, and analyze knowledge of major landmarks in early human evolution from the paleontological evidence of Olduvai Gorge through the hunting and gathering of the Upper Paleolithic.
2. Each student can recall, select, apply, and analyze knowledge of the Neolithic Revolution which produced agricultural surpluses and cities in the Tigris, Euphrates, Indus, Ganges, and Yellow river valleys.
3. Each student can recall, select, apply, and analyze knowledge of the political and cultural legacies of ancient Greece and Rome.

4. Each student can recall, select, apply, and analyze knowledge of various encounters of the three major religions—Judaism, Christianity, and Islam—in the Middle East.
5. Each student can recall, select, apply, and analyze knowledge of the development of the social and political systems of dynastic India and China.
6. Each student can recall, select, apply, and analyze knowledge of feudal society and its institutions in Europe, China, Japan, Africa, and the Americas.
7. Each student can recall, select, apply, and analyze knowledge of the challenges to and modifications of medieval society during Renaissance and Reformation.
8. Each student can recall, select, apply, and analyze knowledge of the culture and ideas of the Enlightenment, especially the Scientific Revolution of the Seventeenth Century and the intellectual revolutions of the Eighteenth.
9. Each student can recall, select, apply, and analyze knowledge of European absolutism and the challenges of constitutionalism in England's Interregnum and Glorious Revolution, the French revolution, and the Napoleonic era.
10. Each student can recall, select, apply, and analyze knowledge of regional empires—such as Ottoman, Mogul, Aztecs, and Sonhai—and their relations with European states.
11. Each student can recall, select, apply, and analyze knowledge about the Industrial Revolution and its effects around the world.
12. Each student can recall, select, apply, and analyze knowledge of the Nineteenth century: "Europeanization" of the globe, especially in Africa and Asia.
13. Each student can recall, select, apply, and analyze knowledge of the effects of two World Wars and the Russian Revolution on European and world order.
14. Each student can recall, select, apply, and analyze knowledge of the emergence as independent nations of former colonies, satellite countries, and dominated regions and the concomitant rise of ethnicity, nationalism, and democracy.

**Science Standards  
Primary Level**

**A. Performance Statement:** Each student can solve problems and investigate questions using scientific methods and tools, and revise personal understanding to accommodate new knowledge.

*Standards:*

1. Each student, working alone and in groups, can conduct investigations by observation, collect specimens, measure and manipulate objects and materials, and offer explanations for his or her findings.
2. Each student understands the scientific enterprise as being collaborative, inquisitive, persistent, and inventive and is in constant search of evidence to support claims.
3. Each student can make predictions based on previously conducted investigations and explain why they do or do not occur when the investigations are repeated.
4. Each student can safely and properly use simple tools of measurement (such as rulers, thermometers, barometers, balances) and other common scientific instruments (such as microscopes, telescopes, and hand lenses).
5. Each student can use the computer to record and graph data, as well as to gain knowledge through the use of simulations and other interactive software.
6. Each student can properly care for and handle living organisms.

**B Performance Statement** Each student shows an emerging understanding in the basic principles of life sciences, particularly in relation to the six themes: energy, evolution, patterns of change, patterns of stability, scale and structure, systems and interactions.

*Standards:*

1. Each student can distinguish between plants and animals; create classifications for organisms according to various characteristics (such as appearance, behavior, and habitat) and justify those classifications.
2. Each student can show an understanding that living organisms need food, water, air, space and an environment in which they can live.
3. Each student can give examples of characteristics to show how particular organisms are suited for their environments.

4. Each student can show a basic understanding that organisms are comprised of cells and can describe simple cell structures or single-celled organisms as seen through a microscope.
5. Each student can describe interactions between organisms—particularly the food chain—in a given environment and understand that almost all food can be traced back to plants.
6. Each student can explain the effect of biotic and abiotic aspects of a given environment on the ability of individual organisms to survive.
7. Each student can demonstrate an understanding of fossils and observe differences and similarities to existing organisms. Each student can describe ways scientists use fossils to reconstruct extinct organisms, particularly dinosaurs, and can form hypotheses about their living habits and characteristics.
8. Each student can demonstrate a basic understanding of heredity and change from generation to generation and over the planet's history by examining various living and fossil plants and animals.

**C. Performance Statement:** Each student can show an emerging understanding in the basic principles of physical sciences, particularly in relation to the six themes: energy, evolution, patterns of change, patterns of stability, scale and structure, systems and interactions.

#### *Standards*

1. Each student can describe and classify materials according to different properties (e.g., hardness, buoyancy, response to magnets, and solubility) and describe changes that can be observed (e.g., changes in the state of water).
2. Each student can show a basic understanding of energy in light and heat particularly as generated by the sun, understand that heat transfers from warmer objects to cooler, show that some materials conduct heat better than others, and explain how electric power can be conserved and why it should be.
3. Each student can describe motion and its reaction to force based on observation, understand the connection between vibration and sound, and understand that movement can be either extremely slow or extremely fast to the point of being imperceptible to the human eye.

**D. Performance Statement:** Each student can show an emerging understanding in the basic principles of earth-space sciences, particularly in relation to the six themes: energy, evolution, patterns of change, patterns of stability, scale and structure, systems and interactions.

**Standards:**

1. Each student can demonstrate through models an understanding of the relationship, between the moon and the earth (e.g., the perceived position of the moon in the sky), the planets and the sun (e.g., the immensity of distances), the solar system and the rest of the universe (e.g., the relationship of distance and perceived size).
2. Each student can show the conversion of water from liquid to a solid, to a gas, back again, and understand how this relates to clouds, fog, and precipitation.
3. Each student can demonstrate an understanding of the earth's gravity and describe atmosphere and the movement of air as manifested in wind.
4. Each student can explain the changes of the seasons in terms of weather and climate and describe how seasons differ between the northern and southern hemispheres and the equator.
5. Each student can demonstrate an understanding of rock cycles and erosion caused by wind and water and show that rocks and soil are comprised of smaller particles, many of which cannot be seen with the naked eye and which, in soil, may include living organisms

**Science  
Intermediate Level**

**A. Performance Statement: Each student can apply knowledge of scientific concepts in experimental context, solve problems and investigate questions using scientific methods, and revise personal understanding to accommodate new knowledge.**

**Standards:**

1. Each student can develop questions that can be explored experimentally and formulate hypotheses consistent with known phenomena and principles.
2. Each student can design an investigation to test an hypothesis, control variables, and collect relevant data.
3. Each student can use appropriate measuring tools to collect and record data, evaluate their precision and accuracy, and distinguish between observation and inference.
4. Each student can explain the need for many observations in the development of scientific knowledge.
5. Each student can develop safe and effective skills when using common lab and field techniques.
6. Using statistics, mathematical models, and available technology, each student can organize, manipulate, and present data to show functional relationships between observations.
7. Each student can evaluate the validity of a hypothesis in the light of observations and experimental data and extrapolate functional relationships beyond actual observations.
8. Each student can relate an experiment to other experiments and to appropriate scientific models and theories and develop new questions and new hypotheses.
9. Each student can integrate the results of an investigation into existing knowledge, distinguishing between scientific evidence and personal opinion.
10. Each student can communicate the results of an investigation with fidelity and clarity, using words, graphs, pictures, charts, diagrams, and appropriate computer software.

**B. Performance Statement:** Each student can critically evaluate or construct arguments based on scientific knowledge, analyze the arguments of others, and distinguish strong arguments from weak ones.

*Standards:*

1. Each student can identify the central conclusions or claims of an argument based on scientific knowledge.
2. Each student can identify and evaluate the validity of the assumptions of an argument based on scientific knowledge.
3. Each student can evaluate the implications and consequences of an argument based on scientific knowledge, including ethical implications and consequences.
4. Each student can evaluate the overall strength of an argument based on scientific knowledge considering logic, possible bias of the author, credibility of sources, and the relevance, validity, and sufficiency of evidence.

**C. Performance Statement:** Each student can apply the knowledge and methods of science when making real-world decisions.

*Standards:*

1. Each student can gather information about the scientific and technological aspects of a socially significant issue and generate alternative solutions.
2. Each student can evaluate each proposed solution, aware that an incomplete knowledge base may result in uncertainty, and decide which alternative seems best.
3. Each student can present a preferred solution to a group and participate in a consensus building discussion to arrive at a group decision.

**D. Performance Statement:** Each student understands and can apply knowledge of the life sciences, particularly in relation to the six themes: energy, evolution, patterns of change, patterns of stability, scale and structure, systems and interactions.

*Standards:*

1. Each student understands and can apply concepts of evolution: the unity and diversity of life, how humans have adapted to various environments, and resultant specialization.
2. Each student understands and can apply concepts of ecology: interactions and interdependence, niche and habitat, interactions among organisms, how organisms respond to the environment, how humans affect the environment.

3. Each student understands and can apply concepts of reproduction and genetic continuity: life cycles (stages of life spans for invertebrates, vertebrates, and seed plants), patterns of reproduction in plants and animals, advantages of different patterns.
4. Each student understands and can apply concepts of human growth, development, and differentiation: gestation, birth, infancy, childhood, adolescence, adulthood, aging, death.
5. Each student understands and can apply concepts of energy, matter, and organization: cell structure at the light microscopic level, biological compounds (e.g., carbohydrates, fats, proteins, etc.).
6. Each student understands and can apply concepts of maintenance of dynamic equilibrium: human systems and homeostasis, human health and disease.

**E. Performance Statement:** Each student understands and can apply knowledge of the physical sciences, particularly in relation to the six themes: energy, evolution, patterns of change, patterns of stability, scale and structure, systems and interactions.

*Standards*

1. Each student understands and can apply concepts of matter: kinds and characteristics, properties.
2. Each student understands and can apply concepts of energy: forms, energy transformations, conservation of energy.
3. Each student understands and can apply concepts of the nature of physical and chemical change: rates of change, equilibrium, phase change.
4. Each student understands and can apply concepts of motion and force: descriptors of motion, causes of motion, equilibrium.
5. Each student understands and can apply concepts of waves and light: mechanical waves, sound, light (characteristics and models).
6. Each student understands and can apply concepts of electricity and magnetism: static charge, moving charge and magnets, electric circuits, fields.

**F. Performance Statement:** Each student understands and can apply knowledge of the following concepts in the earth sciences, particularly in relation to the six themes: energy, evolution, patterns of change, patterns of stability, scale and structure, systems and interactions.

**Standards:**

1. Each student understands and can apply concepts of structure and features: oceans and continents, minerals and rocks, soils, geologic time.
2. Each student understands and can apply concepts of crust and interior processes: convection currents, rock cycle, continental drift.
3. Each student understands and can apply concepts of surface processes: weathering erosion, deposition, glaciation, hydrologic processes (water cycle), water quality and pollution, atmospheric processes (seasons), weather, air quality and pollution.
4. Each student understands and can apply concepts of earth in space: earth, moon, sun, solar system.

**G. Performance Statement:** Each student understands and can apply knowledge of the dynamic relationship between science, technology, and society.

**Standards:**

1. Each student can provide examples of scientific knowledge and cite supporting empirical evidence.
2. Each student can give examples of scientific knowledge that was used to develop and improve a technological design.
3. Each student can give examples of scientific investigations conducted for the purpose of finding a technological solution to a social problem.

**Science  
Upper Level**

**A. Performance Statement: Each student can apply knowledge of scientific concepts in an experimental context, solve problems and investigate questions using scientific methods, and revise personal understanding to accommodate new knowledge.**

**Standards:**

1. Each student can develop questions that can be explored experimentally and formulate hypotheses consistent with known phenomena and principles.
2. Each student can select suitable tests of an hypothesis, choose appropriate measuring tools, and design an experimental procedure for controlling variables and collecting relevant data.
3. Each student can collect and record data, evaluate their precision and accuracy, and distinguish between observation and inference.
4. Each student can explain and employ an understanding of the need for many observations in the development of scientific knowledge.
5. Each student can choose or design appropriate measuring tools and apparatus and develop safe and effective skills when using common lab and field techniques.
6. Each student can manipulate, present, and discuss data, using appropriate statistics, mathematical models, and available technology.
7. Each student can evaluate the validity of a hypothesis in the light of observations and experimental data, extrapolate functional relationships beyond actual observations, and formulate appropriate generalizations, i.e. laws or principles warranted by the relationship found.
8. Each student can relate an experiment to other experiments and to appropriate scientific models and theories and develop new questions and new hypotheses.
9. Each student can integrate the results of an investigation into existing knowledge, distinguish between scientific evidence and personal opinion, and develop a revised, refined, or extended understanding of scientific theory.
10. Each student can communicate the results of an investigation with fidelity and clarity, using words, graphs, pictures, charts, diagrams, and appropriate computer software.

**B. Performance Statement:** Each student can critically evaluate or construct arguments based on scientific knowledge, analyze the arguments of others, and distinguish strong arguments from weak ones.

*Standards:*

1. Each student can identify the central conclusions or claims of an argument based on scientific knowledge.
2. Each student can identify and evaluate the validity of the assumptions of an argument based on scientific knowledge.
3. Each student can evaluate the implications and consequences of an argument based on scientific knowledge.
4. Each student can evaluate the overall strength of an argument based on scientific knowledge considering logic, possible bias of the author, credibility of sources, and the relevance, validity, and sufficiency of evidence.

**C. Performance Statement:** Each student can apply the knowledge and methods of science when making real decisions.

*Standards*

1. Each student can identify, define and examine the scientific, political, ethical, cultural, technological, or economic dimensions of an issue that has personal and social significance.
2. Each student can gather information about the scientific and technological aspects of an issue and generate alternative solutions that address all the important dimensions.
3. Each student can evaluate each proposed solution, aware that an incomplete knowledge base may result in uncertainty; decide which alternatives have scientific and technological merit; and examine the choice from all the relevant dimensions.
4. Each student can present a preferred solution to a group and participate in a consensus building discussion to arrive at a group decision.

**D. Performance Statement: Each student understands and can apply knowledge of the life sciences, particularly in relation to the six themes, energy, evolution, patterns of change, patterns of stability, scale and structure, systems and interactions.**

**Standards:**

1. Each student understands and can apply concepts of evolution: origin, diversity, and unity of life; common characteristics of life; theories about origin of life; evidence of evolution; mechanisms of evolution; biodiversity (adaptation, specialization, speciation); biodiversity over time, including human evolution; extinction and conservation.
2. Each student understands and can apply concepts of ecology: interactions and interdependence; organismal responses to the environment; population attributes, regulation, and carrying capacity; webs, niches, and interactions among organisms; matter cycles and energy flow; human influences (population growth, resources, waste, habitat alteration, agriculture and food production).
3. Each student understands and can apply concepts of reproduction and genetic continuity: cell reproduction, organismal reproduction, Mendelian genetics, molecular genetics, human genetics, genetic techniques including recombinant DNA.
4. Each student understands and can apply concepts of growth, development, and differentiation: life cycles, plant and animal development, environmental influences on development: cells, tissues, organs and systems.
5. Each student understands and can apply concepts of energy, matter and organization: biochemistry; cells and cell theory; ATP and energy transformations; photosynthesis; aerobic and anaerobic respiration; transport and membranes; assimilation, digestion, gas exchange and circulation.
6. Each student understands and can apply concepts of maintenance of dynamic equilibrium: homeostasis and feedback mechanisms, regulation systems, health and fitness, immune systems, disease.

**E. Performance Statement:** Each student understands and can apply knowledge of the physical sciences, particularly in relation to the six themes: energy, evolution, patterns of change, patterns of stability, scale and structure, systems and interactions.

*Standards:*

1. Each student understands and can apply concepts of matter: kinds and characteristics, properties, structure (atomic models, bonds and geometry).
2. Each student understands and can apply concepts of energy: forms, energy transformations, conservation of energy, second law of thermodynamics, energy alternatives for human use.
3. Each student understands and can apply concepts of the nature of physical and chemical change: rates of change, equilibrium, phase change, chemical change (acid-base reactions, oxidation-reduction reactions, inorganic and organic reactions).
4. Each student understands and can apply concepts of motion and force: descriptors of motion, causes of motion, equilibrium, momentum (conservation of momentum).
5. Each student understands and can apply concepts of waves and light, mechanical waves, sound, light (characteristics and models).
6. Each student understands and can apply concepts of electricity and magnetism: static charge, moving charge and magnets, electric circuits, fields.

