The purpose of IMPACT II is to spread excellent teaching ideas throughout Ventura County. IMPACT II does this by partnering with local businesses and organizations to provide $500 individual and $750 team grants to educators for unique, original and innovative curriculum that has been classroom tested. 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 through both grants and an annual awards dinner where we celebrate the true heroes and heroines in our communities.

Over the years Ventura County IMPACT II has matured into the program that we envisioned at its inception in 1993. Business leaders, teachers, and administrators are becoming aware of the program and are participating in unprecedented numbers.

The Ventura County IMPACT II program is a partnership between the Ventura County Office of Education, the Ventura County Star, and several Community Sponsors. IMPACT II puts cutting edge classroom projects into the mainstream, turning students on to learning.

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Lesson Plan Narrative: The 3 New R’s at School

This unit was started to show that a small group of students can have a bigger impact when we work together. Schools are the ultimate wasters of our resources generating huge amounts of trash each day. The essential question we challenged ourselves to was: What can we do to help save our little part of the earth?

Unfortunately with all the budget cuts affecting our district recycling has just been forgotten, this great need resulted in our desire to take it upon ourselves to begin to “fix” this situation. We wanted to build an awareness of trash and what we can do to reduce, reuse and recycle it.

This unit began with the 4th graders weighing their trash. From this starting point students problem solved to figure out what could be done to reduce the trash that would end up in the landfill, taking up precious space. Sorting trash into right areas allowed them to cut their waste by more than half! They were really proud of themselves and started doing the math (If 1 grade level reduces by 12lbs. not a big deal but, when that total was multiplied by all the grades in our school, all the schools in the district you can see where this lead them).

Students began by reading and doing research on the 3 R's (reducing, reusing and recycling). The focus was how they could relate and use them at school. 4th graders researched, found statistics, and information, and ways to help be a solution to the problem. Each day students were very excited to share a “tip” of the day; teaching to each different grade level getting the whole school involved and empowered to make a change in their trash habits.

Students started their own recycle company with jobs for every type of learner, schedule writing, giving presentations, picking up trash, painting recycle boxes, building a compost bin, working the recycle cart (that was used to for the whole school). We weighed trash for all classes’ and began a “biggest loser” competition to see which grade level was the best at reducing their waste. Students wrote and published a book that was added to the school library. Technology was used to do research, making a list of “best” websites and creating a power point available to everyone.

The community got involved with an E-waste day and a rummage sale for spring cleaning. All grade levels as well as teachers, office staff, even the food service (composting leftovers and using the trays for art projects instead of throwing them away) were involved with different challenges and expectations.

This unit is classified into 3 areas, Reduce (encouraging lunch boxes, no plastic bags, using real plates etc.) Reuse (boxes and cardboard for projects, popped playground balls for planters, leftover food for compost bin) and Recycle (all plastic bottles and cans get us money).
The appearance of the school has improved since the “adopt the school” effort; each class takes part in adopting a part of the school to keep clean. This project was cross curricular particularly in multiple disciplines including:

Reading Comprehension 2.0

Expository text (books, articles, web sites and magazines).
• Reading Comprehension 3.2, 3.5

Use of figurative language with The Lorax
• Writing Strategies 1.0, 2.0

Students also write summaries, and responses to literature with this theme. When students did their biome research reports an important aspect to be included was how the environment is being affected, and steps to take to make it better
• Written and Oral Language 1.0, 2.0
• Preparing to speak and share information with other grade levels. Asking and then answering the many questions that arose.
• Math 1.0 Number Sense, 2.0 Addition and Subtraction, 3.0 Problem solve using all the operations

Reading and writing numbers through the millions (amount of time it takes Styrofoam to decay), rounding numbers

Each year we use enough plastic cups to circle the earth 400 times what would that be in a lifetime?
• Measurement 2.0

Weighing, comparing trash

Using graphs and charts to show results
• Mathematical Reasoning 1.0

Use their data to come up with solutions, problem solve and generalize the solutions to other situations; starting with one class to the school, entire district etc
• Data Analysis 1.0

Creating and interpreting charts and graphs to show results

• Science Investigating and experimenting throughout the whole unit, and the Life Sciences with our compost and worm bins to help in the growing in our garden.

This process has been a very concrete real experience which provides valuable lifelong learning. I feel by far the most beneficial aspect has been the knowledge that there is power when you start locally and build up to globally. It has shown them the can help save their earth.
Lesson Plan Narrative: The Minerva Project

It’s March… spring fever has hit and you all need inspiration. March is Women’s History Month, you say to yourself. But as you look through the library you see stories that your students have heard over and over again. You need something innovative and inspiring, something the students haven’t heard before. Enter…the goddess Minerva! She sprang from Jupiter’s head!

The Minerva Project is a project-based unit that spans language arts, technology, art, history, and communications, just to name a few. Beginning with the Big Idea of Inspiration, we look at a few correlations in history that depict inspiration: DaVinci’s flying machines inspired by birds, our White House inspired by Roman architecture, etc. We then look at the California State Seal and try to determine the inspiration. Who is that woman? Why is she on our state seal? The students are introduced to the goddess Minerva, who sprang out of the head of Jupiter full grown, much like California sprang up as a state without first being a territory. Seeking inspiration of our own, each student then seeks out their own inspiring woman to study for Women’s History Month. Who is your modern-day Minerva? Maria Shriver’s 'Minerva Award' recipients are an excellent resource.) Many other subjects come into play here, as students choose (often unsung) champions of various causes- environmental, social, political, gender, etc. Having self-selected their modern-day Minerva, the learner then completes a number of activities across the curriculum, culminating in a presentation before their peers and parents, and possibly even a community event.

