IMPACT II
1998
THE TEACHERS NETWORK
IMPACT II
THE TEACHERS' NETWORK

1998 Disseminator Grants
Ventura County Teacher-Developed Curriculum Ideas

cosponsored by

Ventura County Economic Development Association
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VENTURA COUNTY STAR
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What is IMPACT II?

IMPACT II is starting its sixth year in Ventura County and is part of a national curriculum-sharing and recognition program for teachers in grades kindergarten—12 in all subject matter areas and specializations.

More than 30 IMPACT II business/school partnerships exist in cities throughout the United States, including New York, Chicago, and Los Angeles, as well as in smaller districts, counties, and even entire states. The program now has several thousand selectively chosen teacher members.

The Ventura County IMPACT II program is a partnership between the Ventura County Economic Development Association (VCEDA), the Ventura County Superintendent of Schools Office, and the Ventura County Star.

Important Events - 1999

February
Teachers send in Grant applications.

March
Disseminator Grants awarded.

May
Teacher Business Recognition Program.

August
Display Grants at Summer Conference.

September
Distribution of Impact II catalog of teachers' award winning ideas.

Through IMPACT II teachers can apply for $400 Disseminator individual grants for classroom-tested curriculum ideas which they have developed. Collaborative grants for 2 or more teachers are $600. A committee of teachers, school administrators, and business leaders selects the most ready-to-share ideas for grants. Business leaders award the grants at the spring Teacher Recognition Program.

An IMPACT II catalog published each year, distributes these "cutting edge" ideas countywide. Any interested teacher may attend the fall Curriculum Fair to meet the teacher Disseminators and order teacher materials. This fall the award winning lessons will also be accessible on the Ventura County Superintendent of Schools home page on the internet.

Why IMPACT II?

IMPACT II is cost effective. The County Education Office funds the day-to-day operation of IMPACT II, so contributions go directly to teachers and classrooms for student projects.

IMPACT II puts cutting edge classroom projects into the mainstream, turning students on to learning.

IMPACT II enables excellent teaching ideas to reach all teachers in the county, and raises community awareness of exemplary classroom practices.

IMPACT II boosts teacher morale by recognizing innovative teaching as well as enhancing teacher professionalism through local/national training and teacher presentations.
Message from the Ventura County Superintendent of Schools

Message from the Ventura County Superintendent of Schools

In its sixth year of existence in Ventura County, IMPACT II has matured into the program that we envisioned at its inception. Business leaders, teachers, and administrators are becoming aware of the program and participated in unprecedented numbers in 1997-98. Since 1993, 342 applications have been received from teachers, and 159 were selected and awarded a portion of the $75,000 in donations from local businesses.

In 1998, 28 projects of 71 applicants were selected for awards. Forty-one teachers representing 19 schools in 11 school districts were recognized for their innovative teaching ideas at our IMPACT II Awards Reception and Dinner held in May. Marta Wilson of E.O. Green Middle School in Hueneme and Mark Wilson of Camarillo Heights Schools in Pleasant Valley were awarded the Ed Lyon Excellence in Education Award for the "most useful and replicable" project. Their names have been added to the perpetual trophy that hangs in the lobby of the Ventura County Superintendent of Schools Administrative Services Center in Camarillo. They join the 1996 Ed Lyon Award recipient, Jane Sweetland, and the 1997 recipient, Bonnie Wascher.

This year marked the first presentation of the Annual Superintendent's Award. This award was established to stimulate the submission of IMPACT II projects in a specific discipline and carries with it an additional $400 award. In 1998, science projects were sought, and, Mesa School teacher, Bonnie Wascher's project entitled "Energize" was selected as our first recipient. The 1999 discipline for the Superintendent's Award is Visual and Performing Arts. IMPACT II projects that develop and demonstrate literacy in and through dance, music, theater, and the visual arts and/or encourage participation in arts-related school-to-career experiences will be considered. We hope to receive several outstanding applications for this coveted award.

The purpose of IMPACT II is to spread excellent teaching ideas throughout our county. Recognizing innovative teachers at the awards dinner is an opportunity to celebrate the true heroes and heroines in our communities. The impact on our teachers is exemplified by the following excerpted from a 1998 recipient's letter to me:

"Thank you for hosting...the Academy Awards of education in Ventura County", I was... thrilled. Not often is (teaching) granted the glamour and recognition which you, your staff and the local business community provided that evening.

"Thank you for bringing such a program as IMPACT II to the fore. Its emphasis on excellence is a stimulating call for creative, effective pedagogy. I was excited by the number and quality of innovative teaching units displayed by my fellow teachers! Seeing my math unit included among them was extremely gratifying.

"My escort that evening was my sixteen-year-old son. I believe the awards dinner gave him a new respect for the great effort so many teachers expend on creating their profession. Interestingly, the link to the business community was also noted by him. As he said to me, "I didn't realize business people ever thought about (elementary through high) schools."

"I hope that I will find a way to repay the honor the IMPACT II Awards committee bestowed on me through their grant."

IMPACT II is one example of the outstanding business-education partnerships that exist in Ventura County as a direct result of our multi-year relationship with the Ventura County Economic Development Association (VCEDA) and their participating businesses. The Ventura County Star newspapers' title sponsorship continues to enhance the media coverage and underwrites the dinner expenses: for award recipients. Our business partners in IMPACT II grew from six companies in 1993 to 35 companies donating $20,500 in 1998. I believe that a closer connection between business and education, such as that facilitated by IMPACT II, will provide long-term mutual benefit.

I want to express my appreciation to the business leaders, school administrators, and teachers who have helped IMPACT II grow. The 1998 steering committee leadership by Lee Edwards and the administrative support by Kerry Roscoe were invaluable to the success of the program.

I encourage all teachers in Ventura County to borrow from the great ideas in IMPACT II recognized projects and to submit your successful innovative instructional ideas next year. IMPACT II is one way that we encourage teachers throughout Ventura County to demonstrate their "Commitment to Quality Education for All."

Sincerely,

Charles Weis, Ph.D.
Ventura County Superintendent of Schools, July 1998
Welcome business partners, teachers, administrators and family to the sixth annual Impact II Awards dinner.

Over 125 people attended the 1998 Impact II awards dinner.

Lee Edwards and Ginger Brandenburg kept the program moving.
AWARDS DINNER

The Ventura County Star generously hosted all the teachers at the awards dinner.

A few samples of the Impact II projects on display.
IMPACT II
Superintendent's Award

"Commitment to Quality Education for All"

Each year the County Superintendent will designate one academic discipline in which the competition for the Superintendent's Award will be conducted. The area chosen will generally reflect an area of study which is in need of new teaching ideas. Eligible teachers will be notified of the chosen discipline in the fall of the school year. Projects that are submitted in the designated discipline will be automatically entered in the competition. The author(s) of the winning project will receive an additional $400.00 honorarium, a wall plaque for their school, and his/her name(s) will be added to the perpetual wall plaque in the Administrative Services Center of the County Superintendent of Schools Office.

For more information on the Impact II Grants Program please contact:
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Ed Lyon

Excellence in Education Award

Presented to the Grant recipient who best reflects the criteria of innovativeness, creativity and adaptability

“My proudest work has been in the educational community, trying to bring about a partnership between business and education.”

In 1996 the Impact II Steering Committee established the Ed Lyon Excellence in Education Award in honor of Ed’s decades long commitment to youth and quality education in Ventura County. His involvement in education at all levels and his tireless efforts over the years have set a laudable example for other community business people to follow.

With 30 years experience in the oil business, he is founder and Chairman of the Board of Gaviota Maintenance Service and has served on the boards of numerous petroleum industry associations. Despite his extensive professional involvements, Ed has made a personal commitment to volunteer work for the community. His activities include work as a Fair Junior Livestock Program supporter, a member of the Ventura Boys and Girls Club Board of Directors, a past United Way co-chairman, and president of the St. Bonaventure High School Parent Teacher Guild. A past president of VCEDA and board member for over 21 years, he has expanded the VCEDA Education Committee with programs like Ventura County Science Fair, Ventura County Business Week, Teacher-Business Intern Program, classroom-to-business bus tours, Schools-to-Career Conference, and Tech Prep advisory participation. In 1993 Ed was instrumental in bringing the Impact II program to educators in Ventura County. Additionally, he has spearheaded the drive for a four year California State University campus in the County.

So it is with great pride that we dedicate this award to Ed Lyon, a true advocate of Excellence in Education.
1998 Impact II Partners

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Ventura County Superintendent of Schools Office
IMPACT II

1998
Grant Recipients
"... but what do you really mean?"

Using Dramatic Subtext to Enhance Personal Narrative

The Idea and its Value

In this unit, students infer the thought and motive (aka "dramatic subtext" or "subtext") behind what a character says aloud, then write a narrative as the character, incorporating the written dialogue of the original text and the subtext as interpreted by the student. By examining the possible thoughts and motives of a character, students begin to "hear" how characters might say their lines as conveyed through the implied subtext. Through this exercise, student writers roleplay the characters and explore the concept of thoughts and motives that determine action and speech.

To introduce the concept of subtext, I have students write a two-page dialogue for two characters. They must represent differing points of view about their topic and state that point of view. The two must resolve their conflict, either by one convincing the other, or arriving at a compromise. Each student writes a complete copy of the dialogue.

Next, each chooses one of the characters and writes the subtext for that character, adding thoughts to what is spoken. At this point, the partners read the dialogue aloud interjecting the thoughts of each character.

The final step is to write a personal narrative of the scene incorporating some of the spoken dialogue with the subtext as if it were written in a diary by the character.

Later on, we revisit the technique to explore the subtext implied in literature. Students select a character in a given two-character scene, and write the subtext inferring it from what the character actually says. Then they transform it into a diary entry as if written by the character. Virtually any play that has a sustained two-person scene (about a page or more) can be used successfully. I've used The Diary of Anne Frank, Tetuya and the First Daughter, Romeo and Juliet, The Miracle Worker, and Julius Caesar with equal success.

Once learned, the basic technique transfers easily to many pieces of literature. My students enjoy putting thoughts in the characters' heads, and they enjoy the presentation of scenes using enhanced vocal expression, especially when reading a character's subtext.

The unit promotes interaction with literature and higher level thinking skills in determining the character's thoughts and motive through interpreting the given dialogue.

State Frameworks

"The relationship between writing and human thought is basic to all disciplines." By projecting themselves into the characters from literature and inferring the character's thoughts and motives, students are offered the "chance to express their own thoughts, to define and reflect on them and to explore a new meaning discovered in the text." This unit uses many aspects of the Language Arts Framework: reading, writing, speaking, listening, as well as the critical thinking strategies of interpreting and inferring. Students work both cooperatively and independently in various phases of the unit.

Students

Students from 6th through 10th grade, at various academic levels, have successfully completed this unit over the past four years.

Grades 7-12

Literature
Problem Solving

More Information

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Business Partner

VCEDA
Rotary Club, Simi Sunrise
CORESTAFF Services
A Day In The Colonies

The Unit and Its Value

A Day in the Colonies is an interdisciplinary unit that allows students to experience life as a Puritan in the 1700s. In cooperative groups, students research necessary skills and crafts required for survival in a Puritan town. Particular interest is paid to how Puritan children were reared and educated and their place in Puritan society. Each group makes a wall-size trader chart of their craft and does an oral presentation. Based on their research, students plan a Colonial Day. This day begins with Colonial School followed by hands-on colonial crafts.

Students prepare for Colonial School by making their own version of a primer [a page for each letter of the alphabet with a picture cue and rhyming poetry]. Finished primers are then distributed to first grade classroom as supplemental reading. The room is set up to resemble a colonial classroom including a dunce stool and cap, recitation bench, benches for boys and girls separately, and little electrical lighting as possible. Students choose Puritan names and are assigned an age and appropriate skill level.

Colonial School is an hour simulation of a typical school day in the 1700s. The teacher begins the day by reading a passage from the Bible. Students are then called to the recitation bench to recite sums and read from their primer. Strict discipline is maintained requiring students to sit straight-backed, speaking only when addressed by the teacher.

