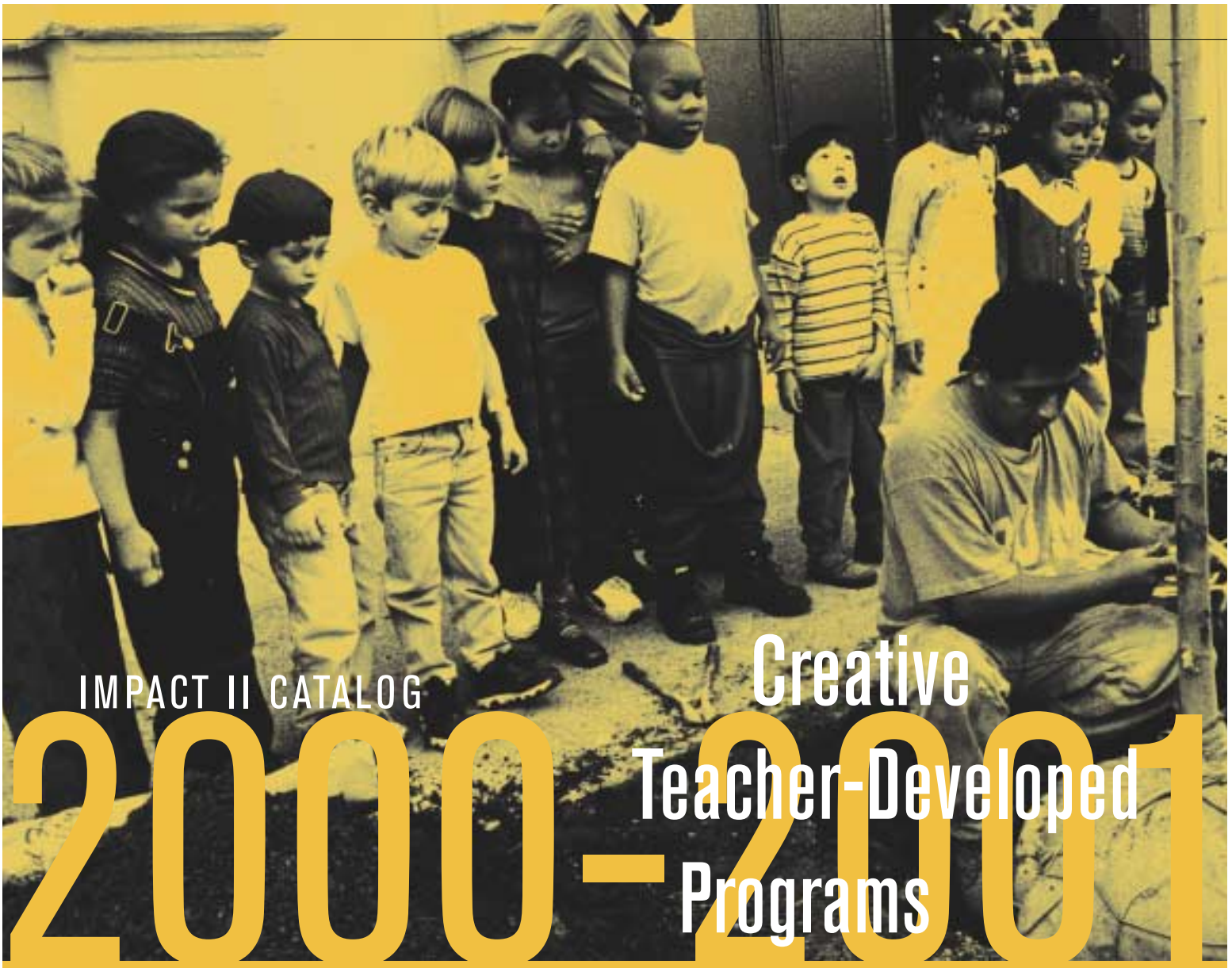

IMPACT II CATALOG

2000–2001

Creative Teacher-Developed Programs in the New York City Public Schools

IMPACT II IS THE MODEL GRANTS AND NETWORKING PROGRAM OF teachers network

teachers network

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IMPACT II CATALOG

2000-2001

CREATIVE TEACHER-DEVELOPED PROGRAMS IN THE NEW YORK CITY PUBLIC SCHOOLS

CONTENTS

→ IMPACT II DISSEMINATOR PROGRAMS–PAGE 5

→ TEACHNET PROJECT DISSEMINATOR PROGRAMS–PAGE 21

→ GRANT APPLICATION FORMS–PAGE 45

teachers network

Dear Colleagues,

For more than 20 years, our organization—now known as Teachers Network—has awarded IMPACT II grants to over 4,000 teachers throughout the New York City Public Schools. We are proud to continue this rich tradition by announcing this year's teacher Disseminator Grant award winners—whose work is showcased in this catalog.

These award-winning curriculum projects—called Disseminator Programs—are profiled in this catalog. Information featured in these profiles includes: how the program works, the students, the staff, what you need, overall value, and teacher contact information. All these programs comprise three main themes—math, science, and technology—cross-referenced by language arts/literacy, social studies, and art.

Major funding for IMPACT II grants is provided through the generosity of The AT&T Foundation and The Pfizer Foundation. Additional support is provided from Con Edison. All these organizations recognize the importance of supporting teachers who produce creative ideas and design excellent curriculum models to improve student achievement in their classrooms.

We hope you find this year's award-winning Disseminator Programs as exciting as we do. For more detailed information on how to adapt these programs for your own classroom—or to request a presentation of these materials to a larger audience—we encourage you to contact the disseminator teacher. Also, if you are interested in receiving either a Disseminator Grant or Adaptor Grant (i.e., to adapt a current Disseminator Program to your classroom), we urge you to apply. We have included applications for both these grants at the end of this catalog. Finally, if you want to learn more about our organization or would like to network with and among the thousands of teachers representing our 28 nationwide affiliates, we encourage you to visit our premier educational web site: www.teachersnetwork.org.

We extend our deepest congratulations to our 2000-2001 IMPACT II award-winning teachers. We hope the examples profiled in this catalog provide the foundation for teachers throughout New York City to continue producing and adapting innovative and excellent curriculum projects to improve student achievement.

Yours in pedagogy,

Ellen Dempsey
President & CEO
Teachers Network

Peter A. Paul
IMPACT II Program Director—New York City
Teachers Network

Join a professional community of New York City teachers and a network of educators nationwide working together to improve student achievement

Teachers Network serves 28 affiliates–cities, counties, and states–that have adopted the IMPACT II grants and networking model, originally piloted in New York City over 20 years ago. More than 35,000 teachers have received grants to develop, document, and disseminate innovative pre-K through 12 programs. Our New York City affiliate offers the following programs and services:

IMPACT II Disseminator & Adaptor Grants. Disseminator Grants of $500 are available to teachers to further develop and disseminate exemplary programs that they have developed in their classrooms. Grant award winners are recognized at award ceremonies and publication parties; provided with support to prepare materials for dissemination; published in print catalogs and on-line; supported in learning presentation skills and leading workshops; and, networked with like-minded professionals. Adaptor Grants of $250 each are awarded to teachers interested in adapting award-winning Disseminator Programs. Interested teachers can learn more about these programs in our annual catalogs, on-line at teachersnetwork.org, and at our spring curriculum fair. Applications are available on-line at: **www.teachersnetwork.org/grants/nyc.**

TeachNet Project New Media Grants. The TeachNet Project provides grants to schools for teams of seven teachers to design, digitize, and disseminate curriculum. Selected teams participate in summer training institutes and workshops during the school year; create web pages on our web server to test materials; receive recognition worldwide through on-line publication of curriculum units; network via the project listserv and web forums with project participants nationwide; and, have access to curriculum and technology consultants. Material developed by TeachNet Project participating schools can be found at: **www.teachersnetwork.org/teachnet.**

National Teacher Policy Institute (NTPI) Fellowships. Each spring, New York City teachers are invited to submit applications for $1,000 fellowships to participate in the National Teacher Policy Institute. Teachers selected to become fellows in the National Teacher Policy Institute increase knowledge of major challenges facing the teaching profession through readings and discussions with leading policy experts; improve leadership skills; are recognized by the public and media; represent teachers nationwide as spokespeople for policy issues; participate in conducting action research; and, become members of an on-line community of educators from across the country. Join us at: **www.teachersnetwork.org/ntpi.**

New Teacher Resources & On-Line Courses. For new teachers who are looking for support, help is only a click away at **www.teachersnetwork.org/ntny.** On this New Teachers New York area of our site, you will find on-line mentoring by experienced teachers; teacher-developed curriculum units and lesson plans; instructional advice; and links to educational resources. You can also earn up to 35 hours of Board of Education New Teacher Credits through our New Teacher On-Line Survival Courses–taken from the comfort of your own home or school via your Internet connection and e-mail account. Courses include: Strategic Lesson Planning, Classroom Management, Standards/Assessment, Teaching Methods, Families as Partners, Becoming a Professional, and Identifying Resources. Course instructors are classroom teachers. The text for the courses is our best-selling **New Teachers Handbook**, written *by teachers, for teachers.* To register on-line, go to: **www.teachersnetwork.org/newteachers.**

teachers network

IMPACT II CATALOG/2000-2001

Creative Teacher-Developed Programs in the New York City Public Schools

Program Director: Peter A. Paul
Consultant: Marilyn Siegel
Associate Editor: John DeAngelis
Designer: KC Witherell
Photos: Front and back cover, p. 5: Kristine Larsen; p. 21: John Schaefer

All grant proposals are reviewed by a committee convened for this purpose. For this year's grants, the IMPACT II Review Committee comprised the following members:

John Elfrank-Dana	Teachers Network
Marilyn Siegel	New York University School of Education
Vicki Jane Amster	P.S. 145, CSD 32
Mary Christine Brady	P.S. 217, CSD 22
Sheila Hofstatter	P.S. 193, CSD 25
Odette Lozada	P.S. 52, CSD 22
Joseph Sweeney	P.S. 110, CSD 30
Louis Velez	I.S. 24, CSD 31

Major funding for the 2000-2001 IMPACT II grants and networking program was provided through the generosity of **The AT&T Foundation** and **The Pfizer Foundation**. Additional support was provided from Con Edison.

IMPACT II Profiles

Fishing for Math, Science, and Social Studies

CURRICULUM AREAS
Science
Math
Social Studies
Language Arts
Technology
ESL

GRADES
Grade 3-6

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→ HOW IT WORKS

Fishing for Math, Science, and Social Studies is an interdisciplinary program that links curriculum from those three subjects to help develop literacy among ESL students. The program allows them to understand how stories, ideas, and methods from Native American cultures can be scientifically explained and validated. Students are first exposed to stories about Native Americans, specifically the story about the Indian Squanto and how he helped the Pilgrims grow better crops by planting fish remains along with the seeds. Then they are asked to write about Squanto and explain how he helped the Pilgrims survive.

Afterwards, students test Squanto's method of soil fertilization by conducting experiments in which some seeds are watered with tap water while others are watered with fish tank water. They monitor the growth over several weeks and display information in the form of graphs, tables, and drawings. While investigating the increased growth of the fish-tank-watered plants, students contact various "experts" in the community via telephone, the Internet, letters, and visits. Some of the contact locations are the Alley Pond Environmental Center, the New York Hall of Science, the Queens Botanical Gardens, and local garden shops. They then conduct additional experiments with water and soil testing kits to find what additional nutrients are found in the fish tank water. Follow-up activities include integrating the knowledge obtained into a class project. Through this program, students see the importance of recycling, conservation, ecosystems, and interdependence among living organisms.

→ THE STUDENTS

The initial participating class was made up of 20 third grade ESL students (P.S. 11Q). The hands-on approach helps to enhance their language skills while at the same time integrates math, science, and social studies curricula in an authentic learning experience.

→ THE STAFF

Mary Ahern has been teaching ESL since 1992. Prior to teaching, she worked as an International Sales Manager. She understands that most employers are looking for problem solvers and team players. She tries to instill these qualities in her students.

→ WHAT YOU NEED

This program uses picture books and videos about Native Americans and the Pilgrims such as *Squanto, Friend of the Pilgrims* by Clyde Robert Pulla and *Squanto and the First Thanksgiving* (video) by Eric Metaxas. The program builds upon previous learning activities about fish, digestive systems, nutrients, seeds, ecosystems, recycling, graphing, and letter writing. It also requires a classroom aquarium (with fish, tadpoles, or both), planting materials (seeds, soil, and pots), a computer with access to the Internet, measuring tools, a camera, soil/water testing kits, and various materials for recording and graphing results.

There will also be a class trip to the Queens Botanical Gardens, the New York Hall of Science, and local gardening and florist shops.

→ OVERALL VALUE

Fishing for Math, Science, and Social Studies is an interdisciplinary approach to learning. The program allows the students to observe, record, investigate, and communicate with a purpose. All of the children, regardless of language ability, are able to learn together through the use of hands-on activities and cooperative learning. The program engages the learners and encourages them to be researchers, investigators, and problem solvers. Students participating in this project won Second Honors in the 1999-2000 District 30 Science Fair. The program can be easily adapted to any classroom.

Ben and Us: Sparking the Standards

→ HOW IT WORKS

Benjamin Franklin said, "The doors of wisdom are never shut." A mouse named Amos helps open those doors and adds some creativity to the fifth grade classroom. And a hundred-dollar bill helps, too.

Ben and Us: Sparking the Standards uses an interdisciplinary approach to develop research, writing, and word-processing skills while giving students a chance to explore, gain knowledge, and be creative. Students complete a teacher-created graphic organizer in the style of an oversized hundred-dollar bill, and use various resources to research the life of Benjamin Franklin and his accomplishments as a scientist, inventor, statesman, and printer.

Becoming familiar with Ben's accomplishments provides the background necessary to appreciate *Ben and Me* by Robert Lawson. In the novel, Amos the mouse takes full credit for Mr. Franklin's work, including the Franklin stove and bifocals, experiments with electricity and lightning, and printing newspapers and *Poor Richard's Almanack*. As the novel is read in class, students respond by keeping journals, understanding point-of-view narrative, and relating to the maxims in *Poor Richard's Almanack*. Since the children have investigated the life of Franklin, they are adept at separating fact from fiction and putting the novel into proper historical perspective.