**F. Performance Statement:** Each student understands and can apply knowledge of the earth sciences, particularly in relation to the six themes: energy, evolution, patterns of change, patterns of stability, scale and structure, systems and interactions.

*Standards:*

1. Each student understands and can apply concepts of structure and features: oceans and continents, minerals and rocks, soils, geologic time.
2. Each student understands and can apply concepts of crust and interior processes: convection currents, rock cycle, plate tectonics.
3. Each student understands and can apply concepts of surface processes: weathering, erosion, deposition, glaciation, hydrologic processes (water cycle, ground water, water quality and pollution), atmospheric processes (seasons, weather, climate, air quality and pollution).
4. Each student understands and can apply concepts of earth in space: solar system, origin and evolution of the universe.

**G. Performance Statement: Each student understands and can apply knowledge of the dynamic relationship between science, technology, and society.**

***Standards:***

1. Each student can give examples to show that scientific knowledge is public, replicable, and subject to revision.
2. Each student can illustrate the usefulness of scientific knowledge by choosing a technological design, explaining how it works, and predicting its beneficial consequences.
3. Each student can explain that every technological design has limits and predict the failures that might occur if certain designs were employed outside their limits.
4. Each student can choose a social problem to which there are several technological solutions and explain the advantages and disadvantages of each solution.

**Mathematics Standards  
Primary Level**

**A. Performance Statement:** Each student can solve real-world problems using knowledge of numbers, numeration, and basic mathematical operations.

*Standards:*

1. Each student can add, subtract, multiply, and divide whole numbers mentally, with paper and pencil, and with a calculator.
2. Each student can use mathematics as a way to understand other areas of the curriculum, for example, using measurement in science and computing the passage of time in history.
3. Each student can solve problems by selecting from a variety of approaches—for example, making a diagram, chart, or graph; finding a pattern; or working backwards—and explain the solution in writing.
4. Each student can judge the reasonableness of answers to mathematical problems.
5. Each student can use estimation for routine problems.
6. Each student can demonstrate an understanding of simple fractions (halves, thirds, and quarters) and commonly-used decimals (money amounts), and show the relation between them.
7. Each student can demonstrate a basic understanding of ratio and scale—for example, by mapping familiar territory such as the classroom, school, or by constructing proportional models.

**B. Performance Statement:** Each student can make decisions and predictions based on a given set of data.

*Standards:*

1. Each student can collect, organize, and describe data; create graphs and charts from that data; and recognize and predict patterns.
2. Each student can analyze data and present it in a variety of forms, such as charts, pictures, or reports.

- 3. Each student can formulate and solve problems that involve collecting and analyzing data.
- 4. Each student can use basic concepts of probability to make predictions and solve problems.

**C. Performance Statement:** Each student can identify geometric properties and relationships.

*Standards:*

- 1. Each student can describe, model, draw, and classify two- and three- dimensional geometric figures.
- 2. Each student can find the perimeter, area, and volume of simple figures through various approaches. including unit square coverings, measurement, and computation.
- 3. Each student can examine and compare given geometric figures, and identify such properties as congruency, similarity, symmetry, points, segments, angles, and planes.
- 4. Each student can measure length, capacity, weight, time, and temperature; use these measurements in computations; and judge the reasonableness of results.

**D. Performance Statement** Each student can use variables, models, and graphs to express relationships, and explain them in writing.

*Standards*

- 1. Given an equation, each student can recognize and explain the associative, distributive, and commutative properties.
- 2. Each student can identify, describe, create, and extend patterns in data, objects, symbols, or numbers.
- 3. Each student can solve simple algebraic problems with one or two unknowns using graphs or tables.

**Mathematics**  
**Intermediate Level**

**A. Performance Statement:** Each student can develop and apply a variety of mathematical strategies to solve real-world and non-routine problems.

*Standards:*

1. Each student can use reason and logic to evaluate information, identify relationships, perceive patterns, and formulate questions for further exploration.
2. Each student can use a variety of approaches—numerical, symbolic, graphical, statistical, for example—to investigate and solve complex problems within and outside the field of mathematics.
3. Each student can analyze a non-routine problem by modeling, illustrating, guessing, simplifying, generalizing, and shifting to another point of view.
4. Each student can construct a mathematical argument, both oral and written, with appropriate vocabulary and symbols.
5. Each student can communicate with peers about a problem and possible solutions and advocate for one among competing hypotheses so that peers can understand the reasoning involved.
6. Each student can use technology to develop a mathematical presentation, oral or written, employing the conventions of mathematical discourse.

**B. Performance Statement** Each student can gather, analyze, and evaluate data to formulate and test a hypothesis.

*Standards*

1. Each student can use appropriate tools—such as measuring instruments, questionnaires, and probes—for the systematic acquisition of data.
2. Each student can organize, represent, and explain data in various ways—using tables, graphs, and statistics, for example.
3. Each student can specify the sample space of an experiment and calculate the probability of an event.
4. Each student can base predictions, inferences, decisions, and convincing arguments on the careful analysis of data and the test of a hypothesis.

**C. Performance Statement: Each student can understand functions, use functional notation, and perform transformations.**

**Standards:**

1. Each student understands the mathematical concept of function and the various representations of a function.
2. Each student can use functional notation to express relationships and transformations.
3. Each student can represent a function by a matrix and use matrices to perform transformations.
4. Each student understands the concept of rate of change and its connection to the slope of a line.

**D. Performance Statement: Each student understands and can apply the properties and relationships of figures in space.**

**Standards**

1. Each student can visualize and represent spatial relationships and geometric properties such as symmetry, similarity, perpendicularity, and parallelism.
2. Each student can choose appropriate units for measurement and set appropriate standards for the accuracy of measurement.
3. Each student can identify various geometric figures by their properties and apply this knowledge of properties when solving problems.
4. Each student can use analytical tools for measurement and appropriate formulas for area and volume.

**E. Performance Statement:** Each student can draw on a broad body of mathematical knowledge and skill when solving problems.

**Standards:**

1. Each student can calculate with efficiency and accuracy, and employ a variety of computational aids, such as calculator, compass, graphing utility, spreadsheet, software for geometric constructions, and computer algebra system.
2. Each student can routinely use estimation to evaluate a strategy and test the reasonableness of a result.
3. Each student understands and can apply number and numeration concepts, such as cardinality, order, divisibility, commutativity, and zero.
4. Each student can formulate and solve equations and inequalities by numerical, symbolic, and graphical methods.
5. Each student can use, create, and explain formulas and algorithms.

**Mathematics  
Upper Level**

**A. Performance Statement:** Each student can develop and apply a variety of mathematical strategies to solve real-world and non-routine problems.

*Standards:*

1. Each student can use reason and logic to evaluate information, identify relationships, perceive patterns, and formulate questions for further exploration.
2. Each student can use a variety of approaches—numerical, symbolic, graphical, statistical—for example, to investigate and solve complex problems within and outside the field of mathematics.
3. Each student can analyze a non-routine problem by modeling, illustrating, guessing, simplifying, generalizing, and shifting to another point of view.
4. Each student can construct a mathematical argument, both oral and written, with appropriate vocabulary and symbols.
5. Each student can communicate with peers about a problem and possible solutions and advocate for one among competing hypotheses so that peers can understand the reasoning involved.
6. Each student can use technology to develop a mathematical presentation, oral or written, employing the conventions of mathematical discourse.

**B. Performance Statement:** Each student can gather, analyze, and evaluate data to formulate and test a hypothesis.

*Standards*

1. Each student can make appropriate use of measures of central tendency, variability, and correlation.
2. Each student understands different representations of the same data and can relate a change in one representation to a corresponding change in another representation.
3. Each student can design, conduct, and interpret a statistical experiment.

4. Each student can model real-world data—by linear regression for example.
5. Each student can apply various statistical tests—tests of significance, for example.
6. Each student can use simulation, such as Monte Carlo methods, to estimate probability.

**C. Performance Statement:** Each student can understand functions, use functional notation, and perform transformations.

*Standards:*

1. Each student can represent transformations by means of functions, matrices, graphs, and charts.
2. Each student chooses appropriate coordinates for a graph—rectangular, polar, or parametric—and can convert between them.
3. Each student understands the properties and transformations of classes of functions.
4. Each student understands and can apply the relationship between slope and tangent line and between instantaneous and average rates of change.
5. Each student understands and can apply the concept of continuity.
6. Each student understands and can apply the concept of recursion.

**D. Performance Statement:** Each student understands and can apply properties and relationships of figures in space.

*Standards*

1. Each student can visualize and represent spatial relationships and geometric properties, such as symmetry, similarity, perpendicularity, and parallelism.
2. Each student uses appropriate transformations—such as translation, rotation, and reflection—to analyze geometric objects.
3. Each student uses analytical tools for measurement and appropriate formulas for area and volume.

**E. Performance Statement: Each student can draw on a broad body of mathematical knowledge and skill when solving problems.**

**Standards:**

1. Each student calculates with efficiency and accuracy and employs a variety of computational aids, such as calculator, spreadsheet, and software for geometric analysis.
2. Each student can use graphing technology and a computer algebra system.
3. Each student can compute with real and complex numbers and manipulate functions, vectors, matrices, and series.
4. Each student routinely uses estimation to evaluate a strategy and test the reasonableness of a result.
5. Each student can solve systems of equations by various means, including matrix methods.
6. Each student can evaluate, graph, and analyze the elementary functions—polynomial, rational, trigonometric/circular, exponential, and logarithmic—and select the appropriate function to solve a problem.
7. Each student can work with abstract mathematical objects and use the symbolic language of mathematics effectively.
8. Each student can use, create, and explain formulas and algorithms.

**Foreign Language Standards  
Primary Level**

**A. Performance Statement:** Each student can communicate effectively and appropriately in the chosen language when confronted with a range of everyday situations.

*Standards:*

1. Each student can understand the chosen language in familiar situations and perform such tasks as introducing one's self, ordering meals, asking directions, and making purchases.
2. Given familiar everyday situations (such as family, school, friends, food, recreation, and one's individual needs), each student can make appropriate comments, initiate and respond to simple statements, and maintain simple face-to-face conversations.
3. Each student can describe a given familiar situation in the present and immediate future.
4. Each student can read and write simple texts on familiar topics, showing a basic understanding of grammar, syntax, and spelling rules.
5. Each student can perform simple tasks in other subjects, including mathematics and science, in the chosen language.

**B. Performance Statement:** Each student can demonstrate, in the chosen language, a knowledge of the people of countries where the language is spoken.

*Standards:*

1. Each student can identify celebrations, food, festivals, and customs of selected countries where the chosen language is spoken and can explain differences and similarities with own culture.
2. Each student can identify games, fairy tales, songs, and rhymes of the selected countries and explain differences and similarities with own culture.
3. Each student can demonstrate the appropriate use of language and behavior as used in daily life in the selected countries and explain differences and similarities with own culture.

**C. Performance Statement:** Each student can identify, in the chosen language, key geographical features, historical figures, and contributions of the people of selected countries where the chosen language is spoken.

*Standards:*

1. Given a map of the selected countries, each student is able to locate and identify the capitals, major rivers, mountains, and other key geographical features.
2. Each student can identify some of the major historical figures of the selected countries.
3. Each student can identify some of the outstanding achievements and contributions that the people of the selected countries have had in the arts, literature, music, science, and history.
4. The student can explain the influence that people from the selected countries have had on the United States.

**Foreign Language  
Intermediate Level**

**A. Performance Statement:** Each student can communicate effectively and appropriately in the chosen language when confronted with a wide range of situations.

*Standards:*

1. Each student can understand the point of view and/or main ideas in selected radio/TV broadcasts, oral reports, poems, or short stories.
2. Each student can participate in formal and informal conversations on familiar and unfamiliar topics, areas of interest, and current events.
3. Each student can ask questions to clarify meaning and seek and give information.
4. Each student can read literature and unfamiliar selections on general topics for general understanding.
5. Each student can clearly and accurately write letters, paraphrases, and brief summaries on familiar and unfamiliar topics.
6. Each student can use the chosen language for learning across the curriculum—for example, by accessing Internet, interviewing native speakers, or consulting original library sources.

**B. Performance Statement:** Each student can demonstrate, in the chosen language, a knowledge of the people and customs of selected countries where the language is spoken.

*Standards:*

1. Each student can identify characteristics such as gestures, dialect, idioms, and linguistic idiosyncrasies unique to the selected countries.
2. Each student can demonstrate the appropriate use of language and customs for successful interaction in the selected countries.
3. Each student can compare and contrast cultural differences among the selected countries and own culture, and can explain these differences.
4. Each student can identify the major events of the selected countries' histories and place them accurately on a timeline.

**C. Performance Statement:** Each student can identify, in the chosen language, key world issues as seen by the people of selected countries where the language is spoken.

**Standards:**

1. Each student can identify current world issues as they relate to the selected countries and compare the different points of view between those countries and the United States.
2. Each student can describe the economies of the selected countries.
3. Each student can discuss the political and economic relationship between the United States and the selected countries.

**Foreign Language  
Upper Level**

**A. Performance Statement:** Each student can communicate effectively and appropriately in the chosen language when confronted with a full range of personal, social, intellectual, and job-related situations.

*Standards:*

1. Each student can respond to questions, make judgments, and offer opinions about a radio show, television program, film, or lecture that includes variations in accent, age of speakers, and rapidity of speech.
2. Each student can discuss topics at concrete and abstract levels.
3. Each student can analyze and discuss poetry or literature using appropriate literary terms.
4. Each student can paraphrase or amplify remarks sufficiently to be understood by a native speaker when communication becomes stalled.
5. Each student can read major literary works and texts on unfamiliar topics which are conceptually abstract and linguistically complex, and include cultural nuances.
6. Each student can perform across the curriculum in the chosen language.

**B. Performance Statement:** Each student can analyze, in the chosen language, the similarities and differences of the people of countries where the language is spoken and other world cultures.

*Standards:*

1. Each student can discuss the influence different religions and national and world politics have had on the people of the selected countries and explain the similarities and differences found in own culture and other world cultures.
2. Each student can analyze examples of the selected countries' media—such as television, music, magazines, movies, and advertisements—and compare to examples from own culture.
3. Each student can discuss the history of the selected countries, and analyze the countries' impact on the politics, religion, art, and economy of other world cultures.

**C. Performance Statement:** Each student can integrate knowledge of the chosen language and culture with other subject areas including geography, history, mathematics, science, and the arts.

**Standards:**

1. Each student can read and analyze texts in another subject areas written in the chosen language.
2. Each student can analyze a topic from another subject area from two cultural perspectives.
3. Each student can conduct research in the chosen language for another subject area.
4. Each student can write a major paper in the chosen language, revise it for content, proofread it for accurate spelling and grammar, and edit it for style.

**Health and Physical Education Standards  
Primary Level**

**A. Performance Statement: Growth and Development. Each student can describe the progression of human development in stages—from embryo to birth to adolescence and so forth—and recognize major factors contributing to growth and development.**

*Standards*

1. Each student can identify a usual sequence of physical and mental human development and recognize individual variation in the time taken to develop.
2. Each student can describe how physical characteristics, heredity, physical and mental health, and environment can influence growth and development.
3. Each student can identify ways nutrition, exercise, environment, leisure activities, and habits affect physical, mental, and emotional health.
4. Each student can describe the functions of major organs (for example, the heart, lungs, brain) and of the five senses.

**B. Performance Statement: Health and Nutrition. Each student can show a basic understanding of the effect of various factors on health—including food, environment, disease, and the use of drugs and alcohol—and explain how such factors can be beneficial or detrimental to health.**

*Standards*

1. Each student can identify common methods of disease transmission and prevention, for example, the importance of washing one's hands to prevent transmission of the common cold or flu.
2. Each student can identify nutrients associated with common foods and describe how they contribute to good health and growth, for example, the importance of calcium to the development of bone and teeth.
3. Each student can show an understanding of drugs that are helpful to health maintenance (i.e., medicine, vaccines, etc) and distinguish these from so-called recreational drugs. Each student can describe effects from the proper and improper use of drugs.

**B. Performance Statement:** Through research and analysis of texts and production in theater, film, and electronic media, each student can discuss the interaction between cultural and historical forces and artistic expression.