Following the school experience, students discuss their feelings about colonial school and compare and contrast their experience with the school they now attend. Students then move into groups to spend the remainder of the day working on colonial crafts. Students dip candles, wood burn a typical colonial shopkeeper’s sign, make a quilt square, churn butter and bread bread (eaten later in the day), practice writing with a quill pen, and create a doll or wreath of corn husks.

As students complete a craft experience, they keep a journal of their experience in a small Colonial Day Log. They also begin an essay comparing colonial schools to the school they presently attend.

At the end of the day, students have an opportunity to gather in groups to reflect upon their experience and express their new understanding of a child’s life in Puritan society. Most leave with a new appreciation for life in the Twentieth Century.

State Frameworks

A Day in the Colonies supports the California Frameworks emphasizing learning across the curriculum with a hands-on approach. The unit attempts to bring to life the fifth grade Social Studies curriculum.

Students

Sixty-five fifth grade students participated in A Day in the Colonies. This unit works well for all ability levels. It meets the needs of all students through cooperative groups and independent activities.

Facilities/Materials

No special facilities or materials are needed. Complete lesson plans, resources, and helpful hints are available on request. Parents expressed interest in making this a permanent part of fifth grade curriculum at our school and were helpful in gathering materials and providing assistance.

Outside Resources

Helpful books


Internet sites

http://www.seacost.com/alisus/1700.htm
http://citlotn.edu.web.01/neprimer.html
http://consuntchobuf.msu.edu/sites/letsnet/nofrwmes/Bigclass/1781/181popi.html


A Medieval Faire

The Unit and Its Value

A group of middle school teachers reflecting the contents of Language Arts, Fine Arts, Science, and Physical Education took the steering wheel and designed an integrated thematic unit to support World History, called Medieval Times. With a Medieval Faire as our culminating activity at the end of the trimester, each teacher had the task of developing a specific unit within their content area which would provide a product or activity to be enjoyed at the medieval Faire.

LANGUAGE ARTS focused on historical fiction of the period. In the medieval tradition, students illustrated books for key vocabulary and published ABC and picture books for the Faire's Museum. Emphasizing the oral tradition of the time, students performed Readers' Theaters and puppet shows of fairy tales and fables. The top puppeteers and orators performed on the day of the Faire at the Theater. They were accompanied by Mynstrels from our school band, which had just learned the song, "The hunchback of Notre Dame."

SCIENCE classes studied simple machines and medieval weaponry. Students built catapults, and the best ones were used at the Faire in mock battles. Paint soaked cotton balls were fired at targets.

HISTORY classes used their textbooks as a jumping off point for their portion of this unit. At the Faire, they provided a "Trial by Ordeal" where peasants and nobles were charged with crimes of the time, such as poaching in the lord's forest. Innocence or guilt was determined by how loudly they screamed when their hand was cut off. History teachers also provided a castle building activity at the Faire, and worked with the school cook in order to provide a special lunch on the day of the Faire. Potatoes and tarts were provided to all the children and teachers.

PE classes learned to juggle and tumble. The top Jesters performed at the theater. Feats of strength were demonstrated at the Faire. Activities like Bojder Throwins and tug of war for all to enjoy.

FINE ARTS classes learned to be Scribes and made scrolls in calligraphy, which had themes of the time like, "One for all and all for one!" or "Some may think you're a peasant, but you'll always be a knight to me!" At the Faire, students picked a message and sealed it with wax, then it was delivered to the Knight or Lady of their choice. Students learned stitchery and made costumes. They designed and embroidered coats of arms on a tunic and some sewed Robin Hood Hats or Jester Hats. Banners were designed, sewed, and displayed around the Theater at the Faire. Knights of the Round Table did a royal demonstration of weaponry and mock battles for all to enjoy.

State Frameworks

As documented in Caught in the Middle, thematic integrated instruction not only ignites enthusiasm for learning, but it becomes a cognitive organizer for students. This strategy facilitates the gathering, storing, and retrieving of information. This unit supports the 7th grade framework.

Students

This was a school-wide theme and all 400 students participated in the Medieval Faire. The day went very smoothly due to great organization and the students' commitment to the theme. Students were organized into three groups. Each group wore a specific color coat of arms which had a schedule they had to follow for the day.

We did have a tower room set up for scoundrels, but most showed their chivalry and very few ended up there.

Facilities/Materials

Units are available for each content area complete with literature lists. Also the plans for organizing a school-wide Medieval Faire are available. The State Department of Education book, Medieval and Early Modern Times provided us with a great deal of help.

Outside Resources

We did have volunteers and professionals, like a knight who stripped his armor, a sage who set up a pavilion and discussed the artifacts he had on display, a falconer and his majestic bird, and an astrologer who predicted the future.

While these people enhanced our Faire it would have been complete and just as much fun without them.
An Excursion Through California’s Counties
(Representatives Tell Their Tales of Our State’s Rich Heritage)

Grades 4-5
History/Social Studies, Language Arts, Art, Mathematics, Music

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Business Partner
Hansen Trust

The Idea and Its Value
We have created a unit of curriculum that enables students to understand historical issues surrounding water and land allocation in California and allows them to become active participants in its political process. Quality water and arable land in California are limited resources. Students are future voters who must be prepared to make informed decisions concerning the management and distribution of these resources. Each of the state’s fifty-two counties has its own tale to tell and studying California’s history through this perspective enables students to see how each county has played a part in the development of our state.

The unit opens with a trip to Vista del Lago where students get an overview of water supply and demand. Later field trips are made to water filtration and reclamation plants. Students use the knowledge they gain to make models of California’s geography, its watersheds, and the State Water Project. They also experiment with monitoring water demands for crop production, testing water quality, creating filtration systems, and developing irrigation systems for our school garden. Each student is assigned a particular county. Correspondence with farm bureaus and farmers from the various counties provides students with a more personal perspective. Several weeks are devoted to studying major cultural groups and celebrating their contributions. Through discussion and the development of a comparative timeline, students develop a sense of our cultural diversity and its historical impact on their assigned county. Students create a three-dimensional county showcase depicting their county’s perspective on historical events, points of interest, and contributions to California’s development. Visits to our city and county government centers give students firsthand knowledge of the political system. Correspondence with state legislators, information sharing, debates, and editorial writing to county newspapers culminates with a student-planned, three-day excursion to Sacramento to discuss water and land-related issues with state representatives.

State Frameworks
This unit has been carefully designed to cover curriculum for the grade four unit — California: A Changing State as described in the California State History — Social Science Framework. Two distinguishing characteristics of this unit of study are that it emphasizes the importance of history as a story well told and it encourages the development of civic and democratic values. This unit creates multiple opportunities for communication in both formal and informal situations for a variety of purposes and audiences, as stated in the California State Language Arts Content and Performance Standards. Scientific processes are applied to the learning of scientific concepts as delineated in the Biological and Earth Science sections of the California State Science Framework. Mathematical Standards, as laid out in the California State Mathematics Framework, are integrated throughout the unit.

Students
Five classes of 4th and 5th graders participate in this project. The classes include Resource, Title I, ELD, and GATE students.

This unit can be adapted to other levels of Social Studies curriculum by changing the scope of its focus. For example, studies of Native Americans could include land rights issues and tribal relocation. United States history could involve a study of the development of agriculture and industry across the continent. It can also be adapted as a unit of study around other issues or topics such as: current events endangered species, development of transportation, or inventions.

Facilities/Materials
All materials for this unit can be found within the regular classroom. A school garden and an indoor grow lab, or any small patch of soil or container will accommodate soil and water experiments.

Outside Resources
Our local newspaper provided us with the address of our representative, Cathy Wright. Her office supplied us with a booklet containing addresses of government officials. A list of Farm Bureaus was provided by the Department of Agriculture. We used the “California Smith” water unit developed by the Metropolitan Water District and “Counting on Cooperatives” from the California Foundation for Agriculture in the Classroom. Local travel agencies are great sources for travel information and maps. For information on California State Park Historical sites, we contacted the State Capitol Education Information Center.

16
Back Off, Bullies!

The Idea and Its Value

**Back Off, Bullies** provides students the opportunity to understand the problem of bullying and to stand up for what is right. At the same time they learn about peaceful assembly, a right guaranteed to all of us in our Constitution.

This project incorporates writing, art, speech, and organizational skills.

To begin, students are given a "quickwrite" about bullies. They pick from two prompts:
1. Write about a time when a bully picked on you.
2. Write about a time you saw someone being bullied.

Then they spend class time discussing the problem of schoolyard bullies and how schools can stop bullying. The idea of a "rally" is introduced. They have all sorts of ideas! The teacher writes the ideas on the board and tells them that if they want to strike back against bullies, they have to be organized. They are then divided into groups. Each group works on a letter to the principal, requesting permission to "peacefully assemble" so that they might "kick off" their campaign and demonstrate against bullying. (They will need to find out how to write a business letter.) They then write a letter to the local newspapers about their campaign, requesting press coverage. They write a one or two-minute skit about bullying. (The skits are performed after the rally in other classes.) They make picket signs which indicate that "Kindness is Cool" and "Bullying is BAD." They design a pin/ribbons which can be laminated and given out to other students to wear for the demonstration. They design posters with catchy slogans and art work that is exciting and innovative. They find quotes about kindness, courage, etc., (they especially like "The only way for evil to exist in the world is for good men to do nothing") to read over the public address system each morning and include in the daily bulletin. Each student writes one-minute speech to be delivered at the rally. They practice these in class with a megaphone.

A rally day and time are selected, and it all comes together. Posters decorate the school. Picket signs are carried. Donuts and juice are sold to help pay for the costs. Students have a list of the order of "protesters" (rally speakers) and they are ready to rumble!

Believe it or not, they run this rally themselves. On the day of the rally each student knew where to go and what to do. They had back-up plans in case someone heckled them (no one did). All I did was unlock my door that morning so they could collect their picket signs.

While working on this project, students went online to find articles on bullying and found many, many articles by psychologists, schools, and expert councils. They learned about the low self-esteem most bullies have and how schoolyard bullies often have unhappy home lives. It was a real eye opener for them!

Our rally project was a huge success, and even made the Channel 7 Eyewitness News!

**State Frameworks**

This project supports the English-Language Arts Framework which says: Teachers must (1) be able to excite students about learning to listen, speak, read, and write... (Section 3) An effective program introduces students to many perspectives, diverse styles, and points of view... (Section 3)

**Students**

Students are in the eighth grade and are thirteen and fourteen years old. Over 60 students participated, including one honors class and one core class where the ability level ranges from very low to quite high.

**Facilities/Materials**

Poster board, markers, sticks, microphone (or megaphone), a place to assemble.

**Outside Resources**

Students were encouraged to visit the library (to read Bartlett's Quotations) and to use the Internet to find slogans and quotations that supported their cause. They used search engines to find articles on bullying.

**Grades 5-12**

**Schoolwide Project**

**Language Arts, History, Visual and Performing Arts**

**More Information**

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Business Partner

Marshall's Design
Books at Home

Grades K-3
Language Arts

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Dr. Wayne Flaaten,
Principal
Hueneme School District
Business Partner
Ventura County Star

The Idea and Its Value

As primary grade (bilingual) teachers, we have found that parent support is the key to student success. Our project fosters that positive parent-child connection and bridges the learning process between home and school. Through use of quality literature & literature-related manipulatives, our Books at Home (Biblioteca del Hogar) program empowers parents to work with their children at home on literacy skills as well as reading for enjoyment.

For a student to be able to participate in this program, a parent had to attend an initial 1-1/2 to 2 hour training meeting. Recognizing the cultural values held by our students' families (who are bilingual or "LEP"), we structured the training meeting to be one that would build and strengthen a sense of community and common goals. We were touched and overwhelmed by our parents' response to the proposal. With just two days notice, seventy-five percent of the families attended the first meeting and within two weeks, all but one of the remaining families were actively involved.