Embedded Best Practices
This project includes the elements of student direction, multiple intelligences, and inquiry-based learning. Examples are used to facilitate best work and scaffolds are provided for lower students. The open-endedness of the projects makes it easily enriched for GATE students, while the artistic and less linguistic in the class will gravitate toward the strong artistic and technological elements. Lastly, the range of social issues that can be covered by these, modern-day Minerva’s, provide a social-emotional piece should that be a desirable exploration.

Lessons and Activities
1. Inquiry lesson on inspiration
2. Teacher-directed lesson on the goddess Minerva
3. Teacher-directed lesson on the California State Seal and related California History
4. Student-directed guided exploration of modern-day Minerva’s (Internet Research)
5. Teacher-directed lesson on developing research questions. Student then constructs RQs.
6. Write (and later present) a community tribute.
7. Using the Internet, plan and design a community event in honor of this person. Pretending to be an event coordinator, present your plan for this event in PowerPoint and/or binder form.
8. Write and record a PSA for your event.
8. Using the California State Seal as a template, create an artistic seal inspired by your modern-day Minerva.

Possible Scaffolds and Enrichments
These activities are easily adjusted to fit learners from grades three to ten. Resources need to be presented at grade level. Length and depth of written assignments are adjusted. Older students can actually research real vendors in the community, present the budget (thus incorporating math as well), and choose an actual venue in the community. Scale drawings can then be constructed (more math) planning the configuration of the event. The PSA can be a simple one-line announcement to a more complex media alert. The medium of the art project can be altered to suit the grade level. Older students can actually put on an event, perhaps on the school yard, in honor of all modern-day Minerva’s. (Culminating around Mother’s Day is a nice touch, with a special mention for these unsung heroes.)

State Standards Addressed
(Ironically, the image you see as you bring up the cde website for state standards in the goddess Minerva on our state seal!) As is evident, students will be reading, writing, speaking, and listening throughout this project. They will be synthesizing information across resources, comparing and contrasting, and using important technology skills for Internet research, recording, and publication. Math is easily incorporated, as explained above, as is history (Rome, California History, government). The incidental learning opportunities are endless, as learners enthusiastically share their heroine’s struggles and accomplishments.

What Will Success Look Like?
When I led this project last year, my sixth and seventh graders were engaged, excited, and enthusiastically sharing what they were learning. The introduction to the unit was so novel that it is as if the whole class did a collective head turn and said, “Huh?” After getting their attention, and presenting the motivating element of choice, the students were happily engaged in all of the activities, especially those involving technology. When it came time to present their work, they were happy to stand before their peers and present their memorized community tribute and art piece; they were proud of their work. This is the first marker of success- teacher observation of student engagement and enthusiasm.

Final products should reflect best work, careful synthesis of ideas, personal voice and passion, and incidental learning. Self, peer, and teacher evaluations may be used on all elements, especially the presentation. The children should be able to reflect on their process, citing how they have been inspired by their person and why. Summative assessments can ascertain the mastery of content in history.

Alternative assessments include the event plan, the seal (including an explanation of the symbolism), and the accuracy of the scale event map.
A Sample of Standards Addressed in the Minerva Project

Third grade

Research and Technology

1.5 Quote or paraphrase information sources, citing them appropriately. 1.6 Locate information in reference texts by using organizational features (e.g., prefaces, appendixes).

1.7 Use various reference materials (e.g., dictionary, thesaurus, card catalog, encyclopedia, online information) as an aid to writing.

History

3.4 Students understand the role of rules and laws in our daily lives and the basic structure of the U.S. government.

2. Discuss the importance of public virtue and the role of citizens, including how to participate in a classroom, in the community, and in civic life.

Fourth grade

Analysis and Evaluation of Oral Media Communication

1.10 Evaluate the role of the media in focusing attention on events and in forming opinions on issues.

History

4.3 Students explain the economic, social, and political life in California from the establishment of the Bear Flag Republic through the Mexican-American War, the Gold Rush, and the granting of statehood.

4.5 Students understand the structures, functions, and powers of the local, state, and federal governments as described in the U.S. Constitution.

Fifth grade

Organization and Delivery of Oral Communication

1.4 Select a focus, organizational structure, and point of view for an oral presentation.

2.7 Communicate values, opinions, or personal insights through an original work of art.
2.3 Demonstrate beginning skill in the manipulation of digital imagery (e.g., computer-generated art, digital photography, or videography).

4.1 Identify how selected principles of design are used in a work of art and how they affect personal responses to and evaluation of the work of art.

**Sixth grade**

Deliver informative presentations: a. Pose relevant questions sufficiently limited in scope to be completely and thoroughly answered. b. Develop the topic with facts, details, examples, and explanations from multiple authoritative sources (e.g., speakers, periodicals, online information).

1.4 Select a focus, an organizational structure, and a point of view, matching the purpose, message, occasion, and vocal modulation to the audience.

6.7 Students analyze the geographic, political, economic, religious, and social structures during the development of Rome.

**Seventh grade**

1.6 Create documents by using word-processing skills and publishing programs; develop simple databases and spreadsheets to manage information and prepare reports.

1.2 Construct and read drawings and models made to scale.

**Eighth grade**

Interpret and evaluate the various ways in which visual image makers (e.g., graphic artists, illustrators, news photographers) communicate information and affect impressions and opinions.

**Ninth grade**

1.7 Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.