*Standards:*

1. Each student can describe relationships between theater and other cultural institutions in other cultures and historical periods. Each student can describe such aspects as relationships among religion, ritual, and theater; the connections between dramatic presentations and social and political thought; and the effect of culture and technology on the content and style of dramatic presentations.
2. Each student can describe the historical development of one or more aspects of theater.
3. Each student can compare and criticize with authority important texts and productions representative of various genres, cultures, and historical periods.
4. Each student can research and examine the lives and works of selected playwrights, actors, directors, and theatrical designers from various cultures and historical periods. Each student can draw connections between the artist's work and the cultural and historical period in which it was created.

**C. Performance Statement:** As a critical artist and a critical member of an audience, each student can perceive, analyze, and compare relationships between artistic intent and expressive means in all theatrical media including stage, film, radio, and video.

*Standards*

1. Each student can analyze his or her own and other exemplary dramatic texts to establish and describe relationships among character, environment, genre, and style and the resulting shape of the drama. Each student can discuss a playwright's choices of devices for conveying ideas.
2. Each student can use analytical vocabularies and concepts to relate and compare individual responses to classroom and professional presentations. Each student can consider the relationship of text to production decisions and to audience response.
3. Each student can judge the quality of productions, can articulate own interpretation of the production's meaning, and defend the criticism coherently and logically. Each student can compare criticisms of the same work.

**Music Standards  
Primary Level**

**A. Performance Statement:** Each student can demonstrate the ability to create and perform music by singing, playing instruments, moving to music, and composing and improvising music.

*Standards:*

1. **Singing.** Each student can sing songs accurately and independently, on pitch, and in rhythm, alone or with a group, and with a clear, free tone. Each student can sing rounds, partner songs, and harmony.
2. **Playing Instruments.** Each student can play simple melodies, rhythms, and chords on classroom instruments (drum, recorder, autoharp, etc.).
3. **Composing.** Each student can create short pieces using conventional musical sounds and nontraditional sounds available in the classroom or body sounds (e.g. clapping, finger snapping); experiment imaginatively by altering pitch, tempo, timbre, and dynamics for expressive purposes; and create music to dramatize stories.
4. **Improvising.** Each student can create thoughtful alterations and variations to existing songs, and create "answers" to unfinished melodic phrases by singing or playing on classroom instruments.
5. Each student can respond to music and sound, particularly to meter and beat, by appropriate movements, such as clapping or walking; respond to changes in tempo, dynamics, pitch, rhythm, timbre, or style by changing movements appropriately. Each student can create patterns of movement to express their thoughts or feelings or to express what they hear in various musical works.
6. Each student can sing from memory a basic repertoire of at least two dozen folk and composed songs from the United States and from other regions of the world.
7. Each student can recognize and distinguish electronic and acoustic sounds and use a variety of electronic sounds to express musical ideas.

**B. Performance Statement:** Each student understands the cultural and historical context of music and can identify the influence of diverse heritages evident in the music of the United States (including African, European, and Latin American).

*Standards:*

1. Each student can distinguish between the music of today and the music of earlier periods, and determine whether particular works come from the same culture or different cultures.
2. Each student can identify the major musical characteristics of United States music, including its African, European, and Latin American elements.
3. Each student can identify well-known musical pieces and genres from different cultures and historical periods—for example American traditional songs, West African drumming, calypso, classical—and describe their purpose and meaning.

**C. Performance Statement:** Each student shows skill in listening and responding to music, can identify certain features of music, and can offer ideas about the music's meaning and purpose.

*Standards:*

1. Each student can identify specific musical events and features when listening to music and demonstrate musical perception in responding to music.
2. Each student can explain the effect of a composer's choices—such as the choice of instruments, key signature, and duration—and describe his or her response using appropriate music vocabulary—for example, melody, rhythm, harmony, tempo.
3. Each student can invent graphic symbols to notate music, so that it can be reproduced later, and use standard notational symbols to notate pitch, rhythm, dynamics, and other features.
4. Each student can recognize the basic features of unfamiliar music by studying the notation.
5. Each student can identify voices (such as male and female, high and low, and distinct individuals), types of band and orchestral instruments (strings, brass, etc.), a selection of non-western instruments, and identify structures such as call and response, theme and variations, opera, and concerto.

**Music Standards  
Intermediate Level**

**A. Performance Statement: Each student can demonstrate the ability to create and perform music by singing, playing instruments, and composing and improvising music.**

**Standards:**

1. **Singing.** Each student can sing accurately alone and with others, with a free tone, and with expressive qualities appropriate to the music. Each student can sing rounds, partner songs, songs with descants, and songs in three parts. Each student can correct errors in pitch or rhythm when they occur, demonstrate sensitivity to blend and balance, and respond to the conductor.
2. **Playing Instruments.** Each student can demonstrate a skill on a variety of classroom instruments (recorder, autoharp, mallet, keyboard, etc.) and play at least three chords on two or more instruments. Each student can play independently, play in groups demonstrating sensitivity to blend and balance, and respond to the gestures of a conductor.
3. **Composing.** Each student can compose simple pieces for at least one performance medium, using traditional or nontraditional sounds, including electronic (personal computers, sequencers, synthesizers, and drum machines). Each student can compose reflecting a knowledge of melody, rhythm, and harmony and showing growth in musical imagination and expression.
4. **Improvising.** Each student can spontaneously create simple rhythmic and harmonic accompaniments to live or recorded music and demonstrate originality and imagination in experimenting with variations in tempo, timbre, dynamics, and phrasing for expressive purposes.
5. Each student can sing from memory a repertoire of folk, art, and popular songs. On instruments. Each student can play a repertoire of diverse periods and styles including at least some works performed from memory. Each student can vary vocal and instrumental style and interpretation appropriately, depending on the type of music being performed.

**B. Performance Statement:** Each student can examine the cultural and historical context of music and show an understanding of major western and non-western works, and various musical periods and genres.

*Standards:*

1. Each student can identify by style, genre, composer, title and movement or section, if applicable, a repertoire of at least a dozen important works for various performance media, and explain briefly why each is considered exemplary.
2. Each student can classify by genre, form, and period a musical work presented aurally and give reasons for the classification.
3. Each student can explain the distinguishing musical and cultural characteristics of the Baroque, Classical, and Romantic periods and of at least two distinctive styles of the twentieth century outside the western art music tradition.
4. Each student can explain the rhythmic, melodic, harmonic, timbral, and other characteristics of a musical style in three or more distinctive world cultures; discuss the meaning and purpose of each style; and classify an unfamiliar piece of representative work according to its cultural origin.
5. Each student can identify various roles and functions musicians perform in American society and contrast them with the role of musicians in other cultures and historical periods.

**C. Performance Statement:** Each student can show skill at listening and responding to music, interpret the music's meaning and purpose, and judge the effectiveness of a performance in fulfilling its intended purpose.

*Standards:*

1. Each student can identify specific musical events while listening to movement-length work and create graphic symbols to map the work while listening in order to later report the nature and sequence of musical events.
2. Each student can describe the musical and expressive qualities of two or more differing interpretations of the same work, explain how they differ, and suggest what effect each has on the listener.
3. Each student can identify commonalities among music and other arts disciplines and connect music to other academic disciplines.

4. Each student can describe, evaluate, and discuss musical works, both in performance and in notation, paying particular attention to pitch, rhythm, harmony, as well as to their texture, formal structure, performance medium, and other salient features. Each student can demonstrate knowledge of scales, intervals, chords, and chord progressions and show competency with technical vocabulary.
5. Each student can sing or play simple melodies in the treble or bass clefs at sight; identify by name and function standard notation for pitch, rhythm, articulation, and dynamics; and accurately follow a single line of standard notation while listening to it performed.

**Music Standards  
Upper Level**

**A. Performance Statement: Each student can demonstrate the ability to create and perform music by singing, playing instruments, composing and improvising.**

**Standards:**

1. **Singing.** Each student can demonstrate good posture, good breath control, and basic technical skills in singing and can sing with good pitch, rhythm, diction, balance, blend, and interpretation. Each student can sing independently an appropriate part in an ensemble, with or without accompaniment, and with sensitivity to the gestures of a conductor.
2. **Playing Instruments.** Each student can play at least one instrument (band, folk, or electronic) well enough to perform in informal settings. Each student can play a part in an instrumental ensemble accurately and independently; demonstrate attention to pitch, rhythm, and interpretation; and show sensitivity to blend and balance, and to gestures of a conductor.
3. **Composing.** Each student can compose simple pieces for at least two contrasting media using personal computers and basic musical digital devices as appropriate.
4. **Improvising.** Each student can spontaneously create short, freestanding works, simple rhythmic and harmonic accompaniments, or melodic lines to music which is live or recorded, instrumental or vocal.
5. Each student can perform with expression and musicianship a varied repertoire of vocal and instrumental literature, performing from memory works of various genres, cultures, and periods. Each student can perform music of at least two contrasting styles with dynamics, phrasing, and expression appropriate to each.
6. Each student can orchestrate or arrange simple pieces for media other than those for which the pieces were written. Each student's work demonstrates knowledge of the ranges and potential of instruments, voices, and other media.

**B. Performance Statement:** Each student can describe and analyze the cultural, historical, social, economic, and aesthetic context in which various works were created.

**Standards:**

1. Each student can identify by genre, composer, title, and movement or section (if applicable) a repertoire of at least twenty exemplary works for various performance media, briefly state reasons why each is considered exemplary, and evaluate the quality and merits of each.
2. Each student can criticize and classify a musical work presented aurally and support his or her reasoning.
3. Each student can identify and explain the distinguishing musical and cultural characteristics of western art music—such as, Baroque, Classical, Romantic—and of four or more distinctive musical styles of the twentieth century, at least two of which are not in the western art music tradition. Each student can evaluate representative works for their merits as models.
4. Each student can identify and explain the distinguishing musical and cultural characteristics of a representative style of music from at least four distinctive cultures from outside the west. Each student can recognize aurally examples of music of those cultures and evaluate representative works for their merits as models.
5. Each student can explain various purposes of music in contemporary cultures and cite examples. Each student can identify various roles and functions musicians perform in society, cite representative individuals who function in those capacities, and describe their activities and achievements.

**C. Performance Statement:** Each student can listen and respond to music, analyze its meaning and purpose, and evaluate the quality and effectiveness of the work and/or performance.

**Standards:**

1. Each student can compare different interpretations of the same work, describe the musical and expressive qualities of the performances, and discuss the effectiveness of each with reference to melodic contour, harmonization, dynamics, tempo, instrumentation, register, or other expressive qualities.
2. Each student can demonstrate musical perception after listening to long movement-length works of music, identify specific musical events in that music, and describe in detail specific features of the work.

3. Each student can demonstrate a knowledge of scales, intervals, chords and chord progression and identify, in detail and by using the technical vocabulary of music, the musical devices and techniques used to provide unity and variety, repetition and contrast, and tension and resolution.
4. Each student can sight-read music with the difficulty of a simple hymn.
5. Each student can notate from dictation step-wise melodies, rhythmic patterns including quarter notes and eighth notes, and four-part harmonic patterns.
6. Each student can select for his or her personal performance and listening music of high quality relative to other works of the same genre and justify the selections.

SCOPE AND SEQUENCE CHART

<b>SOUNDS</b>	1	160
<b>PRONUNCIATION</b>	1	48
<b>SEQUENCING GAMES</b>	1	17
<b>BLENDING</b>		
Say It Fast	1	24
Say the Sounds	6	14
Say the Sounds—Say It Fast	8	40
Sounds—Say It Fast	13	25
Say It Fast—Rhyming	16	25
Rhyming	26	38
Sound Out	18	33
<b>READING VOCABULARY</b>		
Sounding Out Words	28	160
Reading the Fast Way	60	160
<b>Word-Attack Skills</b>		
Regular Words	28	160
Rhyming Words	37	160
Words Beginning with Stop Sounds	63	160
Irregular Words	89	160
Word Build-Ups	124	160
<b>STORY READING</b>		
Sounding Out Words	40	106
Reading the Fast Way	75	160
Individual Checkouts	108	160
<b>Additional Skills</b>		
Word Finding	57	86
Period Finding	87-90	
Sentence Saying	87	106
Quotation Finding	94	106
Question Mark Finding	98-103	
Reading the Title	115-118	
<b>Comprehension</b>		
Picture Questions	40	160
Story Questions—Oral	75	160
Story Questions—Written	131	160
Read the Items	151-160	
<b>TAKE-HOME EXERCISES</b>		
Say It Fast	1	20
Writing	1	160
Cross-Out Games	1	130
Picture Completion	1	39
Sound Out	14	33
Pair Relations	21	143
Matching	29	119
Reading Vocabulary	34-39	
Story and Sentence Copying	40	160
Reading Comprehension	120	160
Story Items	131	160
Picture Comprehension	144	160

**SOUNDS AND LETTER NAMES**

Sounds	1	39	
Sound Combinations (Diphthongs and Digraphs)	1		160
Letter Names—Vowels		40	52
Letter Names—Consonants			83-86
Alphabetical Order			83-86
Capital Letters			87-94

**READING VOCABULARY**

Sound Out	1		82
Read the Fast Way	1		160
Word Parts	1		160
Hard Words	3, 4, 8, 9, 13, 18, 32	47	
Final-e Rule		48	80
Spell by Letter Names			86 160

**STORIES**

Decoding			
Oral Story Reading	1		160
Rate-and-Accuracy Checkouts		5-160 (every fifth lesson)	
Comprehension			
Story Comprehension—Oral	1		160
Story Comprehension—Written	1		160
Picture Comprehension	1		160
Rule Review			147-160
Read the Items	3	39 47	81 94

**INDEPENDENT TAKE-HOME EXERCISES**

Mechanics			
Sounds and Sentence Copying	1		48
Comprehension			
Picture Comprehension	1	25	
Story Items	1		160
Reading Comprehension Passages	8		160
Following Instructions		18	120
Story-Picture Items		61	94
Picture Deductions			95 147
Written Deductions			123 160
Factual Information Passages			132 160

# Scope and Sequence Chart

The following scope and sequence chart provides an overview of the skills taught in *Reading Mastery III*. The skills are divided into four principal areas: decoding skills, comprehension skills, literary skills, and study skills.

The numbers on the chart indicate which lessons offer practice in a given skill. When a span of lessons is shown in regular type (1-20, for example), every lesson in the span offers practice in the skill. When a span of lessons is shown in italic type (*1-20*, for example), most lessons in the span offer practice in the skill.