In the initial meeting we shared songs, chants, and some activities (listed below) to extend the books. These strategies are designed for parents with or without a reading background to enhance the child's critical thinking skills of predicting, retelling, contrasting, comparing, and dramatizing literature.

1. Before reading the book, have your child look at the pictures and tell you a story.
2. After reading the story, have your child re-tell the story. Ask questions such as:
   a. What happened first? What happened next?
   b. What happened at the end of the story?
3. Ask your child which character they would like to be and why.

4. Have your child draw a picture of a favorite part of the story and tell about it. Write what your child says about the picture.
5. Have your child pretend to be one of the characters and act out the story.

In kindergarten the program begins in January. The students bring home one book each week. First graders participate three nights a week throughout the school year. Each participating student takes home a numbered bag containing a book. A puzzle, musical instrument, game, puppet, or paper & writing ideas which extend the reading and are included in each bag. Manipulatives in the bags relate to the theme or concept taught in the book. These activities encourage the child and parent to interact positively with the literature.

A bag rotation schedule is posted in the classroom. In first grade the students are able to monitor the rotation with very little teacher assistance. The kindergarten requests one parent helper for ten minutes each week. After each family has rotated through the bags, the books & manipulatives are changed. Teachers have a personal list of the books and accompanying resources for accountability and record keeping.

State Frameworks

We incorporated the Language Arts Framework by including activities that promote reading, writing, listening, and speaking skills, and encourage positive interaction. We used several genres of literature: short stories, poetry, fantasy, fairy tales, songs, fiction, and non-fiction.

Students

This program served 19 LED first graders and 39 LED kindergarten students. The student reading levels varied from non-readers to 2nd grade mastery. It could be modified for K-6 grade programs by changing the literature and activities in the bags to grade appropriate levels.

Materials/Outside Resources

The material for the bags in one class was donated by Youth Education Sponsors (Y.E.S.) Network. Parents were responsible for sewing a bag for their child. Other options for bags can be laminated manila envelopes. The books in this program are supplied by school resources, past reading programs, teacher personal books, and donated books. School library books could also be used. Manipulatives which extend the reading include: puzzles, musical instruments, puppets, books on cassettes, games (bingo, dominoes, number & letter matching), paper, glue, watercolor paints crayons, or writing ideas.
Books Without Borders

The Idea and Its Value

Our frustrations with our current schedule spurred us to create a class consisting of the same sixty students who share literature, writing, and world history assignments. We realized individually, and later as a group, our desire to combine two disciplines that clearly relate in a natural way: integrating these two courses, and requiring the students to assimilate different kinds of information, in turn needed to display their understanding through many avenues: art, music, speech, and writing. Grouping them so they can use and learn from each other's strengths.

Following weeks of research that produce an individual research paper, a group project binder, and an oral presentation concerning unresolved issues in the modern world, the students tackled the challenge of synthesizing all of their acquired knowledge by creating a picture book they read to elementary children, complete with original art and text.

As a culminating project, the children's picture books allowed students a creative, fun and rewarding outlet for their weeks of toil. When they finally read their books to a young audience, their overwhelming sense of the Unresolved Issues Project as an "assignment" fades with rising laughter from the young children. Prior to the children's book, the sophomores had researched for five weeks. They wrote an academic research paper and then combined their particular topic with others such as: Johnny researching nuclear weapons in Pakistan, then combining his report with four other students who have written about the Spread of Weapons of Mass Destruction in four other countries. The Spread of Weapons of Mass Destruction group then constructed an interesting presentation for the remaining students in their class. After these more "academic" pursuits, the task of writing for a younger audience challenged them even further. Happily, we know that they found this last and most difficult portion the most rewarding.

When we reflected on this unit, when we revised our grading rubric and rewarded our three-page explanatory hand-out for the eight-week project (which we will gladly provide for other interested teachers), we always came back to images of our students and the joy they projected while they read. Reaching their original prose, and pointing to the drawings they have so carefully constructed and colored, gives credence to the notion that creativity shared is creativity that can be valued by others, not only for its intrinsic values, but also for the ability for creativity to transcend any subject.

State Frameworks

Since the state frameworks require World Civilizations classes to start with unresolved world issues, this project was a natural. Our inspiration for this comprehensive project came from Oak Park High School, where they have a series of units at each level that culminate with a senior graduation requirement of immense proportion. We sat and listened to their teachers, and returned to make this one our own in the sense that we knew that a picture book would meet the creative needs of both our students and ourselves. We believe that a picture book can be used in almost any discipline and with almost any subject of study, because writing for an audience, especially a distant one in either age or understanding, provides possibly the greatest challenge in a young person's education.

Students

Almost all of our students have written a research paper, and some have created children's books, but none have done both. As the linkage between these two seemingly disparate disciplines cemented at the end of our time with these issues. The sophomores realized that even younger audiences can begin to understand these complex topics with the right mixture of words and pictures, read by the authors in the flesh who can bring a personal element to learning. Even our most reluctant high school students have left elementary classrooms smiling and waving "good bye." Aside from reading their books, many of the high school students talked, played, and generally interacted with young people half their age in a way that they have never done before in a classroom setting.

Facilities/Materials

In our neighboring trailers, we accumulated magazines, colored paper, markers, and other construction materials that allowed for the creation of all kinds of art projects.
The Idea and Its Value

This integrated unit demonstrates the relevance of literature as students compare the morals and social positions of medieval England with their contemporary society and thus discover that occupations vary as much as personalities. To prepare for Geoffrey Chaucer’s Canterbury Tales we watch the video, Becket, so that the students can become familiar with the esteemed religious leader whose shrine the pilgrims were traveling to visit. Awareness of the relationship between Becket and King Henry II helps the students gain an appreciation of the conflicts between church and state.

Each student is assigned to research one of the characters. Then, as we come to each character in the Prologue, the “expert” introduces the personality, appearance and vocation of the assigned character. Everyone records the distinguishing descriptions of each character thus gaining a keen appreciation for Chaucer’s ability to colorfully depict the cross section of society. Students then gather in groups of five to six to write their own 21st Century Prologue. They describe the setting, purpose and destination of their trip while maintaining the format, style and rhyme scheme of Chaucer. Each student writes a poem describing physical and social characteristics as well as vocational interests. These individual poems are then inserted into their group Prologues with a conclusion. The groups perform these Prologues. Students are encouraged to portray vocations that they would truly be interested in pursuing since this leads into a Career Research project, presented in both written and oral modes. In “The Pardoner’s Tale,” students are exposed to the evils of avarice, deceit and hypocrisy. Students apply this awareness in a marketing project where they have to (1) identify the kinds of sales pressure used by the Pardoner; (2) identify the irony of the Pardoner’s Tale of avarice with his own personal greed; (3) compare two TV commercials and analyze the appeals used to “pitch” their product; and (4) write a letter of complaint to the Pardoner demanding reimbursement for misrepresented goods.

“The Nun’s Priest’s Tale” uses several allegories to teach morals, issues of self-awareness, and the pitfalls of pride. Chaucer effectively employs satire to show mele dominance “spiced” with the ability of women to cause man’s downfall. To emphasize the satire our readers don props while reading their parts. For example, the fox is draped with a red feather boa, Chaucicleer, the fox, wears a large, fluffy red barrette in his hair to represent a rooster’s comb, and Pertelote, the hen, wears a yellow shower cap with the fingers of a yellow rubber glove glued on top. These visuals help the students to remember the story and the role of each of the characters. After reading the tale, groups analyze the allegories, morals, satire and examples of pride and then present their findings to the class. Then, to show that history plays a big role in our lives, I share with the class several of the 40+ businesses throughout the United States (accessed on the Internet) who have included “Chaucicleer” in the name of their business. This leads into another group project: “Chaucicleer in the Modern Business World.” Students choose a literary character as the business name for a company and explain how it relates to their establishment. One group created the following business:

“Pertelote’s Herbs,” an herbal pharmacy that is located in France. This pharmacy was named Pertelote’s Herbs because in the Nun’s Priest’s Tale there was a hen named Pertelote who made an herbal medicine for Chaucicleer whose indigestion may have been causing his dreams.

State Frameworks

These activities support the State Framework of core literature for grade twelve along with infusing the SCANS competencies and school-to-work emphasis in the curriculum. Students further develop research expertise, critical thinking skills, discover different personality styles, and explore various careers.

Students

Thirty senior students, members of the Business Academy, participated in this unit. The class is an integrated group of College Prep and General level students ranging from those with limited English skills to high academic competency.

Outside Resources

Input from business representatives regarding admirable traits and competencies desired in the workplace.
Eco-Adventures in Your Backyard

The Unit and Its Value

Students conduct field studies at the nearby California State Parks Sand Dune Restoration Project, and participate in restoration work, taking measurements, collecting data, monitoring changes, and assessing the site's environmental health.

This simple, grassroots project began two years ago when we saw the need to educate our students about a sand dune restoration project at a nearby state park, and the opportunity to learn about science in the outdoors. Many of our students pass by this restoration area on their way to and from school, and we felt that it was important to the success of the re-vegetation that the students understand and appreciate it and hence protect it.

All activities could be adapted to any relatively wild area nearby a school. These include bingo for plant identification, sampling plant populations using quadrats, create a transect profile of the site. Students collect and propagate seed to plant at the site. They study plant growth specifics and create topographical mapping of the site, measure and design their plots.

Students regularly take weather readings at the site to understand the dynamics at work, conduct mechanical analysis of soils with a soil scientist, and study soil pH, as well as local sediment supply and the local environmental issue of sediment starvation. We study taxonomy and dune zoology, and complete a comparative study of insects in the restored and non-restored areas.

The success of this program is measured through student projects including pamphlets, signs, giving tours, making videos, and creating posters, all on the sand dunes, their natural history and preservation.

State Frameworks

We are creating a science program that helps students discover natural relationships, that shows the relationships among curriculum topics, as well as between school and daily life, that involves the larger community, and is active hands-on problem solving.

The Sand Dunes provide our students with an opportunity to apply and integrate their classroom science studies in a real ecosystem. They are active learners, questioning, measuring, observing, researching. They see a direct relationship in the real world to what they are learning in the classroom. Using all their senses, they are involved, intellectually and physically in varied learning tasks.

Students

All 300 7th grade science students, including regular and special education, bilingual, GATE, and Deaf and Hard of Hearing, and blind are currently involved in sand dune ecology studies.

Students are seeing families and minorities working as scientists and learn that science is for them too. They became advocates for the dunes and began to be able to interpret them to friends and family. The general level of awareness is raised wherever and whenever they are in the outdoors. Students can explain the problems caused in habitats by mutations such as ice plant. They are beginning to understand the balance between using the beach recreational and preserving a delicate ecosystem. This will enable them to be more scientifically literate adults, able to ask educated questions when facing land use planning issues.

Facilities/Materials

The unit can be undertaken in any outdoor area that is relatively wild. 1 meter quadrats, hand lenses, wind meters, thermometers, and compasses are helpful but not absolutely necessary. Field study sheets, and actively guided are already written and easily adaptable to any habitat.

Outside Resources

Locally the California State Parks, Native Plants Society, the Audubon Society, and soils scientists provide excellent guest speakers, and help to interpret the natural history of your habitat.

Grades 4-12

Science

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The Idea and Its Value

If our students are to become responsible citizens, they must have full awareness of the role energy plays in their lives. Let's face it. We are a nation addicted to energy and that could be a very big problem. In this unit students will be able to describe the energy resources available on earth and how they are harnessed to generate electrical power. Students will compare renewable and non-renewable resources while explaining how coal, petroleum oil and natural gas are formed, recovered, and used. Students understand that energy can change from chemical to mechanical to electrical energy. Students evaluate energy sources and their efficiency and make a personal plan to conserve energy and explain its importance.