2.6 Create a two or three-dimensional work of art that addresses a social issue.
**C11.0 Students understand and apply the fundamentals of planning events for a diverse clientele:**

C11.1 Understand the purposes and target audiences of various venues.
C11.2 Plan special events (e.g., meetings, trade shows, fairs, conferences) based on specific themes, budgets, agendas, space and security needs, and itineraries.
C11.3 Know how to establish business relationships with a variety of locations, food suppliers, and other vendors.
C11.4 Develop schedules, registration tools, event materials, and programs.
C11.5 Know procedures for setting up facilities, equipment, and supplies for a meeting.
C11.6 Know the essential procedures for planning, promoting, publicizing, coordinating, and evaluating a program or event.

**Tenth**

4. Students understand the meaning, implication, and impact of historical events and recognize that events could have taken other directions.

10.4 Know how promotion concepts and strategies, including advertising, sales promotion, public relations, and personal selling, are used to communicate information about products, services, images, and ideas to achieve a desired outcome.
Minerva Project
Due: 3/26

To celebrate Women's History Month, you will be studying a female community contributor and doing a portfolio about that person.

1. Choose a female community hero. You can find ideas at:
   http://www.nwhp.org/resourcecenter/biographycenter.php
   http://www.womensconference.org/minerva-awards/

   When you get to the Minerva Awards page, click on the link “See winners for” for each year. When the different winners come up, click on their name to learn their story.

   Of course, you do not have to limit your search to these sites. When choosing your heroine, keep in mind what the project requirements are. Ask yourself these questions:

   a. Will she be interesting to study?
   b. Have I already learned about her before, or is she new and different?
   c. Do I believe in her cause?

2. Do research about this person. Learn about her life, her cause, how she went about creating change and/or helping others.

3. Generate 10 key questions to ask about this person, questions that can be answered by the research you have done. Write down the questions and the answers.

4. Write a Community Tribute about this person. (See guidelines.)

5. Plan and design a community event to honor this person. (See guidelines.)

6. Write a PSA to announce your community event. (See guidelines.)

7. Complete a seal in honor of this person, one that represents her. (See assignment sheet.)
Community Event

Your assignment is to plan a community event to honor this person, much like Earth Day honors the earth! There should be a nonprofit organization sponsoring the event (and thereby earning the money). The NPO should be obviously linked to this person’s work. You can make up the NPO if you have to. What NPO is associated with this event?

What do you see at a community event? Brainstorm your ideas here:

After we share ideas, add any additional ideas here:

Now you need to show your event plan. How can we do that? Brainstorm your ideas here:

After we share ideas, add any additional ideas here:

Choose 3-4 elements to complete. Which three have you chosen?
Community Tribute

Paragraph 1: Begin with a statement about the outstanding qualities (no more than three) of the person. Describe the contributions of this person.

Paragraph 2: Describe who has benefited from their labors. Be specific. Cite what could be the situation if this person had not helped. Or, cite an anecdote about their work (or both).

Paragraph 3: Restate (but not exactly) their outstanding qualities. Cite how they inspire you.

Example:

[Name] is a sacrificial and empathetic community member. She has steadfastly volunteered her time in many organizations. For example, she worked with troubled teens in the Orange County area, often spending time and resources to help them with many important life lessons, like getting a job and making it through college. She also volunteered for TIPS, a volunteer organization that works with people who have just experienced a violent crime and have no family to turn to. Currently, she is a CASA volunteer, one who advocates for children in the foster care system.

Countless people, mainly children, have benefited from her loving service. [Name] is an excellent listener, nonjudgmental advocate, and a fun distraction! She knows when to push a child and when to take them out for an ice cream. Many people would go without comfort and help if it weren't for her labor of love.

The world needs more compassionate people like [Name]. She truly gives from her heart because she wants to, not as some civic duty. She has said that her life is enriched as she gives to others. Loving and sacrificial, [Name] inspires me.
Mother Teresa

Mother Teresa was known as a selfless thinker and a very responsible person. She had altogether dedicated her life to helping the poorest of the poor and people with HIV/AIDS. Mother Teresa founded the “Missionaries of Charity” in 1950, to help ones in need. The “Missionaries of Charity” helped the poor, sick, orphaned, and dying. Being the founder of “Missionaries of Charity”, she did the same for over 45 years. Mother Teresa won the Noble Peace Prize for being the loving and compassionate woman she was.

If she had not chosen to do what she did, immeasurable amounts of lives would have been lost to the endowment of sickness and destruction. The homeless, orphaned and especially the dying would have suffered all the way to death. When Mother Teresa says “Peace begins with a smile,” she means that tranquility will not happen on its own, you have to be the smile. Now that’s just what she did.

Countries around the world such as India, need another Mother Teresa to guide them through these trouble times. She truthfully gave what she had to the ones that, beyond any question, needed it. Being a woman of a graceful heart and a whole lot of passion, Mother Teresa tells me, we can do it.
Public Service Announcement

1. Choose points to focus on. Don't overload the viewer or listener with too many different messages. List all the possible messages you'd like to get into the public mind, and then decide on the one or two most vital points.

2. Brainstorm. This is also a good time to look at the PSA's that others have done for ideas. Get together others to toss around ideas about ways you can illustrate the main point(s) you've chosen. If possible, ask members of your target group in this process. If you're aiming your PSA at African-American youth, for example, be sure to invite some African-American youth to take part in brainstorming.

3. Check your facts. It's extremely important for your PSA to be accurate. Any facts should be checked and verified before sending the PSA in. Is the information up to date? If there are any demonstrations included in the PSA, are they done clearly and correctly?