## Decoding Skills

### SOUNDS AND LETTERS

- reading sound combinations: 20-29

### WORDS

- reading regularly spelled words: A-D, 1-140
- reading irregularly spelled words: A-D, 1-140
- reading word lists for accuracy: A-D, 1-140
- spelling difficult words: A-D, 1-140

### SENTENCES AND STORIES

- reading aloud: A-D, 1-140
- reading silently: A-D, 1-140
- reading aloud for rate and accuracy: A-D, 5, 7, and every fifth lesson from 10 to 140

## Comprehension Skills

### COMPREHENSION READINESS

- following oral directions: A-D, 1-140
- responding to picture tasks: A-D, 1-140

### VOCABULARY

- identifying the meanings of common words and phrases: 1-140
- comprehending vocabulary definitions: 2-140
- using vocabulary words in context: 2-140
- identifying homonyms and homographs: 77-83, 87-140
- comprehending contractions: 81-124

### LITERAL COMPREHENSION

- answering literal questions about a text: A-D, 1-140
- identifying literal cause and effect: A-D, 1-140
- recalling details and events: A-D, 1-140
- following written directions: A-D, 1-140
- memorizing facts and rules: A-D, 1-140
- sequencing narrative events: 23-140

### INTERPRETIVE COMPREHENSION

- predicting narrative outcomes: D, 1-140
- relating titles to story content: A-D, 1-140
- inferring cause and effect: A-D, 1-140
- inferring story details and events: D, 1-140
- making comparisons: 22-140

### REASONING

- using rules to classify objects: A-D, 1-140
- completing written deductions: 1-60
- drawing conclusions: A-D, 1-140
- using rules to predict outcomes: 8-113

## Literary Skills

### ANALYZING CHARACTERS AND SETTINGS

- interpreting a character's feelings: 1-140
- pretending to be a character: 1-140
- interpreting a character's motives: 11-140
- inferring a character's point of view: 33-140

### TYPES OF LITERATURE

- reading realistic fiction: 45-59, 64-76, 86-95
- reading fantasy: 1-140
- distinguishing between realism and fantasy: 3-6, 11, 13, 18, 20, 23, 25, 35
- reading non-fiction: A-C, 2-140

## Study Skills

### WRITING

- writing answers to questions: A-D, 1-140

### USING REFERENCE MATERIALS

- reading informational passages: A-C, 2-140
- interpreting maps: 8-140
- identifying standard measurements: 11-140
- interpreting diagrams: 25-140
- interpreting time lines: 82-88, 91, 94, 95, 99, 103, 105-107, 110, 114, 123, 124
- filling out forms: 109-140

# LEVEL A

## Scope and Sequence

Connecting math concepts, Level A builds on the aspect of mathematics that is most familiar to children—counting. Counting experiences are developed in a variety of contexts, expanded to the

	Lessons									
	1	5	10	15	20	25	30	35	40	45
<b>FOLLOWING INSTRUCTIONS</b>	[Bar from 1 to 5]									
<b>COUNTING</b>										
Rote Counting	[Bar from 1 to 45]									
Rational Counting	[Bar from 1 to 15]									
Ordinal Numbers	[Bar from 10 to 15]									
Counting Backward	[Bar from 20 to 45]									
Counting by 10	[Bar from 1 to 45]									
<b>SYMBOLS</b>										
Symbol Writing	[Bar from 1 to 25]									
Symbol Identification	[Bar from 1 to 15]									
Numerals and Counters	[Bar from 5 to 15]									
<b>MORE/LESS/EQUAL</b>										
More	[Bar from 5 to 45]									
Equality	[Bar from 15 to 15]									
Less	[Bar from 25 to 45]									
More/Less Discrimination	[Bar from 35 to 45]									
<b>ADDITION/SUBTRACTION</b>										
Addition	[Bar from 10 to 45]									
Subtraction	[Bar from 35 to 45]									
Addition/Subtraction Discrimination	[Bar from 40 to 45]									
<b>PLACE VALUE</b>	[Bar from 15 to 45]									
<b>PROBLEM SOLVING</b>	[Bar from 40 to 45]									
<b>APPLICATIONS</b>										
Money										
Measurement										
Estimation										

# Level B

## Scope and Sequence

Connecting Math Concepts, Level B provides many illustrations of how mathematical concepts are linked to each other and to the outside world. For example, money is used to illustrate renaming, regrouping, multiplication, problem solving and many other concepts. CMC includes both symbolic and physical representations for place value, regrouping,

	Transition		Lessons										
	A	B	1	5	10	15	20	25	30	35	40	45	
COUNTING	1s							2s				5s	
FOLLOWING DIRECTIONS													
PLACE VALUE													
2-Digit Numerals													
3-Digit Numerals													
Discrimination													
NUMBER FAMILIES													
Addition													
Subtraction													
Discrimination													
Missing Addend													
FACTS													
Addition											+2		
Subtraction									-0	-1		-2	
Discrimination													
NUMBER RELATIONSHIPS													
< = >													
Number Line													
Fact Derivation													
MEASUREMENT													
Length													
Time: Calendar													
Time: Clock													
Equivalences													
COLUMN ADDITION													
No Carrying													
Carrying													
Discrimination													
COLUMN SUBTRACTION													
No Borrowing													
Borrowing													
Discrimination													
MENTAL ARITHMETIC													
Addition													
Subtraction													
Discrimination													
MONEY													
Coins													
Dollar-and-Cents Problems													
MULTIPLICATION													
GEOMETRY													
Identifying Shapes													
Perimeter and Area													
TABLES													
Number Tables													
Number-Family Table													
PROBLEM SOLVING													
Story Problems													
Picture Problems													

# Level C

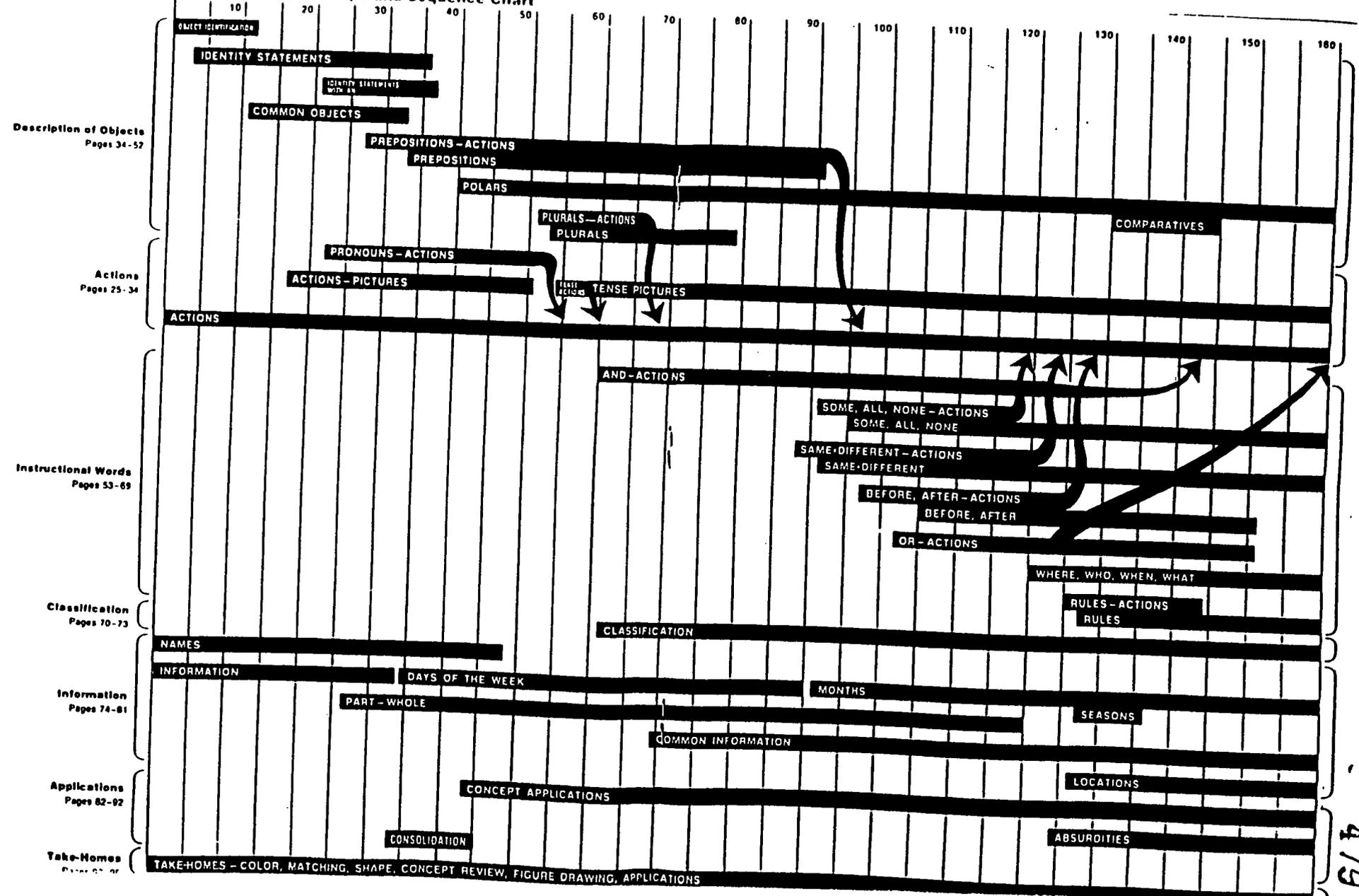
## Scope and Sequence

*Connecting Math Concepts, Level C* places a strong emphasis on higher-order thinking. Students learn a variety of mapping techniques for relating problem solving to real-life situations. With word problems, measurement, money, time, and various projects, students graphically represent information before they attempt to calculate an answer. The

	Lessons									
	1	5	10	15	20	25	30	35	40	45
Addition and Subtraction Number Families	[Shaded]									
Addition Facts	[Shaded]									
Subtraction Facts	[Shaded]									
Multiplication Facts	[Shaded]									
Division Facts	[Shaded]									
Mental Arithmetic	[Shaded]									
More/Less	[Shaded]									
Number Relationships	[Shaded]									
Place Value	[Shaded]									
Column Addition	[Shaded]									
Column Subtraction	[Shaded]									
Column Multiplication	[Shaded]									
Division With Remainders	[Shaded]									
Estimation	[Shaded]									
Calculator Skills	[Shaded]									
Equation Concepts	[Shaded]									
Problem Solving	[Shaded]									
Analyzing Data: Tables	[Shaded]									
Fractions	[Shaded]									
Coordinate System	[Shaded]									
Graphs	[Shaded]									
Area	[Shaded]									
Volume	[Shaded]									
Time	[Shaded]									
Statistics: Range	[Shaded]									
Money	[Shaded]									

**Distar Language I Scope and Sequence Chart**

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# 44 Distar Language II Scope and Sequence Chart

	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	
<b>ACTIONS</b> pages 25 - 27	<b>ACTIONS-REVIEW</b>																
			CAN-DO						SYN		LEFT-RIGHT						
<b>CLASSIFICATION</b> pages 27 - 33	<b>CLASSIFICATION</b>																
						FROM-TO											
<b>WORD SKILLS</b> pages 34 - 49	<b>POLARS-OPPOSITES</b>																
				DEFINITIONS					SYNONYMS								
											SUPERLATIVES						
													CONTRACTIONS				
<b>SENTENCE SKILLS</b> pages 50 - 61	<b>WHO, WHAT, WHEN, WHERE, WHY</b>																
	<b>QUESTIONING SKILLS</b>																
							STATEMENTS				STATEMENTS						
				VERB TENSE													
<b>REASONING SKILLS</b> pages 62 - 77								ANALOGIES						IF-THEN			
			ONLY														
		T-F				TRUE-FALSE											
			DESCRIPTION														
		S-O								SAME-DIFFERENT							
												LEFT-RIGHT					
<b>DIRECTIONAL SKILLS</b> pages 78 - 85				FROM-TO													
									MAP READING								
<b>INFORMATION</b> pages 86 - 89	<b>DAYS, MONTHS, AND SEASONS</b>																
								LAND FORMS									
			MATERIALS														
<b>APPLICATIONS</b> pages 89 - 91	<b>PART-WHOLE</b>																
	<b>CONCEPT APPLICATIONS</b>																
	<b>ABSURDITIES</b>																
<b>TAKE-HOMES</b> page 92	<b>TAKE-HOMES</b>																

## Introduction

Most of what we use in communicating with each other can be called language. The scope of topics that can be included in the teaching of language (or English) is therefore very broad. The choice of what to teach must be somewhat arbitrary.

Which of the thousands of aspects of language should be selected for study after the child has begun to learn communications skills and language concepts? Should he learn something about transformational grammar? Should he learn how to write thank-you notes and keep a diary? Should he learn the major parts of speech? Should he learn to listen to others as they talk? Should he learn language skills that are relevant to his daily life? These questions are not easy to answer, and any selection of material or topics must necessarily be incomplete. Language, English—or whatever it is called—is a broad and many-sided subject. A major focus must be selected and objectives defined.

The major focus of Distar® Language III is on the analysis of sentences, both spoken and written. The focus is not limited to grammatical analysis; it includes the kind of analysis that deals with what a sentence says and what inferences can be drawn from that sentence. The analysis of sentences is systematically expanded into writing. After a child learns something about analyzing what sentences say, he is in a better position to construct sentences that express precisely what *he* wants to say. He is able to manipulate the parts of the sentence, to focus on its critical elements, and to anticipate the questions the reader or listener might have.

The objectives for Language III have been determined by looking at the long-range skills that we want children to have. We want them to be able to analyze what they read. We want them to be able to anticipate the questions that a reader might have about the topic they are discussing or the situation they are describing. We want them to be able to consider different possibilities, anticipate ambiguities, and above all to express themselves clearly, orally and in writing.

To guarantee this performance, we should take realistic steps. If we give the children who are ready for Language III very sophisticated tasks, some of them will perform well. Some will perhaps take the subsequent steps and become very proficient at communicating with others through writing and speaking. Others, however, will not succeed. Language III is an attempt to identify the skills that *any* child will need, to structure them so that they are understandable, and to provide the child with enough reinforcing practice in each newly learned skill so that he can use it easily. The goal is to teach every child.

Distar Language III is designed to lay a foundation for communications skills—particularly written communication. The skills included in the program are those that have the greatest immediate use. At the end of the year the children who are well taught will have much more to learn before they are proficient editors or writers, but they will have taken the most important steps. They will have mastered a basic structure of analysis to which more refined skills can later be added. They will have begun to acquire the ability to communicate that distinguishes the well-educated person from the one who lacks education and who cannot express himself in writing.

## CONTENT OF THE PROGRAM

What are these high-priority skills? Some have to do with grammar, or the basic structure of the language; but grammatical skills are certainly not the only important ones that a child should study. More important are the skills that allow the child to deal with the content of what is written—to analyze what it says and how it says it. Also more important are writing skills—the application of grammatical analysis to written communication.

Six major topics are developed in Distar Language III:

1. Information analysis
2. Information processing
3. Sentence structure analysis
4. Sentence structure processing
5. Mechanics and usage
6. Writing

1. **Information analysis** deals with the questions that can be answered by referring to a specific sentence or set of sentences. For example, the sentence "The boy was tired that night" answers a number of questions. It answers the questions "Who was tired?" "When was he tired?" "How did he feel?" On the other hand, the sentence does not answer such questions as "Why was he tired?" or "Where was he that night?"

To perform an information analysis we must begin with a sentence. We must then address questions to the sentence, and we must use the sentence as the basis for answering each question. Either the sentence does or does not give information that allows us to answer a particular question. The information that we use to answer the question comes from the sentence.

2 In Distar Language III information analysis is taught through exercises in which children work with sentences and short stories. They answer questions about who, what, why, when, and where. In addition, they compare pairs of sentences and determine which sentence gives more information or which gives redundant information. They identify sentences that summarize longer passages. The goal of these activities is to teach children about the kinds of questions that can be answered by referring to different sentences. In other words, the exercises teach them to analyze the information given in sentences.

In information analysis we simply ask questions to clarify what the sentence says and what it doesn't say; in information processing we take the information and do things with it. We perform operations, using the information in the sentences.

2. Information processing follows information analysis. After a sentence has been analyzed in terms of the questions it answers, the sentence can be used in exercises that require logical thinking. For example, something mentioned in the sentence can be "classified" by the reader. The sentence "The boy was tired that night" refers to a boy. We can put *boy* in the class of persons. We can reconstruct the sentence to read "The person was tired that night." This sentence is implied by the information provided in the original sentence. To arrive at the sentence about the person we had to perform an operation on the original sentence.

Classification is only one of the information-processing operations. Another basic information-processing operation is formulating conclusions (or making deductions) based on the original information. If we are told that Mary is a grick and that all gricks are sitting, we can conclude that Mary is sitting.

3. Sentence structure analysis in Distar Language III is a systematic approach to basic sentence forms and their relationships. Here is a summary of that approach. The sentence "The boy was sleeping last night" is about the boy. The subject of the sentence therefore is *the boy*. The sentence tells something about the boy. It tells that he was sleeping last night. This part of the sentence is the predicate. This simple analysis enables children to analyze a wide variety of sentences. The sentence "Running is fun" presents no serious problems, although conventionally taught children often have trouble with it because *running* is a form of the verb *run*. The sentence is about running, so *running* is the subject. The sentence tells that running is fun; therefore, *is fun* is the predicate. Once the children have learned to identify the subject and the predicate, they are taught the next step—finding the simple subject (boy) and the verb (was sleeping).

4. Sentence structure processing reinforces children's understanding of sentence form. After each step in analyzing the structure of the sentence, the child is taught how to use this information in processing sentence elements. As he learns to identify the subject of the sentence, he begins to make up sentences using a given subject. From exercises that teach him to discriminate between questions and statements, he moves to the task of converting statements to questions and questions to statements. He learns how to move words in the predicate and vary sentence form after he has learned to identify the subject and predicate. Exercises in sentence construction in a new language give additional understanding and practice in the processing of formal elements in sentences.

5. Mechanics and usage are treated as an extension of sentence structure analysis. To make the form of a written sentence more easily identifiable, we put a mark at the beginning (the capital letter) and a mark at the end (some kind of closing punctuation.) If part of the predicate is moved in a statement so that it precedes the subject, a punctuation mark is needed to show that the sentence is not in the usual order. In the statement "Long before his bedtime, the boy was sleeping," part of the predicate has been moved in front of the subject. The comma shows the part of the predicate that has been moved.