This unit is a four week unit integrated into the entire curriculum. Weekly spelling and vocabulary words are taken from the week's study of energy. Reading is done through investigative teams in both social studies and science. The teacher also reads aloud daily from Beyond the Door, a novel by Gary L. Blackwood, and various comprehension activities have been developed. Mathematical investigations have been designed to suit the daily topics. Science lessons, activities, and experiments have been planned to give students a basic introduction to energy and the sources that provide energy to the world.

After daily reading aloud by the teacher and exercises with spelling and vocabulary words, the following takes place:

Week One

A. Social Studies Groups: Investigations into the past. Students are grouped to investigate the history of:

1. Early civilizations' use of energy i.e. heat, water.
2. Early use of wind power
3. First commercial oil well
4. Discovery of the steam engine
5. Discovery of electricity
6. Coal mining
7. Solar energy
8. Nuclear energy
9. Geothermal energy

At the end of the week students have prepared a large colored poster with their information.

B. Science and Math
The teacher presents lessons daily: "What is Energy?" These lessons include activities and experiments i.e. "Understanding the Joule" and "Back to You," many of which include mathematical thinking.

C. Energy Groups: The last period of the day students are grouped to investigate energy forms and sources:

1. Water
2. Wind
3. Solar
4. Fossil
5. Nuclear
6. Geothermal
7. Biomass
8. Electricity

Resources have been collected by the teacher for student teams. Students are to report their findings on a large colored poster with pictures or charts and/or make a model of energy forms.

Week 2-3:

Presentations, Activities, and Experiments. One to two days is spent on each Science Group.

A. The teacher gives a short lesson on the topic using the laser disc Windows on Science: Energy Resources and the NEED project's Transparent Energy, up-to-date informational energy transparencies.

B. Poster presentations take place from both the social study groups and the science groups.

C. The teacher plans various activities, experiments, videos, field trips, and speakers to correlate with the energy source studied that day. I.e. a field trip to the Santa Paula Oil Museum, a parent security who just returned from bringing solar energy to India, working with a model steam engine, cooking lunch with a solar oven, making a wind device to pick up paper clips, building a catapult to produce energy, playing the card game, Energy Resources, debating advan-
The Superintendent's Award Winner

Advantages and disadvantages of the various energy sources. At least one activity or experiment per day will involve mathematical thinking.

**Week 4:**

**Energy Consumption and Conservation**

A. Teacher directed lessons, activities, and experiments include: acid rain, pollution, energy efficiency, energy use at home, where do we go from here?

B. Students survey energy use and write an energy plan to live by.

C. The teacher has completed the reading of Beyond the Door and students complete the thematic unit activities developed by the teacher.

By the conclusion of **Energize**, students will have had opportunities to explore the broad energy resources available both yesterday, today and tomorrow. Students will have given considerable thought to how this affects their lives and just what part they must play in our energy future. Through exploration and investigation, the science of energy becomes more relevant to them while gaining confidence in becoming independent learners.

**State Frameworks**

This unit supports all areas of the State Framework and engages student activity in the learning experience.

**Students**

Students from all academic levels can participate. By pairing more limited students with strong students, all were able to be successful. This is truly a cooperative learning project.

**Facilities/Materials**

An extensive bibliography has been developed. The teacher guides the students through an Internet search on the classroom computer. I recently discovered the NEED Project and used their student intermediate information book and transparencies. The CD-ROM Energy Resources was used during computer time twice weekly. The laser disc program, Energy Resources, from Windows on Science was used in teacher directed activities. An energy resource chart, Energy Resources card game, solar oven and reflector, and model steam engine and generator, have been purchased with Armgen funds. I have also collected several videos on various energy resources.

**Outside Resources**

An excellent tour was taken to the Santa Paula Oil Museum and the Santa Paula oil seeps. Guest speakers included a parent team who work at a solar panel manufacturing plant. I would strongly advise teachers to attend a presentation of the NEED Project.
The Idea and Its Value

This unit integrates math and science skills and oral presentation through cooperative groups with peer and self-assessment. It is a culminating activity and assessment piece which gives sixth-grade students in Mathematics the opportunity to synthesize and apply their knowledge of data collection and organization, graphing and data analysis, while employing computational skills. The outcome is a product, (i.e. multimedia presentation, poster or notebook). This product must include: 1. survey question, 2. frequency table, 3. measures of central tendency (mean, median and mode), 4. two kinds of graphs (picto, bar, line, circle or pie), 5. one misleading graph accompanied by an explanation of what makes it misleading and why, 6. summary of the results and conclusions based on the data, 7. next questions ("What more might you want to know?"; "Where would this lead you?"), and 8. description of the sampled population.

Day one: Student groups (which could be preselected or random) select their survey question, one which generates numerical data. In the past groups have asked: "How many books have you read so far this school year?" (Information from book logs), "How many pets do you have?" and "How tall in centimeters are you?" After the survey question has been approved by the teacher with discussion about the nature of responses and possible questions it will raise, the students design a survey chart to record the responses of their classmates.

Day two: Groups post the survey charts around the room. In carousel fashion, groups of students move from chart to chart to record their responses. One member of each survey group stays with the chart to explain the question and method of response, to monitor responses and to answer questions. Monitors are relieved so that they also can record their responses. Before charts are taken down group members check the number of responses which must equal class attendance. They discuss the seven requirements of the assignment, how they might share responsibility for completion of the task and how they will begin the organization and analysis of their data.

Day three and four: Students work with their groups to organize, analyze, summarize and display the data. Mini Lessons are provided by the teacher to ensure accurate representation of data for different types of graphs. Computers are available for graphing (using The Cruncher program) and word processing. Students use their text as a reference and review concepts previously instructed and practiced, thereby solidifying their knowledge of graphing and measures of central tendency. A daily log is required to keep track of progress and for individual student accountability.

Day five: Projects must be completed and an oral presentation practiced. Students are encouraged to use note cards for the presentation so that they are not reading from their poster. All members of the group must have a part in the oral presentation of the project.

Day six: After each group has presented and displayed their product, the audience may (and usually does) ask clarifying questions and/or make constructive comments. Because students must explain and defend their process and outcomes, their conceptual understanding is broadened. Later, I meet with any groups which have inaccuracies. We discuss the misconception and method needed to correct the mistake. Any errors must be corrected by the group.

Graphically Speaking makes dealing with data collection, organization and analysis and interpretation fun. Working together in cooperative groups affords all students the concrete experience of working with data which are "real" to them, while having the support of peers in order to synthesize and apply their knowledge of statistics. Many times during the year that I've used this project I've heard students exclaim, "I really get it, now!" Correspondingly, chapter tests given after the completion of this project show greater student understanding of the concepts of data collection, organization and analysis.

State Frameworks

Mathematics Framework: "In grades five through eight, the mathematics curriculum should include exploration of statistics in real-world situations so that students can systematically collect, organize and describe data, construct, read and interpret tables, charts and graphs..."

Students

For several years, heterogeneous groups of sixth-grade students have successfully completed the project. This project could be adapted to grades five through eight and used to represent scientific as well as mathematical data.

Materials

Materials needed are: butcher paper and/or poster board for surveys and posters, graph paper, markers, glue, calculators, compasses, protractors, and, optionally, computers for graphing and word processing.
The Idea and Its Value

*Home Is Where the History Is* is an integrated unit of study that brings "home" the idea that we have to learn about our past in order to go forward with our "history."

In these lessons, Social Studies and Survey of the Arts combine disciplines in order to create a more informed understanding of our local history.

What it takes to be successful is a sense of pride and understanding, coupled with hard work. These concepts, as well as our local history, are being lost to our youth. By having the students participate in these lessons, they have gained more respect as well as an interest in our community. After having introduced a lesson on the historic homes of Oxnard at Heritage Square, several students approached me during the next few weeks to inform me that they had visited the area, a place they knew nothing about before this time.

Social Studies - The focus was to cover Western Expansion as it relates to the local pioneers and the Oxnard plain. The students, working in groups of two, were given a list of 10 pioneer families to chase from. The names were provided by a local historian. The criteria for the names selected was based on available biographies and made available to the students, and a second criteria was based on the classroom interviews of some descendants of these families who were arranged by the teachers.

Pioneer list: Thomas Bard, Adolfo Camarillo, the families of Pierson, Pettit, McGrath, MacKintosh, Borchard, Frieschi, Denison, and Daily.

Students were then required to write a minimum of a two-page typed report of the subject and had to include the following information on where the subject came from, when and why they migrated, a summary of the economic conditions, and finally, information of the population status of the area. Also included in the report was a student generated map of the area which made a reference to where the subject of the report lived or "farmed."

In addition to the biographies of the pioneer families, some students researched and wrote summaries of the historical eras of California, as related to the area we live in, starting with the Chumash period, on to the Spanish and the land grant era, through the early California days, up to the 20th century, from W.W II, to the present.

Survey of Arts - The focus was drawing of historical structures, homes and ranches, maps and portraits, of the pioneers of the Oxnard plain.

selected students participated in a field trip that included a visit to the Ventura County Museum, the Ventura Mission, the Bard mansion, and Heritage Square in Oxnard. Students were provided with a camera to take pictures of the historic structures.

As a culminating project, the summaries, maps and pictures of the historical periods, as well as the biographies, were combined and bound together to form several books that represent an overview history of the area that we live in. These projects have been made available for student viewing in our school library.

A follow-up project included a display of the students work at Heritage Square.

State Frameworks

This unit meets the State framework on Western Movement and goes well beyond the textbook when it comes to not just teaching History and Art, but appreciating and respecting it as well.

Outside Resources

Ventura County Historical Museum Library, Heritage Square, Oxnard Public Library.

Grades 6-12

History, Art

More Information

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Business Partners

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The Unit and Its Value

*It's All in Your Head* is an integrated, interdisciplinary unit on the brain with a culminating "Mind Olympics" that includes student created projects, a cooperative team problem solving competition, and a Brain Quiz Bowl.

The brain unit is an exciting, hands-on approach to learning the history of brain surgery, the different parts of the brain and their function, the central nervous system, and the current theory of multiple intelligences. Students will work in groups for one session a week during an eight week period.

The idea of the unit *It's All in Your Head* came from the students eagerness to learn more about the concept of intelligences. We were studying about Howard Gardner's definition of genius and how people use multiple intelligences. The students picked out of a hat one of the multiple intelligences and had to teach a lesson to the rest of the class using their chosen intelligence. The students enjoyed this project, and it motivated them to ask more questions about how people learn. The class decided the brain was the next logical topic to study.

We started with *Brain Surgery for Beginners*. The students explored why Hippocrates is sometimes called the "Father of Medicine" and how, in the Renaissance period, Vesalius began the modern age of anatomy. The local hospital lent us materials and videos on Magnetic Resonance Imaging (MRI). We had the opportunity to study first hand real MR brain scans. The students learned how precious their brains are and how important it is to keep them healthy.

The students then made brain models out of clay using research from books, magazines and information downloaded from the computer. The students worked meticulously to create the cerebrum, the cerebellum, and the brain stem scientifically accurate. The students were so proud of their models that they displayed them on the desk and used them to quiz each other on the brain functions. The students created an art project on the map of the brain showing where sight, smell, taste, touch, hearing and muscle control are located. We hung them in the cafeteria to teach other students about their brains. From the wrinkles of the cortex we dove in deeper to the gray matter to find out the complexity of microscopic nerve cells and their synapses. After we watched a movie each student scientifically diagrammed and labeled the nerve cells and connected them around the room to simulate how a nerve signal travels through the body.

In "Dr. Frankenstein's Brain Lab" students had to use higher level thinking skills, gloves, tweezers and a scalpel, to dissect cow brains to discover similarities and differences between the cow's brain and the human brain. They observed, sketched and described how the cow brain looked through a tendon and then a microscope.

The students were tested on their information by designing a fifteen page owner's manual for their brain. The students used critical thinking skills to apply what they had learned throughout the unit to publish the manual. The owners manuals were both teacher and student evaluated. The students were also videotaped explaining what they had learned from completing their project.