The humorous-but-accurate presentation of the scientific method helps the students plan their own projects for the Annual Science Fair in our school and district.

Next, the students research the life of another scientist or inventor. They then become authors, modeled after Mr. Lawson, and create illustrated storybooks such as *Tom* (Edison) *and Me* to tell how the famous scientist or inventor was guided through his/her accomplishments by an Amos-like character. They use word-processing programs on the computer to generate the text, and do hand-drawn or computer-assisted illustrations. The stories are shared on Author's Day in our classroom.

→ THE STUDENTS

All 31 of the students in my fifth grade class participate in the learning experience. We use the classroom computers and our school's computer lab, where each child can work on an individual computer for a limited time. The children have one computer period a week with our computer specialist, so by the time they get to fifth grade, they are familiar with basic computer operation and keyboarding.

→ THE STAFF

Gloria Block has been teaching fifth grade at P.S. 42 for ten years. She was a TeachNet Disseminator Grant recipient in 1998-1999 for **How Does it Feel to Find a Fossil.** Mrs. Block has given staff development and new teacher workshops in District 31.

→ WHAT YOU NEED

We use a computer with Internet access, encyclopedia CDs, reference books from the library, and word processing software. The novel *Ben and Me* by Robert Lawson is available in a softcover edition from Scholastic, and we use hardcover blank books for the children's storybooks. The hundred-dollar-bill graphic organizer, printed on green paper, provides the initial motivation for the children.

→ OVERALL VALUE

Ben and Us addresses current standards in English/language arts, social studies, science, and technology, and provides opportunities to respond to literature by drawing upon historical knowledge and exercising reading and writing skills. The children view historic events through first-hand accounts and learn how people interact with their environment and use resources to meet their needs. The final product, an original storybook, serves as a keepsake and the culmination of their endeavor.

CURRICULUM AREAS
Science
Language Arts
Social Studies
Technology

GRADES
4-8

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Who's Who in Black History

CURRICULUM AREAS
Technology
History

GRADES
Middle School/High School

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→ HOW IT WORKS

In **Who's Who In Black History**, students create and play games to learn about the roles that African-Americans have played in American history in fields such as arts and education, science, politics, the civil rights movement, the military, and sports. They also complete a research project on a significant Black person in history. This project requires the use of a variety of computer programs and resources. Students take notes from CD-ROM encyclopedias and Internet sites as well as books and encyclopedias from the library. The final reports they create will be shared with the class.

The activities and lessons for this unit were designed to reach students with learning disabilities, allowing them to work in small groups while practicing new skills and working one-to-one with teachers. Because of its open-ended structure, students who have varied abilities can engage in the activities and research at different levels. For students with reading and writing problems, a smaller set of research questions can be developed. Students with greater abilities in reading and writing can extend their research accordingly.

→ THE STUDENTS

The fifteen students in my class are eighth graders. The class is a MIS (Modified Instructional Setting) 1, so many students have learning disabilities and/or emotional difficulties. The classroom does have eight computers, and the students also made use of computers in the library. There was no Internet access in my classroom, so we used the library computers to do research on the Internet. Prior to this unit, most of my students had not had formal training in typing, using the Internet, or using CD-ROM encyclopedias.

→ THE STAFF

I have taught in the MIS 1 program for two years. This year, I am working in a Chancellor's District School in Sunset Park, Brooklyn. I work with an extremely motivated and energetic staff. Many of my ideas came from worksheets that a colleague of mine gave to me. And although there are no paraprofessionals in the room, I do have the assistance of an ESL teacher who comes in once a day. While we were working on this unit, she held writing conferences with students in my class. Also, the librarian and computer support personnel from Project Smart were very supportive of the project.

→ WHAT YOU NEED

Computers with Internet access are needed along with software such as the Grolier's Encyclopedia CD-ROM and the ClarisWorks word-processing program. Markers, highlighters, dictionaries, large index cards, and student folders were used to collect and present information, and to prepare each student's report. You may want to use some of the handouts that I have prepared, too.

→ OVERALL VALUE

This unit engages students in a variety of activities that challenge them to learn skills in technology, language arts, history, and math. The students use technology to help them read and comprehend informational material, and produce displays (with tables, charts, and graphs) as well as written and oral reports. Activities and lessons are presented in a clear manner and offer students multiple opportunities for mastery, while allowing them to work at their own pace.

At the completion of this unit, students will not only have a variety of skills in using computers, writing reports and analyzing data, they will have learned about the accomplishments of many Black people in history.

The Mystery Powders

→ HOW IT WORKS

The Mystery Powders enables students to demonstrate their knowledge of physical science, the scientific method, and technology in a cooperative learning environment. They explore the chemical and physical properties of matter, study the periodic table of elements, and consider atomic number and mass, chemical symbols, electron configuration, and bonding power. They work in pairs on the Interactive Periodic Table program, which is designed to reinforce their knowledge of chemical symbols, atomic number, bond types such as covalent and ionic, and characteristics that the families of elements share.

Next, the students work in groups of 3 to 4. Each group gets a lab kit containing goggles; lab coats; 5 cups (labeled A-E) of white substances such as baking powder, baking soda, starch, gelatin, and salt; 5 spoons; 4 dropper bottles filled with vinegar, water, biuret solution, and iodine; neutral litmus paper; and a laminated test mat. Lab safety rules and procedures are reviewed. Each group has one researcher, one recorder, and one data entry person. All students perform all the tests on the substances. They are given the chemical formulas and hypothesize about what powder is in each cup. They record their hypotheses on lab worksheets.

The students begin by placing a spoonful of powder A in each of the four boxes on the test mat. They record all test results on a data chart provided on the worksheet. The first box is for observation of physical properties (color, texture, and whether it is a crystal or powder). The next three boxes are for chemical properties (pH and whether or not it contains protein, starch, or carbon dioxide). Students wipe the test mats clean and begin again with powder B and so on. When all powders have been tested, the data entry person enters the results on a computer spreadsheet setup. The researcher uses the Interactive Periodic Table program to match the chemical and physical properties of the powders to the elements. They research the individual elements that make up each compound and look for information on how the elements are used in compounds. Students use the research and experiment results to identify the substance in each cup, answer critical thinking questions, and write a lab report.

→ THE STUDENTS

Over a hundred seventh grade students in classes of 30-32 with various technology backgrounds use an interdisciplinary approach to identifying **The Mystery Powders.** During daily science classes, they work cooperatively to perform tests, and record data and research. This project can be adapted to various achievement levels and used with small or large group instruction.

→ THE STAFF

Janice Dalton has been teaching science for seven years and currently teaches seventh grade physical science at the Bay Academy for the Arts and Sciences. She is chairperson of the leadership team for the school, and has been using **The Mystery Powders** in her class for two years with highly successful results.

→ WHAT YOU NEED

The project requires either a classroom or lab room if one is available, a minimum of two computers, word-processing and spreadsheet software, encyclopedias and the Interactive Periodic Table software. The program also requires laboratory worksheets that list materials and procedures, and a test mat.

→ OVERALL VALUE

The Mystery Powders is an interdisciplinary project that encourages interdependence. All group members have a stake in the success of their group. Through research and experimentation, the students enhance their knowledge of chemicals, chemical equations, compounds, and their common uses. Students utilize computer technology to facilitate each step of the project. Critical thinking, report writing, and cooperative learning are emphasized.

CURRICULUM AREAS
Physical Science
Technology

GRADES
7-8

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A Herculean Task

CURRICULUM AREAS
English
Math
Technology

GRADES
Middle School/High School

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→ HOW IT WORKS

A Herculean Task is an interdisciplinary program involving English and math that also integrates technology into the English curriculum so it can be aligned with the ELA Standards. In this way, students can be learning content-area material as well as honing their skills to take the new English Regents. Initially, students are introduced to the myth of Hercules in class and they decide which qualities of Hercules are similar to those of our modern-day heroes.

The class separates into cooperative learning groups, where they fill out the triangles in a pie-graph handout with all twelve labors of Hercules and determine which specific qualities he would need to use in order to accomplish those labors. On a second handout, the groups answer teacher-generated questions, this time representing their answers using fractions, decimals, and percentages. Each group presents their answers to an assigned question, and is graded on how persuasively they present their argument. Subsequently, the students complete a third handout that depicts their answers in a box chart.

Next, students learn how to create graphics of their own choice using Microsoft PowerPoint to depict their answers. A demonstration of Microsoft PowerPoint is given using a computer on wheels and a projector before taking the students into the computer lab. When in the lab, students are asked to determine how computers can help them represent their answers–using fractions, decimals, and percentages–to the teacher-generated questions. Then they pair off to work on creating those graphics. The student-made graphs and box charts are then redistributed to the other cooperative learning groups, who are asked to interpret the information and use it to write a persuasive essay that argues whether Hercules needed strength or intelligence to accomplish his labors.

→ THE STUDENTS

A Herculean Task can be used successfully with basic-skills through honor-level classes as part of a unit on mythology. Since the program includes a wide range of learning strategies, it is especially useful when teaching classes that contain students who are being mainstreamed.

→ THE STAFF

Sandy Del Duca taught English to all grade levels for the past seven years at DeWitt Clinton High School. She developed this program five years ago and implemented it in her ninth grade classes. She has facilitated various staff development workshops, including a series sponsored by the Bronx Superintendent's Office entitled "Integrating Technology into the English Classroom to Meet the New Regents Standards." She also participated in preparing a CD-ROM for the district on integrating technology into the classroom. In September, Sandy joined the Manhattan Superintendent's instructional team as a staff developer.

→ WHAT YOU NEED

In order to replicate this program, teachers will need a copy of the myth of Hercules and the handouts that were created for the program. They will also need a computer on wheels and a projector, as well as access to a computer lab that has Microsoft PowerPoint or another software program that can be used to create graphics.

→ OVERALL VALUE

The program maximizes the use of technology because it enhances the existing curriculum and is directly aligned with the new English Regents. It uses instructional time effectively since the computer activity is integrated into one specific aspect of a unit, and is focused on the preparation students need to meet the new standards set forth by the State of New York. Moreover, the program's varied activities address the different learning styles of students while promoting critical thinking skills and encouraging positive social interaction.

Story Quilting

→ HOW IT WORKS

Story Quilting is an interdisciplinary program based in literacy, but integrating social studies, math, art, and technology. The project includes an author study, read-alouds, analysis of craft, research, hands-on exploration of geometry, and a "virtual" museum trip.

We begin with a look at the work of Faith Ringgold, with a focus on *Tar Beach.* The children reflect on this book and list "noticings" which include her illustrations and their quilted borders. After visiting her Web site (www.artincontext.org/artist/ringgold/bio.htm) and watching a biographical video, they learn how quilting became the vehicle for her art and storytelling. Via the Internet, pairs of students explore museums and view her works and those of other quilters. Simultaneously, other groups research her and her work through nonfiction books and learn about the art of quilting. They become aware of the element of design and geometry in quilting and use pattern blocks and/or quilting tiles to create their own quilt patterns.

From a magazine article, they learn how quilts were used during the time of the Underground Railroad to give clues that helped escaping slaves find freedom, and revisit Faith Ringgold through her book *Aunt Harriet's Underground Railroad in the Sky.* This leads to discussions of Harriet Tubman and to the literary comparison of two poems about Tubman written in different voices.

The study culminates with the design in paper of an ABC quilt honoring Harriet Tubman that incorporates all they've learned about quilting as a story-telling medium.

→ THE STUDENTS

Three classes of fourth and fifth graders (20 students in each) participate in this project during our extended-day Project Read program. Minimum technical expertise is required since sites are bookmarked for the students. Participants meet in the library, where there is Internet access. The program can easily be adapted for other grade levels. Since it touches so many curriculum areas through varied modalities (aural, tactile, visual, etc.), diverse interests and styles of learning are addressed.

→ THE STAFF

Helene Espinoza has been teaching for 15 years. She has taught third grade and TAG and is currently a cluster teacher, teaching research and library skills as well as Project Read. She oversees the administration of her school library and gathers resources for teachers and students. She is actively involved in the Columbia University Writers Project and tries to incorporate this into her work. She has led school-based parent workshops and has written curriculum for an environmental science program.

→ WHAT YOU NEED

Though this program was done in our library, which has a bank of four computers connected to the Internet, it can be done anywhere there is an Internet hookup. The materials needed are works by Faith Ringgold, appropriate nonfiction books for research, quilting tiles or pattern blocks, and basic art supplies.

→ OVERALL VALUE

Story Quilting lends itself to easy integration of literacy with other subject areas. Among the New York City English/Language Arts Standards addressed by this project are: reading twenty-five books; reading and comprehending at least four books on the same subject, author, or genre; reading and comprehending informational materials; and responding to works using interpretive and critical processes. It provides hands-on activities, allows for cooperative learning, develops research skills, widens children's experiences with technology, allows them the opportunity to "visit" museums, and takes them back in time to a noteworthy period in our history. The culminating creation of their own designs and quilt patterns encompasses all of the learning that takes place during this study.

CURRICULUM AREAS
Literacy
Social Studies
Math
Technology
Art

GRADES
4-5

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Earth Design 2000

CURRICULUM AREAS
Science
Mathematics

GRADES
5-8

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→ HOW IT WORKS

Earth Design 2000 is an inquiry-based program that motivates students to use the scientific method to design and construct a project or invention that can protect the earth's environment. This standards-based program encourages students to identify a problem, research it, and use problem-solving strategies to design a model solution.

Students are encouraged to use Internet Web sites and CD-ROM encyclopedias to gather information and statistics about problems affecting the earth's environment, such as pollution. They develop a project or invention that helps solve the problem, such as a way to recover metal from a garbage dump. They also read about individuals and groups who have made major contributions to environmental protection. The students demonstrate their projects and inventions to the class, and the outstanding ones are displayed at the school science fair. These projects will also be displayed at our architecture, design, and technology fair.