Punctuation is also used when parts of a sentence are missing. In the sentence "The boy ran, fell down and hurt his knee" the word *and* is missing after the word *ran*. A comma replaces the missing word.

In Language III, the children learn how to punctuate sentences in which part of the predicate has been moved; they also learn several other comma rules. They work on the use of periods, question marks, and quotation marks. They learn a few capitalization rules. They learn about contractions and abbreviations. The mechanics and usage conventions are survival skills for handling written expression.

6. Writing is a construction task in which the children must apply the various skills they have been taught.

There are two objectives for the writing exercises in Language III. The first is to ensure that the children apply analysis and processing skills as well as mechanics and usage conventions taught in the program. The second is to give the children practice in expressing themselves. To accomplish these objectives the program contains exercises in which the children write stories from pictures, complete stories already started, and write exact descriptions that would enable a reader to distinguish between the object described and other similar objects.

## THE MATERIALS

Distar Language III contains both teacher materials and student materials. The materials are divided into 160 daily lessons.

The teacher's primary tool is the Teacher Presentation Book. The book is spiral bound and is packaged with the other teacher materials in a display box. The presentation book contains the tasks that the teacher presents to the children during each lesson. It provides precise directions for the activities that are to be taught and is coordinated with the children's materials. The teacher uses it every day when presenting the language lessons.

The other components in the teacher's display box are these:

1. The teacher's edition of the three student workbooks, with answers written in
2. A copy of the student textbook
3. A key to the textbook that gives answers to the children's exercises
4. A teacher's guide

(See page 5 for a detailed description of the Teacher Presentation Book and how to use it.)

A teacher's edition of each student workbook (included in the display box) is identical to the student version, except that the answers are written in and the work check procedure is printed on the inside front cover.

The Teacher's Guide includes an introduction describing the goals of the program, an overview of what is taught, a discussion of program organization, and a detailed section on teaching strategies. The last part of the guide contains a description of the program, a discussion of the specific teaching techniques, and corrections for many of the exercises. This part of the guide is organized into four major topics: Information, Sentence Structure, Mechanics and Usage, and Writing.

Use the Teacher's Guide as your handbook when teaching the program. Use it in connection with your Teacher Presentation Book. The guide contains the rationale for the exercises you will be teaching and provides you with specific suggestions for teaching them. It identifies some of the problems the children may encounter with the more critical tasks. It specifies ways to handle the problems and in some cases provides you with additional exercises you can present.

The children's workbooks are packaged separately. Each child uses three workbooks during the year: Workbook I for lessons 1-59; Workbook II for lessons 60-110; Workbook III for lessons 111-60. There are workbook activities for each lesson. Most require the child to supply short answers to questions, to complete items, or to fill in blanks.

Each child has a textbook. It is casebound and reusable from year to year. The children do not write in their textbooks; they work the exercises on lined paper. Most of the textbook activities involve more extensive written work than do the workbook activities. The children do both workbook and textbook activities each day.

## PLACING THE CHILDREN

Distar Language III is appropriate for all children who perform on—roughly—the beginning third-grade level. Those who have been taught Distar Language I and II can move easily into Language III. Distar Language III can also be used as a language program for any children who have basic language skills.

Children who have had Distar Language II can begin Language III immediately. They can start when they complete Level II, whether at the beginning or in the middle of a school year. Children who have completed lesson 100 in Language II can also begin Language III. You should, however, schedule a period for these children during which they can continue in Language II. They therefore will have two language-instruction periods during each day.

Children who have not had Distar Language II can be placed in Language III if they have basic language skills. This doesn't mean that they have to understand all the concepts presented in the first two levels of Distar Language. It does mean, however, that the children should have mastered these skills.

1. They should be able to repeat long statements in one or two trials. (For example: "Before he went to the store, he ate three cans of beans.")
2. They should be able to handle simple analogies. (For example: A bird is to flying as a fish is to ———.)
3. They should be able to tell how two objects are the same and how they are different. (For example: How is a tree the same as a flower? How is it different?)
4. They should be able to answer who, what, where, when, and why questions about simple statements. (For example: "That afternoon, the girl went to the store to buy some bread." Who went to the store? Where did she go? When did she go? Why did she go?)
5. They should have an understanding of simple classification relationships. (For example: Something that can take you places is a ———. Something that you eat is ———. Something that you wear is ———.)
6. They should understand part-whole relationship. (For example: Name the parts of a chair. Name the parts of your face.)
7. They should be able to follow somewhat complex directions. (For example: Open your book to page 17 and look at the top line.)

other Distar Language programs can perform well on the above language tasks and if they possess basic reading and writing skills, they can start in Language III.

Those who do not have sufficient reading skills to do the independent work required in the program should be grouped separately so that you can work with them during the 30-minute independent activity period.

Procedures for helping these children are discussed on page 9.

## ORGANIZATION OF THE PROGRAM

Distar Language III is organized into topics, tracks, and tasks. The scope-and-sequence chart on pages 12–13 lists the topics and tracks taught in the program. It divides the content of the program into six main topics, under each of which is a list of tracks. For example, under the topic Information Processing the first two tracks are Classification and Following Directions. Numbers on the chart refer to lesson numbers and show the first and last presentation of a track in the teacher's book as well as the first and last exercise in either the workbook or the textbook.

A track is a sequence of exercises, or tasks, that teaches a particular skill or operation. The tasks are arranged in order of increasing difficulty or complexity. Each is a unit of instruction, presenting information to the children and testing them to see whether they have mastered the concept or idea of the task.

Each task is first introduced in the teacher presentation book to ensure that the child knows how to go about it before he attempts it on his own. Tasks in the presentation book are labeled to identify the way they are taught—as an oral activity, a workbook activity, or a textbook activity. They are also labeled to identify the particular skills or operation being taught. Tasks that are very important as foundations for future learning and tasks that are relatively difficult to master are repeated in the presentation book more times than are less crucial or easier tasks. Teaching procedures appropriate when a task is first introduced are gradually phased out as the children's understanding increases. Finally, the teacher-led activity phases out completely, and the children begin to do the exercises independently. They then continue to practice that particular skill daily or at intervals until mastery is assured. A sequence of tasks might start with a teacher-directed oral activity, continue with a teacher-directed workbook activity, and end with a series of independent workbook activities. Another sequence might start with a teacher-directed textbook activity and after several teacher presentations continue with a series of independent textbook activities.

## Lesson 35

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### Teacher-Directed Oral Activity

#### Task: Classification

- Listen. The girl lost the doll. Say it. Wait. Now I'm going to make up a sentence using a class name and a class name for doll. Listen. The person lost the toy. Say it. Wait. I'll say the sentence we started with. You say the sentence the class names. Listen. The girl lost the doll. . . . The person lost the toy. Repeat until the children's responses are firm.
- I'll say both sentences. Listen. The girl lost the doll. The person lost the toy. Everybody, which sentence tells more? Wait. Yes. "The girl lost the doll" tells more. What does it tell? Wait. Yes, it tells what kind of person and what kind of toy.
- Listen. The person lost the toy. Does that sentence tell what kind of person? Wait. No. Does it tell what kind of toy? Wait. No. If all we know is that the person lost the toy, we can't tell what kind of person it was. Maybe it was a man. Maybe it was . . . (Pause.) The children are to indicate different persons. If all we know is that the person lost the toy, we can't tell what kind of toy was lost. Maybe it was a ball. Maybe it was . . . (Pause.) The children are to indicate different toys.
- So the sentence "The girl lost the doll" tells us more. It tells us what kind of person and what kind of toy.
- Repeat the exercise from the beginning if children are having difficulty.

### Teacher-Directed Textbook Activity

#### Task A: Classification

- Everybody open your textbook to lesson 35. Wait. Find part A. Read the instructions for part A out loud. Read this sentence. *The girl lost the doll.*
  1. Now read item 1 out loud. Write a sentence using class name for girl and doll. Do it. Check the work of a few children.
  2. Read item 2 out loud. Write the sentence that tells more. Do it. Check the work of a few children.

Figure 1

Another organizational feature of Language III is interconnection of related tracks. For example, the Sentence-Nonsense Discrimination track, start lesson 20, begins with oral activities in which the children discriminate between complete statements and sentence fragments. Several days later they begin to identify sentences and fragments in workbook exercises. In lesson 36 the workbook activities in this track combine with other tracks in which the children have been learning punctuation and capitalization and acquiring the ability to discriminate between statements, questions, and commands. The result: a series of exercises gives the children practice in all these skills and continues through most of the program. This pattern of integration is followed throughout the program. After the children have been taught a particular skill in isolation, they use it in increasingly sophisticated contexts.

Tasks usually contain items. The items in teacher-directed workbook and textbook activities are numbered to correspond with numbered items in the children's materials.



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# WHAT YOUR KINDERGARTNER

*Needs to Know*



PREPARING YOUR CHILD  
FOR A LIFETIME OF LEARNING

EDITED BY E. D. HIRSCH, JR.,  
*author of Cultural Literacy.*  
AND JOHN HOLDREN

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II.

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# History and Geography



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## INTRODUCTION

In kindergarten, children often study aspects of their immediate world: the family, the school, the community, etc. While such local studies should be encouraged, we should also take advantage of children's natural curiosity and begin to broaden their horizons. By introducing kindergartners to history and geography, we can foster their curiosity about the larger world and begin to develop their sense of the past and its significance. For young children, we need to emphasize the "story" in history. By appealing to children's naturally active imaginations, we can ask them to "visit" people and places in the past. We encourage you to go beyond these pages to help your child learn about history through art projects, drama, music, and discussions.

In the following pages, we introduce—let us emphasize, *introduce*—a variety of people and events. The children will encounter most of these people and events more fully in their later schooling. For example, we introduce July 4, 1776, as "the birthday of our nation," on the premise that kindergartners can understand the idea of a "birthday." But we do not go into any discussion of the American Revolution (which, by the way, we do introduce in the First Grade book of this series, and explore in some detail in the Fourth Grade book).

In beginning to tell children the story of the past, we have tried to be sensitive about the degree to which, and the manner in which, we expose children to the tragic aspects of history, such as the practice of slavery in the United States. In some cases, we have chosen to leave for later grades some of the darker aspects of history. For example, here we tell the story of Columbus's first journey to the "New World," but we wait until later books in this series to tell about the devastation wrought on Native American peoples by the diseases that came with the European explorers. The goal in kindergarten, then, is less to explore historical events or ideas in depth than to orient the child to the past and plant the seeds of knowledge that will grow in later years.

### *Suggested Resources*

*Follow the Dream: The Story of Christopher Columbus* by Peter Sis (Knopf, 1991)

*Just Like Abraham Lincoln* by Bernard Waber (Scholastic, 1964)

*My First Presidents' Day Book* by Aileen Fisher (Children's Press, 1987)

*New True Books* series. Children's Press has over thirty books on Native Americans, such as: *The Delaware*, *The Sioux*, *The Hopi*, and more.

*Samuel Eaton's Day: A Day in the Life of a Pilgrim Boy* and *Sarah Morton's Day: A Day in the Life of a Pilgrim Girl* by Kate Waters (Scholastic, 1993, 1991)

## World History and Geography

### What a Ball! Our World

Step outside and what do you see? Look as far as you can. Do you see houses and backyards? Big apartment buildings? Green fields and mountains? A lake or an ocean?

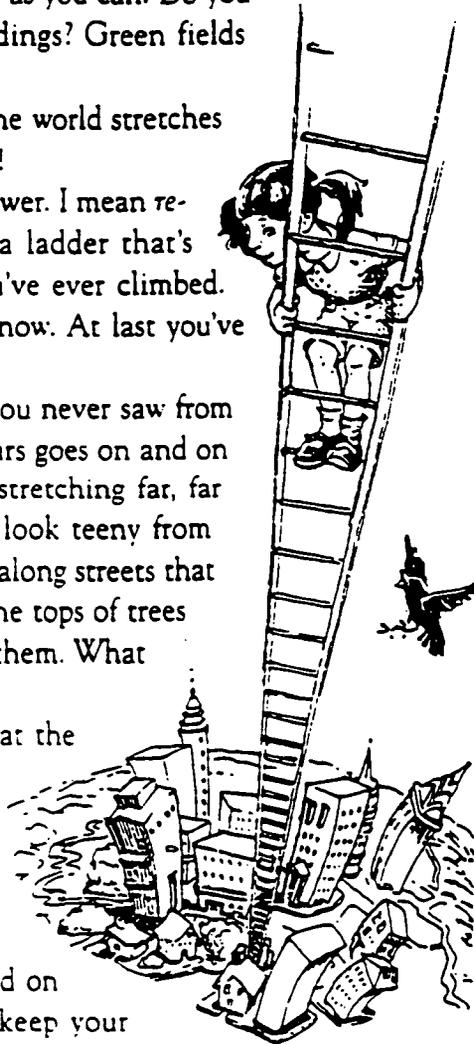
Whatever you see, it's all part of our world. The world stretches as far as you can see—in fact, a whole lot farther!

Let's imagine that just outside there's a high tower. I mean *really high*. You can climb a ladder to the top, a ladder that's longer than the ladder of the highest slide you've ever climbed. Ready? Start climbing. Keep going—don't stop now. At last you've reached the top. Catch your breath!

Now you're way up high. You can see things you never saw from the ground. You can see how this big world of ours goes on and on and on. Maybe you can see your city or town stretching far, far away. Maybe you can see rows of houses (they look teeny from your perch on the top of the tower), all lined up along streets that look like crisscrossed lines. Maybe you can see the tops of trees and a blue-green line that snakes along through them. What is that wavy line? A river!

Well, we can't stop here. I forgot to tell you: at the top of the tower there's a rocket ship. Yes, it's waiting for you! Climb in! Put on your space suit and strap on the seat belts. Ready for countdown? Five, four, three, two, one—blast off!

You're off to the moon! Here you are. First Kid on the Moon! Step outside your space ship (but keep your space suit on; there's no air to breathe on the moon). Now let's look back to where you came from—our world, the planet Earth. What do you see?



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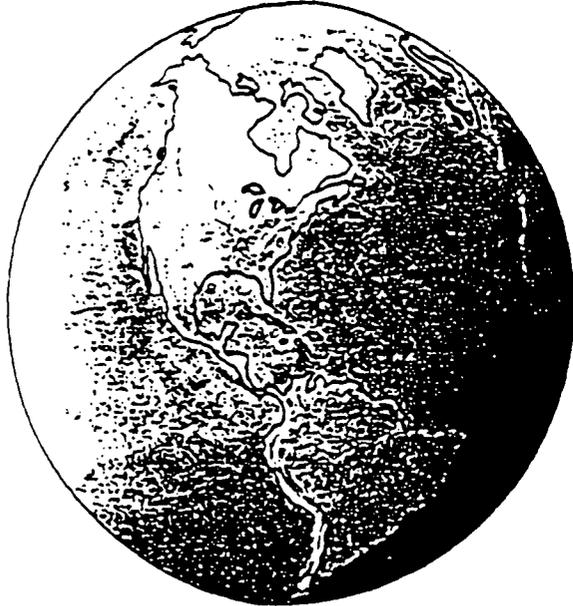
It's a ball! Seen from outer space, our world is a large bluish ball with patches of white swirling around it. What do you think those swirly white patches are? (They're clouds.)

### Oceans and Continents

Now, imagine that you have on special space glasses that allow you to peek under all those clouds. If you could, then the Earth would look something like this.



This is how our world, the planet Earth, looks from space.



The planet Earth.

Look at all that blue. It seems to be moving. What do you think it is? That's right—it's water. And what are those big green patches? Did you say, "Land"? Right again.