The culminating event, "The Mind Olympics" promoted critical thinking skills, such as analyzing, evaluating, and synthesizing. It incorporated all of Howard Gardner's Seven intelligences. "On two days, over 100 students came together to compete in problem solving activities and a Brain Quiz Bowl. We even ate a Jell-O brain.

State Frameworks

This unit supports the State Frameworks for Science, Language Arts, Art, Health, Technology and Social Studies.

Students

One hundred gifted and talented students in grades two through five participated in the 1996-1997 school year. It is easily adaptable to all learners.

Facilities/Materials

Work is done in a classroom setting. The materials that are needed are, books and videos about the brain, cow brains, MR and CAT samples. Many books and magazines can be found in the library.

Outside Resources

Community Memorial Hospital
Butcher Shop
Steckel Park
Mission Possible: STS-98: The Mathematical Journey
Sophomores Teaching Seconds (Graders) in Cyberspace

The Idea and Its Value

Using class video exchanges, class-to-class Internet communication, challenging projects, and hands-on learning, this unit is as valuable to building self-esteem as it is to teaching math.

At the beginning of the high school quadrilateral unit, pairs of 10th grade students (Big Buddies) were asked to design quadrilateral puzzles and worksheets that would help the 2nd grade students (Little Buddies) learn about quadrilaterals. The 10th graders designed a puzzle made up of only quadrilateral pieces for a 2nd grader to solve. It had to have at least 2 of every type of quadrilateral, and a worksheet to go along with the puzzle that would help a second grader learn the names and basic facts about quadrilaterals. The necessary parts were the puzzle, a box for storage, a worksheet, instructions, a name for the puzzle and one toy company, a clean/fun/little picture puzzle, an evaluation sheet that another geometry student could use to ‘proof-play’ the puzzle before a 2nd grader tried it, and a second copy of everything in a folder for the teacher.

The high school students reacted enthusiastically to this challenge. The finished products were well beyond what was anticipated, as evidenced by the variety of mediums used, such as corrugated cardboard and wooden blocks; one even incorporated velcro overlays to create a multi-layered special effect to the picture. A wooden Ernie puzzle was painted with bright acrylics and had a colorful instruction sheet, with construction paper cut-outs to illustrate definitions clearly. The quadrilaterals had bright green strips of paper glued onto each shape, marking the parts of sides that were congruent or equal. Bright red arrows were added on shapes that had parallel sides, or as they put it, sides that never touch each other. The Spindled Simo puzzle had cleverly written definitions that were descriptive enough to help the children remember the new terms. A rhombus was defined as a crooked square.

These were presented to the 2nd grade class as unique puzzles created especially for them, which set the motivational tone for ease and high interest immediately. Their first exposure to the contents was exploratory in pairs. As each pair succeeded with one puzzle, they traded with another pair. They brainstormed the attributes of the shapes that were used for the different pieces. The class responded: “Hey, these are not like our class jigsaw puzzles, they are more like pattern blocks with pictures on them”, which lead into the teacher showing the class the corresponding worksheets. The challenge was to resolve the puzzle with a partner while completing the worksheets. Their final challenge was to take their puzzle and worksheet and write a letter to the Big Buddies explaining what they had learned about quadrilaterals. They were to use numbers, pictures and words to explain all the ways these puzzles had helped them learn. The total success of this exchange was when the teacher announced the puzzles would be returned since there wasn’t enough storage to keep all the puzzles. The class unanimously decided to donate their store-bought puzzles to other classes and keep those made by the Big Buddies.

When the second graders began their astronomy unit and the Big Buddies designed special space holders to hold an adventure story that must be completed by using the skill of coordinate graphing. The intrigue here was to discover which geometric shape held the secret message. The teams practiced on a huge target (painters’ drop cloth), stripped with masking tape to make a life-size graph for the teams to walk. Teams of three in their hula hoop spacecraft accurately acted out the story while it was videotaped for their high school writers to watch at their site. We had mission control readers as “regional markers”, actually other students helping to show the coordinates from each side of the target. Yarn was used to draw the lines forming the geometric shape marked out by the coordinates. There was a definite feeling of teamwork as the three balanced the hoop without the use of their hands while following mission controls directions about the next move.

The next level is having the students actually able to write their own math questions to their buddies and receive detailed explanations back via the Internet.

State Frameworks

This integrates the use of technology to communicate between schools. The Math Framework stresses unifying ideas with math strands and providing real world connections for mathematical communication. Higher level thinking skills and problem solving are used throughout.

Grades: 2nd and 10th (may be adapted for any combination of grade levels beginning with 2nd).

Geometry, Math, Writing, Problem solving and Technology

More Information

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Business Partners

Corland Electronics
Limoncella Co.
Multicultural Bookmaking

The Unit and Its Value

Multicultural Bookmaking immerses adolescents into a variety of cultures while allowing for individuality and creativity. Students create hand-crafted replicas of books from different cultures being studied. These books, once completed, are used for a variety of literary forms, again based on the culture of study. Cultures and literary forms represented this year include African folk tales, Indian temple, Japanese Haiku books, and European books from the Middle Ages. These ideas were adapted from Multicultural Books To Make and Share, written by Susan Gaylord. The time taken for construction of these books, together with original literature, ranges from one week to four.

African folk tales require students to draft an original folk tale. Once the draft is accepted, students replace key English words with Swahili. Books are constructed in an accordion style, using traditional Ghanian symbols for the cover. Each page is divided in half, the top for illustrations and bottom for text. A translation page is added at the end for easier reading.

Japanese books of Haiku include the students' original Haiku poetry in a book stitched by hand. Illustrations are three dimensional, made from a variety of torn textures, with an emphasis on simplicity. Each poem is titled using both English and Japanese characters.

The Book of Days is a European book of the Middle Ages. Students respond to twelve situational prompts over a three-week period. Responses are written from the point of view of a character from that time, be it a Lord or servant. Meanwhile, hardbound books are constructed from scratch. Once complete, entries are copied into the journal.

These books have helped students to experience and appreciate cultures from all over the world. They also allowed students to take complete ownership of their work, while combining Language Arts and Social Studies. Students are required to both analyze and synthesize material, prior to creating their own work.

The success of these projects was immediately evident. There is 100% participation, and pride of ownership. Students were especially proud to have their work displayed in a Young Authors Fair. In their words, these books were neat, cool and fun. More importantly, students, despite their educational level, can explain the significance of their work a year after its completion.

State Frameworks

This supports both the Social Studies and Language Arts recommendations, as well as the Goals 2000.

Students

One class of 35 students participated in these projects in 1996-97. Currently, over 65 students in two classes are involved in bookmaking. All students are 7th graders. All classes are heterogeneous, comprised of ESP and GATE students, as well as average students. There are high, medium and low abilities and/or achievers existing in each class. Every student has experienced success with these projects.

Facilities/Materials

The teacher supplies all materials for the books. A variety of materials is necessary depending on the book being made. For the type of books listed in this grant, the materials needed would include the following:

- **AFRICA**: file folders, construction paper, yarn, glue, and butcher paper
- **JAPAN**: 60# paper, embroidery thread, needles, nails, 50# paper, and tissue paper
- **EUROPE**: construction paper, foil, needles, thread, cardboard, jewels, and 20# paper

Materials such as glue, glue sticks, pens, scissors, and markers are used in all productions.

Outside Resources

For these projects, outside resources are not necessary.
M. Y. O. B. (Make Your Own Blood)

The Idea and Its Value

M.Y.O.B. blends the already existing student excitement generated by Halloween, with a little vampire folklore, to teach students about blood and the circulatory system.

The theory that vampires and werewolves of Eastern European and Balkan nations during the Middle Ages actually suffered from a blood disease was presented during a symposium at an annual meeting of the American Association for the Advancement of Science. The L.A. Times article about the disease, Porphyria, and its possible link to vampire folklore serves as an effective hook to engage students in learning about blood, blood diseases, and the circulatory system, as well as related social and technological issues.

Rather than taking the more common textbook/worksheet approach, students' learning involves a little story telling, culture, history, literature, and music focus on the science of blood. Students read the story of Florence Sabin's discovery of the origin of blood in 1917 and the story of Karl Landsteiner's discovery of different human blood types in 1907. As an extension, older students may read Bram Stoker's Dracula. Students also hear a recorded song about mosquitoes and how they benefit by being "your blood sucking friends." The topic of blood banks, their safety and some social misconceptions, lends itself well to class discussions and/or guest speakers. What are the real risks of donating blood or receiving donated blood? How are transfusions made and what is synthetic blood?

The unit culminates on Halloween with students performing a lab to create their own fake blood. Setting the mood is key. The lights are out, the teacher is dressed as a vampire (I just wear black and white with a cape.) There are 1000ml beakers with red water and dry ice bubbling on the demo table and Halloween music playing. Students are to combine ingredients provided, experiment with different combinations, record their procedure and then compare their results for the best fake blood recipe. The first year students brought their own materials, now it is just as easy to provide it for them.

If time permits, the clothing and scabbing process can be covered and students can try their hand at make-up artistry by making a fake slab or two. The materials are basically the same. This is totally gross and the students really enjoy it while learning about the bodies protective and recovery processes.

This unit is worth sharing with other teachers because one can introduce and cover a good deal of content in an interesting and fun manner. The idea for the unit came after reading the Vampire article in the L.A. Times and has been expanded gradually since.

State Frameworks

Connections to the CA Science Framework include the underlying themes of Energy, Systems and Interactions and Stability.

I think that making our own blood was extremely educational and fun. It was really interesting to learn about the platelets, fibrinogen and their purposes. The red and white cells are also important to know about.

Making blood was cool and kind of made me feel like I was working for E.R.,(anonymous student)

Makin' Blood - I enjoyed making blood because I both had fun and learned the components that make both real and fake blood. If I had the chance I would do that again. Thanks Ms. West.(casey Huffman)

Students

The 8th grade classes (943 students) say they enjoy learning about blood and the circulatory system because it is interesting, scary, fun and gross at the same time. Findings in the area of brain research would support the effectiveness of involving student emotion in the learning process. Students remember this unit!
Mystery Planets:
An Integrated, Interdisciplinary Unit on the Scientific Method

Grades 2-6
Science, Language
Ares, Math, Art,
Technology

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The Idea and Its Value

Mystery Planets: an integrated, interdisciplinary unit on the study of what it takes to be a modern scientist. Mystery Planets involves a hands-on approach to learning through scientific investigation and experimentation using "out of this world" materials, culminating in a spacecraft design party and field trip to the IMAX Theater to see a movie on space exploration. Students worked in cooperative groups to form teams of scientists who explore two substances from two different mystery planets. The scientific teams worked for twelve sessions during a six-week period. Through this simulation, the students developed important skills in the art of scientific investigation.

The idea for this unit came after students watched a video about the Mars Pathfinder and the people at JPL (Jet Propulsion Laboratory). Students were intrigued to see how the Pathfinder was designed and wanted to know more about how one scientific team came together to create the whole project.

The first planetary adventure began when students received a packet of mystery matter from NASA. NASA wanted the students to examine the matter. The students were divided into teams to analyze and classify the matter. Students had to make inferences about the matter and decide where this matter came from and what the planet might look like.

They had to write a story about their mystery matter and send the results back to NASA. The direct connection to NASA helped the students see real world implications to the assignments in class. Students were asked to draw and describe the surface of their planet, on the basis of the scientific inferences that were previously developed. The sequence was important in that it not only moved from identification and reporting to the more critical thinking activity of inferring, but it "slow"ed students down and gave them more time think.

The second planetary adventure started with a lab investigation to ascertain the properties of the gooey substance from Planet Glop. After a discussion of what a property of a property is, the scientific teams used their senses (except taste) to investigate the mystery substance. The students were able to test some of their ideas at an equipment station where a hot plate, a saucepan, plastic bags and other implements could be used. The recorder from each team would write the properties they found on large butcher paper. After the posters were put up around the room, the students were called to attend an important scientific convention on their findings of the second mystery planet. This discussion helped the scientific teams come to an agreement on the properties of the mystery substance. The students compared and contrasted the substances from the two mystery planets in an essay.