4. Identify a "hook". A hook is whatever you use to grab the listener or viewer's attention. How are you going to keep them from changing the channel or leaving the room or letting their attention drift when your PSA comes on? A hook can be something funny, it can be catchy music, it can be a shocking statistic, it can be an emotional appeal -- whatever makes the listener or viewer interested enough to watch or listen to the rest of your PSA. For example, if you're aiming for Hispanic listeners, your hook might be to have your PSA use Tejano or salsa background music.
Sample Media Alert:

Date
Contact Name(s)
Phone(s)

ENJOY THE DAY AND STRENGTHEN YOUR BONES

WHAT: (Insert name of event) is a (insert description of event) to benefit the National Osteoporosis Foundation (NOF) and its efforts to prevent osteoporosis. NOF is the nation's leading voluntary health organization solely focused on osteoporosis. More than 44 million Americans, ages 50 and older, have or are at risk for osteoporosis. Bone health is a concern for men and women at any age. Participants are encouraged to raise money to fight the disease by securing pledges from individual sponsors. A minimum donation of $20 is required.

WHY: (Insert name of event) is a call to action for all generations to take steps to prevent osteoporosis and bring information about osteoporosis prevention, detection and treatment directly to communities.

WHEN: DATE. Registration begins at TIME. Pre-walk warm-up program begins at TIME.

WHERE: SITE.

WHO: SPEAKERS/CELEBRITIES
Artistic Collage Seal

Use the template to make an image of your heroine, including the helmet and the concentric circles. Using symbolism, design and create a seal for your heroine. We learned why certain images were placed in our California Seal. What images would be in her seal? Brainstorm here:

Using as many mediums as possible, complete your project. This project should display time, effort, and creativity. TAKE YOUR TIME. Ask yourself, “How will this work display the work of a 6th/7th grader? How will it be above and beyond the work of a younger student?” Try to resist simply grabbing a marker and coloring it in. What else could you do? Brainstorm other mediums and materials:
# 6+1 Trait Writing Model: Community Tribute

**Teacher Name: [Redacted]**

**Student Name: [Redacted]**

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<td><strong>Word Choice</strong></td>
<td>Writer uses vivid words and phrases that linger or draw pictures in the reader's mind, and the choice and placement of the words seems accurate, natural and not forced.</td>
<td>Writer uses vivid words and phrases that linger or draw pictures in the reader's mind, but occasionally the words are used inaccurately or seem overdone.</td>
<td>Writer uses words that communicate clearly, but the writing lacks variety, punch or flair.</td>
<td>Writer uses a limited vocabulary that does not communicate strongly or capture the reader's interest. Jargon or cliches may be present and detract from the meaning.</td>
</tr>
<tr>
<td><strong>Sentence Length</strong></td>
<td>Every paragraph has sentences that vary in length.</td>
<td>Almost all paragraphs have sentences that vary in length.</td>
<td>Some sentences vary in length.</td>
<td>Sentences rarely vary in length.</td>
</tr>
<tr>
<td><strong>Capitalization &amp; Punctuation</strong></td>
<td>Writer makes no errors in capitalization or punctuation, so the paper is exceptionally easy to read.</td>
<td>Writer makes 1 or 2 errors in capitalization or punctuation, but the paper is still easy to read.</td>
<td>Writer makes a few errors in capitalization and/or punctuation that catch the reader's attention and interrupt the flow.</td>
<td>Writer makes several errors in capitalization and/or punctuation that catch the reader's attention and greatly interrupt the flow.</td>
</tr>
<tr>
<td><strong>Grammar &amp; Spelling</strong></td>
<td>Writer makes no errors in grammar or spelling that distract the reader from the content.</td>
<td>Writer makes 1-2 errors in grammar or spelling that distract the reader from the content.</td>
<td>Writer makes 3-4 errors in grammar or spelling that distract the reader from the content.</td>
<td>Writer makes more than 4 errors in grammar or spelling that distract the reader from the content.</td>
</tr>
<tr>
<td><strong>Adding Personality</strong></td>
<td>The writer seems to be writing from knowledge or experience. The author has taken the ideas and made them &quot;his own.&quot;</td>
<td>The writer seems to be drawing on knowledge or experience, but there is some lack of ownership of the topic.</td>
<td>The writer relates some of his own knowledge or experience, but it adds nothing to the discussion of the topic.</td>
<td>The writer has not tried to transform the information in a personal way. The ideas and the way they are expressed seem to belong to someone else.</td>
</tr>
</tbody>
</table>

Date Created: **Mar 08, 2010 02:15 am (UTC)**
Multimedia Project: Community Event

Teacher Name:  
Student Name:  

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Originality</td>
<td>Product shows a large amount of original thought. Ideas are creative and inventive.</td>
<td>Product shows some original thought. Work shows new ideas and insights.</td>
<td>Uses other people's ideas (giving them credit), but there is little evidence of original thinking.</td>
<td>Uses other people's ideas, but does not give them credit.</td>
</tr>
<tr>
<td>Mechanics</td>
<td>No misspellings or grammatical errors.</td>
<td>Three or fewer misspellings and/or mechanical errors.</td>
<td>Four misspellings and/or grammatical errors.</td>
<td>More than 4 errors in spelling or grammar.</td>
</tr>
<tr>
<td>Requirements</td>
<td>All requirements are met and exceeded.</td>
<td>All requirements are met.</td>
<td>One requirement was not completely met.</td>
<td>More than one requirement was not completely met.</td>
</tr>
<tr>
<td>Attractiveness</td>
<td>Makes excellent use of font, color, graphics, effects, etc. to enhance the presentation.</td>
<td>Makes good use of font, color, graphics, effects, etc. to enhance to presentation.</td>
<td>Makes use of font, color, graphics, effects, etc. but occasionally these detract from the presentation content.</td>
<td>Use of font, color, graphics, effects etc. but these often distract from the presentation content.</td>
</tr>
<tr>
<td>Permissions</td>
<td>All permissions to use graphics &quot;borrowed&quot; from web pages or scanned from books have been requested, received, printed and saved for future reference.</td>
<td>All permissions to use graphics &quot;borrowed&quot; from web pages or scanned from books have been requested and received.</td>
<td>Most permissions to use graphics &quot;borrowed&quot; from web pages or scanned from books have been requested and received.</td>
<td>Permissions were not requested for several graphics &quot;borrowed&quot; from web pages or scanned from books.</td>
</tr>
</tbody>
</table>