→ THE STUDENTS

Four sixth grade classes and two special education classes participated in **Earth Design 2000**, but it is easily adapted to other grades.

→ THE STAFF

Manette Gampel has been teaching science for almost twenty years. She is the coordinator of her school's architecture and design program, which has been recognized as an exemplary program for middle school. She has received several grants and was a past recipient of an IMPACT II grant for her program **Soda Bottle City in the Year 2000**. Her work has been featured in several publications, and she has lectured citywide and at national conferences on the value of incorporating architecture and computer-aided design into middle school science and mathematics programs.

→ WHAT YOU NEED

Classroom computers with Internet access and CD-ROM encyclopedias and *TIME* magazine software, if available. Internet access enables students to research local pollution problems and gather data for their reports. A visit by experts from the Salvadori Center helps students understand the need to protect the environment when designing infrastructure in cities, such as the inclusion of modern recycling plants.

→ OVERALL VALUE

Earth Design 2000 encourages students to design inventions that emulate professional scientists by using the scientific method. Students may work alone or in groups to study an environmental problem and design a solution in the form of a project or an invention. Students report on their work in classroom presentations and have an opportunity to answer questions from other students. Besides resulting in fascinating science fair projects, **Earth Design 2000** helps students develop awareness of what each person can do to protect the environment.

Timelines and Extinct Animals

→ HOW IT WORKS

Timelines and Extinct Animals effectively integrates technology into many curriculum areas. It was initially created to fit P.S. 224's Queens school-wide theme: "Timelines and Events of the Millennium."

Using extinct animals to demonstrate the concept of a timeline is ideal because the topic of animals is naturally motivating.

Through the use of a teacher-made template created with the Kid Pix Studio Deluxe program, students design their own timelines as they learn about each animal in detail through teacher-made informational charts. The students then use Kid Pix to create original artwork of each animal, along with an animal fact sheet. When the timeline, picture, and fact sheet are completed, each student creates his/her own multimedia slide show using the same program.

The cooperation and assistance of paraprofessionals is crucial for a successful experience with this project and all projects in the lab setting.

→ THE STUDENTS

The students that participated in this program were 30 Specialized Instructional Environment (SIE VIIB) students from three different classes. Each class met in the lab twice a week. All work was completed in the lab. Almost all of the students had prior experience with the tools and mechanics of Kid Pix. This program was used with both students functioning on grade level and non-readers. Non-readers received one-to-one assistance from teachers, were encouraged to dictate their facts to the teachers, and were able to record their responses using a microphone. Other possible adaptations of this program include use with larger or smaller groups, and younger or older students. For students with higher levels of technological skills, the teacher can use different programs such as Hyperstudio to create the artwork and interactive multimedia presentations.

→ THE STAFF

Lori Hassin has been teaching in the New York City Board of Education in District 75 for almost twenty years, and has been the computer lab teacher at P.S. 224 for the past ten years. She has devoted all of her efforts in the lab towards the integration of technology into all curriculum areas and the adaptation of the curriculum for her students. Her students' work was recently displayed at the 1999 District 75 Technology Solutions Fair.

→ WHAT YOU NEED

Timelines and Extinct Animals can be used in a computer lab or a one-computer classroom. This project was conducted in a computer lab containing 12 Macintosh computers with the Kid Pix Studio Deluxe program. All machines are networked to two color printers.

Teachers need to have the resources available to them to gather information and to produce the informational charts. Internet access, reference books and CDs, and library books are needed. A scanner, Adobe PhotoShop, ClarisWorks, a color printer, ink cartridges, and posterboard are all suggested items to present attractive informational charts.

→ OVERALL VALUE

When technology is the tool used to achieve a goal or objective, the results are remarkable. The use of the computer ensures success, creates enthusiasm, and improves self-esteem for all students. The subject matter of **Timelines and Extinct Animals** is naturally motivating, standards are addressed, and technology is integrated into the curriculum. The easy adaptability of this program appeals to all. Children learn the valuable lesson of animal conservation and express their ideas using the computer. When students see their work displayed in their multimedia slide shows, they can only feel proud of their accomplishments.

CURRICULUM AREAS
Technology
Art
Language Arts
Social Studies
Science

GRADES
3 - 5

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A Planting We Will Go/Grow

CURRICULUM AREAS
Language Arts
Technology
Math
Social Studies
Science

GRADES
1-6

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→ HOW IT WORKS

A Planting We Will Go/Grow is an interdisciplinary project in which multiple learning styles of the students are stimulated with a variety of techniques. Students explore the process of germination and the parts of a plant, create a slide show depicting their findings, and learn some valuable life lessons.

Students read *The Empty Pot* by Demi, a modern-day folk tale that explores Chinese culture and geography. Appreciation of other cultures is developed and nurtured. In the story, an emperor gives one seed to every child to plant. They do not know that the seeds were cooked already, and will not grow. The theme is "Honesty is the best policy." The students discuss the language arts/reading aspect of the folk tale, and identify with the character learning a valuable lesson: no matter who you are or from which culture you come, certain values remain constant. A reading/writing connection is developed and strengthened as the project progresses. Children also choose a life lesson that they will illustrate in a short story.

The students go on a field trip to Forest Park (several blocks from the school) to observe and record the process of germination. These trips are planned in advance with the Forest Park Rangers. Several trips are made to observe, record, draw, and measure the growth pattern of the plants. Students make and revise predictions based on their previous findings. The measurements are converted using both metric and customary units. Graphs are created to illustrate the growth pattern of the plants. Research is done to further explain the parts of a plant and the process of germination.

Students create the graphics depicting the different growth stages using Kid Pix Studios and ClarisWorks, and create a slide show with narration explaining the process of germination. A graphic illustration of a plant is produced and labeled, and the students construct graphs of the growth stages in germination.

→ THE STUDENTS

There are thirty fourth graders involved in this program, which is adaptable for all elementary grades. Students work on the classroom-based computers on a daily basis. There are many different instructional strategies used for this project: whole group, cooperative groups, and independent work that address the variety of learning styles in the classroom.

→ THE STAFF

Lisa Jimenez is a fourth grade teacher at PS 90Q. Catherine Donaruma-Canzoneri, a staff developer at PS 90Q, also assisted on this project.

→ WHAT YOU NEED

This program can be done in a regular classroom using computers equipped with Kid Pix Studios and ClarisWorks. The books are borrowed from the school and public libraries. Several walking trips are necessary in order to make observations about plants and plant growth. Measurement tools are needed on the trips.

→ OVERALL VALUE

A Planting We Will Go/Grow is an all-inclusive project that incorporates all disciplines of learning, making it a truly meaningful experience for the students. It fosters a sense of unity and tolerance among the children, teaching them major life lessons as well as life skills, i.e., human relations, recording data, investigating, making predictions, etc. Students read and comprehend informational material, write a response to literature using critical processes, participate in group meetings, and demonstrate a basic understanding of the rules of the English language. It can be adapted to any grade level by simplifying or intensifying the project to meet the needs of the students.

Knots on a Legend Rope

→ HOW IT WORKS

Knots on a Legend Rope is an interdisciplinary program that taps into the Multiple Intelligences philosophy and gives students a key to Native American culture. The initial activity is a trip to the Museum of Natural History. Groups of two or more students observe dioramas of North American mammals that played an important role for Native Americans. The students take notes, which become part of their research portfolios, and then draw two sketches of the dioramas using charcoal pencils first and then pastels. A group of students can photograph or videotape the dioramas for reference purposes.

Next, the children write and word-process reports about the animals, and use clip art to insert pictures. They proofread and edit their work on the computer. The teacher's task is to guide the students and give them individual help when needed.

Then the students read and discuss books written by Paul Goble, whose legends carry students deep into Native American culture. They read and analyze *Just So Stories* by Rudyard Kipling, which proposes in a very unusual and entertaining way how the world was created. After class discussions, the students create their own original legends and poems.

The culminating activity is publishing a big book: *Native American Animal Stories.* The teacher laminates and binds the children's drawings with the matching printed legends and poems into the book.

Finally, a rope will be tied to the binding of the book. Every time a person reads a legend, she/he will tie a knot on the rope as a symbol of a lasting relationship and of deep appreciation for the valuable lessons of the past.

→ STUDENTS

This program was initiated in grade four of a dual-language gifted class, but students of all grades, technological backgrounds, and learning styles can participate. Cooperative groups, individuals, or full classes can work on this interdisciplinary unit throughout the school year.

→ THE STAFF

Karina Maceczek has been teaching bilingual and ESL classes at P.S. 200 for nine years. Karina is presently involved in curriculum writing for the Globe Program and the Board of Education as well as the Action Research Project and the D&D project conducted by Brown University and NYU.

→ WHAT YOU NEED

The program requires a class trip to the Museum of Natural History. In the museum, students will need worksheets for note taking, paper for drawing (12x24), charcoal pencils, and pastels. A camera and a video camera would be a plus for documenting the steps of the program. Suggested literature for class discussions is *The Song of Hiawatha* by Henry Longfellow; *Buffalo Woman, Dream Wolf*, and *The Girl Who Loved Wild Horses* by Paul Goble; *Knots on a Counting Rope* by Bill Martin Jr. and John Archambault; and *Just So Stories* by Rudyard Kipling. Students need access to research software and at least one classroom computer. This project can be also done in cooperation with the school computer lab. Software applications include Grolier's Encyclopedia and the San Diego Zoo's *Animals in Their World*.

→ OVERALL VALUE

The program is a wonderful opportunity to grasp the lessons of the past. The unit opens a broad path of exploration, research, and discovery, and helps students understand the culture of Native North Americans and their interaction with the environment. The close links between the subject areas make the learning process meaningful and valuable. The program exposes the students to innovative strategies and methods of teaching and learning. The parts of the program are easy to adapt for social studies and science class projects.

CURRICULUM AREAS
Language Arts
Science
Social Studies
Technology
Art

GRADES
3-8

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PowerPoint Poems

CURRICULUM AREAS
Technology
Language Arts

GRADES
6-8

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→ HOW IT WORKS

PowerPoint Poems is a way for students to play with poetry and learn multi-media design at the same time. The students select a poem of their own or a favorite published poem, and they make it into a dancing, singing work of art as a PowerPoint slide show. They use images, colors, sounds, and creatively positioned and choreographed text to create their displays. In doing this, they study a poem in depth, determine its meaning, and work towards conveying and enhancing that meaning with their design choices.

This program has two instructional purposes. First, as a computer technology project, it teaches the use of multimedia design to convey meaning. Secondly, as a language arts project, it engages students in creative response to poetry. In choosing how a poem is displayed, the student demonstrates his/her understanding of its meaning, and contributes to the expression of this meaning with his or her own ideas.

The students are also engaged in reflection and critique. They are asked during sharing sessions to explain certain design decisions. They then discuss and defend their choices. They gain a greater appreciation of poetry, a greater understanding of design principles, and more comfort and skills with computers. This also teaches them a program that they can later use for another class project (i.e., presenting a research project or report).

→ THE STUDENTS

I work with 8-10 students at a time. The students are taken from art or advisory classes to work with me for a marking period. I have done this as both a paired and independent activity. Both were successful, but my preference was for individual work. The participants are seventh and eighth grade students of all academic levels. They have a range of technical experience, but usually none of them have previously used PowerPoint. They pick it up in a flash. Classes meet once per week for an hour in the computer lab.

→ THE STAFF

Andrea Menotti is entering her second year of full-time teaching in the New York City Public Schools. She began as a student teacher while completing her master's in English Education at Teachers College, Columbia University.

→ WHAT YOU NEED

This project requires a computer with Microsoft PowerPoint, which comes in the Microsoft Office software bundle. Teachers also need an extensive collection of short poems. I choose short, rhyming poems for my collection, since these are most popular with the kids. However, a teacher may decide to choose certain poets based on his/her particular language arts curriculum. Or, if the teacher has a "Writing Workshop" curriculum, the use of the students' own poems in the project makes an exciting form of publication.

→ OVERALL VALUE

The work the students do on these PowerPoint poems is brilliant. They really shine at this. The students who enjoy writing get to publish their poetry in a new and exciting way. Those who enjoy art get to develop their skills. And the technically inclined get to integrate computers with their language arts experience. Most of all, students who participate in this project have the unique opportunity to take a poem and enhance it, joining in creative collaboration with the original poet. If teachers want to see kids wide-eyed and amazed at what they can do with poetry, then this is the project for them!

Out of This World

→ HOW IT WORKS

Out of This World is an interactive program that involves science, language arts, and technology. It enables students to explore the solar system from their classroom, using both the Internet and books for research purposes. The students design and create a journey into outer space, whereby they visit the nine planets and the sun using the software of HyperStudio. The solar system is an exciting, highly motivating subject for the students and is part of the curriculum. All of these factors combined make a truly exhilarating experience.

The students discuss the nine planets and their relationship to the sun. They identify pertinent information needed regarding each planet. A worksheet with relevant questions is devised based on their discussions. Students are cooperatively grouped, and each group is assigned a planet. Each child has a specific responsibility to fulfill for his or her group. They research their planet using the Internet and books, and organize and paraphrase information for their written report. Each group puts together an oral presentation on their planet. The written information is entered in ClarisWorks. Pictures of the planets are created in Kid Pix Studios, and are then scanned in. Slide shows are created illustrating such events as a solar eclipse, a planet's rotation, moons orbiting their planet, etc. A Hyperstudio program is developed using buttons and hypertext links.

There are several techniques in which class time is divided to implement this program. Whole class lessons serve as an introduction, along with a good deal of cooperative group work. Some research is performed individually; each student has a certain responsibility that needs to be accomplished. The class has a computer schedule that they adhere to. A daily schedule allows each child to receive approximately a half-hour per day of computer time.

→ THE STUDENTS

There are 30 fifth graders in the classroom. This program is appropriate for all types of learners, especially with the use of the multimedia program HyperStudio.

→ THE STAFF

Catherine Donaruma-Canzoneri has been teaching for nine years. She is presently a staff developer in PS 90Q participating in CSD 27's Professional Development Academy. She is the District 27 computer contest winner for 1997 and 1998. Jennifer Saksa also assisted on the project.