Next the students read and discussed the scientific method and were asked to conclude in what ways they used the scientific method in their investigation of the mystery planets.

Students used critical thinking skills by evaluating and analyzing what they had learned about the surfaces of the planets by designing spacecraft can land on the different mystery planets. The students were teacher evaluated on their essays and lab reports. The students also self-evaluated their spacecraft with a grade and a narrative to support it. The students were treated to a field trip to the IMAX theater to see a movie on a space voyage.

State Frameworks
Science, Language, Math, Art and Technology

Students
One hundred gifted and talented students in grades two through five, fifty sixth grade students and twelve fifth grade students participated in the 1997-1998 school year. It is easily adaptable to all learners.

Facilities/Materials
Work is done in a classroom setting. The materials that are needed are: mystery planet material (lava rock, salt, owl pellets, pieces of copper, different types of rocks), glob (corn starch, water, glue), science fair books, recycled materials from Art from Scrap for the spacecraft.

Outside Resources
JPL Jet Propulsion Laboratory, California Institute of Technology Teacher Resource Center
NASA: http://www.hq.nasa.gov/education
http://spaceklink.nasa.gov
http://quest.arc.nasa.gov
Imax Theaters, Exposition Park, Los Angeles, California
Oceanarium

The Idea and It's Value
Students at our school explore the undersea world through the use of science and technology. Students from two classrooms use hands-on activities and participate in the exploration of the ocean and present it to the students at our school and world, via the Internet on the schools' home page.

The Oceanarium project that we have developed is both innovative and creative. We have taken a traditional science unit and transformed it into an exciting multi-curriculum unit where students explore first hand, our greatest resource, the ocean. Students use the Internet to find and present information, they develop a web page, operate a video cam-corder, and take photos with a "quick-cam" camera.

The specific instructional purpose and value of our unit is to impact as many people as we can regarding the importance of our oceans. We want to let students learn a little more about the ocean that is only a few miles away from our homes.

This unit promotes the use of higher level thinking skills by encouraging students to be responsible for their own learning. The needs of all learners are addressed through this project. Students will cooperate in group activities and investigations. These activities encourage positive student attitudes and behaviors through the sharing of this new knowledge.

This two classroom project takes place over a period of several months.

Our project is evaluated by several means. One way is through active participation in hands-on activities i.e., dissections, computer data entry, Internet information searches, etc. The students do individual reports which are presented both orally and in written form. These are included in a student portfolio. We also evaluate our web page during and at the conclusion of our project. We transform one of our classrooms into a complete learning center, where Oceanarium Tours are run. Our school has provided computers, Internet access and most basic materials.

We have developed this unit because our school is located near one of the most interesting ecosystems, the ocean, and our student need to explore it first hand. Our Oceanarium offers our students a fun and challenging way to study our oceans.

State Frameworks
This unit fully supports the recommendations in the areas of Science and Language Arts. This unit supports all learning modalities and encourages higher level thinking. This unit also integrates technology into the regular curriculum.

Students
Our students (grades 4 - 6) engage in hands-on exploration of the oceans. Our program impacts our entire school (over 900 students) along with however many access our school's Oceanarium website.

Facilities/Materials
We transformed one of our classrooms into a complete learning center, where Oceanarium Tours are run. Our school has provided computers, Internet access and most basic materials.

Outside Resources
We visit our public library for research purposes, have guest speakers visit our classroom and make trips to the Channel Islands National Park museum, to the tide pools of Carpenteria and to Anacapa Island.
Planning Makes Perfect
Successful Problem Solving Write-up

Grades 4-6
Mathematics
Language Arts

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The Idea and Its Value

Homes are not built without blueprints. Books are not written without an outline. Problem solving should not take place without a plan either. With two motivating activities, students see the importance of planning and organizing main problems. These activities lead the students to the modeling of a five step write-up for communicating their mathematical thinking.

The first activity is a group project. The group's objective is to create a robot that has an everyday purpose (doctor, pizza delivery person, garbage worker). The groups are given a worksheet copy of household, plumbing, and electrical supplies (plunger, trash can, elbow pipes, outlets). Each group only gets one copy of the worksheet but may trade items with other groups. All items used to create the robot are a purpose. As groups determine the parts they need to create the robot, they can make arrangements with other groups to trade. Only one person may leave the group to inquire about trades. Once a trade has been made with a group no more trading may occur with that group. Students glue their robots together on black paper, use chalk to draw in the surrounding environment, and write a creative story explaining the life of the robots.

The second activity is done twice over two days. Using snap cubes or lego type blocks, the teacher creates a three dimensional climbing toy using a variety of shapes and colors and places it away from the view of students. Students are told that they have been asked to create the new climbing toy at the park. They will have $100,000 to spend. The climbing toy must be an exact replica of the one the teacher created. All materials have been donated so the only cost will be for labor. Each trip to view the climbing toy across town will cost the group $100 as long as no materials have been touched. As soon as the group begins to build the climbing toy, the cost will rise to $10,000 per minute. Reward the group saving the most money.

The first time the activity is done, the students immediately work with the materials and have someone running back and forth. They soon run out of funds. The second or third time they see the need for careful planning.

Using these activities as a reference, the Five Step Problem Solving Write-Up is introduced. This is the format used when working on problem solving activities. The teacher models several problems. The five steps are completed for every problem modeled but one or two steps will be the focus at a time. The students need to have experience at one step at a time before you can expect proficiency on the entire writeup.

The following steps of the write up are as follows:

State problem in your own words. Place the problem on the overhead and ask students to read the problem to themselves. Turn off the overhead and have them share with a neighbor. Turn on the overhead once more to read again. Students write the problem after the overhead is turned off.

State important data. As a whole class, discuss and list what information must be used to solve the problem.

Choose a strategy. As a class, list all the strategies that could be used.

Solve. Ask students to share on the overhead. Have each student choose another strategy and solve the same problem again emphasizing that most problems can be solved more than one way.

Justify. Model steps to solving why problem is correct, why strategy works, etc. Ask students to make mathematical connections to real world, name other similar problems, etc. A ten point rubric is used and criteria displayed.

State Frameworks
The California Mathematics framework emphasizes problem solving and communication in Mathematics. Working cooperatively is a common goal in all the California Frameworks. There is opportunity to communicate thinking in a variety of methods. The unit is accessible to all students.

Students
Two fifth grade classrooms experienced these activities. The classroom consisted of ESL, Title I, Resource, and GATE.

Materials
Supplies found in most classrooms including construction paper, graph paper, art supplies, overhead, etc. A bibliography of problem solving resources is available upon request.
Recyclable Silent People Impersonators

The Idea and Its Value

Recyclable Silent People Impersonators is a mathematical, scientific, artistic and writing venture into a world that only the student can create. By designing and building a life sized clone of themselves out of recyclable products each student studies and explores shapes, sizes, measurement, features, and possibly the aspiration of their "impersonator".

This challenging curriculum enhances the opportunities for all students to show how they see themselves and their relationship to others. It also provides student interest in saving our Earth's resources by using only recyclable materials in their "impersonator".

The project begins with a series of lessons and discussions on how we could create these clones. We discuss recycling and non-biodegradable features of plastics and their effect on the environment. We introduce scientific vocabulary words appropriate for the grade level (in this case first grade) as we discuss the needs of the project and how using items in our "people" keeps them from being dumped in our landfills or ending up as trash in our environment.

To begin creation of our impersonators we read and view The Magic School Bus by Joanna Cole and All About Your Skeleton by Ruth Gross. To include music and song in understanding parts of the body and how they move we sing and play to such tunes as "If You're Happy and You Know It", "The Hokey Pokey", and "Simon Says". When the students become familiar with how joints work in helping us move, we're ready to begin. Introduction to measurement and shape begin with lengths of string or yarn to measure the circumference of the student's body parts. As we progress this method of measurement gives way to tape measures which the students love using because they can now record the body part data.

Once the students have completed their "bodies" they are ready to write about their clones. Assignments introduce the student to descriptive writing as well as projecting feelings and attributes they would like to see in themselves and others. This personification helps students to define admirable traits focusing on the positive and what they want their impersonator to be like is a non-threatening way to explore behaviors. It also helps to understand what it means to be a good student and friend... all of the impersonators are good listeners!

State Frameworks

This unit supports Mathematics, Language Arts, Health and Physical Education frameworks by incorporating a multi-curricular series of lessons. It can be easily adapted for bilingual students and students with special needs since everyone has a perfect model to draw upon. Students "Recyclable Silent People Impersonators" is a 1st grade unit that can be adapted to any grade level. First grade students have successfully created their impersonators complete with yarn hair, clothing and proper dimensions. This project can also be tied to a Big Buddy upper grade class to involve a larger part of the student body. We partnered up with a fifth grade class. As the teacher, it is a delight to have a class full of silent impersonators! The mathematics can include standard or metric measure while all other curricular areas can be adapted to fit the needs in grade level standards.

Facilities/Materials

Materials such as nylons, dry cleaner bags, plastic grocery bags, rubber bands, clothing for the finished body are all recycled to our classroom by parents and students. Books and videos were mentioned previously.

Outside Resources

A field trip to a recycling facility would also be a good extension.

Grades K-2
Mathematics
Language Arts, Health, PE, Science

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Kim and Teri Peterson
So You Thought the Underground Railroad Was a Subway?

The Idea and Its Value

The purpose of this unit is to help students understand the difficulties, tension, emotions, and work of those who escaped on the Underground Railroad.

The teacher poses the role of a slave owner, and the class members, who represent the Underground Railroad, must smuggle the slave to safety in Canada. The slave is a rag doll (about the size of the students' backpacks) that is placed on the teacher's desk and/or in a backpack, under a sweater, or in a gym bag. The catch is that the slave must be transported through the hands of 25 stations (students) on the Underground Railroad to safety in Canada, otherwise known as Canada.

The Procedure:

Depending on class interest and the cooperation of other members of the faculty, this activity could take from 2-4 days to 2-4 weeks.

1. Each History class has its own slave with an index card sewn to its back. Whether the student carries the slave for a few minutes or a few days, each must sign the card before smuggling the slave to the next student.

2. Reward posters appear around campus for the return of the slaves.

3. Each time the slave is recaptured, it must again be smuggled to Canada, with a new card sewn on its back for another 25 signatures.

4. A real reward, such as candy or homework passes, is offered for the "snitches" who turn in the slave, and for the class that transports its slave to Canada most quickly.

During the teaching of the Civil War, the students are inundated with facts and figures about the atrocities that were committed by people to people. In order to bring this to life for concrete sequential 8th graders, they have the chance to participate in an active simulation of those atrocities. While they're carrying the slave, they try to be unobtrusive so as not to get caught, and begin to wonder whom they will be able to trust to pass the slave off on the journey to safety.

Higher-level thinking skills are promoted by the simulation for students who come to understand, experience, and analyze treatment of the black slaves, and then share those thoughts through writing exercises, discussions, and other active lessons. As mentioned earlier, Language Arts teachers follow with fiction, such as The Slave Dancer, Science teachers with weather patterns of the East and Northeast at various times of year, and Art teachers with creating wanted posters and mobiles, etc.

Because of this active demonstration, the students need to cooperate with each other in the class, whether the Gifted or the Special Ed., students in a team that benefits from all their skills and talents. This encourages positive student behavior and promotes the district's character traits, such as respect, sportsmanship, and kindness.

State Frameworks

Social Studies Framework advises 8th grade curriculum to focus on the 19th Century of U.S. History. One of the seven units is the Civil War and its impact on our citizens. The students are encouraged to delve into the literary of historical, ethical, cultural, and geographic aspects of our culture.