Date Created: Mar 08, 2010 02:31 am (UTC)
Research Report: 10 Key Questions

Teacher Name: [Redacted]

Student Name: [Redacted]

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of Information</td>
<td>All questions answered thoroughly.</td>
<td>8-9 questions answered thoroughly.</td>
<td>6-7 questions answered thoroughly.</td>
<td>Less than 6 questions answered thoroughly.</td>
</tr>
<tr>
<td>Quality of Questions</td>
<td>All questions clearly relate to the main topic.</td>
<td>8-9 clearly relate to the main topic.</td>
<td>6-7 clearly relate to the main topic.</td>
<td>Less than 6 clearly relate to the main topic.</td>
</tr>
<tr>
<td>Mechanics</td>
<td>No grammatical, spelling or punctuation errors.</td>
<td>Almost no grammatical, spelling or punctuation errors.</td>
<td>A few grammatical spelling, or punctuation errors.</td>
<td>Many grammatical, spelling, or punctuation errors.</td>
</tr>
<tr>
<td>- Please Choose -</td>
<td>undefined</td>
<td>undefined</td>
<td>undefined</td>
<td>undefined</td>
</tr>
</tbody>
</table>

Date Created: Mar 08, 2010 02:39 am (UTC)
6+1 Trait Writing Model: PSA Announcement

Teacher Name: 
Student Name: 

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grammar &amp; Spelling</strong></td>
<td>Writer makes no errors in grammar or spelling that distract the reader from the content.</td>
<td>Writer makes 1-2 errors in grammar or spelling that distract the reader from the content.</td>
<td>Writer makes 3-4 errors in grammar or spelling that distract the reader from the content.</td>
<td>Writer makes more than 4 errors in grammar or spelling that distract the reader from the content.</td>
</tr>
<tr>
<td>(Conventions)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>Writer makes no errors in capitalization or punctuation, so the paper is exceptionally easy to read.</td>
<td>Writer makes 1 or 2 errors in capitalization or punctuation, but the paper is still easy to read.</td>
<td>Writer makes a few errors in capitalization and/or punctuation that catch the reader's attention and interrupt the flow.</td>
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</tr>
<tr>
<td>(Conventions)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Word Choice</strong></td>
<td>Writer uses vivid words and phrases that linger or draw pictures in the reader's mind, and the choice and placement of the words seems accurate, natural and not forced.</td>
<td>Writer uses vivid words and phrases that linger or draw pictures in the reader's mind, but occasionally the words are used inaccurately or seem overdone.</td>
<td>Writer uses words that communicate clearly, but the writing lacks variety, punch or flair.</td>
<td>Writer uses a limited vocabulary that does not communicate strongly or capture the reader's interest. Jargon or cliches may be present and detract from the meaning.</td>
</tr>
<tr>
<td><strong>Flow &amp; Rhythm</strong></td>
<td>All sentences sound natural and are easy-on-the-ear when read aloud. Each sentence is clear and has an obvious emphasis.</td>
<td>Almost all sentences sound natural and are easy-on-the-ear when read aloud, but 1 or 2 are stiff and awkward or difficult to understand.</td>
<td>Most sentences sound natural and are easy-on-the-ear when read aloud, but several are stiff and awkward or are difficult to understand.</td>
<td>The sentences are difficult to read aloud because they sound awkward, are distractingly repetitive, or difficult to understand.</td>
</tr>
<tr>
<td>(Sentence Fluency)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Nonprofit Organization</strong></td>
<td>A NPO was chosen/created that relates closely to this person's work.</td>
<td>NPO relates somewhat.</td>
<td>NPO relates slightly.</td>
<td>No NPO chosen.</td>
</tr>
<tr>
<td><strong>Hook</strong></td>
<td>PSA grabs attention.</td>
<td>Somewhat grabs attention.</td>
<td>PSA has an introduction, but does not grab attention.</td>
<td>No introduction—simply states details of event.</td>
</tr>
</tbody>
</table>
# Making A Collage: Seal