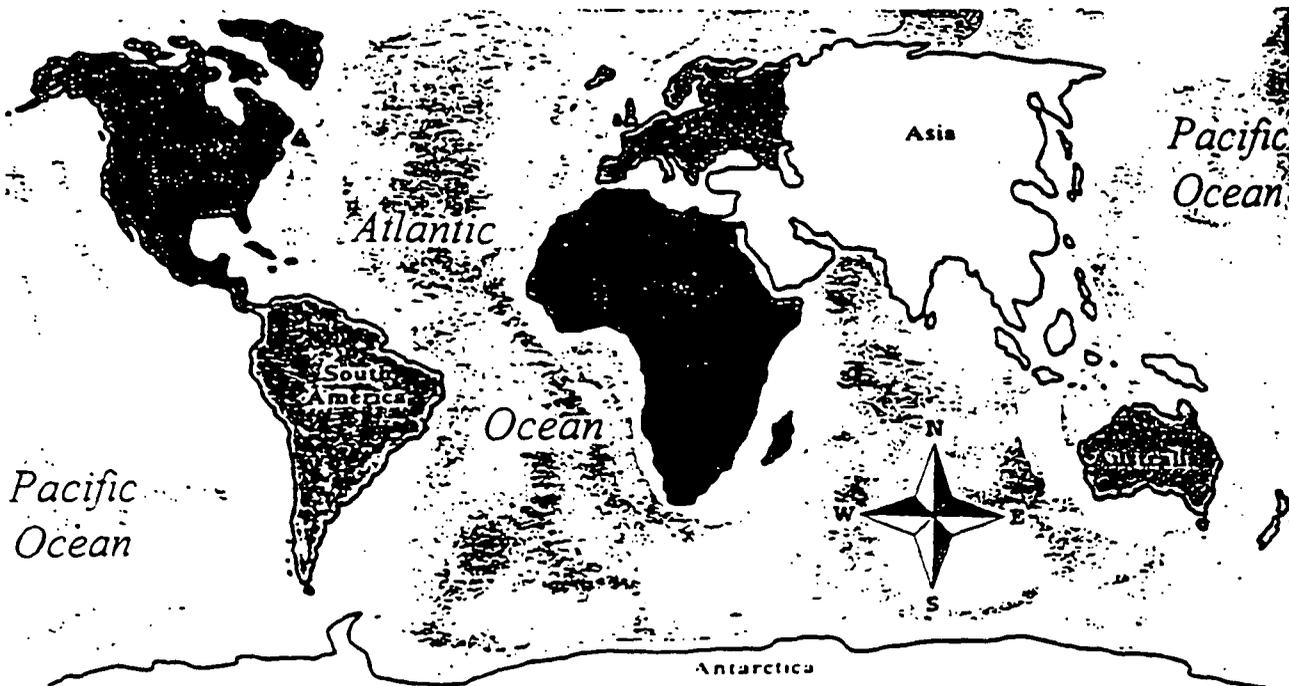
Do you see that there's a lot more blue than green? Water, water, everywhere! Well, not quite everywhere, but our world is mostly under water. The biggest bodies of water are called oceans.

WHAT YOUR KINDERGARTNER NEEDS TO KNOW

What about those big pieces of land poking through the oceans? They're called continents. There are seven of them. Each continent has its own name. The seven continents are:

- Asia
- Europe
- Africa
- North America
- South America
- Australia
- Antarctica

As you can see from this map, each continent has a different shape. Run your finger slowly around the outline of each continent. Place a piece of white paper or tracing paper over the map, and with a pencil trace the outline of each continent. (But, since Antarctica is mostly hidden way down at the bottom of this map, you will want to trace it from the map on page 131.)



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## Maps and the Globe

Do you know what you're making when you draw the land shapes on a piece of paper? You're making a *map*. That's what maps are—drawings of the world. Maps give us pictures of the world to study. They help us see the shapes of land and water. Maps can also give us other information. Some maps show where mountains and rivers and lakes are, and give their names. Some show the names of highways and the locations of towns and cities.



These children are using a globe.

There's a special kind of map that isn't flat like paper. Instead, this map is round, like a big balloon. It's called a *globe*. A globe is a little model of our world. Of course, a globe is *much, much* smaller than our planet Earth, just as a Matchbox car is much smaller than a real car or a doll is much smaller than a real person.

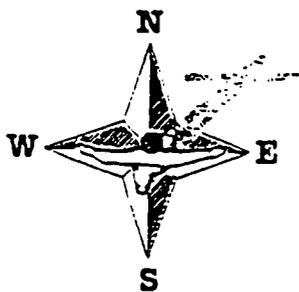
At home, school, or the library, look at a globe. Notice how much more water there is than land. Now find each of the seven continents. Use your finger to trace around the outline of each continent.

## Which Way Are You Going?

To help you find things on a map or globe, you need to know the four main directions that tell you where things are. Everything on earth is in a certain direction from where you are now. Let's learn the names of the four main directions. They are: **north**, **south**, **east**, and **west**.

East is where the sun rises. If you don't know where that is, you can find out early tomorrow morning.

West is where the sun sets. You can find out where that is late today or tomorrow.



Once you've found out where the sun rises, you can find all the directions from where you are. Here's how. Stick your arms straight out from your sides. Slowly turn yourself until your right arm points to where the sun comes up. Keep your arms straight out! Your right arm is now pointing east and your left arm is now pointing west. Keep those arms straight out just a little longer. Look straight ahead. Your nose is pointing north. The back of your head is facing south.

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# North, South, East, West

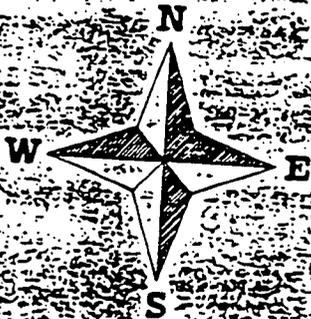
Let's look at the directions on a map. In most maps, the top of a map is north. To go north, move your finger up on the map.

The bottom of a map is south. To go south, move your finger down.

The right of a map is east. To go east, move your finger to the right.

The left of a map is west. ("Left" and "west" sound alike, which can help you remember.) To go west, move your finger to the left.

Have you heard of the North Pole and the South Pole? Those are the special names for the very top of our world, and for the very bottom. Which pole is at the top of our world? Can you find the North Pole on a globe? Can you find the South Pole on a globe?



Many maps use a picture like this to show the directions.

Now try this. Here's a picture of a house. There is something near the house on each side. Which direction is each thing from the house?

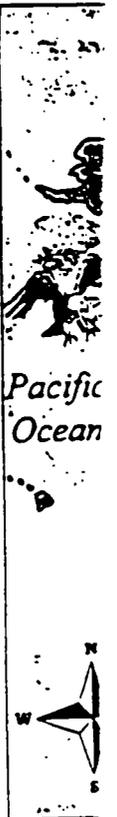
- The dog is \_\_\_\_\_ of the house.
- The tree is \_\_\_\_\_ of the house.
- The cat is \_\_\_\_\_ of the house.
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### Around the World in Seven Ways

PARENTS: It is not important that kindergartners be able to define or explain the difference between countries and continents. A complete understanding of the relevant geographical and political concepts requires a level of abstract reasoning that will develop in later years for most children. We provide the basic explanation below because children will hear about both countries and continents, and they can benefit from having at least a working response to their likely question, "What's the difference?"

Let's learn about the seven continents. Do you remember their names? Let's say them aloud: Asia, Europe, Africa, North America, South America, Australia, Antarctica.

As you learn about the seven continents, you'll also hear about some different countries. Countries and continents—what's the difference? Well, countries are usually smaller than continents. For example, let's say you live in the United States of America (do you?). Then that's your country: the United States of America. But your country

is only part of a bigger continent. Which continent? North America.

The United States of America is a country on the continent of North America. There are other countries on the continent of North America. To the north of the United States is the country called Canada. To the south of the United States is the country called Mexico. Each one of these countries has different leaders and different rules. Each country uses a different kind of money. Each country has a different flag. But all three countries are on the same continent: North America.



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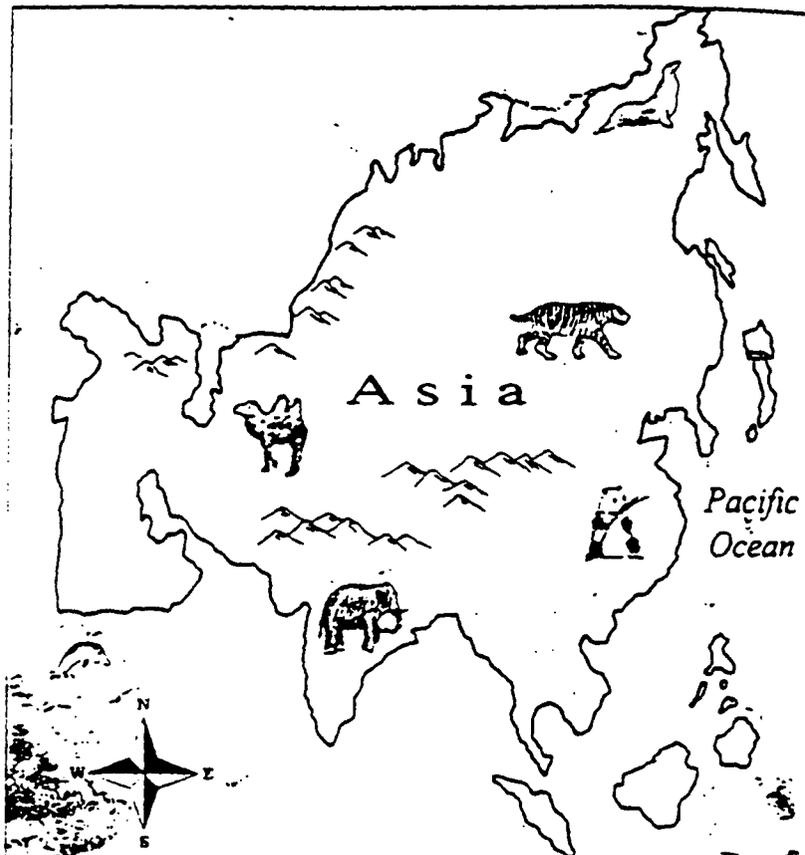
20

Now let's learn about the seven continents, and about some of the countries on each continent.

### Asia

The largest continent in the world is Asia. Look at Asia on the map.

Put your finger on Asia, but watch out! Asia is home to tigers, elephants, and panda bears, and they might find your finger very interesting.

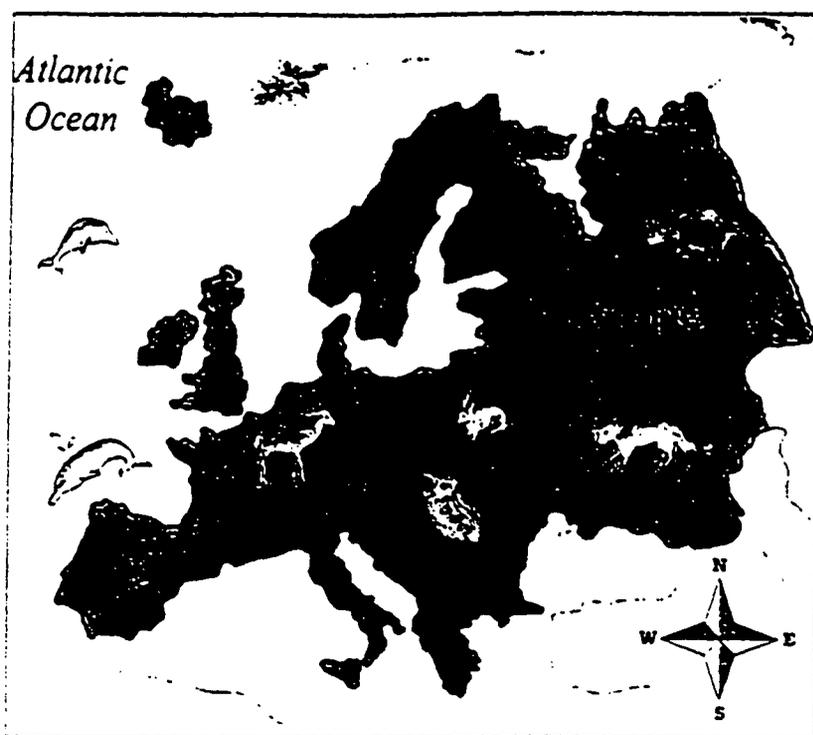


A wall runs for miles and miles across the country of China. This picture shows only a small part of the Great Wall of China. A powerful leader made his people build this wall a long time ago to defend their country from enemies. The wall has watchtowers and walkways. It's so wide that you can ride six horses side by side along its top.

**Europe**

Look at the map on page 116 and find Asia's neighbor, Europe. Asia and Europe touch each other. Compared to Asia, Europe is a small continent. Europe has beautiful buildings—wonderful palaces, churches, museums, and more!

This is the Eiffel Tower, in the country called France. The Eiffel Tower is made of metal. You can ride to the top of the tower in an elevator and look out over the great city of Paris.



Here we are in jolly old England, at a place called Buckingham Palace. Who lives in a palace? Why, who else but a king, or a queen, or maybe both? For many, many years, the kings and queens of England have lived in Buckingham Palace. Nowadays, the king or queen doesn't rule England or make the laws anymore, but the English people still like to have a king or queen. Who are those red-coated fellows with fuzzy black hats standing outside the palace? They are the palace guards.



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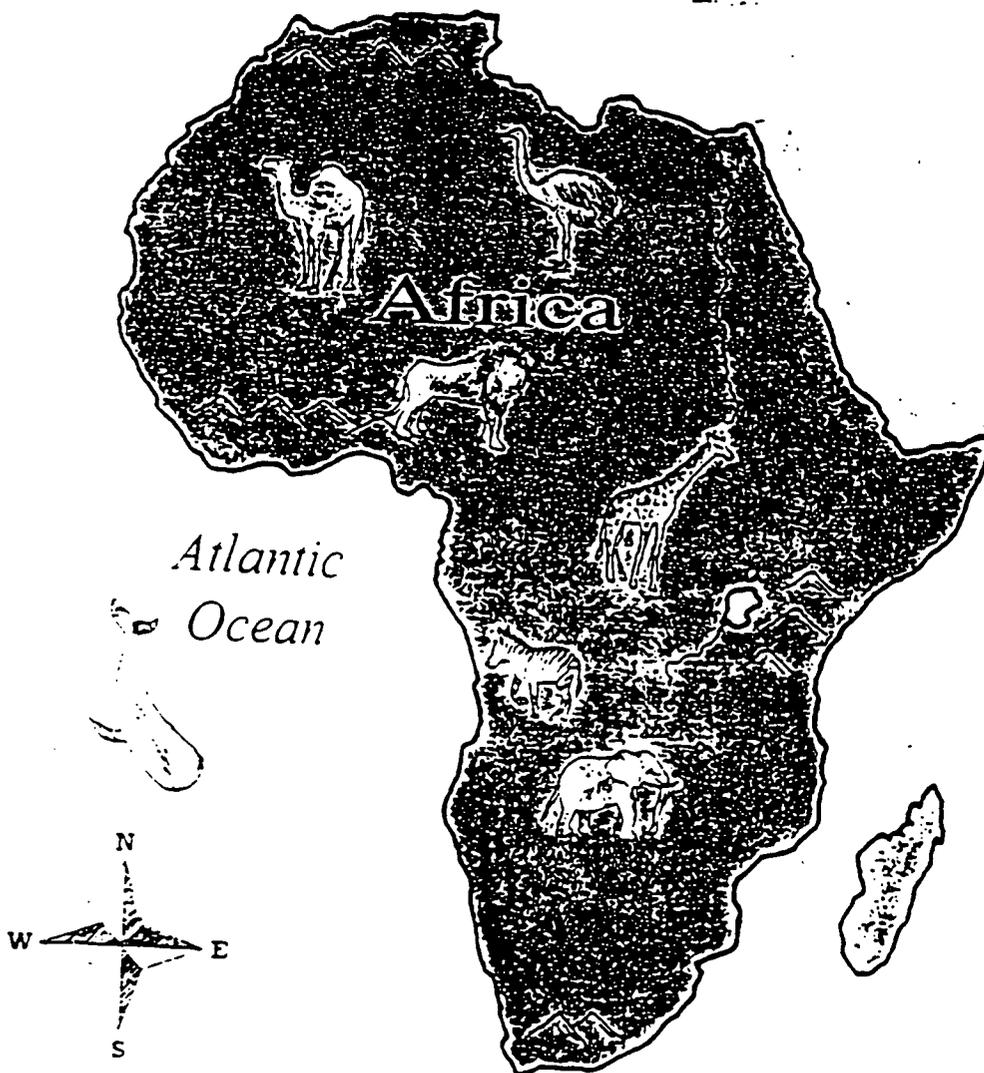
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**Africa**

Look back to the map on page 118. Take your finger and move it down from Europe. You'll soon come to Africa. Use your fingers to measure Africa. See how much bigger Africa is than Europe? Africa is the world's second largest continent. (Do you remember the name of the largest continent?)