→ WHAT YOU NEED

Materials include Internet access and computer programs such as ClarisWorks, Kid Pix Studios, HyperStudio, and Grolier's Encyclopedia. Four computers and a scanner are connected to a color printer in the classroom. Research materials are located in the school library and the neighborhood branch of the New York City Public Library.

→ OVERALL VALUE

In **Out Of This World**, students gain the necessary tools to research topics, write reports, and create exciting, informative presentations. They journey not only to outer space, but also towards the road of higher thinking skills with the use of these vital elements that technology supplies. Creating a program in HyperStudio opens new doors for students to experiment and deepen their understanding. Working in cooperative groups has many benefits, such as team building skills, using individual talents for the success of the group, etc. This program appeals to all types of learners. **Out Of This World** sets the students up for success, reinforcing their self-esteem.

CURRICULUM AREAS
Science
Language Arts
Technology

GRADES
4-6

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Surveying Pre-Teen Tastes

CURRICULUM AREAS
Mathematics
Language Arts
Technology

GRADES
5-7

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→ HOW IT WORKS

Surveying Pre-teen Tastes is a multidisciplinary program that enables students to develop math and language arts skills while focusing on their peers' opinions and preferences regarding areas of common interest: food, movies, music, and other youth-oriented subjects and issues. This program enables students to graph their surveys of children from ages 10-12 both traditionally and with the use of technology. Discussing the tastes of pre-teens makes the work more interesting.

The students are divided into groups of four, taking into account varied abilities in math and computer skills. Each member of the group is assigned a task: leader, secretary, keyboard operator, and presenter. They discuss topics that interest them, such as foods, music, school subjects, books read, movies, etc. The groups pick the topics and ask 100 students aged 10-12 about their tastes and preferences, giving each individual about four choices. The groups work both together and separately, in and out of school.

After teaching the graphing process using CIMS, the teacher demonstrates how to make charts and interpret them as graphs using a word-processing program. After all the groups have a chance on the computers, their findings are discussed. The students then chart their surveys and draft both a bar graph and a pie graph using the spreadsheet of ClarisWorks. The main activities are assembly of information; critical thinking, and collating and examining data; putting their information on a spreadsheet; and then graphing that information.

→ THE STUDENTS

The students were sixth graders of varied computer abilities, though none of the children knew how to chart or graph information. The program can be adapted to children of different ages with varying interests.

→ THE STAFF

I have been teaching 30 years and every year is a new experience for me. I am always learning, using books, taking classes and listening to my students. This is the first time I have used this program.

→ WHAT YOU NEED

A computer with a word-processing program and a printer is used. The teacher must be familiar with a spreadsheet such as that found in ClarisWorks, Microsoft Excel, or Lotus 123. It is easier to teach the class using a converter that puts the teacher's computer screen on a large television, but this is not required. The graphs are more effective and interesting when they are produced on a color printer.

→ OVERALL VALUE

I wanted to develop a fun activity that would include cooperative learning. There are several children new to the school and I wanted them to become more involved with the class. Our classroom is self-contained, so moving around and interacting with new students represented a great opportunity for all.

The sixth-grade math curriculum has chart reading and graphing as topics. The children are also required to gather, analyze, and interpret data. Graphs can be used in every subject, to plot or display information. The skills gained within the groups and by the individuals enable each child to become a better student in all fields of learning, both in school and in the future.

Fun with Franklin

→ HOW IT WORKS

Fun with Franklin is an interdisciplinary, technology-oriented study of an amazing man whose multifaceted genius greatly influenced history. While studying Ben Franklin initially comes out of social studies, his many accomplishments lead us to science, math, and language arts. The students work cooperatively both at their computers and at their desks doing research, taking notes, sharing information, writing reports and mini-books, and developing slide shows.

The study begins with a read-aloud about Ben, with note taking, discussion, and development of a class KWL chart following. For the next several sessions, the children work cooperatively in groups of three, gleaning information on Franklin the writer, politician, scientist, and inventor. Using the Web site: www.ushistory.org/franklin/index.htm they learn how to use the links that lead them to the information they seek. Available in a Ben Franklin basket are trade books, texts, encyclopedias, and articles that offer a glimpse of this historic figure. Immersed in information about the man, students produce nonfiction reports. At the same time, whole-class activities reveal the many areas that Franklin influenced. They make timelines, study his proverbs, keep weather data (gotten from the Internet) and graph it, do experiments with electricity, and try their hand at potato printing. They think about how his work and ideas have influenced our lives even today and write him letters of thanks. They take an online trip to the Ben Franklin Institute in Philadelphia (www.fi.edu/tfi/welcome.html), and, finally, they make flip-books that serve as the basis of the slide shows they develop using ClarisWorks.

→ THE STUDENTS

Twenty-eight fifth grade general education students of varying abilities participate in this program that takes place in our classroom. Since our fifth grade teachers work together on many projects, three other classes, similar in composition, do many of the activities. Children develop some of their technical abilities through weekly sessions in our computer lab. However, since this is the first year of Internet availability in my classroom, I teach them online research skills and illustrate the steps involved in preparing slide shows. This program can easily be adapted for other grades.

→ THE STAFF

Hilary has been teaching for 10 years, during which time she has taught many grades. For the past few years, she has been enjoying fifth grade and has also been teaching a special afterschool environmental science program in energy conservation to fourth and fifth graders.

→ WHAT YOU NEED

This program can be implemented in any classroom with Internet access. My room has a bank of four iMacs clustered together, with room for two or three students at each computer. However, this work can be done just as easily in a one-computer classroom or in a lab or library. We use ClarisWorks (now AppleWorks) for our word processing and slide shows, but any similar software can be used. We also use encyclopedias and related library books for the research.

→ OVERALL VALUE

Fun with Franklin is an interactive, thematic, cross-curricular project that incorporates literacy into other subject areas. The cooperative learning and hands-on activities motivate the students and keep them interested. While gaining insight into the greatness of this man and his times, they develop important research, reading, and writing skills and strive to meet vital standards in English/language arts and, peripherally, in math, science, and social studies. The excitement of using technology to gather and present information is without parallel. It requires not only the "how-to" of navigating Web sites, but also the ability to organize, synthesize, and interpret information for presentation to others.

CURRICULUM AREAS
Social Studies
Literacy
Math
Science
Technology

GRADES
4-6

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Computer Graphics: An Introduction to PhotoShop

CURRICULUM AREAS
Art
Technology
Writing

GRADES
Middle School/High School

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→ HOW IT WORKS

Computer Graphics was originally designed as an adjunct to already-existing art courses. Its primary goal is to enable all students, regardless of their natural artistic abilities or skills, to express themselves in a technologically based visual manner.

Projects such as story illustration or postal stamp design encourage each of the participants to conduct their own interdisciplinary research in order to make a visual statement. While approaching solutions individually to achieve their given project's goals, the students learn how to use the various tools and techniques of the computer graphics program PhotoShop.

The students keep a daily journal to encourage language mastery and to reflect their own ideas and concerns. As an enhancement, they are encouraged to openly discuss the role of visual media in society, using resources such as advertising and visits to local museums. An outgrowth of the museum visit is a broadening of their awareness through art history, whether past or contemporary. It is also of great benefit for students to maintain and build an image library for the classroom.

Since the course began, student attendance and involvement has proliferated. This is because the computer is a non-threatening vehicle for expression. It has also demonstrated additional avenues of promise for the career-oriented student, whether mainstream or a recipient of special education.

→ THE STUDENTS

Initially designed for the high school student, the course works well for almost every grade level that is mature enough to operate a keyboard and remember the step-by-step process of accomplishing computer tasks. The writing components, such as the journals or essay sections given while testing, greatly benefit the students' literacy skills.

→ THE STAFF

Lowell Shaw developed the curriculum for this course in 1998. A Special Education teacher for 15 years in Brooklyn, New York, Mr. Shaw was also the recipient of a Disseminator Grant in 1989 for **Airbrush,** a painting course designed for the Special Education population. Mr. Shaw holds a BFA degree from Pratt Institute and an MSE from the College of Staten Island. He is the author of several articles for *Airbrush Action*, a national arts magazine, and has had numerous paintings published for the decor industry. Mr. Shaw, aside from his teaching responsibilities, is currently developing a portfolio of paintings for the non-commercial arts arena.

→ WHAT YOU NEED

Computer Graphics requires a 486 or higher PC with CD-ROM drive (IBM or Mac), a color printer, a scanner, and, of course, the Adobe PhotoShop software. Only one printer and scanner are needed per classroom. Internet access can be of great benefit, especially when a student wishes to download imagery or research a topic. A digital camera is desirable, but optional. A visit to a local museum or gallery is of great benefit. Guest speakers can include artists or those in the graphic arts industry. These individuals often further a student's understanding of the importance of the arts and artistic vocations.

→ OVERALL VALUE

As stated previously, student involvement grows exponentially, and literacy and interdisciplinary involvement strategies are strengthened. Students who have demonstrated language learning difficulties will find this course especially helpful. It affords great promise for personal and academic growth.

TeachNet Profiles

Presenting Mealworms: A Slide Show

CURRRICULUM AREAS
Science
Technology
Math

GRADES
5

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→ HOW IT WORKS

Presenting Mealworms is an interdisciplinary unit incorporating science, technology, and math (specifically measurement). In this unit, students gather data on the habits, food preferences, classification, life cycle, characteristics, properties, and anatomy of mealworms. Students perform "hands-on" activities with live specimens and follow the scientific method of investigation.

The students also master new media technologies, with the computer utilized as a tool. They learn new concepts, master program software, and research and access resources available on the Internet. Graphics generated and acquired by students are imported into word-processing documents and multimedia presentations. Working in cooperative groups, the students demonstrate and reinforce learning by creating multimedia slide shows. Additionally, student-generated slide shows are an ideal way for students to communicate concepts learned, educate others, and celebrate their accomplishments, which are worthy of praise and recognition.

The students develop scientific thinking by using evidence to construct explanations, evaluating different points of view and distinguishing between fact and opinion. They become familiar with scientific tools and technologies, critique written and oral explanations, demonstrate scientific competence by completing non-experimental research using print and electronic information, and demonstrate an understanding of the characteristics and life cycles of organisms.

→ THE STUDENTS

Two classes of 25 fifth grade students met twice a week. The ability levels of these students varied. They included ELL students, Resource Room children, and students with average and above-average ability. The various activities involved in this program are ideal for whole group instruction, small cooperative groups, and individualized tasks.

→ THE STAFF

Lisa Bilello is a "hands-on" science cluster teacher with eight years of experience in this field. She was a third-grade classroom teacher for one year. Presently, she is a split-cluster teacher teaching both science and computers to grades one through five. She also has taught family literacy outreach programs for the past three years, and is a recipient of a UFT mini-grant award for a math, science, and technology project with an environmental theme.

→ WHAT YOU NEED

Presenting Mealworms requires 10 or more class periods to complete. A computer with an Internet connection, as well as a scanner, digital camera, word-processing software, presentation software (i.e., AppleWorks, Kid Pix, PowerPoint, etc.) are used, along with mealworms, hand lenses, and encyclopedias (both text and software formats).

Mealworms are relatively clean if you remove any leftover produce from the tank on a weekly basis. If the weather is hot, mealworms changing into pupae within a week. You'll have to move fast or buy another portion of mealworms the following week if you haven't finished completing any particular life-cycle stage of study. Wearing plastic gloves while handling the mealworms may make you more comfortable, and will also cut down on the number of times you need to wash your hands.

→ OVERALL VALUE

Motivation for acquiring knowledge and learning new media skills is practically guaranteed by tapping into the students' natural curiosity about insects. Hands-on activities cross language barriers and cooperative grouping enables peer support. In this interdisciplinary program, students of all cognitive levels and learning styles achieve success.

Seeing Life in Sea Life

→ HOW IT WORKS

During **Seeing Life in Sea Life**, students obtain a basic knowledge of animal life in the ocean. They learn how sea life has an impact on our environment, and, conversely, how our environment has an impact on it. They become aware of the different available research media (literary books, encyclopedias, reference books, computer software, the Internet, etc.) and resource sites (class, school, and public library; Internet Web sites; etc.) and learn to utilize these media and resources to facilitate their study. They are introduced to the computer and other technology tools that enhance their study, and get hands-on opportunities to obtain the basic knowledge and skills necessary to use some of these tools. This provides a starting point for further exploration of integrating technology into class projects.

The students use scientific inquiry to pose questions and develop solutions. They access, process, and transfer information using appropriate technologies; understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment; and recognize the historical development of ideas in science. They apply technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs; understand the relationships and themes that connect science and technology; and apply the themes to these and other areas of learning.

→ THE STUDENTS

The target student grade level is 2-4. Many of these students are in dual language classrooms where they are taught in both English and Chinese. They are heterogeneously grouped. Most do not have access to computers at home. Therefore, our lesson plans include basic computer training sessions.

This study can be developed with monolingual, bilingual, and dual language students. They need to know or learn how to alphabetize, use chapter books, tables of contents, and indexes, and develop basic computer skills.

→ THE STAFF

Eleanor Christian is a New York State– and New York City–certified early childhood teacher with over 30 years of teaching experience. She holds a Master of Science Degree in Education and an ESL ancillary license. She is an Early Childhood Science Cluster teacher at P.S. 1 in New York City's Community School District Two. She has also taught educational courses at a local community college. Ms. Christian collaborates on this project and units of lesson plans with her two colleagues: Amy Hom, who is a Standards Staff Developer, and Kathy Huey, who is a Technology Staff Developer.

→ WHAT YOU NEED

Seeing Life in Sea Life requires 10 or more classes to complete. Equipment used includes tape recorders, a TV and VCR, a computer with an Internet connection, and digital cameras and projectors. Necessary software includes an Internet browser; Web software such as Inspiration; word-processing software such as AppleWorks, Student Writing Center, or Microsoft Word; and digital image-editing software such as Adobe PhotoShop. Other media includes books and videotapes related to sea-life.