**Teacher Name:**

**Student Name:**

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Creativity</strong></td>
<td>Several of the graphics or objects used in the collage reflect an exceptional degree of student creativity in their creation and/or display.</td>
<td>One or two of the graphics or objects used in the collage reflect student creativity in their creation and/or display.</td>
<td>One or two graphics or objects were made or customized by the student, but the ideas were typical rather than creative (e.g., apply the emboss filter to a drawing in Photoshop).</td>
<td>The student did not make or customize any of the items on the collage.</td>
</tr>
<tr>
<td><strong>Design</strong></td>
<td>Graphics are trimmed to an appropriate size and interesting shape and are arranged well, some in front and some behind. Care has been taken to balance the pictures across the canvas.</td>
<td>Graphics are trimmed to an appropriate size and interesting shape and are arranged with some items in front and others behind. The canvas, however does not appear balanced.</td>
<td>Graphics have been trimmed to an appropriate size and shape, but the arrangement of items is not very attractive. It appears there was not a lot of planning of the item placement.</td>
<td>Graphics are untrimmed OR of inappropriate size and/or shape. It appears little attention was given to designing the collage.</td>
</tr>
<tr>
<td><strong>Number of Items</strong></td>
<td>The collage includes 10 or more items, each different.</td>
<td>The collage includes 8-9 different items.</td>
<td>The collage includes 6-7 different items.</td>
<td>The collage contains fewer than 6 different items.</td>
</tr>
<tr>
<td><strong>Time and Effort</strong></td>
<td>Class time was used wisely. Much time and effort went into the planning and design of the collage. It is clear the student worked at home as well as at school.</td>
<td>Class time was used wisely. Student could have put in more time and effort at home.</td>
<td>Class time was not always used wisely, but student did do some additional work at home.</td>
<td>Class time was not used wisely and the student put in no additional effort.</td>
</tr>
<tr>
<td><strong>Attention to Theme</strong></td>
<td>The student gives a reasonable explanation of how every item in the collage is related to the assigned theme. For most items, the relationship is clear without explanation.</td>
<td>The student gives a reasonable explanation of how most items in the collage are related to the assigned theme.</td>
<td>The student gives a fairly reasonable explanation of how most items in the collage are related to the assigned theme.</td>
<td>The student’s explanations are weak and illustrate difficulty understanding how to relate items to the assigned theme.</td>
</tr>
</tbody>
</table>
The Minerva Project

Minerva was the goddess of war and wisdom. She is called Athena by the Greeks.

Eureka!
Under the gaze of Minerva, the Roman goddess of wisdom, a miner works near the Sacramento River. A grizzly bear rests at her feet and ships ply the river. The Sierra Nevada mountains rise in the background. Wildlife, agriculture, natural beauty, commerce, and opportunity are all represented on California’s Great Seal.

The state motto, Eureka, sits over the mountains. A Greek word that means “I have found it,” Eureka refers to the discovery of gold in California. The miner, working with a pick, is another reference to the gold that was found in California. A pan and a rocker are also depicted on the seal near the miner. The pan was used to separate the gold from the dirt; just add water. The rocker is a larger and more sophisticated “pan.” It allowed miners to process more dirt and sand faster. At the time the seal was designed, people were coming from all over the world looking to “strike it rich” in the gold fields.

Virtually all of the products coming in and out of California were carried over water routes at the time the seal was designed. Mining supplies, letters from home, luxuries, household items, and gold were all carried on ships. From the eastern United States, ships sailed south around Cape Horn and north to California. The ships, on a representation of the Sacramento River, symbolize the commercial greatness of California.

A sheaf of grain in the foreground represents California’s agricultural wealth. In fact, many who came looking for gold found farming more profitable. Today, California is an agricultural giant among the states. At the feet of Minerva, stands the California grizzly bear. A symbol of strength and independence, the grizzly bear is the Official State Animal and is the prominent feature on the California State Flag.

Grizzly bears were, at one time, common in the state but the mass movement of people into California during the gold rush strained their habitat and caused their numbers to decline sharply. Today there are no wild grizzly bears left in California.

The seal was designed by Major R. S. Garrett of the U.S. Army, and adopted at the Constitutional Convention of 1849 before California became a state in June 1850. At the time of the seal’s adoption, thirty states comprised the United States. Near the upper edge of the seal are 31 stars, anticipating California’s admission. The original 1849 design is depicted to the right.

In 1937 minor changes were made to the seal.
How are state governments run?

Tenth Amendment:
“...all powers not expressly assigned to the federal government are reserved to the states or to the people.”

Executive Branch
Legislative Branch
Judicial Branch
Lesson Plan Title: At Your Service
Lesson Plan Grade Levels: 6, 7, 8, 9, 10
Lesson Plan Subject Areas: Language Arts/Reading (SAGE Category), History/Social Science

Lesson Plan Narrative: The Unit and its Value

At Your Service is a four-week unit (which can be expanded into a year long project) designed to heighten students’ awareness of the importance of community service. Incorporating literature, history, math, and community outreach, students will see the value of the school district’s character traits (kindness, respect, integrity, and perseverance) and how to apply them to their daily lives.

The unit begins with an excerpt from Kent Nerburn’s book Simple Truths titled “On Giving.” After students write answers to a set of questions, they brainstorm ways to show kindness. They come up with such possibilities as mowing the lawn, bringing in the trashcans, and helping with dinner (all without being asked), visiting an elderly person, opening the door for someone. The idea is stressed that we don’t have to have lots of money to make others happy...a simple compliment could make someone feel like a million bucks. At this point I hand out a strip of construction paper which students use to record each kind act they complete in a week’s time. I have them begin their first act of kindness in class by turning to a partner and complimenting him/her. The boys, awkwardly, say things like, “Well, you don’t look as bad as you normally do.” At this point I model how to properly give someone a compliment and also how to receive one. This sets the stage for the rest of the unit as students clearly see the power they possess to create happiness in someone and how quick, inexpensive, and simple it is; in two seconds they can bring joy to someone’s day. After a week, students staple their construction strips together creating a kindness chain which we hang up around the room. Students write in their journals about their experiences, noting others’ reactions to their kind acts and include clippings from newspapers and magazines of people exhibiting similar acts of kindness. (Standard 2.6)

From here, students read Oscar Wilde’s “The Happy Prince,” a fairytale about love and sacrifice wherein a statue of a prince befriends a swallow and together, through their altruism, change peoples’ lives forever. Via their written responses students identify significant literary devices (e.g. metaphor, irony, symbol) that define a writer’s style. Students are also able to demonstrate mastery of the various elements of a story, such as plot, character, and theme. (Standards 1.1, 1.3, and 3.6). To further illustrate one of the themes, I present the class with a plain cardboard box (which secretly has a picture of them in it) and a pretty colorful one, asking them which one they prefer. I explain that although at first the pretty box might be preferable, that really it’s the plain one that is better, because when we open it, we see beauty inside. This illustrates clearly that appearances are not that important; it’s what’s inside that matters.