Students

All 8th graders participate in this simulation, no matter in which of the 11 classes they're registered. Students in other grades also try to participate by helping to smuggle the slaves out of the classes or "snitch" on who's currently hiding the slaves. While we have been conducting this simulation for the past four years, 1200 - 1300 students have participated in the Underground Railroad, and seem to remember their part in the simulation of smuggling the slaves to safety.

Facilities/Materials

Each History class needs its own slave doll for which patterns are available. Daily bulletin notices keep the whole school apprised of which slaves are safely in Canada and which are still out. Videos, book titles, and other instructional materials are available for those wishing to create the simulation for their schools.

Staff

We are two teachers who teach History and Language Arts, who encourage the participation of all other staff members, especially all those in the 8th grade. Outside speakers and library resources from the school and the county facilities will also contribute to the students' awareness.
Students as Teachers
Using Small Books to Teach Concepts to Younger Children

The Idea and Its Value

Students who may be reluctant to write are given the opportunity to share their knowledge and to write for a group of students several years younger than themselves, thus reducing their writing fears and teaching content in a simpler form to the younger students.

Throughout my years of teaching reading and writing, I have had many students who were fearful of reading in front of their peers, or who have had trouble thinking of things that they wanted to write that they could share with their fellow students. These same students, however, have rarely been afraid to read to or write for students who are at least three years younger. I have tried to tell my eighth-grade students to write to fourth graders, but it wasn't until this year, when I decided to have them write small books for younger children and read the books with them that I really saw their interest in writing flower, and their output and quality really increase. It seems that they had to have a tangible audience of younger students to get them motivated.

I have tried my “experiment” with small books twice this year, each time in a little different way and with a different unit of study. The first small books were made following a group research project on World War II. Students had to type a three-page group research paper on a chosen aspect of the war, then had to summarize that paper into a six-page small book, complete with pictures. The book had to teach fourth graders the same material that they had learned in an easier to understand manner.

The second approach to the small book was done during a unit on the Civil War. This time each student had to make a small book of six pages, drawing from a set of given categories, with information taken from readings, class discussions, note-taking, etc. Students could discuss ideas and consult with their groupmates, but had to do their own original work.

One of the beauties of this unit is that all my students, from those who had the most difficulties with language to those who had almost always been reading and writing, felt confident in their abilities to read and write for younger students. I kept hearing comments like, “That’s all we have to do? That’s so easy!”

I developed the idea for this unit on my own, but referred to several books on making small books to give me design ideas. I required my students to include artwork on each page, and to coordinate their written summaries with their artwork.

The success of this unit was measured by the attitude of my students toward reading and writing and their output. Other than getting my students to increase their reading and writing, the greatest result of this program is the relationships built between my eighth graders and the younger students that they taught. It was a boon to the self-concepts of both groups. I would thoroughly recommend this approach to other teachers, and I plan to use it next year.

State Frameworks

The small books and subsequent sharing with younger children satisfied the Language Arts framework recommendations of reading, writing, speaking, and listening. In both instances, the small books took on a cross-curricular approach, combining History/Social Studies with language.

Students

101 eighth grade and 34 fourth grade students have taken part in the program this year. Both groups of students had a mix of male/female, gifted, special education, and second language learners. Any class, grades 4-19, should be able to repeat this unit with similar results. This can also be adapted to many different subject areas.

Facilities/Materials

Students will need to have a grasp of their subject matter (from books, lectures, labs, videos, etc.), and should be taught summarizing skills. They also need examples of small books as models. Basic art supplies such as construction paper, scissors, glue, markers/crayons, and rulers will be needed. There needs to be an agreement with a class(es) of younger students, and fieldtrips will need to be arranged. (We chose walking fieldtrips with a nearby elementary school in our district.)

Outside Resources

Parent help will be necessary for the trip to another school.

Grades 4-12

Language Arts, History/Social Studies

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Santa Barbara Bank & Trust
Talking Gallery of American Heroes

Grades 6-8
History/Social Studies
Visual & Performing Arts

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The Idea and Its Value
Students become teachers as they bring to life the heroes of American history. At the same time, they improve their research, writing and speaking skills. There are four steps to this project. Each step requires some amount of problem solving.

I. Major characters from the eighth grade history curriculum are put into a hat. (This project has been done with as few as 50 students and as many as 120, so the number of names can be limited or extensive—but all should be different). After each student selects a hero, the immediate job is to research the clothing and hair styles of the day and what the hero looked like. Life-size faces are made in class and the student is then directed to add a six to eight inch 3-D body. When finished each hero should have historically correct hair, shoes and clothing and be mounted in a frame with an appropriate nameplate.

II. Students must research their heroes in the following areas: contributions to American history, important decisions, famous speeches, personal philosophy about life and government, political environment of the time, and the popular music of the day. Each student also needs to find a popular song that epitomizes the person's contribution to American history.

III. Students must pretend that they are the heroes they have created and researched. Each is going to be a guest speaker and therefore must write a speech using the researched information. The speech is written in the first person and rough drafts (sometimes more than one) and final draft must be approved before going to step four. This is the most crucial step because it insures indepth and accurate research and a well-organized presentation. Depending on the hero and the level of the student, the speeches should be from 3-8 minutes long.

IV. The final step is taping the speech. The researched music must be incorporated into the tape in such a way as to enhance the speech and not distract. The speech is practiced before taping.

The portraits are arranged around the room in chronological order on a timeline. When we get to the point in our curriculum the tape is played. Students love hearing each other's tapes. The musical themes help them remember the theme of the person's life. They learn from each other in a very scholarly and fun manner, while at the same time they quickly learn to evaluate a quality product. In addition they have a year long visual of the order of people and events in our curriculum.

Students are evaluated in several areas: the historical accuracy of the hero's appearance, the depth of their research, the organization of their material, their choice of modern music that represents the theme of their hero's achievements, and the delivery of their speeches.

State Frameworks
The heroes, their times and achievements come directly from the state History/Social Studies framework. In addition, the research, writing and speaking tasks are examples of teaching English across the curriculum. The writing process is required.

Students
50-120 students per year have done this project for the past seven years. It has involved first year and GATE students. It can be adapted to any group or any subject. Students love it.

Facilities/Materials
The life-size faces are done in the classroom with white glue and paper towels. Research materials are found in the school library, the city libraries, classroom textbooks, computer reference materials and the Internet. Students will need a tape and you will need a tape recorder in the classroom.
The Quilted Curriculum
Quilts in Geometry, Fractions and Multiplication

The Idea and Its Value

Quilts are comforting, beautiful, functional and intrinsically suited to the study and teaching of geometry, fractions and multiplication. Angles and lines, area and perimeter, as well as the concepts of parallel and perpendicular, are all geometric elements apparent in quilts. Traditional quilt patterns are fractional blocks of squares and triangles in full, half and quarter sizes. And the very creation of quilts—the careful laying of its pieces row upon row after row—is naturally conducive to skip counting (the “multiples”) and comprehending the structure of the times table.

My six-week-long unit was stimulated by the strong desire to introduce geometry and its vocabulary to my third and fourth grade bilingual students in a meaningful manner.

Students’ spelling and vocabulary assignments were filled with such target words as horizontal, vertical, diagonal, planes, and space. Bilingual teachers will note that the target vocabulary was high in cognates which supports the children’s transition to English.

Applying and becoming familiar with the new terminology was important. Thus, manipulatives such as fraction circles and squares, tangrams, pattern tiles and polygon shapes were very helpful. Our third-grade Mathland kit provided an ample supply.

Language was always central to the unit. Students began to write in their math journals about the shapes they saw around them, their defining attributes and comparing sizes of shapes, distinguishing fractions, even beginning to play with the idea of equivalence. We progressed from oral expression, as we examined quilts and their patterns, then advanced to communicating our ideas in writing, finally to translating our words and ideas into mathematical equations. “I can add halves!” exclaimed one student. “Oh quarters,” observed her partner, “They’re like little halves.”

Students colored reproduced quilt patterns. Assembling their work into class quilts reinforced their understanding of the times tables they were learning. As students mounted rows of their work, they used the idea of “missing factors” to infer the number of rows they’d end up with. Students created and solved quilt-based word problems.

State Frameworks

Through its handling of shapes, groups and patterns, this unit developed a multi-strand math theme that was based in geometry and visual thinking but which also included measurement patterning and logic all integral aspects in the California State Math-
The Titanic and Me
A Study of American Tragedy and Immigration

Grades 3-12
History, Language Arts, Science, Math, Music, Art, Technology

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The Idea and Its Value
This unit on the Titanic disaster is designed to increase student interest and involvement in reading by focusing on a fascinating disaster, as well as involve them in the historical aspects of the early part of our century.

An in-depth study of the Titanic was really first conceived by the students. The sixth grade Special Day Class students came to school with a variety of questions concerning the ship and the time period, especially those who had seen the recent movie. Discussions were overheard on campus about the movie, and the actors and actresses who performed in it. Several times, students would be doing class research on the Internet, and ask if they could "just look up one thing about the Titanic" or "just print one picture of Leonardo Dicaprio" when they were finished. With that much student interest, there just had to be a lesson here. And there was.

The basic unit on the Titanic is designed to be learned in two weeks. One of the extensions, that of American immigration, focusing on Ellis Island at the turn of the century, was designed to take another two weeks. We had the students write their autobiographies and family history along with this, so the immigration portion extended to about four weeks. Included in this unit was extensive research about the United States in 1912—automobiles, photography, the president, fashion, literature, art, and music—learned by the students from books, photographs, newspapers, and the Internet. There was also a science and math component that looked at icebergs, their origins and movement, size, frequency, water temperature surrounding them, and just what would happen to individuals who found themselves in these waters. We found that once we had begun the unit, there were so many student-generated questions and so many areas of extension, that we could have spent months in exploration.

One thing that we fretted over in planning the Titanic unit was the difficulty of reaching those learners who have language processing needs, those who are second language learners, those who need to be challenged beyond average, and, of course, those in the middle—all at the same time! To help solve this problem, we chose two basic text sources on the Titanic: The Titanic: Lost and Found, by Judy Donnelly, and a selection from McDougal Littell's new seventh grade text entitled "From Exploring the Titanic" by Robert D. Ballard. (You will recall that Mr. Ballard is the gentleman who discovered the location of the Titanic in 1985, and explored it in 1986.) The Donnelly text is written at a 9-3 level, and gives a good overview of the disaster that is easily understood; the Ballard text is more technical, with more difficult vocabulary, but is quite readable for the average middle-grade student. There are several other texts, including A Night to Remember by Walter Lord, that would be appropriate for older students or those with a higher reading level. To increase understanding at all levels, we also created two bulletin boards in each of our classrooms focusing on the Titanic itself and on the 1912 era, including lots and lots of pictures. A good pictorial source that we used is On Board the Titanic by Shelley Tanaka, which has photographs, pictures, and paintings of the ship and its passengers.

One of the best aspects of this unit is that it allowed for both individual and group work. Individually, students were able to read and explore, as well as ask questions of their families and write their autobiographies while exploring immigration. In groups, students did research on various topics of their choosing, such as the president in 1912, William Howard Taft, fashion in 1912, and sweatshops, with particular focus on the employment of children. One extension that was added at the seventh/eighth grade level was the production of a group newspaper, dated April 15, 1912, done as a group activity.

The success of this unit on the Titanic and immigration can best be measured in student participation, rarely have we seen students who were so excited by learning, and who couldn't ask enough questions or find enough answers. Quite a few students even spent time at lunch or after school on the Internet to find more, and we kept hearing how frustrated the students were that they were unable to find more information at the library, because all the materials on the Titanic had been checked out. Students would find something in the news, and couldn't wait to bring the new information to share with the rest of the class.
Ed Lyon Excellence in Education Award Winner

We wholeheartedly recommend this, or a similar unit, to other teachers as a way to motivate their students to read and learn, and as an excellent study in history. As teachers, it was even fun for us to learn much, much more about a very interesting subject.