→ OVERALL VALUE

Seeing Life in Sea Life is an interdisciplinary study that incorporates science, social studies, art, reading/writing, and technology. It employs inquiry-based learning by soliciting questions and answers from students, and allows them to take charge of their own study and decide what specific sea-life subjects they will focus on. This program emphasizes the importance of research and provides strategies and tools to build the students' research skills. It introduces the many ways technology can enrich the learning experience.

CURRICULUM AREAS
Science
Social Studies
Language Arts
Technology

GRADES
2-4

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Robotics: Wave of the Future

CURRICULUM AREAS
Science
Computer Science

GRADES
6-8

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→ HOW IT WORKS

Robotics: Wave of the Future began and serves as an introduction to the robotics program that is being taught at Staten Island Tech High School. The students utilize various computer-simulation programs that design robots, and then test these robots to see how they function. The students also do research via the Internet about advances in robotics. As a final project, the students build a working robot using various materials and kits that are available in the marketplace.

The use of the computer, Internet, and visual media is essential to the program because it provides rapid and up-to-date information on the robotics field. In addition, it prepares the students to be "computer literate." The teacher must do research in advance in order to find Web sites that offer the necessary background information.

In this program, the students demonstrate an understanding of position, motion, and forces; and develop an understanding of ideas and unifying concepts as well as the impact of science and technology. They collect and analyze data, identify problems, propose and implement solutions, and evaluate accuracy, design, and the outcome of investigations.

The students are evaluated by their participation in class and their comprehension of the information presented to them.

→ THE STUDENTS

This unit was completed with an accelerated class of eighth grade students. No special skills are required, but previous computer experience is a plus. The unit can also be adapted for students in an average or below-average class.

→ THE STAFF

Raymond Cottrell currently teaches eighth grade in Staten Island, New York. His courses include earth science, computer science, and robotics.

→ WHAT YOU NEED

Robotics: Wave of the Future requires 10 or more class periods to complete. A computer with Internet connection, a digital camera, and other audio/visual equipment is necessary.

→ OVERALL VALUE

One of the best features of this unit is how it allows the students to work together as a team. There was little in-fighting and everyone participated. No one single student was in control. The use of the computer and programs are essential to the class, and the students readily adapt to the use of technology. It is a pleasure to see the development of "searching" skills by the students. Without teacher assistance, they learn to narrow their requests and surf faster through Web sites for information.

How Does Your Garden Grow?

→ HOW IT WORKS

In **How Does Your Garden Grow?**, sixth grade students learn how air, water, light, and temperature affect the growth and development of plant life. By planting a garden in the classroom, the children discover how flowers grow from seeds. They also learn about vegetative reproduction by observing the growth of plants from cuttings of roots, stems, and leaves. And growth charts are developed by using several computer software applications.

Additional lessons include the study of biomes that are home to many varieties of plant life and the specific plants found in each. Students create their own mini-habitats with either living (dirt, grass, and plants) or non-living materials, and they observes the changes that occur in living plants when they are denied food, oxygen, water, and sunlight.

Software programs help the students to do research, define scientific terms, and create games or learning tools to further enhance their classwork. In the CD-ROM program Science Court, the children learn how to classify things as living or non-living. Viewing videotaped programs on plants explains how plants adapt and survive with unique mechanisms or characteristics that attract insects or repel predators.

Incorporating technology into the classroom environment creates excitement and motivation among students. Scientific concepts are absorbed through hands-on learning and any tools that promote understanding should be included in lesson planning.

The students are assessed by their participation and the comprehension they display, as well as the work they produce.

→ THE STUDENTS

The students involved in this project have a variety of learning skills. Advanced students as well as learning-disabled students have used these lessons. Each child is able to work at his/her own pace. By working in teams, the children can help each other. The curriculum and textbooks used in grade six help prepare the students for this project. With a basic knowledge of plants and an understanding of laboratory procedure, students should be able to complete this topic.

→ THE STAFF

Jean Dente has taught at Intermediate School 24 in Staten Island for the past five years. She holds licenses in science, home economics, and administration and supervision. She is a registered dietitian and a certified nutritionist with the State of New York and enjoys incorporating food and nutrition into the science curriculum by bringing the garden into the classroom.

→ WHAT YOU NEED

This program requires seven class periods to complete. A computer with Internet access and software materials such as the CD-ROM Science Court and ClarisWorks (for spreadsheets and graphs) are necessary. A monitor and VCR are also needed in order to view the videotape *Obsession with Orchids* (PBS). A working knowledge of computers is needed.

→ OVERALL VALUE

This program can be used any time of the year. In the winter, plant life cheers up a dull room. Today, computers are found in most classrooms. It is important to include them when creating lesson plans. Students can learn while having fun, as many programs are educational as well as entertaining. Lessons can be further enhanced by class trips to a pond, lake, or nature trail. Team interdisciplinary lessons can include social studies (biomes), math (graphing, charting), and language arts (reading books about plant life). Many more projects based on plants can be developed. A shop can be set up for growing plants for profit. A guest speaker from the local greenbelt or a garden club member can visit the school. The students will learn how to use the tools of technology and develop analytical and cognitive skills that promote student achievement.

CURRICULUM AREAS
Science
Technology

GRADES
6

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Fun with Numbers

CURRICULUM AREAS
Mathematics
Technology

GRADES
6-8

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→ HOW IT WORKS

In **Fun with Numbers**, students from grades six through eight search the Internet for various mathematical games in order to "subliminally" develop their skills in multiplication, addition, subtraction, division, and fractions. In addition to developing math and computer skills, they also develop basic consumer skills. Each group of four students will visit several Internet sites and "collect" various games designed to assist in learning targeted mathematical concepts. Finally, the students create their own math game, which they play and enjoy with their fellow classmates.

This program reinforces basic arithmetic and number concepts, namely how to add, multiply, and divide whole numbers and how to compare decimals, percents and fractions. In addition, basic problem-solving and reasoning skills are reinforced. Computer and consumer skills are also developed.

The students are assessed through their participation in class and from their performance in the tests they take.

→ THE STUDENTS

The students suitable for this project are sixth to eighth graders, ages ranging from 11 to 14. The necessary background is basic mathematics and some knowledge of computers and the Internet.

→ THE STAFF

Lucille Dym is a veteran math teacher who teaches seventh grade math at I.S. 24 where she is Project Smart turnkey coordinator. She also writes curriculum for the College of Staten Island and is currently working on her master's degree in technology.

→ WHAT YOU NEED

This program requires six class periods to complete. A computer with Internet capabilities and a printer are necessary, along with the software program Fizz and Martina's Math Adventure (Tom Snyder Productions).

→ OVERALL VALUE

The best feature of this program is that the students become very involved and competitive regarding who will create the best game in the class. The students test each other in basic math, and the best way to learn is to teach. Their creations are fantastic and they love to play each other's games. And while they are having fun, they are acquiring important skills.

Holiday Shopping with the Nonverbal Child

→ HOW IT WORKS

Holiday shopping can be frustrating for the parents of nonverbal children. But when shown catalogs, nonverbal students often point, stare, or show other forms of interest in at least one item, in at least one catalog. These catalogs are also often linked to a consumer Web site. Since many parents own personal computers and are on-line, they can browse the Web sites with their children and shop on-line. The students will be able to browse the Web sites in school as well as at home.

The teacher collects various catalogs that display high-interest items for the corresponding age group; lists and bookmarks the corresponding Web sites in order to quickly access them; and prepares a basic lesson about winter holidays among various cultures and religions, including the tradition of writing a letter to Santa Claus.

Each student will receive a teacher-made letter to Santa. If he/she is unable to write, the teacher will fill in the answers. The student will be shown catalogs until he/she focuses attention to an item, which is then put on a list. When the list is complete, the student is shown the corresponding Web site. The student will be presented with this same task for three consecutive sessions in order to determine accuracy and consistency of choices made. When this is determined, the list and a copy of the related Web sites will be sent home to their parents.

→ THE STUDENTS

Holiday Shopping with the Nonverbal Child is appropriate for special education/nonverbal students from kindergarten through grade 12.

→ THE STAFF

Michelle Flammia teaches the speech- and hearing-handicapped at P.S. 255 at P.S. 7 in Queens. She works with elementary autistic students as well as elementary mentally retarded/emotionally disturbed students. This is her seventh year teaching. During 1999-2000, she served as a TeachNet mentor.

→ WHAT YOU NEED

A computer with Internet access is needed along with Microsoft Word software and various catalogs.

The following list offers just a few of the Web sites that can be explored. There are many others that sell books, clothes, etc.

www.etoys.com
www.target.com
www.bluelight.com
www.toysmart.com
www.noodlekidoodle.com

→ OVERALL VALUE

This is a fun and exciting project for students as well as parents. If you have students whose parents are not on-line at home, invite them to your school during a scheduled session with their child and explore the site together. The parents will appreciate the time and effort of this project as well as the amount of frustration that will be reduced during their holiday shopping.

CURRICULUM AREAS
Special Education (Autistic Population)
Technology

GRADES
K-12

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Author Study

CURRICULUM AREAS
English
Technology

GRADES
2-4

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→ HOW IT WORKS

In **Author Study,** students in cooperative learning groups read books by Laura Numeroff and analyze the author's style using a semantic web. They practice word-processing skills using Write On! Plus: Writing With Picture Books. They follow a sequence map to create a story using the author's style that they have studied. The story is illustrated and published as a book or presented as a computer slide show.

In forming cooperative learning groups, roles such as reader, secretary, graphic artist, information processor, publisher, and presenter will be assigned. The reader reads the book to the group. The secretary records group responses. The information processor enters the story the group creates on the computer. The graphic artist illustrates it. The publisher binds the pages of the story into book form or prepares a storyboard for the slide show. The presenter shares the finished product with the whole class.

Author Study addresses several important standards: Students read and comprehend at least four books on the same subject, or by the same author, or in the same genre. They read aloud fluently, produce a response to literature and a narrative account. They participate in group meetings and prepare and deliver a presentation. They demonstrate a basic understanding of the rules of the English language in written and oral work, and analyze and revise work to improve clarity and effectiveness. Finally, they produce work in at least one genre that follows the conventions of that genre.

→ THE STUDENTS

This unit can be done in cooperative learning groups for grades 2-4. Students should have some experience entering text on a computer and using a drawing and painting software application.

→ THE STAFF

Carolyn Hornik has been teaching in the New York City public school system for 24 years and she has been a computer coordinator at P.S.101 for 12 years. She also conducts staff development workshops for District 21 and teaches an afterschool professional development course entitled "Computers In The Classroom."

→ WHAT YOU NEED

Author Study requires ten or more class periods to complete. A computer with Internet access and word-processing software is needed, along with software programs such as Student Writing Center, by Learning Company, or AppleWorks by Claris or Microsoft Works, as well as Kid Pix. You will also need Write On! Plus: Writing With Picture Books (Sunburst) along with the books *If You Give A Mouse A Cookie* and *If You Give A Pig A Pancake* by Laura Numeroff.

→ OVERALL VALUE

The students develop a sense of pride and accomplishment in being able to produce a finished book or slide show. They learn respect for others and work as part of a group, and take another step towards reaching the English Language Arts Standards. The students are able to understand that authors use different styles of writing and, in doing so, the students develop a love for literature and the writing process.

Let's Plan a Trip!

→ HOW IT WORKS

The objective of this learning experience is for students to solve a real-world challenge—**Let's Plan a Trip!**—using the Internet. As this is a unit for an ESL class, the students' language skills are enhanced by reading authentic materials, selecting relevant information, writing answers to comprehension questions, and then applying their new knowledge to a more comprehensive writing project. The student chooses the form of presentation—journal, travel brochure, or postcards—and integrates text and image to demonstrate mastery of the unit objectives. In addition to planning a trip, students improve their searching, writing, and word processing/design skills that will assist them with work in their content area classes.

The students also meet ELA Standards by reading and comprehending informational materials, producing a written report, demonstrating an understanding of the rules of English grammar, and analyzing and revising work to make it more effective.

The teacher discusses with the students the exact steps they will take to complete the project, then lets them work independently or in pairs to navigate the Internet and collect information. He/she also sets a deadline for the writing assignment. If time permits, students may present their work orally to the class.

→ THE STUDENTS

This project is designed for high school ESL students with high–intermediate language skills. It can be adapted to a bilingual language arts or social studies class, with students of lower language ability researching and writing in their native language. Students who do not have basic Internet navigation or word processing skills will require more instructional time to complete the unit.

→ THE STAFF

Carla Huck was the Assistant Principal and Technology Coordinator of University Neighborhood High School. She is currently on leave of absence and serving as an educational consultant. Her students continue the Internet projects she implemented as an ESL and French teacher at Murry Bergtraum High School. She has served as both a TeachNet mentor and an Impact II Disseminator. Carla also teaches a graduate course at CCNY to ESL/NLA/Bilingual teachers on integrating technology into their classrooms. She is the winner of several technology awards, including the AOL Foundation IEI grant, the Pioneering Partners Grant, and the New York State Model Teachers Award. She hopes to transfer her personal interest in and enthusiasm for travel and cultural exploration to students through lessons like this one. Visit her web page at www.elfrank.com/huck.

→ WHAT YOU NEED

A computer with Internet connection and word processor is necessary. Photo-editing software is optional.

→ OVERALL VALUE

Technology brings to life the study of other countries and cultures. It also demonstrates how important information literacy is to individuals today. Without leaving their classroom, students are transported to faraway places and are captivated by the images and information they find. This program has proven highly successful for all learners because students are fascinated by travel; they can work at their own pace; and they have the option of choosing their final mode of presentation. The students are proud of their projects, and feel a strong sense of accomplishment upon completion of this unit. ESL students, who hail from different countries, often return to the sites used in this project to look up information about their native countries as well. Seeing entire Web sites and their classmates' presentations dedicated to these countries fosters their self-esteem and gives them a sense of belonging.