To incorporate history, I give information about Ben Franklin’s lifelong endeavor to be a morally good person and the virtues he wanted to improve upon. After defining and citing examples of certain character traits (sincerity, humility, justice, frugality...), students compare the values of the 1700’s to today’s. (Standard 3.5) Similar to Franklin, students keep a journal for one week, listing three virtues they would like to work on and what they did to achieve their goals. From here, students read the short story “A Letter to God,” about a farmer whose crops die and writes a letter to God asking for money. The letter is intercepted by the postal workers who try to gather the money and try to pass it off as coming from God. They fall short of the farmer’s request, so the
farmer then writes another letter, telling God to send it to him direct next time as the postal workers are crooks (since he thinks they actually took some of the money out of the total requested rather than actually being the ones who gathered the money). Class discussion revolves around character motive and how, when we perform kind acts for others, that not only might we not be acknowledged, we might even be misunderstood, but that should not prevent us from giving. At this point, students use proper personal letter style to craft their own letters but instead of writing to God, they write to the soldiers in Afghanistan, thanking them for their service and bravery. (Standard 2.5) The writing component of the service projects continues with biographical writing based on Dave Isay’s Storycorps project Listening is an Act of Love. His program gives a voice to ordinary Americans with extraordinary stories, the underdogs in hidden corners of the country. Students conduct an interview of an adult (some years we’ve gone to convalescent homes, but any adult will do) which they then turn into a biographical essay. (Standards 2.1 a, b, and c) Such questions are posed as “What have you learned in life? What are you most proud of? What was the happiest moment of your life? The saddest?” Students not only learn history from firsthand accounts, get experience with interview and listening skills, biographical writing, but are also able to see the value and importance of community outreach, as they see their interviewee uplifted and full of gratitude for their concern and attention. Students see that if we take the time to listen, we’ll find wisdom, wonder, and poetry in the lives and stories of people all around us.

Classes embark on other service projects throughout the year such as a, Manna Food Drive, Coats for the Cause (coat collection for the homeless of Ventura County), Adopt a Family for Thanksgiving. One project created for MyStuffBags, an organization helping homeless children, allows students to use math skills (measuring, geometric dimensions…) to create blankets to fill the children’s bags. Another project, a yearlong homework assignment, is answering questions on Freerice.com. For each correct response about history, vocabulary, and math, students’ bowls get filled up with rice which is sent to countries in Africa. (Standard 1.3)

The unit culminates with a test on the pieces of literature read, various literary techniques used by authors, and the character traits studied. I measure the success of the unit by student assessment done via journal writing, class discussion, personal letters to soldiers, biographical essay, and pieces of rice earned on Freerice.com. The unit promotes the use of higher level thinking skills as students are not only reading, interpreting, and discussing pieces of literature, but are also identifying, defining, analyzing, and utilizing literary elements. The unit addresses the needs of all learners by tapping into creative thinking as well as objective analysis of information.

All in all, the unit is instructional, fun, and one I will continue to use. At Your Service encourages positive student attitudes and behavior as students are paying particular attention to the motivations, values, and sacrifices portrayed in individuals across time. I feel an overwhelming need to do this unit since students are at an age where they are discovering who they are – their character, their values, their dreams. In the words of Kent Nerburn, I want my students to see when they serve others, “The world expands, a moment of goodness is created, and something new comes into being where before there was nothing. You become part of the community of humanity that trusts and shares to reveal the softness of its heart. Once you become a giver, you will never be alone.”

State Frameworks
This unit supports many aspects of the Language Arts framework: reading, writing, group discussion, interdisciplinary connections, and higher order thinking activities. It is aligned with state standards and also supports the Social Studies Framework by encouraging critical-thinking skills.

Students
Students were in the eighth grade and at various academic levels. A total of 180 students participated each year beginning 2003.

Materials
Various pieces of literature, newspapers, construction paper, fleece material, scissors, rulers.
Lesson Plan Title: Hotel Design and Creation Unit
Lesson Plan Grade Levels: 4, 5, 6
Lesson Plan Subject Areas: Mathematics (AMGEN Category)

Lesson Plan Narrative:

The Hotel Design and Creation Unit is truly a new and different math experience for upper elementary students. Through hands on creating and research students not only learn a variety of math and language arts skills but also the real world application of these skills. This unit is centered on real world application of geometry, algebra, and language arts skills. This real world application engages students by giving them a reason to learn. As students progress their way through the unit they find themselves excited to learn more and even more excited to apply their new skills.

As the unit begins students learn and review the necessary basics of ratios, scaled designs, geometry, and measurement. However, these lessons are quick to involve students in hands on activities and applications. For example, during one of the first lesson students are expected to look at a list of hotels and their heights and develop a reasonable ratio to use for the scaled design of their own hotel. As the lessons progress, students begin bringing in materials from home to use in the creation of their hotels. Some students bring boxes and paper towel roles while others may bring in empty soup and coffee cans. As each item comes in, students measure them to determine their scaled size according to their chosen ratio. The Hotel Design and Creation Unit focuses on hands on application from day one to the final presentation.

All students learn and demonstrate their learning differently. The Hotel Design and Creation Unit addresses this and opens the door for all students to enjoy learning and be successful. The project gives auditory learners an opportunity to learn from the teacher as well as their fellow group members. Visual learners are satisfied through the use and creation of pictures, demonstrations, models, handouts and diagrams. The Hotel Design and Creation Unit is a very hands on project that culminates with the creation of a three-dimensional model and PowerPoint presentation. These activities provide an opportunity for kinesthetic learners to be engaged and excited in the process as well. Overall, we are finding the Hotel Design and Creation Unit to be exciting, motivating, and inspirational for all students.