Africa spreads over much of the earth. It's a continent of amazing variety. "Variety" means difference. Africa has lots of different kinds of weather and land.



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### **North America**

Look at the map on page 118. Put your finger on Africa. Pretend your finger is a ship. It's time to sail away from Africa. Go west, toward two big connected continents. To get there, you have to cross an ocean first. The name of this big ocean is the Atlantic Ocean.

Let your finger sail over the big waves of the Atlantic Ocean and take you to North America.

You've just crossed one big ocean, the Atlantic, to get to North America. Now, move your finger west across North America. Do you see another ocean on the western side of the continent? This is the Pacific Ocean. A famous song says that the United States of America stretches "from sea to shining sea"—and now you know the names of those two "shining seas"!

Between the Atlantic and the Pacific oceans, on the continent of North America, you'll find deserts, prairies, and forests. You'll find steamy swamps where alligators live, and tall mountains where mountain lions roam. You'll find farms and cities, big and little.

One of the most beautiful places in the United States is the Grand Canyon. A long, long, long time ago—millions of years ago—a river ran through here, and the water carved away the land. If you visit the Grand Canyon, there are places where you can go deep down into the canyon. Do you know how you get there? You ride on mules.



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## INTRODUCTION

Children gain knowledge about the world around them in part from observation and experience. To understand the world of plants and animals, or of seasons and the weather, or of physical forces like magnetism, a child needs firsthand experience with many opportunities to observe, experiment, and get her hands dirty. In the words of *Benchmarks for Science Literacy* (a 1993 report from the American Association for the Advancement of Science): "From their very first day in school, students should be actively engaged in learning to view the world scientifically. That means encouraging them to ask questions about nature and to seek answers, collect things, count and measure things, make qualitative observations, organize collections and observations, discuss findings, etc."

While experience counts for much, book learning is also important, for it helps bring coherence and order to a child's scientific knowledge. Only when topics are presented systematically and clearly can children make steady and secure progress in their scientific learning. The child's development of scientific knowledge and understanding is in some ways a very disorderly and complex process, different for each child. But a systematic approach to the exploration of science, one that combines experience with book learning, can help provide essential building blocks for deeper understanding at a later time. It can also provide the kind of knowledge that one is not likely to gain from observation: consider, for example, how people long believed that the earth stands still while the sun orbits around it, a misconception that "direct experience" presented as fact.

In this section, we introduce kindergartners to a variety of scientific topics, consistent with the early study of science in countries that have had outstanding results in teaching science at the elementary level. The text is meant to be read aloud to your child, and it offers questions for you and your child to discuss, as well as activities for you to do together.

### ***Suggested Resources***

- Animals Born, Alive and Well* by Ruth Helier (Grosset and Dunlap, 1982)
- Chickens Aren't the Only Ones* by Ruth Helier (Grosset and Dunlap, 1981)
- From Seed to Plant* by Gail Gibbons (Holiday House, 1991)
- Me and My Body* by David Evans and Claudette Williams (Dorling Kindersley, 1992)
- My Five Senses* by Alike (HarperCollins, 1989)
- What Will the Weather Be Like Today?* by Paul Rogers (Greenwillow, 1990)
- Recycle That!* by Fay Robinson (Children's Press, 1995)

## Plants and Plant Growth

### Plants Are All Around Us



This orchid grows in a hot, wet place.



This cactus grows in a hot, dry place.

I'm going to say a word and you tell me what you think of. Ready? Here's the word: "plants."

Did you think of something like a green bush or blooming flower or tall tree? Can you tell me two more things about plants?

We live in a world full of plants. Some plants grow big, like the California redwood trees. Some redwoods stand over three hundred feet tall—that means almost one hundred children your size would have to stand on each other's shoulders to reach the top!

Other plants stay tiny. A plant called duckweed grows in lake water. It's so tiny that it just looks like a green speck.

Thousands of different kinds of plants grow all around the world. Some plants, like tropical orchids, grow only in steamy jungles. Some plants, like cactuses, grow where it's hot and dry. Some plants can grow just about anywhere: the dandelion grows in the cracks of city sidewalks just as easily as in fields and yards.

Some plants smell wonderful, like a rose in bloom. Some plants stink, like the plant with a name that says a lot about its smell: skunk cabbage! Have you ever smelled a sweet-smelling flower, or a plant you didn't like at all?

All the food that you eat comes from plants. Eggs and potatoes, carrots and cucumbers, the wheat that gets ground into flour and baked into bread—they all come from plants. But wait a minute. What about meat—like a hamburger or



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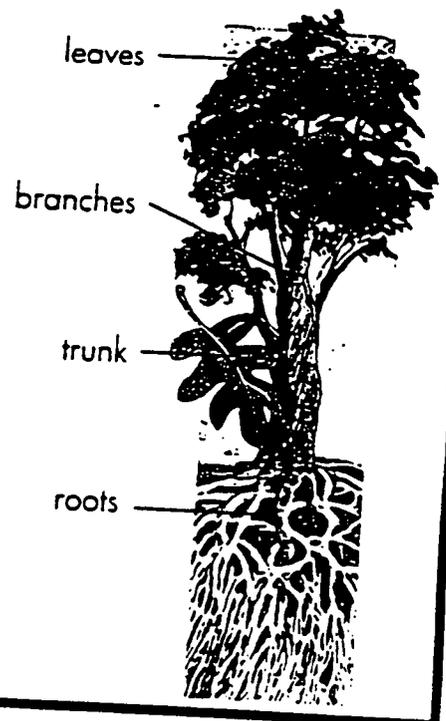
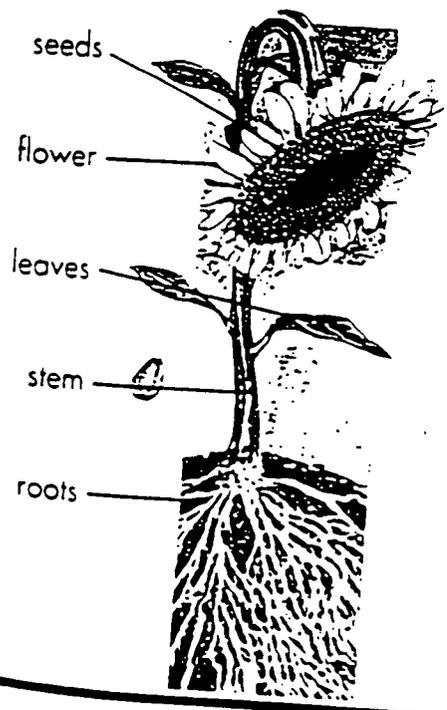
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sliced turkey? And what  
about fish? Cows,  
turkeys, and fish are not  
plants—they're ani-  
mals! That's right—but  
all those animals eat  
plants.

And that's not all:  
without plants we  
would have no paper for  
writing and drawing, no  
lumber for building  
houses, and no cotton  
cloth for clothes. We  
couldn't live without  
the plants in our world.

Plants have different parts. Look at the pictures and put your finger on each part of the plant as you say the name of the part.



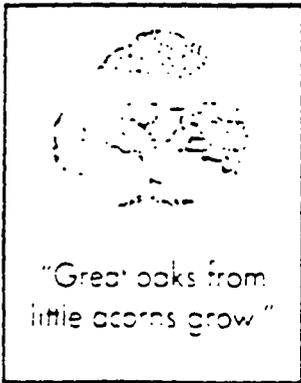
### Seeds Grow into Plants



Many plants grow from seeds. Have you ever seen the little seeds inside an apple? Or have you eaten a slice of watermelon and had to spit out a lot of seeds? Have you eaten a peach, which has one big seed in it? (Don't eat the seed!)

Many plants have flowers, and these flowers make seeds. Flowers bloom in all the colors of the rainbow: yellow tulips, orange marigolds, red roses, purple lilacs, blue forget-me-nots. A bouquet of colorful, sweet-smelling flowers is one of the nicest presents a person can give.

A little seed can turn into a giant plant. Even big trees start from little seeds. Have you ever found an acorn, then looked up to see the big oak tree that dropped it? That little acorn has all it needs to start growing another oak tree.



"Great oaks from little acorns grow"

An acorn is the seed of an oak tree: only an oak tree can grow from an acorn. Do you think a peach tree can grow from an apple seed? No — only an apple tree can grow from an apple seed. And only a sunflower can grow from a sunflower

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seed. What can grow from a pumpkin seed? That's right: only a pumpkin.

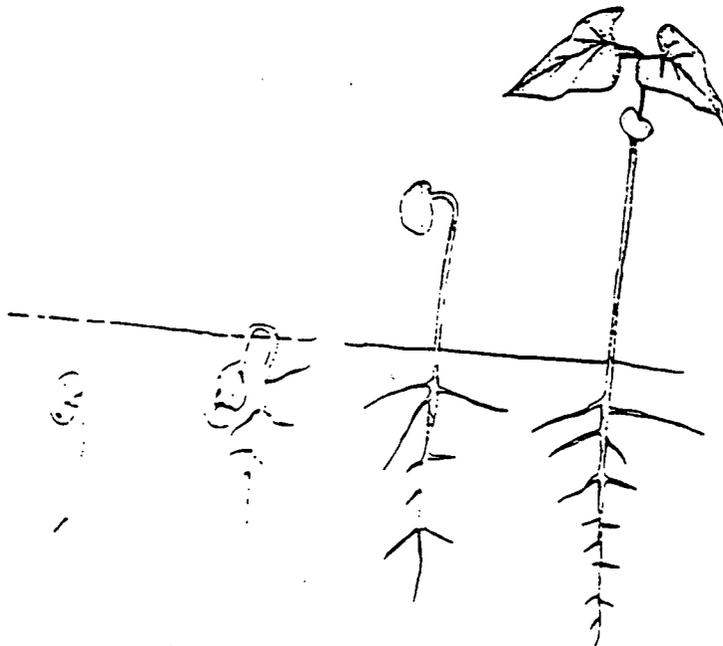
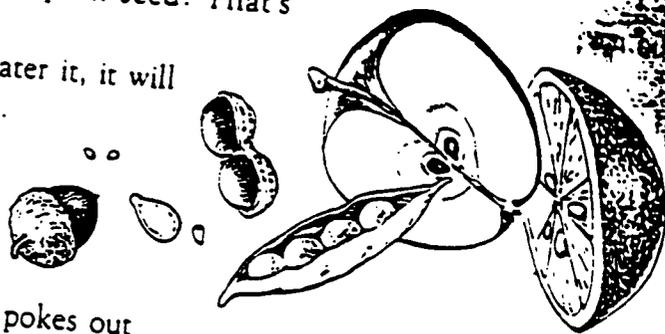
If you put a seed in dirt and water it, it will usually sprout into a baby plant.



This bean is a seed. Let's look at what happens when it's planted and watered. After a

little while, a small root pokes out and grows down into the ground. Then a tiny shoot with leaves grows up in the other direction.

Just like a human baby, a baby plant needs food. Where does the baby plant get its food? From the seed, which is like a little lunch box. As the baby plant grows, the seed gets smaller because the plant is using the food inside the seed.



Stages of a bean seed growing.

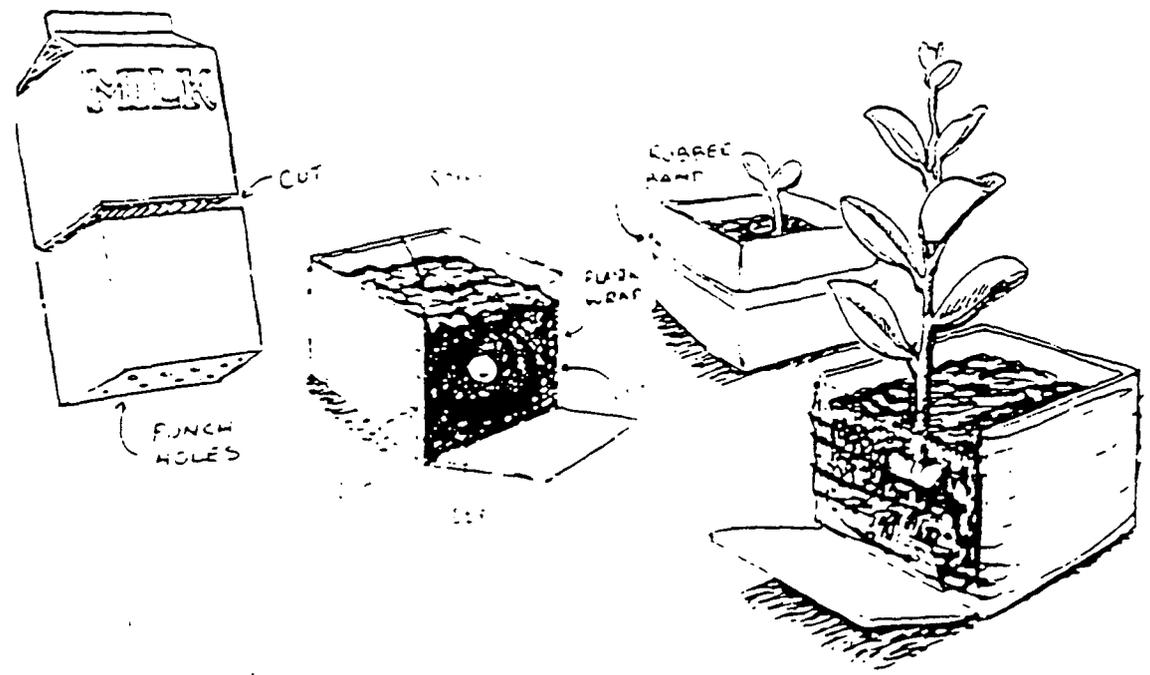
A tree can grow from an acorn. A sunflower

### Watch a Seed Grow in a "See-Through" Planter

PARENTS: Here's an activity you can do with your child that will let you see a seed grow into a plant. Tell your child that you're going to make a "see-through" planter. Have your child do as much as you and he are comfortable with. You'll need to be in charge of the first steps of making the planter, which require cutting a milk carton with strong scissors or a utility knife.

#### Get Ready:

- You will need:
- a half-gallon milk carton
- scissors or a utility knife
- clear plastic wrap
- tape (masking tape or transparent tape)
- a big rubber band
- potting soil
- some bean seeds (not beans to cook and eat from the grocery store, but the kind that come in a sealed package for growing)



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**Go:** First, cut the milk carton to about one half of its height. Now you have a box with no top. Poke some holes in the bottom, for drainage.

Now cut straight down along two corners of the milk carton. This will allow one side of the carton to fold down, like a flap, while remaining hinged at the bottom.

Leave the flap down so that you have an open side. Cover this side with a sheet of clear plastic wrap. Pull the wrap taut and tape it securely to the outside of the milk carton. Now raise the flap and slide a big rubber band around the milk carton to hold the flap up in place.

Fill the carton about three-fourths full of soil. Now take some of the bean seeds and put them in the soil, next to the clear plastic wrap. Cover these seeds with just a little more soil (about a half-inch).

Put the carton on a plate and sprinkle in just enough water to make the soil moist, not dripping wet.

Put the plate and carton in a warm place. Check the soil daily and add water as necessary to keep the soil moist. Every day, remove the rubber band and let down the flap. This will let you look through the window of clear plastic wrap and see how your seeds are growing "underground"! Pretty soon you should see roots poking down, and sprouts growing up through the soil.

## What Plants Need to Grow

What's the difference between a plant and a person like you? Well, both you and a plant start out small and then keep on growing. But you can walk around. Most plants stay put. As a plant grows, its roots sink deep down into the soil and hold on tight. A plant may sway in the wind, but it stays rooted, growing in one place for all its life.

Another big difference between you and a plant is how you eat your breakfast, lunch, and dinner. Have you ever seen a plant eat breakfast? Plants don't sit down for a meal, but they do need food. In fact, plants make their own food.

To make their food, plants need air, light, and water, and also minerals from the soil. The plant's leaves take in air and sunlight. The plant soaks up water and minerals through its roots. (These minerals are dissolved in the water, the way you can dissolve sugar in a cup of water.) The plant uses the air, light, water, and minerals to make its own food. Don't you wish you could do that when you're hungry?!

You can grow a plant in a pot of soil if you give it enough water, air, and light. What do you think would happen to a plant if it doesn't get enough water or light? Let's find out.



## What Do Plants Need?: An Experiment

**PARENTS:** Here is a simple experiment you can do with your child to show what a plant needs to live. Have your child do as much as you and she are comfortable with.