CURRICULUM AREAS
ESL
Computer Science

GRADES
9-12

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Saving the Environment

CURRICULUM AREAS
Science
Math
Art
Technology

GRADES
K-2

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→ HOW IT WORKS

Saving The Environment is an interdisciplinary unit that enables young children to study various aspects of the environment. It can be used in any of the primary grades with adaptations for the particular level of the group. It begins with a discussion of various environmental problems, and goes on to cover the properties of recyclables, with particular focus on the recycling of paper, as well as exploring other ways to improve the state of our environment. The children participate in a recycling project where they save bottles and cans to collect money for "adopting" a whale. They graph their collection of bottles and cans using units of five to see how many bottles they need to be able to adopt their whale.

The students also study the history, characteristics, and life cycle of the whale, and they learn about that part of the world in which the whale they've adopted can be found. The children learn about other endangered species and what they can do to help the plight of these creatures. They increase their awareness of problems in our ecosystem and begin to see how we are all responsible for its care. After seeing pictures of whales on posters, in library books, and on the National Geographic CD-ROM Whales, the children try their hand at creating their own drawings of whales, which are hung in the classroom to create an "Our Friend, the Whale" art gallery display. Finally, they record their experiences in various ways, including creating a slide show on the computer.

→ THE STUDENTS

This project has been done with several kindergarten children in an inner-city school, but can be adapted for all of the primary grades. It can also be altered for children who have minimal skills or for those who are gifted.

→ THE STAFF

Diane Kaye is currently a teacher at P.S. 206, where she runs the Early Childhood computer lab. Previously, she was the Growing Healthy/Science cluster teacher as well as a classroom teacher in the lower grades. She is very involved in writing grants, the Comprehensive Education Plan, and curriculum for the Title VII Systemwide Improvement Grant and Magnet Grant. She has also participated in creating a Pre-K handbook for parents. In addition to her public school position, she has taught ESL, computers, and bookkeeping to adults at Kingsborough Community College through the Office of Continuing Education.

→ WHAT YOU NEED

The necessary materials are a computer with Internet access to collect information about whales and organizations dedicated to studying and protecting whales. Books can be obtained from the school library and the National Geographic CD-ROM Whales is very informative. The Kid Pix Studio software is used in the creation and presentation of the slide show.

→ OVERALL VALUE

This unit goes across the curriculum areas. It addresses the affective, psychomotor inquiry skill areas important especially with small children. The students develop a basic understanding of the characteristics and properties of organisms and objects in the environment and walk away with a feeling of doing something productive and helpful, giving them a feeling of pride and increasing their self-esteem.

Flaming Weasels: The Perfect Sound

→ HOW IT WORKS

Flaming Weasels: The Perfect Sound uses concepts of algebra (formula) and physics (energy and resistance) to tackle a real-life problem: setting up a sound system. The students participate in lessons on energy, resistance, and the resistance formula. They are introduced to the workings of a sound system and the dilemma facing a fictitious band: The Flaming Weasels. They create a journal for this band and prepare a presentation to the class of their research and findings.

The students must be able to use the Internet to find the needed data and be familiar with basic word-processing programs in order to type their project. The teacher must research basic concepts of resistance, energy, and sound, and be familiar with physics and music terms. He/she will need to look up relevant data and be familiar with the questions that are used.

The students are tested on the definitions they have been given and their ability to use the resistance formula to solve basic problems. However, the bulk of how they are graded is based on their presentation, which is judged by their peers.

→ THE STUDENTS

The students are high school level.

→ THE STAFF

Angela Lee teaches math at Murry Bergtraum High School in Manhattan. She is a TeachNet Project mentee.

→ WHAT YOU NEED

A computer with Internet access is needed. Other materials used include MS FrontPage, MS Word, and a physics textbook.

Related links for **Flaming Weasels** are included on the Web page. The links lead to the data needed to solve the problems given to the students.
http://teachnet-lab.org/mbhs/alee/weasels.html

→ OVERALL VALUE

In **Flaming Weasels: The Perfect Sound**, the students acquire necessary math and science information while developing writing and presentation skills. They work individually and in groups, and both the use of technology and the subject matter—a fictitious rock group—helps keep their interest levels high.

CURRICULUM AREAS
Math
Science
English
Technology

GRADES
9-12

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"Inherit the Wind"

CURRICULUM AREAS
Language Arts
Technology
History
Science

GRADES
9-12

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→ HOW IT WORKS

High school English students from grades nine through twelve explore the theory of evolution through the highly relevant play "Inherit The Wind" and a series of articles and essays about the famous Scopes trial that centered around the right to teach evolution. The students incorporate technology as they research the topic and write their own essays on whether evolution should be taught in school.

The students first read a New York City student's published opinion on the 1999 Kansas law that banned evolution questions from state tests. They evaluate her essay and a *New York Times* article about the Kansas law and other accounts of the Scopes trial from 1925. They take notes and write short essays on their opinions of the events. They also read an article outlining the conflict between religious faith and the theory of evolution. Again they take notes and write essays expressing their opinions.

Reading assignments for the play "Inherit The Wind" are completed at home. For each of the five scenes, students write an account using the point of view of one of the characters in the form of a letter to a friend or a diary entry. They also read the play in class and discuss issues raised and the literary devices the authors use in the play, which is a fictionalized account of the 1925 trial. Finally, they write essays based on the play and choose five topics to research using the Internet.

→ THE STUDENTS

A wide range of student ability is acceptable. I used these lessons with ninth graders in New York City who also happened to be studying evolution in their biology class.

→ THE STAFF

Peggy Maslow, a New York City high school English teacher for 23 years, has used technology in the classroom for over 16 years. She is also her school's newspaper advisor, and has taught courses in journalism, mystery, and American literature to all levels of students ranging from those with reading difficulties to honors.

→ WHAT YOU NEED

Completion of this project will take 10 or more class periods. Students will be reading the play "Inherit the Wind" by Jerome Lawrence and Robert E. Lee. Computers with an Internet connection and search engine such as Netscape are needed. A basic working knowledge of computers is necessary.

→ OVERALL VALUE

Researching the background issues first enhances the students' understanding and motivates them to be more engaged while reading "Inherit The Wind." For students, the issue of religious faith being in conflict with the theory of evolution is a very moving one. They become very animated in their discussions. Furthermore, students are motivated to express their opinions about the conflict by drafting and writing essays, then revising and editing them. The research exercise that follows allows the students tremendous choice in finding an area of interest. Using the Internet is integral to finding and using the background information and even more important in doing the research on a related topic of their choice.

Working with a core group of subject teachers is ideal in ninth grade. This way, the biology teacher is teaching evolution while the English teacher is teaching "Inherit the Wind." An art teacher can show how drawings and other artwork "evolve" during the creative process. And the history background is the Scopes trial as well as the history of censorship.

Homes

→ HOW IT WORKS

Homes exposes children to vocabulary and literature related to a topic they are familiar with, develops pride in being able to draw and write by hand and on the computer, and develops mastery in vocabulary usage in the students' everyday experiences.

The teacher locates Web sites related to homes and dictionary pages such as: www.EnchantedLearning.com/dictionary.html which is an early childhood interactive dictionary showing images, animation, and text. Another site: www.LittleExplorers.com has activities involving research skills for preschoolers through grade three.

The teacher also creates a semantic web for houses by eliciting related words such as bedroom, window, family, bed, chair, table, living room, and door. This information is then used to prepare a chart to see what students would like to learn about houses. He/she prepares pictures of dwellings, obtains a list of student addresses from the school office, and creates sample drawings of homes using Kid Pix. The Kid Pix tools such as line and rectangle may be used to create the drawings. Visuals related to furniture in a bedroom can be obtained from Magnetic Way. The teacher can construct a Venn diagram to compare the bedroom in the book *This Is The Place For Me* by Joanna Cole with the students' bedrooms. He/she can also write a finger play, "Here Is A House" from Creative Publications, and use student pictures to make a "house pictograph."

Student activities include drawing pictures with crayons and with Kid Pix tools of their own homes and writing their address on the picture; describing their houses using vocabulary displayed on the word wall; making an address plate for their front doors with Kid Pix; as well as using Kid Pix to find, draw, and print pictures of bedroom furniture. Finally, the students make predictions of the outcome of the book *This Is The Place For Me* and compare their predictions to what actually happens in the story.

→ THE STUDENTS

The students are kindergarten and first graders with limited English proficiency. Very limited computer skills and writing skills would be required by the students as well. The main purpose is to build vocabulary and self-esteem. **Homes** can be adapted for older children.

→ THE STAFF

Margaret McQuade has been teaching since 1970, first in a private elementary school and, since 1984, in the New York City public school system. She has taught grades K-8, early childhood reading, and early childhood English as a second language.

→ WHAT YOU NEED

Homes requires approximately five class periods to complete. A computer with Internet access is used and required software includes Kid Pix. The book *This Is The Place For Me* is read.

→ OVERALL VALUE

Homes builds self-confidence in students with limited English proficiency by increasing their vocabulary and appreciation of literature, and develops their proficiency in writing skills. The students read, write, listen, and speak for information and understanding; interpret information represented in pictures, illustrations, and simple charts and webs; use a picture dictionary; match spoken word to print; use computer software to support early reading and writing development; and create art to represent a word or concept. By focusing on a familiar and friendly topic, **Homes** also boosts motivation for learning English.

CURRICULUM AREAS
ESL
Social Studies
Technology

GRADES
K-5

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The Bleeding Edge

CURRICULUM AREAS
Language Arts
Science
Art
Technology

GRADES
6-11

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→ HOW IT WORKS

The Bleeding Edge is an on-line zine that explores blood as a metaphor. Languages and visual iconography are forms of cultural expression. Students can express their own ideas about the impact of blood and circulation on our day-to-day vernacular and thought patterns by contributing to www.thebleedingedge.org.

This zine was created by 6 to 11th grade students who worked with their digital art (Meryl Meisler) and foreign language (Francine LaPorte and Neisha White) teachers to pre-plan their topics with storyboards and scripts and produce their projects for the www.
Possible features include:

Blood for Beginners: an illustrated dictionary by the sixth grade.

Blood Lines/Close Ties: first-year foreign-language students (seventh grade) create their personal Significant Family albums. The albums can include members who may or may not be blood-related or human.

Red-Time Stories: second-year foreign-language students (eighth grade) write and illustrate books in the genre of children's literature.

High School Zine Articles: the circulation classes (mixed grades 9, 10, 11) investigate, author, and illustrate articles (fact and fiction).

Second-year foreign-language students (9th and 10th) create serial stories in the zine style.

→ THE STUDENTS

I.C.E.'s racially diverse and multi-ethnic population is heterogeneously grouped. Each grade level worked on a different aspect of the zine. In addition to their research topic, each student was responsible for drawing his/her own self-portrait and using a word processor to write their autobiography.

→ THE STAFF

Meryl Meisler, a 20-year veteran of the NYC public school system, teaches digital art at the Institute for Collaborative Education, a small 6-12 school. As adjunct professor for the UFT Professional Development Program, she trains teachers to use the arts and technology across the curriculum. Among her career highlights are inclusion of her students' collaborative work in the Whitney Museum Biennial, the Queens Hall of Science collection, and several exhibits at the New Museum of Contemporary Art. She is the recipient of numerous grants and awards including the Disney American Teacher Award, NY Foundation for the Arts Fellowship, Council of Basic Education–Time Warner Inc. Art Fellowship, a Brooklyn Borough President Proclamation, Artists Space Individual Artists Grant, Chase Active Learning Grant, IMPACT II Developer Grant, Earthwatch Education Award, Samuels Award for Excellence in Teaching, and C.E.T.A. Artists Grant.

→ WHAT YOU NEED

The Bleeding Edge takes 10 or more class periods to complete. A computer with Internet access and a printer is required. Software applications include a drawing program (Adobe PhotoShop and/or AppleWorks), a word-processing program (Microsoft Word or AppleWorks) and a Web authoring program (Netscape Composer, free on Netscape Communicator). Animations were created with Adobe ImageReady. Make sure your students keep their work organized. Follow the naming conventions for the www (no more than eight characters, all lowercase, no special characters). Remember–you only have to be one step ahead of your students.

→ OVERALL VALUE

This was our first real Web site. It is still a work in progress. Students, parents, guardians, and faculty alike are excited to see their work on the www. We were thrilled that the Web site was mentioned in an article in the *New York Times*. Students worked very hard to edit their work in English and in a foreign language. We recommend that you adapt it to your classroom because it is thrilling to see your students work on the Internet.

What Is an Ambassador?

→ HOW IT WORKS

What Is an Ambassador? helps ESL students understand the importance of ambassadors. They read the story "China's Little Ambassador" by Bette Bao Lord and compare the character Shirley's somewhat smaller role to the real roles of ambassadors all over the world. The students brainstorm and share ideas on the definition of an "ambassador." This can be done orally or with students putting their ideas on the board. They also write sentences using the new vocabulary they encounter, and take turns reading the story. They are encouraged to ask questions, especially pertaining to vocabulary they do not understand. With a partner, the students write down two questions that they will ask their classmates to check listening and reading comprehension.

This program also increases the students' awareness of cultural diversity and allows them to share personal experiences that are similar to Shirley's. This helps increase their understanding and awareness of the story. Finally, the students learn about the story's author, take part in related research and fact-finding on the Internet, and increase their vocabulary and self-awareness.

→ THE STUDENTS

The students are high-school level, and are recent immigrants to the United States from all parts of the world. All of them are studying English. They have many cultural differences, but what brings them together is a need and desire to learn this language and become accustomed to the American culture.

→ THE STAFF

Susan Morey was a TeachNet Mentor and ESL teacher at Murry Bergtraum High School. She is currently on a leave of absence and is teaching at North Shore High School in Glen Cove, New York. She has completed graduate studies in using technology in the classroom, and has also lived and taught in Japan for three years and is fluent in Japanese and French.

→ WHAT YOU NEED

What Is an Ambassador? requires eight class periods to complete. The students read the story "China's Little Ambassador" by Bette Bao Lord from the unit on cultural diversity in the textbook *Voices in Literature* (Silver, Heinle & Heinle). A computer with Internet access is also required. Useful sites include:

www.kepplerassociates.com/lordb.htm
This Web site has information about the author and her experiences living in the U.S.

www.nationalgeographic.com/resources/ngo/maps/atlas/asia/china.html
www.datacomm.ch/pmgeiser/china
These two sites have information about China and the Great Wall of China.