State Frameworks

In preparing this unit, we referred to the most current draft of the proposed California State Framework for Language Arts, along with the Science and Social Studies frameworks. In keeping with the Language Arts framework, students divided their time between reading, writing, listening, and speaking. They worked in groups and individually, and participated in peer editing. Evaluation was done on a group and individual basis, using a variety of evaluation methods.

Students

The students who participated in this unit were 13 sixth grade SDC students, and 100 seventh grade students. The mix included second language learners, some recently transitioned, and GATE students. It could easily be adapted to other grade and ability levels.

Facilities/Materials

We made extensive use of history and literature textbooks, library books that had information from the period, first-person accounts of the accident, sources of immigration statistics, reproducible books on immigration, the Internet, the soundtrack from the movie “Titanic,” and film footage and National Geographic coverage of Ballard’s Titanic exploration. A complete bibliography of sources is available. When presenting this unit as a teacher workshop, we will have a PowerPoint presentation, some video and audio clips, handouts of our lesson design, photographs and student work samples, and some of the books we used for perusal.

Outside Resources

An excellent field trip idea that we had is a visit to the Queen Mary, docked in Long Beach Harbor. The captain’s tour includes a trip below deck to view first, second, and third class accommodations. We found many of our sources at the Oxnard Public Library; much of the Titanic literature has been listed; right now, but we found information on fashion in the costume section, books about child labor, information about the history of automobiles and aircraft pertaining to 1912, etc. The Internet is a rich source of information, from things about the current movie and its actors to historical and scientific data. The Internet also has information on Ellis Island, including immigration statistics.
Through the Looking Glass of a Scientist and a Poet

Grades 7-8
Mathematics
Language Arts

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The Idea and Its Value

The English language is a fine tool that is used to communicate complicated rational theories as well as whispers of the heart. To succeed in the 21st century, students must be able to research and use scientific language in such a way that their thoughts can be understood by scientists everywhere. On the other hand, they must also be able to communicate thoughts which go beyond the literal, they should be able to understand that to a scientist, a rose may be a Rosaceae plant, but to a poet this blossom atop its thorny stalk may be a painful memory of a relationship gone awry.

Each day for seven days, students bring to class an item from nature. Items range from a dandelion plucked just outside the classroom door to a seedling picked up the previous summer. The first task is to draw the item, identifying the whole as well as the parts in scientific language. A dandelion, for example, is Taraxacum officinale; parts include the corolla (petals), stamen, anther, pistil, stigma, ovary, calyx, etc. Each student uses measuring techniques to give a precise dimension to the item. The final scientific write-up includes the drawing and either a list or prose description of the item using precise scientific language and measurement.

Taking the same item, the student then writes about it as a poet. On this side of the page, the item itself cannot be identified as what it is on the literal level. It must become a symbol of something else. The flower becomes earth’s laughter, or a distant memory. The description is purely poetic as the item is interpreted through the poet’s eye.

Do this writers’ workshop for 5-7 days in class. I’ve found that by the end of the week, students are coming prepared with their scientific nomenclature. Some students spend the entire 45 minute writers’ workshop on the scientific write-up, then work in the quiet of their own homes on the poetic interpretation. After the sequential writers’ workshops, have students choose the day’s work they like the best. They take these two write-ups (the scientific and the poetic) and hone them into final drafts, checking spelling, grammar, accuracy, and finally mounting them with an illustration on a piece of 11 x 17 paper.

State Frameworks

The state science and language arts frameworks as well as Goals 2000 require that students be able to write informative and descriptive paragraphs which give simple, clear pictures of a person, place, thing, or idea. The expository writing requirement for seventh grade requires that they be able to clearly state facts, directions, or explain or define terms. This assignment may be modified or extended to fulfill any of these expectations.

The Students

I have assigned variations on this project to seventh grade language arts/humanities classes for four years. A variety of students have participated including GATE clusters as well as heterogeneous mixes. Expectations are easily modified to accommodate ELP or RSP students.

Facilities/Materials

Notebook paper for drafts. An item from nature each day for 5-7 days (one per student - no sharing allowed). Rulers & string to help with dimension measurements. Library resource books - encyclopedias, plant, rock identification books, etc. Colored paper (11 x 17) to display final product.

Staff

I am a left-brained humanities teacher who is trying to teach her students to nurture both sides of their brains.
The Idea and Its Value

After reading the play Twelve Angry Men and watching the movie, my two 10th grade CP classes were eager to participate in a mock trial. What made the process different from others who do mock trial was that our trials were video-taped and sent to another class for jury deliberations, where ELD (English Language Development) students viewed the trials, discussed the points of law and the legal system, deliberated, then delivered their verdict back to us stating their reasoning. They also made suggestions for improving future presentations. Steps for mock trial which took approximately three weeks: Decide which version of stories to do. Read Steck Vaughn Point-of View Fairy Tales

- Write a scenario for the trial, stating both sides of the case, listing witnesses and what they might testify to (optional step, but useful if students do not get to choose which side they will represent). Create prosecution and defense teams of students, balancing their abilities.
- Teams summarize their side of the case, listing evidence, witnesses, investigative reports, and expert testimony that may be used in the trial.
- Summarize what each witness will testify to and create documents, photographs, charts, diagrams, etc., necessary to explain the testimony.
- Groups cast the parts and rehearse.
- Prepare a disclosure document for the opposing team listing witnesses and evidence. There may be an exchange of questions and perhaps a meeting for the lead counsel of each side at this point to clear up any confusions.
- Consider rebuttal witnesses and practice all witness testimony, including anticipated challenges from the opposition.
- Prepare opening statements.
- Call witnesses, opposing side may redirect questions to their witnesses at the proper time.
- Prepare and deliver closing statements.

The ELD students then followed most of the steps and did mock trials of their own, which were also video-taped; students within the ELD class sat as jurors and rendered a verdict.

All students were assessed based upon their participation, use of deductive and inductive reasoning skills, and by the jury’s perception and analysis of the presentation.

Students
70 Grade 10 CP students in English classes
20 English Language Development students

State Framework
This activity supports the State Framework goals of enhancing reading, writing, speaking and listening, and the development of critical thinking skills.

Resources
Movie of Twelve Angry Men
Steck Vaughn series

Facilities
Classroom art supplies for witness visual aids
VCR and videocassette

Grades 10-12
Language Arts

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Patricia Hauser, Principal
Simi Valley Unified SD
Business Partners
Simi Valley Chamber of Commerce
Wheat — It Can’t Be Beat
A Unit from Seedin’ to Feedin’

Grades K-8
Science, Health, Math, Social Studies Language Arts Visual & Performing Arts

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Business Partners
Hansen Trust

The Idea and Its Value
The history of wheat is woven through this unit as connections are made from wheat weaving of 5,000 years ago, to California’s bonanza wheat farms and mission “atole” (wheat meal mush), to present day wheat production and nutritional importance. Students, as sprouting wheat farmers in this hands-on unit, each plant a crop of wheat, follow and plot crop growth, watch the grass grow and develop wheat heads, harvest and grind seeds, and prepare bread from the class crop.

Learning extends both across the curriculum and time, weaving through the entire year. Higher-level thinking skills will be “cultivated” as this integration occurs. The agricultural-wheat theme is intertwined through Science (Life Lab, Seed Plants), Health (The Food Pyramid), Math (Growth chart on centimeter paper), Social Studies (Ancient Civilizations, World & American History, California Agriculture), Art (Corn Dollies), Language Arts (Vocabulary & Literature), Music (Earthly Tunes).

The unit “sprouts” by introducing students to the worldwide tradition of the “corn doll.” After the last sheet of grain was cut, it would be made into a “corn doll” in honor of Ceres, the goddess of the harvest who was thought to live in this woven symbol. The doll was hung inside to protect the goddess and was replanted next season to assure fertility of the new crop. The class is taught to bind three straws of wheat that have been softened in water. They form the strands into a loop and tie together with a colored ribbon symbolizing red-poppy and warmth, green-spring and fertility, blue-cornflower and truth, yellow-corn and Ceres, white-pancy, brown-earth. Our principal joined us for this activity which easily involved all students. She shared students’ enthusiasm as she hung her own corn doll on the class bulletin board. This positive attitude extended home as eager parents brought in wheat graders and bread machines, as well as intricate examples of ornaments made of woven straw like the “corn daily.” The unit “grows” as students plant soaked wheat seeds in milk cartons. These could be decorated by covering with white paper on which students can draw faces. As wheat germinates, “hair” sprouts. Each child is given centimeter paper along with a lesson on metrics and line graphs to document plant growth. As wheat is fast growing, students quickly and easily observe that wheat is a GRAIN. As their bonanza crop soon outgrows the cartons, children may transplant in Life Lab garden or at home. Concurrently, life science curriculum such as plant life studies are taught. Health concepts such as nutrition and importance of the food pyramid can be linked. Students go on a scavenger hunt to find box tops, labels, pictures, and ads to create a Wild & Wacky Wheat College including such items as: Wheaties, Wheat Thins, Frosted Mini-Wheats, bagels, pasta, tortillas, Cream of Wheat, etc. Language Arts activities incorporate word searches, crossword puzzles, and poetry using Wild & Wacky Wheat Words. Letters to wheat product manufacturers may be composed to acquire more information, posters, and handouts. Social Studies curriculum using Oh, California is intermingled as we study the history of California agriculture against the backdrop of Spanish Exploration (hard tack), the mission and rancho periods (“atole” and flour tattles), wheat bonanza farms, the pioneers, and modern day farming. Concepts to “harvest” include irrigation, crop rotation, resource management, and migrant workers. Children will enjoy singing “Lotta Seeds Grow,” “The Garden Song,” “The Sprout Song,” and “Dirt Made My Lunch” from Earthy Tunes.

State Frameworks
This unit supports the History/Social Science and the Language Arts Frameworks integrating reading, writing, and listening with art, music, science and health. It uses active learning principles, is equally accessible to all learners, and provides “real life applications,” all of which support state recommendations.

Students
This is a “seeding” unit being cultivated for the first time. Our wheat grass is currently over one foot tall and thriving in the rain, thanks to El Niño. Sixty-one fourth grade farmers, including ESP and GATE are enjoying success in this easily adaptable unit. Teachers from K-8 can easily adapt this unit to their needs. Because of the hands-on nature and real life connection, this unit will benefit all students regardless of age or ethnicity.

Facilities/Materials
Gathering the Sun by Alma Flor Ada, Earthy Times by Mary Miche, centimeter graph paper, milk cartons, soil, wheat seeds and stalks, a garden plot and tools, directions for wheat growing.

Outside Resources
California Agriculture in the Classroom Conference 1997, graders and bread machines from parents, Nishinori Farms, Yabani Farms, The Plant Doctor (AgRx),

Staff
Both Patty and Robin have been 4th grade partners for 7 years at Los Primeros Structured School.
Aera Energy LLC
American Commercial Bank
American Petroleum Institute
AT&T Wireless Services, Inc.
Avenue TV Cable Service
Bird Roofing & Waterproofing, Inc.
Boething Treeland Farms
CAD/CAM Consulting Services
Camarillo Community Bank
CORESTAFF Services
Cordlund Electronics
Dairy Farmers of America
England, Whitfield, Schroeder & Treadway, LLP
Fast Frame (Vta. & T.O.)
Grether Farming Co., Inc.
GTE
Hansen Trust
Kim & Teri Peterson

Limoneira Company
Marshall's Design
Moorpark Chamber of Commerce
PacFab
Procter & Gamble
PSI Bearings, Inc.
Rockwell
Rolls Scaffold & Equipment
Rotary Club of Simi Sunrise
Santa Barbara Bank & Trust
Simi Valley Chamber of Commerce
Southern California Edison
Southern California Gas Co.
Toyota of Ventura
VCEDA (Ventura Co. Economic Development Assoc.)
Ventura Chamber of Commerce
Ventura County Star
Ventura County Supt. of Schools Office

Partners in Education

VCCS
Superintendent of Schools Office

VCEDA
Ventura County Economic Development Association

VCCS
Superintendent of Schools Office

VCEDA
Ventura County Economic Development Association