### Get Ready:

You will need:

3 paper cups

a sharpened pencil

potting soil

9 bean seeds (not beans to cook and eat from the grocery store, but the kind that come in a sealed packet for growing)

a cookie sheet or tray

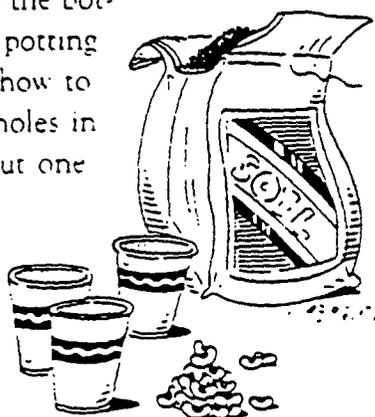
**Go:** Tell your child that you're going to do an experiment together that will take several days. In this experiment, you're going to plant some seeds and see what they need to grow.

Poke a tiny hole (you can use a sharp pencil point) in the bottom of each paper cup. Let your child fill each cup with potting soil to about a half-inch from the top. Then show her how to plant the seeds: have her use her finger to poke three holes in the soil in each cup, about half a finger deep. Then put one seed in each hole and cover them all with soil. (You need only three bean plants for this experiment, but you're planting more in case some of the seeds don't germinate.)

Put the cups, once planted, on the cookie sheet or tray. Water the plants sparingly so that the soil is damp but not muddy. Take the tray to a spot near a sunny window. Help your child water the seeds (just a bit) every day until the seeds sprout and the first leaves begin to spread. If more than one plant has sprouted in a cup, then carefully pull out the other plants and leave only one plant per cup in order to proceed with the experiment.

When you have a plant growing in each cup, write numbers on the cups, 1, 2, and 3. Now you can do something different with each of these plants.

*Plant 1:* Leave this plant where it is and continue to water it every day. Talk with



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your child so that she can see that this plant is getting everything it needs to live: wa-  
ter, air, light, and minerals from the soil.

**Plant 2.** Leave this plant where it is but do not water it anymore. Ask your child what  
this plant won't be getting. Help her see that it won't be getting water but that it will  
be getting air and light.

**Plant 3.** Have your child put this plant in a dark place, such as in a kitchen cabinet  
or a closet. Tell her to keep giving this plant a little water daily. Ask your child what  
this plant will not be getting. Help her see that the plant will be getting air, water, and  
minerals but no light.

Check the plants with your child every day. As changes in the plants become notice-  
able, you can ask your child:

- "What is happening to each plant?"
- "Which plant seems to be doing best?"
- "What does a plant need for healthy growing?"

### Seeds to Eat

You've learned that a baby plant sprouts from a seed and then uses the seed for food  
as it grows. Did you know that you get food from seeds, too? Here are  
some seeds you might eat.

**Corn** is the seed of the corn plant that grows tall in the farmer's  
field. When you eat corn on the cob, you are eating rows of seeds.

**Wheat** is the seed of the wheat plant. Wheat seeds are so hard  
that if you tried to eat them, they would almost break your teeth.  
So we grind wheat seeds into flour to use for baking bread.

**Peas** are the seeds of the pea plant. Peas grow in long green  
pods.

**Green beans** are the seed pods of the bean plant. When you  
eat a green bean, you are eating a pod and a seed. If you pull one apart very carefully,  
you can see the little seeds inside.

**Peanuts** are the seeds of the peanut plant. Next time you eat a peanut, pull it apart  
very carefully. You can see the start of a tiny new peanut plant inside.



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## We Eat Many Plant Parts

Seeds aren't the only part of plants that we like to eat. We eat roots, like radishes, onions, and carrots. We eat stems, like celery. We eat leaves, like lettuce and cabbage. We even eat some flowers. For example, when we eat broccoli, we're eating the flower of the broccoli plant just before it blooms.

And of course, we eat the fruit of many plants. Apples, pears, and oranges are fruits. For us, these fruits are food. For a plant, the fruit protects the seeds that grow inside the fruit. In the plant world, by the way, tomatoes, green peppers, and pumpkins are also fruits, even though most of us call them vegetables. They are fruits because they hold seeds inside them as they grow.



## Growing Food Plants

You may think that fruits and vegetables come from the grocery store. But that's just where we go to buy them. Somebody has to grow most of the fruits we eat. Many of the fruits and vegetables at the grocery store grew on plants at farms and orchards.

The food you buy at grocery stores often comes from really big farms. There are different kinds of big farms. There are poultry farms (where they raise chickens). There are dairy farms (where they raise cattle and where your milk comes from). There are grain farms (where they grow big fields of wheat, corn, barley, and other grains). There are "truck farms" where they grow—not trucks!—but lots of different vegetables, like lettuce and broccoli.

Other farms grow important crops, but not for eating. For example, cotton comes from farms. You may be wearing something made of cotton.



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## LOOK WHAT PLANTS PROVIDE US!

Many of your favorite foods come from plants. Can you add to this list?

French fries	come from	Potatoes
Sugar	comes from	Sugarcane plants
Cereal	comes from	Wheat, oats, corn, and rice
Maple syrup	comes from	Maple trees
Chili beans	come from	Bean plants
Chocolate	comes from	Cocoa trees
Bananas	come from	Banana trees



It takes a lot of work to grow all the plants we eat. Farmers work all year round to raise food. They plow the earth and plant the seeds. They try hard to keep weeds and animals away from their crops. Some farmers figure out ways to irrigate, or bring water to their crops so the plants will grow even if it doesn't rain.

Each farm or orchard packs its vegetables or fruits into crates and boxes so trucks can carry them to grocery stores across the country. Some trucks have refrigerators inside so the food stays fresh until it reaches the store. Some fruits or vegetables are cooked in factories, then canned or frozen to keep even longer.

## Seasons and Weather

### The Four Seasons

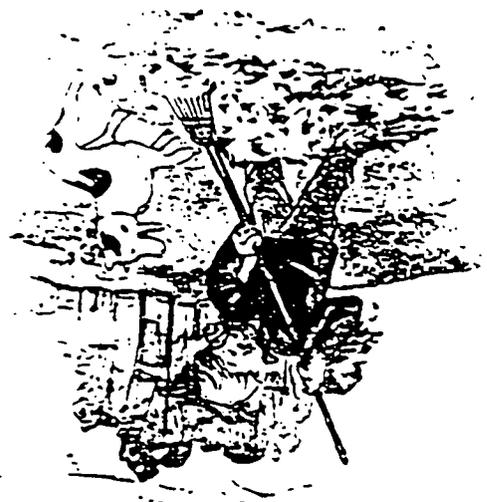
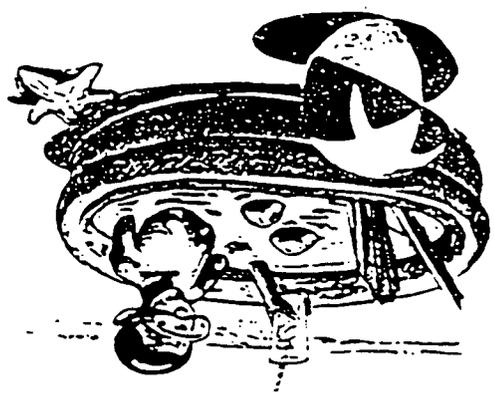
A year is divided into four parts, called the four seasons. Do you know the names of the seasons? They're spring, summer, fall, and winter. (Fall is also called autumn.)

What is each season like? That depends on where you live. In many places, spring is warm, and flowers bloom. Then comes a hot summer. Then comes a cool fall, when the days get shorter. Then comes a cold winter, and maybe lots of snow.

In other places, the seasons change in other ways. Some children live in places where it never snows. In some neighborhoods, the leaves stay green all year round.

But no matter what the weather does where you live, the year still cycles through four seasons—spring, summer, fall, winter—over and over, every year.

What are the ways to take care of the trees? How can we help them grow? What are the different kinds of trees? How do they grow? How do they change during the different seasons? What are the different kinds of trees? How do they grow? How do they change during the different seasons?



WHAT YOUR KINDERGARTNER NEEDS TO KNOW

In many countries, many trees turn gold, fall off the trees, the guesses are the same. In many countries, many trees turn gold, fall off the trees, the guesses are the same.

TWO KINDS OF TREES

In many parts of our country, the leaves on many trees and bushes turn from green to red, gold, and brown, and then fall off. This happens in the season called—you guessed it—*fall*.

Trees and bushes whose leaves fall in the fall have a special name. It's a big word, so hold on: deciduous (dee-SIJ-oo-us). It's almost a tongue twister: try saying "deciduous" four times very fast! "Deciduous" means "falling off." Even though deciduous plants lose their leaves in the fall, they grow new leaves in the spring. Maples, oaks, and apple trees are all deciduous trees.

But you may have noticed that some trees and bushes stay green all through the winter. They lose some of their leaves every year, but because they seem to stay green

forever, we call this kind of plant *evergreen*. Pine trees and holly bushes are evergreens.

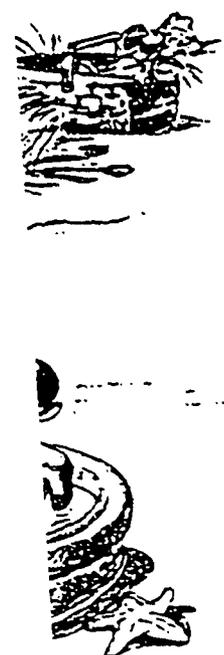


*The tree in the middle of this picture is a deciduous tree. Look at all the leaves it has in the summer!*



*Here's the same tree in the winter, after its leaves have fallen.*

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## Talking About the Weather



I'm going to ask you the same question in two different ways. Here's the first way: "What's it like outside?" Here's the second way: "What's the weather?"

The weather is what it's like outside. Did you think about the weather today? Maybe you did, without even realizing it. What kind of clothes did you wear today? The weather had a lot to do with your choice.

No matter where people live, they talk about the weather. It's something everybody shares. When it's cold outside, we shiver. When it's pouring rain, we need raincoats or umbrellas. When it's hot and humid ("humid" means the air is moist and sticky), we sweat and want a cold, iced drink.

What do we talk about when we talk about the weather?

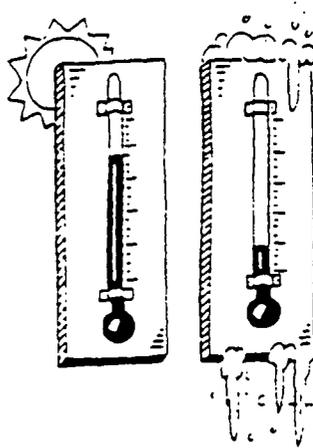
**Temperature.** Is it hot or cold, cool or warm? The temperature goes up and down. When the sun comes up, it warms the air and the temperature goes up. When the sun goes down, the air gets cooler and the temperature goes down.

The temperature changes with the seasons. In many places, summer

days are usually warm or hot. In most places, the temperature in summer is much higher than in the winter. Winter days are usually cool or cold.

**Clear or cloudy?** Look at the sky. Is it a clear day? On a clear day, the sun shines in the bright blue sky. Or is it a "partly cloudy" day—which means some clouds are in the sky.

To tell what the temperature is, people use a thermometer. Many thermometers, like the ones in the picture here, have a colored liquid inside a tube. As the temperature goes higher, the liquid rises in the tube. As the temperature goes lower, the liquid goes down in the tube.

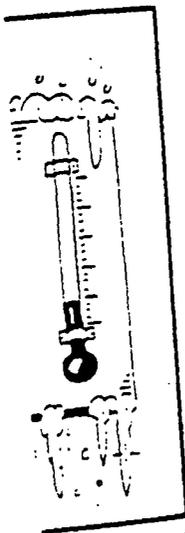


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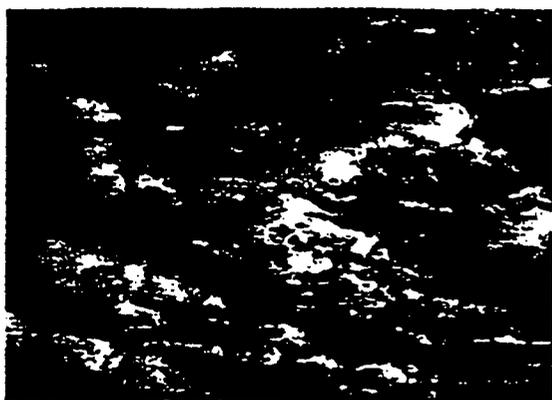
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A partly cloudy sky.

Clouds are made of very tiny drops of water or tiny bits of ice. Clouds come in different shapes, sizes, and colors. Are there any clouds in the sky now? Are they big, white, and puffy? Or are they white streaks, or dark gray stripes? Or is the sky covered over with a blanket of gray clouds so thick that you can't see through to the sun? A thick blanket of gray clouds sometimes means that rain is coming.

**The wind.** Is the air calm and still, or is the wind blowing? The wind is moving air. You can't see the wind, but you can see the way the wind moves the branches of trees, or carries a kite higher and higher, or blows your hat off your head. Sometimes the wind blows gently and feels good. Sometimes the wind blows hard and brings stormy weather.

I DO NOT MIND YOU, WINTER WIND

by Jack Prelutsky

I do not mind you, Winter Wind  
when you come whirling by,  
to tickle me with snowflakes  
drifting softly from the sky

I do not even mind you  
when you nibble at my skin,  
scrambling over all of me  
attempting to get in

But when you bowl me over  
and I land on my behind,  
then I must tell you, Winter Wind,  
I mind . . . I really mind!



## The Wind Blows in Many Directions

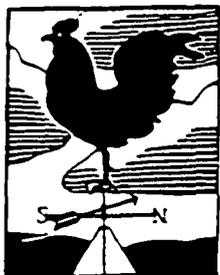
**PARENTS:** This activity can help your child see which way the wind is blowing and understand that the wind blows in different directions. The activity requires some cutting and stapling. Have your child do as much as you and she are comfortable with.

### Get Ready:

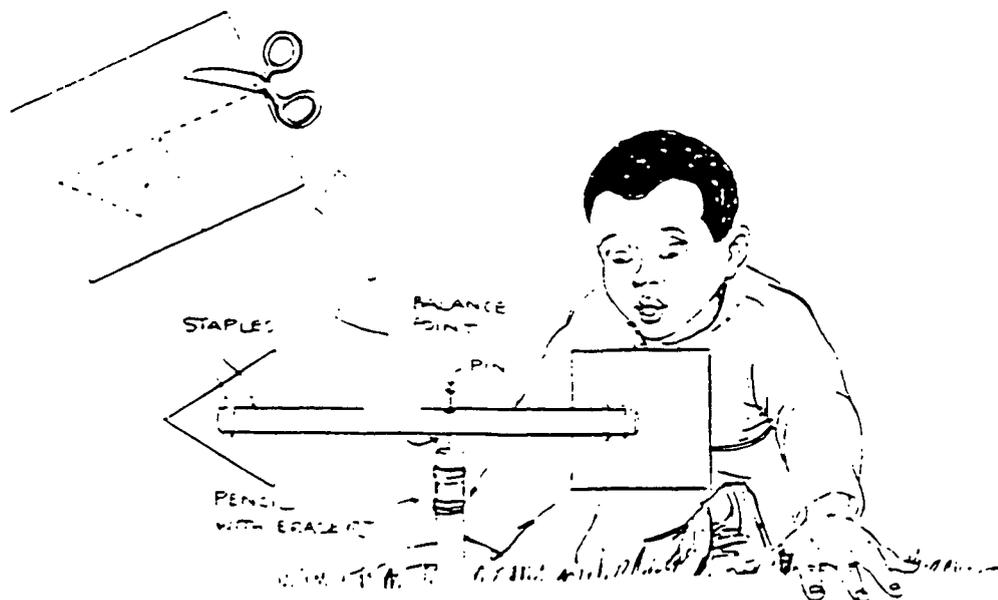
Tell your child that together you are going to make a weather vane that she can use to see which way the wind is blowing.

You will need:

- an empty plastic milk container
- scissors and a stapler
- a plastic straw
- a pen or marker
- a pin
- a pencil with an eraser



**Go:** The weather vane will look like an arrow. Cut two small squares out of a side of the plastic milk container. Staple one square to one end of the straw. Cut a triangle out of the other square, then staple the triangle to the other end of the straw.



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