→ OVERALL VALUE

What Is an Ambassador? provides an easy and nonthreatening way for ESL students to improve their oral and written language skills. They work both individually and in groups, feel more integrated into their new surroundings, and gain self-esteem along with their newly found language skills.

CURRICULUM AREAS
Language Arts
Social Studies
Technology

GRADES
9-12

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The Deciduous Temperate Forest

CURRICULUM AREAS
Science
Technology

GRADES
4-12

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→ HOW IT WORKS

New Yorkers live in the Deciduous Temperate Forest Biome. Do students who live here consider themselves to be living in a forest? The New York State Regents Biology Curriculum considers the interactions among living things and their environment—both living and nonliving. These considerations result in the understanding of all biomes in the world in general, and the biome in the Bronx in particular.

Students from grades 4 through 12, teachers, and parents are given a tutorial Web site to go to where they read, do activities, and answer questions about biomes, plant succession, and ecology. The viewer is urged to seek additional links and continue his/her study in greater depth. Although there are many Internet sites with valuable information, in order to introduce them to persons who are unfamiliar with this rich source of information, only one is mentioned per lesson. You may want to go back to previously used tutorial sites, since they may have additional information that is related to the content to be learned.

Students should be able to write a composition for each biome, describing the temperate deciduous forest, taiga, tundra, marine, freshwater, tropical rainforest, temperate rainforest, frigid desert, hot desert, and temperate desert. The compositions should include communities of plants and animals, available liquid water, temperature, and other specific factors.

New York State Regents Biology New Standards includes ecology, biomes, and plant succession as important concepts to be mastered. The lessons described develop mastery of these concepts.

Students are assessed by their ability to locate and comprehend the information presented in each lesson, by their participation in the required activities, and by their ability to answer questions.

→ THE STUDENTS

Students grade four and up, parents, and teachers are populations for which this information and these lessons are suitable. New York State high school biology students are the target group.

→ THE STAFF

Edwin Pell, Ph.D., is a biology teacher with experience and certification in art, physics, chemistry, and general science. Teachers, students, and parents are invited to contact Dr. Pell by e-mail with questions, comments, and information.

→ WHAT YOU NEED

Each lesson takes one class period to complete. Computers with Internet access are needed. Having daily access in the classroom for each student is desirable. If Internet access is not available there, weekly use of the computer room can be substituted, along with the encouragement of students to continue Internet tutorial learning during discretionary time. Students need basic computer skills.

→ OVERALL VALUE

The intent of these lessons is to direct students, teachers, and parents to specific Internet tutorial sites that contribute to gains in achievement in New York State Regents Biology in selected areas. Each lesson gives the student opportunities to gain information, mastery, and important related content, as well as chances to use his/her abilities of analysis, synthesis, and evaluation, and all the aspects of critical thinking.

Each Internet tutorial site directs students to additional links. This allows them to pursue learning at the rate and in the manner that is most congruent to their learning style and level of interest.

Friendship

→ HOW IT WORKS

Friendship allows ESL students to use and develop writing, reading, and speaking skills while considering and exploring the concept of friendship. Students will read "The Fox" from Antoine de Saint-Exupery's *The Little Prince* and Alfred Uhry's play, "Driving Miss Daisy," and will listen to the Paul Simon song "Old Friends." They work cooperatively to understand the new vocabulary they come across in the texts, with the teacher acting as facilitator. The class discusses the stories aloud, acts out scenes from the play, and answers written and oral comprehension questions.

The students also write essays about the theme of friendship in the two texts. They do peer editing of the essays and then read them aloud. Many students have trouble writing an essay with one controlling idea because they seldom are exposed to this type of exercise. Therefore, it's important for teachers to guide the students patiently, making sure they understand the concept and method of writing such an essay.

The students are assessed by their progress in speaking, listening, writing, and reading.

→ THE STUDENTS

Low, intermediate, and advanced ESL students benefit from these activities. Reading, writing, and speaking skills are required.

→ THE STAFF

Linda Wang is an ESL teacher at University Neighborhood High School. She has been teaching for three years. Her teaching principle is the whole-language approach, teaching grammar in the context of stories or other literature pieces. She also believes that the classroom should be student-centered, with students actively participating in peer editing, writing stories together, etc.

→ WHAT YOU NEED

Friendship requires an estimated eight class periods to complete. A computer with Internet access and Microsoft Word is needed. Copies of Antoine de Saint-Exupery's *The Little Prince* and Alfred Uhry's play, "Driving Miss Daisy" are also necessary, as is a CD boombox and a copy of Simon and Garfunkel's *Bookends* CD containing the Paul Simon song, "Old Friends."

The following sites are recommended:
For Antoine de Saint-Exupery's life story, go to: http://members.tripod.lycos.nl/tlp/antoine.htm;
For Antoine de Saint-Exupery's *The Little Prince*, www.elpa.post.ru/win/MP/EN/l.html.

→ OVERALL VALUE

Students combine printed information such as the play "Driving Miss Daisy" with Internet information that allows them to explore beyond the textbook. Writing an essay with one controlling idea will familiarize them with the Standard Regents exam. Working in a team allows them to help each other. Finally, students learn English in a contextualized environment that relates to their lives, thereby giving them additional confidence and, ultimately, more self-esteem.

CURRICULUM AREAS
ESL
Foreign Language

GRADES
9

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Julius Caesar

CURRICULUM AREAS
Language Arts
Social Studies
Technology

GRADES
10-11

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Fax: 212-732-6622

bodamoto@hotmail.com

Principal: Grace Julian

→ HOW IT WORKS

While reading "Julius Caesar," students learn about Shakespeare, his time, Elizabethan culture, and Shakespearean language. The students' learning is no longer limited by a teacher's knowledge. They can visit a virtual Globe Theater and learn about Roman history and related subjects. Students also critique others' work on-line, absorb what they read on the Internet, and create original work.

Teacher preparation steps include researching Web sites on ancient Rome, Shakespeare, and the Globe Theatre, and preparing questions that tap into the different levels of cognitive skills for the students.

Student activities include visiting the relevant Web sites and reading background information about Shakespeare. They also publish their reactions to the play on-line.

A project can be designed to help assess the student's understanding, such as the analysis of a character or theme, or they can debate over issues raised in the play. After reading articles that critique "Julius Caesar" and show different perspectives on the play, the students write responses to one or two of the articles and share them on-line.

→ THE STUDENTS

This unit is tailored for high school English students. The students need not be Internet savvy but must be able to catch on to e-mail and using Web resources.

→ THE STAFF

Bo Wu teaches English at Murry Bergtraum High School in Manhattan. She is a TeachNet Project Mentor.

→ WHAT YOU NEED

Julius Caesar requires 10 or more class periods to complete. Computers with Internet access are needed for students to do research and share their opinions with other students. Software materials used include Microsoft FrontPage for web creation and any Internet browser (4.x or higher version).

Required teacher technology skills include Web site creation and building a discussion forum. Students are required to have a basic knowledge of computers and using the Internet. This unit is designed for teachers who are experienced in Internet projects. As a beginner, you can pick a part of the unit and implement it in your class. As you start teaching the play, you can use an on-line gallery to help students understand and keep track of the characters.

→ OVERALL VALUE

The use of technology enables students to learn at their own pace, according to their needs or interests, and allows the multidisciplinary approach to happen naturally. It also provides opportunities for individual instruction since lessons are posted on-line, and it instills a sense of pride in students as writers when they see their work published on the Web. It also enhances their communication with pupils from other schools who are doing the same project.

For teachers, this unit demonstrates how effective teaching can take place within a heterogeneous classroom. Students have more opportunities to receive individual instruction and are able to work at their own pace. Teachers are removed from the center of the classroom and pass the role to the student. The four ELA Regents tasks based on the play help the students reexamine the issues discussed in the play from another perspective, which also familiarizes them with the New York State Regents exam.

Energy Transfer: The Movie

→ HOW IT WORKS

After a fourth-grade energy transfer experiment, the students create a spreadsheet and a corresponding chart to compare the cooling of a hot glass of water to the warming of a cold glass. Using Snapz Pro 2, the students create a QuickTime movie that shows them entering the data into the spreadsheet and watching the chart change with each new entry. The narration includes the students' observations of the experiment, their findings, and the scientific principal behind the lesson. The movie is made on several tracks, which the students edit and combine into the final movie, using QuickTime Pro. Lastly, the students upload the movie onto the Web.

It is important to separate the project into different tasks. The students work in pairs, and only create one movie. You can select other students for a similar project at another time. One project may involve as many as 10 students.

→ THE STUDENTS

Energy Transfer: The Movie is part of the fourth grade science curriculum. The students begin using spreadsheets in third grade. By fourth grade, they start applying this skill independently. Some of the students do basic (cut and paste) video editing.

→ THE STAFF

Marc Santiago has taught computers to elementary school students for 15 years. His current focus is guiding students through the creation of Hyperstudio stacks.

Dan Fenner was a Project Smart Schools staff developer for Community School District 24. Currently, he is P.S. 88's computer staff developer. His goal this year is publishing the on-line companion to *The Seneca Student Press*, the school's student newspaper.

Ira Handell is currently in his second year of teaching science at P.S. 88. He is part of Community School District 24's science leadership team and has received Delta Education training for the SCIS 3 (Science Curriculum Improvement Study) program. Ira has given workshops for P.S. 88's staff on the use of the SCIS hands-on program, understanding New York City Science Performance standards, and writing a narrative procedure using scientific ideas.

Gail Garfunkel has taught science for the past seven years, and has been part of Community District 24's science leadership program since its inception. The program provides training for science specialists throughout the school district. Gail received Delta Education training for the SCIS 3 (Science Curriculum Improvement Study) program. She continuously trains new teachers on the science curriculum.

→ WHAT YOU NEED

Energy Transfer: The Movie requires an estimated five class periods to complete. A computer with Internet access is needed. The new media technology used is Snapz Pro 2 and QuickTime. Snapz Pro 2 captures action occurring onscreen and creates a QuickTime movie from it. Snapz Pro 2 uses QuickTime technology. QuickTime Pro allows soundtracks that serve as narration to be added easily. It also allows for a text track, which can be used for labels or subtitles. Although QuickTime 4 allows the movies to be streamed, we post the movie to the Web as a download. This ensures higher audio and video quality. We estimate file sizes to range between five and ten megabytes for the Internet version. The CD version can be as much as 30 mbs.

→ OVERALL VALUE

This interdisciplinary program is both effective and fun because of the creative use of the computer, and the students gain experience working both individually and in groups. Having students describe the science experiment and its results solidifies their grasp on the concepts.

CURRICULUM AREAS
Science
Math
Technology

GRADES
3-12

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Expressing Yourself in English

CURRICULUM AREAS
ESL
English
Technology

GRADES
9-12

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→ HOW IT WORKS

ESL students don't read and write enough in their English classes because they have trouble relating to the materials and curriculum presented. Literature is usually taught from an exterior and moralistic perspective. **Expressing Yourself in English** presents literature and the arts the way students like it: as a vehicle for self-expression and growth.

The program asks for the students' active participation in the design and implementation of the unit. Lessons are based on the collective consciousness of the classroom: activities such as reading poetry, writing essays, or viewing movies are based on student selection. The program also integrates several media (music, TV, the Internet, and written literature) into a single vehicle of communication: personal expression and emancipation.

Expressing Yourself in English is geared towards the needs of the students to pass the literature-based English Regents exam. The students create electronic collections of their favorite literature that they download from the Internet. They then write either an essay response or a literary piece of their own. Once this is done, their work is collected and published on the Internet using the school Web site at http://fklane.org

Assess the needs and talents of your students and include them in your literature-based unit. Remember that literature and the arts are instruments for understanding and changing the individual and his/her world.

This program meets various New York standards for language arts: using language for information and understanding, literary response and expression, critical analysis and evaluation, and social interaction.

→ THE STUDENTS

The targeted student population for this program is ESL transitional in grades 9 through 12, fluent in English, having at least two years of English-language schooling. Most of the students are juniors and seniors who will have to take the English Regents exam soon.

→ THE STAFF

Dinu Pietraru has been a New York City public school teacher since 1988. He has taught English and ESL at the junior high and high school level. He is presently working as a teacher and ESL coordinator at the Franklin K. Lane High School in Queens.

→ WHAT YOU NEED

This program requires 10 or more class periods to complete. A computer with Internet access for research and publishing is needed. Additional requirements include word-processing programs and scanners for the student-produced artwork.

→ OVERALL VALUE

Expressing Yourself in English weaves the students' interests and work into the fabric of the curriculum. For instance, reading one of Shakespeare's sonnets will bring forth sonnets written by some of the students. The class will then analyze all the work that is produced. The unit is dedicated to discovering the artistic and literary talents and capabilities of every student. The culmination of this learning experience will be publishing on the Internet. By reading and writing about things they relate to and feel strongly about, students are better equipped to understand and use literature and the arts as a way to make sense of their lives and to adapt to their at-times-overwhelming environment. They will also be better prepared to take and pass the English Regents exam.

teachers network

Interested in publications and videotapes produced by Teachers Network? Here is some of what we have to offer:

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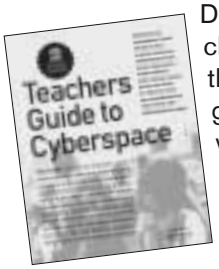

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Connects the findings of the National Teacher Policy Institute to the recommendations of the National Commission on Teaching & America's Future (2000). Through NTPI action research studies, MetLife Fellows highlight the ways in which policy plays out in the real world of schools and classrooms.

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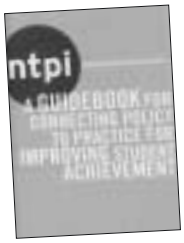

Introduces NTPI to organizations interested in aligning policymaking with student learning by joining a nationwide network of affiliates that has a proven track record of success.

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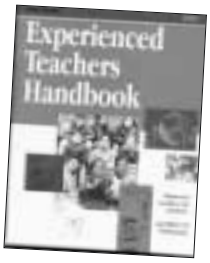

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INDEX BY SCHOOL LEVEL AND PROJECT TITLE

ELEMENTARY SCHOOL

A Planting We Will Go/Grow, Lisa Jimenez p.14
Author Study, Carolyn Hornik p.28
Ben and Us: Sparking the Standards, Gloria Block p.7
Energy Transfer: The Movie, Dan Fenner p.39
Fishing for Math, Science, and Social Studies, Mary M. Ahern p.6
Fun with Franklin, Hilary Sedewitch p.19
Holiday Shopping with the Nonverbal Child, Michelle Flammia p.27
Homes, Margaret McQuade p.33
Knots on a Legend Rope, Karina Maceczek p.15
Out of this World, Catherine Donaruma-Canzoneri p.17
Presenting Mealworms: A Slide Show, Lisa Bilello p.22
Saving the Environment, Diane Kayne p.30
Seeing Life in Sea Life, Eleanor Christian p.23
Story Quilting, Helene Espinoza p.11
Timelines and Extinct Animals, Lori Hassin p.13

MIDDLE SCHOOL

Earth Design 2000, Manette B. Gampel p.12
Fun With Numbers, Lucille Dym p.26
How Does Your Garden Grow, Jean Dente p.25
PowerPoint Poems, Andrea Menotti p.16
Robotics: Wave of the Future, Raymond T. Cottrell p.24
Surveying Pre-Teen Taste, Matti Santagata p.18
The Bleeding Edge, Meryl Meisler p.34
The Mystery Powders, Janice Dalton p.9
Who's Who In Black History, Mary Clancy p.8

HIGH SCHOOL

A Herculean Task, Sandy Del Duca p.10
Computer Graphics: An Introduction to PhotoShop, Lowell Shaw p.20
Expressing Yourself in English, Dinu Pietraru p.40
Flaming Weasels: The Perfect Sound, Angela Lee p.31
Friendship, Linda Wang p.37
Julius Caesar, Bo Wu p.38
"Inherit the Wind", Peggy Maslow p.32
Let's Plan a Trip!, Carla Huck p.29
The Deciduous Temperate Forest, Dr. Edwin Pell p.36
What Is an Ambassador?, Sue Morey p.35

INDEX BY BOROUGH AND COMMUNITY SCHOOL DISTRICT

BRONX

High School	Pell, Dr. Edwin, Dewitt Clinton High School	p.36

BROOKLYN

CSD 20	Gampel, Manette B.–Intermediate School 201	p.12
CSD 20	Maceczek, Karina–P.S. 200	p.15
CSD 20	Santagata, Matti–P.S. 104	p.18
CSD 21	Dalton, Janice–The Bay Academy of Arts and Sciences	p.9
CSD 21	Hornik, Carolyn–P.S. 101	p.28
CSD 21	McQuade, Margaret–P.S. 101	p.33
CSD 22	Kayne, Diane–P.S. 206	p.30
CSD 28	Ahern, Mary A.–P.S. 40Q	p.6
CSD 28	Espinoza, Helene–P.S. 206Q	p.11
CSD 28	Sedewitch, Hilary–P.S. 206Q	p.19
Dist 85	Clancy, Mary–M.S. 136	p.8
High School	Maslow, Peggy–Franklin K. Lane High School	p.32
High School	Pietraru, Dinu–Franklin K. Lane High School	p.40
High School	Shaw, Lowell–Roosevelt High School	p.20

MANHATTAN

CSD 2	Christian, Eleanor–P.S. 1	p.23
CSD 3	Menotti, Andrea–Columbus Middle School	p.16
High School	Huck, Carla–University Neighborhood High School	p.29
High School	Lee, Angela–Murry Bergtraum H.S. For Business Careers	p.31
High School	Meisler, Meryl–The Institute For Collaborative Education	p.34
High School	Morey, Sue–Murry Bergtraum H.S. For Business Careers	p.35
High School	Wang, Linda–University Neighborhood High School	p.37
High School	Wu, Bo–Murry Bergtraum H.S. For Business Careers	p.38
High School	Del Duca, Sandy–Manhattan Superintendent's Office	p.10

QUEENS

CSD 24	Fenner, Dan–P.S. 88	p.39
CSD 26	Bilello, Lisa–The Mayflower School, P.S. 191Q	p.22
CSD 27	Donaruma–Canzoneri, Catherine–P.S. 90Q	p.17
CSD 27	Jimenez, Lisa–P.S. 90Q	p.14
Dist 75	Flammia, Michelle–P.S. 224	p.27
Dist 75	Hassin, Lori–P.S. 224	p.13

STATEN ISLAND

CSD 31	Block, Gloria–P.S. 42	p.7
CSD 31	Cottrell, Raymond T.–Myra S. Barnes, I.S. 24	p.24
CSD 31	Dente, Jean–Myra S. Barnes, I.S. 24	p.25
CSD 31	Dym, Lucille–Myra S. Barnes, I.S. 24	p.26

teachers network

Teachers Network is a nationwide, non-profit organization that has been working for more than 20 years to support, recognize, and connect innovative teachers through grants and networking opportunities in the areas of curriculum, leadership, policy, and new media. Teachers Network comprises 28 affiliates–representing most major cities, entire states, and organizations such as the National Peace Corps Association. The IMPACT II program is the basic grants and networking model that has been adopted by each affiliate. To date, over 35,000 teachers have received IMPACT II grants; half a million teachers have benefited from IMPACT II networking opportunities. For more about the services and opportunities available through Teachers Network, please visit our web site–created *by teachers, for teachers:* **www.teachersnetwork.org**

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teachers network

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A Disseminator is a current K-12 New York City Public School teacher who has developed an innovative, student-centered program that has been taught in the classroom during the past year; applicants should also be able to show how this program has improved student learning. Grants are awarded in three categories: math, science, and integrating new media (technology) in the curriculum (but may also include social studies, language arts, the arts, and/or other subject areas).
Major funding for **IMPACT II** grants is provided through the generosity of **The AT&T Foundation** and **The Pfizer Foundation**. Additional support is provided from Con Edison. **Disseminator Grants of $500 each will be awarded.** Completed applications must be postmarked by **May 1, 2001**. You may apply for only ONE grant. This application is also available on-line at: www.teachersnetwork.org.

All sections of the application must be completed for consideration. There are three sections to this application:

I. Applicant Information **II. Program Information** **III. Program Profile**

Mail completed application to: Teachers Network; *Attn:* Peter A. Paul; 285 West Broadway; New York, NY 10013.
For more information, please call Peter at: 212-966-5582 or e-mail him at: ppaul@teachersnetwork.org.

1. APPLICATION INFORMATION	
NAME (FIRST, MIDDLE INITIAL, LAST) Mr.__ Ms. __ Mrs. __ Dr.__	LICENSE
SUBJECT(S) CURRENTLY TEACHING	GRADE LEVEL(S)
HAVE YOU RECEIVED AN IMPACT II GRANT BEFORE? Yes __ No __	IF YES, PLEASE SPECIFY THE TITLE AND YEAR OF THE AWARD
COMPLETE SCHOOL NAME AND NUMBER	PRINCIPAL'S NAME
SCHOOL ADDRESS	COMMUNITY SCHOOL DISTRICT
CITY/STATE/ZIP	SCHOOL PHONE NUMBER
SCHOOL FAX NUMBER	YOUR E-MAIL ADDRESS
HOME ADDRESS	
CITY/STATE/ZIP	HOME PHONE NUMBER
HOW DID YOU LEARN ABOUT THIS GRANT?	

I am applying for a:

☐ **Math and/or Science Disseminator Grant**

☐ **Educational New Media (Technology) Disseminator Grant**

Teacher's signature and date: _____

I support this application (principal's signature and date): _____

II. PROGRAM INFORMATION. Please describe your program by responding to the following questions. Attach your typed responses along with samples of materials developed (e.g., student work, lesson plans). We also strongly encourage you to send photos showing students participating in the program. Materials should be original work.

Please note: The use of italics below relates to new media grant programs. New media programs should use computer technology as a tool in creating a meaningful learning experience for students. Computer projects may use the World Wide Web and/or stand-alone software applications.

1) What is the title of your program?
2) What is the instructional purpose of your program? *How does technology help achieve that purpose?*
3) What kinds of resources does this program use and how do you select those resources?
4) How are you implementing this program in your classroom? Describe how students gain the necessary *technological* competency *and how you divide class time between time spent at–and away from–the computer.*
5) What are the main activities that comprise your program? Please describe.
6) Are you the original source or did other source(s) contribute to the development of your program? Explain.
7) What would you estimate the cost would be for a teacher to adapt this program? Please include items such as technical training, hardware, and/or software.

III. PROGRAM PROFILE. Please write a narrative description of your program. The total text should not exceed 500 words. Please use the format outlined below. This narrative should be sent with your application. If you are selected to receive an IMPACT II Disseminator Grant, this profile will showcase your program in Teachers Network's ***IMPACT II Catalog***–to be disseminated throughout New York City Public Schools. Your work will also be featured on Teachers Network's premier educational web site: www.teachersnetwork.org.

CURRICULUM AREA(S):	List one or two areas of major focus.
NEW MEDIA USED:	*Describe the kinds of computer applications and hardware used.*
LIST OF GRADE LEVEL(S):	Please list grade levels for which your program might be appropriate.
TITLE OF PROGRAM:	Please name your program.
HOW IT WORKS:	Describe your program clearly and concisely. Give examples of what students do and learn. Provide one detailed example of a classroom activity *and how technology plays a role.*
THE STUDENTS:	Tell how many students participate in the program–including level of achievement, *relevant technical background,* and how often they meet. Indicate if they meet in the classroom, computer lab, or both. Can the program can be adapted to other ages and achievement levels and/or used with larger or smaller groups? How does your program address the needs of all learners in your classroom?
THE STAFF:	What is your teaching background? How long have you been doing the program? List awards and other recognition, workshops led, etc. Do you need assistance (paraprofessionals, volunteers, librarians, computer teachers)?
WHAT YOU NEED:	Describe the setup (space; location of computers) and materials needed (books, supplies, Internet access, number and kind of computers, software). Mention material you have prepared that would be helpful for teachers interested in adapting your program. Include such resources as field trips, use of school media center, web sites, or public library, contributions from parents or institutions, and guest speakers.
STANDARDS:	What learning standards (state and/or city) are addressed by this project?
OVERALL VALUE:	Write a few sentences that "sell" your program. Describe the program's best features, innovative aspects, *creative and effective uses of technology,* and contributions to student achievement. Explain why teachers would want to adapt it for their classes. Statements such as "promotes self-esteem" should be followed by how the program accomplishes this.
MORE INFORMATION:	Please list your: name, school, school address, school telephone, school fax, **e-mail address**, and principal's name.

teachers network ADAPTOR GRANT APPLICATION

An Adaptor is a current K-12 New York City Public School teacher who selects a classroom program profiled in Teachers Network's ***IMPACT II Catalog*** and creatively modifies it to his/her own classroom situation. You may adapt any program that would be of benefit to your grade level/subject and students. **Adaptor Grants of $250 each will be awarded**. Major funding for **IMPACT II** grants is provided through the generosity of **The AT&T Foundation** and **The Pfizer Foundation**. Additional support is provided from Con Edison. Completed applications must be postmarked by **May 1, 2001**. You may apply for only ONE grant. This application is also available on-line at: www.teachersnetwork.org.

All sections of the application must be completed for consideration. There are three sections to this application:

I. Applicant Information **II. Information and Implementation** **III. Administrative Support**

Mail completed application to: Teachers Network; *Attn:* Peter A. Paul; 285 West Broadway; New York, NY 10013.
For more information, please call Peter at: 212-966-5582 or e-mail him at: ppaul@teachersnetwork.org.

1. APPLICATION INFORMATION

NAME (FIRST, MIDDLE INITIAL, LAST) Mr.__ Ms. __ Mrs. __ Dr.__	LICENSE
SUBJECT(S) CURRENTLY TEACHING	GRADE LEVEL(S)
HAVE YOU RECEIVED AN IMPACT II GRANT BEFORE? Yes __ No __	IF YES, PLEASE SPECIFY THE TITLE AND YEAR OF THE AWARD
COMPLETE SCHOOL NAME AND NUMBER	PRINCIPAL'S NAME
SCHOOL ADDRESS	COMMUNITY SCHOOL DISTRICT
CITY/STATE/ZIP	SCHOOL PHONE NUMBER
SCHOOL FAX NUMBER	YOUR E-MAIL ADDRESS
HOME ADDRESS	
CITY/STATE/ZIP	HOME PHONE NUMBER
HOW DID YOU LEARN ABOUT THIS GRANT?	

II. INFORMATION AND IMPLEMENTATION

1. Title of Disseminator Program to be adapted _____

2. Program disseminator's name_____

3. Direct contact with the disseminator of the program that you are interested in adapting is **required** before a grant can be approved. I made contact via the following method (include date of contact):
   _____ E-mail _____ Telephone _____ Workshop _____ Letter _____ Visit _____ Curriculum Fair

   Other, please explain_____

4. Fill in the number of students at appropriate grade level(s) who will be involved in your adaptation
   K_____ 1_____ 2_____ 3_____ 4 _____ 5_____ 6 _____ 7_____ 8_____ 9_____ 10_____ 11_____ 12_____

5. When will you begin using this classroom program? Date _____/_____/_____
   Why did this program interest you?
_____

6. What is the educational need for this program in your class?
_____
_____
_____

7. What qualities or parts of this program most impressed and interested you, and why?
_____
_____
_____

8. How will you implement the classroom program with your students and integrate it within your curriculum? What changes will be made from the original classroom program?
_____
_____
_____

9. How will you know that your adaptation made a difference (assessment)? Summarize the effects of your program on students.
_____
_____
_____

10. Signature of the Applicant/Teacher

_____ Date _____/_____/_____

III. ADMINISTRATIVE SUPPORT (to be completed by the school principal)

I support implementation of this program. Yes ___ No____
If the adaptation is successful, would you be able to fund its continuation as part of the regular school budget?
____Yes ____No Comments: _____
_____

Signature of the principal:_____ Date _____/_____/_____