This unit goes beyond simply teaching math. It is a cross-curricular adventure designed to motivate and inspire students in the areas of language arts as well as math. The final PowerPoint Presentation emphasizes numerous Language Arts standards. This is especially true in the Language Arts strand of Listening and Speaking. Because this strand is not emphasized on state testing it can be easily ignored. However, this unit highlights these standards as an important part of the final presentation.

The assessment of The Hotel Design and Creation Unit is essential to its success. Throughout the unit students complete mini-quizzes. The goal of the mini-quizzes is to provide the teacher with quick and easy data regarding how well each student understands the topic. At the end of the unit students will be assessed on their final presentation. The rubric used covers important aspects of the project including correct measurement and geometric and algebraic calculations, a well organized, focused, and coherent verbal and PowerPoint presentation, as well as ability of group members to work together. In addition to the teacher filling out a rubric
for each student, each student will be expected to fill out a rubric as well. This gives the teacher insight into how well students feel they grasped the information as well as how well their group worked together.

While the design of this unit is based on the fifth grade content standards, it does tie closely with the fourth grade and sixth grade standards as well. This is especially true in the Mathematic area of Measurement and Geometry and the Listening and Speaking strand of the Language Arts content standards. This makes the Hotel Design and Creation Unit very adaptable to several grade levels.

Perhaps the most valuable concept of the Hotel Design and Creation Unit is the idea of allowing students to explore how mathematic and language arts skills are routinely applied to the real world. Similarly, group work is used to emphasize the essentials skills needed to work together as a team that is so common in today’s workplace. Through the design and creation of a hotel the students are able to go beyond simply recalling and reciting what they have learned and dive into an educational world of application.
### Hotel Design and Creation Unit Lesson Sequence

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Goal</th>
</tr>
</thead>
</table>
| 1. Graphing and Ordered Pairs             | -The students will be able to locate points on the coordinate plane.  
                                           | -The students will be able to graph points on the coordinate plane.                                                              |
| 2. Scale Drawings and Models              | -The students will be able to determine a drawing’s and models scale size when given a ratio.                                     |
| 3. Scale Drawings and Models 2            | -The students will be able to pick an appropriate ratio to use when given an objects real size and the desired size of a model or drawing (i.e. A building is 200 feet tall. You want to create a model that is 2-5 feet high. What ratio would you use?). |
| 4. Scale Drawing Creation                 | -The students will be able to create a scale drawing of their hotel on the coordinate plane using ordered pairs to note hotel features such as the pool, lobby, restaurant, etc. |
| *This lesson takes more than one session to complete.* |                                                                                                                                 |
| 5. Perimeter, Circumference, and Area     | -The students will be able to find the perimeter, circumference, and area of circles, rectangles, trapezoids, and triangles.       |
| 6. Creating 3-Dimensional Figures         | -The students will be able to create 3-dimensional figures such as cubes, rectangular prisms, triangular prisms, pyramids (triangular, square, pentagonal, or hexagonal), cylinders, and cones. |
| *This lesson takes more than 1 session to complete.* |                                                                                                                                 |
| 7. Surface Area and Volume                | -The students will be able to find the surface area and volume of cubes, rectangular prisms, triangular prisms, pyramids (triangular, square, pentagonal, or hexagonal), cylinders, cones, and spheres. |
| *This lesson takes 2-3 sessions to complete.* |                                                                                                                                 |
| 8. Hotel Creation                         | -The students will be able to create their 3-dimensional scaled hotel models.                                                      |
| *This lesson will take several sessions to complete.* | Amount of time given to students to work is up to each teacher.                                                                  |
| 9. Final PowerPoint Creation              | -The students will be able to create their final PowerPoint presentations.                                                          |
| *This lesson will take several sessions to complete.* | Amount of time given to students to work is up to each teacher.                                                                  |
# Hotel Design and Creation Unit Lesson Sequence

<table>
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<tr>
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| 1. Graphing and Ordered Pairs | -The students will be able to locate points on the coordinate plane.  
- The students will be able to graph points on the coordinate plane. |
| 2. Scale Drawings and Models | -The students will be able to determine a drawing’s and models scale size when given a ratio. |
| 3. Scale Drawings and Models 2 | -The students will be able to pick an appropriate ratio to use when given an objects real size and the desired size of a model or drawing (i.e. A building is 200 feet tall. You want to create a model that is 2-5 feet high. What ratio would you use?). |
| 4. Scale Drawing Creation  
*This lesson takes more than one session to complete. | -The students will be able to create a scale drawing of their hotel on the coordinate plane using ordered pairs to note hotel features such as the pool, lobby, restaurant, etc. |
| 5. Perimeter, Circumference, and Area | -The students will be able to find the perimeter, circumference, and area of circles, rectangles, trapezoids, and triangles. |
| 6. Creating 3-Dimensional Figures  
*This lesson takes more than 1 session to complete. | -The students will be able to create 3-dimensional figures such as cubes, rectangular prisms, triangular prisms, pyramids (triangular, square, pentagonal, or hexagonal), cylinders, and cones. |
| 7. Surface Area and Volume  
*This lesson takes 2-3 sessions to complete. | -The students will be able to find the surface area and volume of cubes, rectangular prisms, triangular prisms, pyramids (triangular, square, pentagonal, or hexagonal), cylinders, cones, and spheres. |
| 8. Hotel Creation  
*This lesson will take several sessions to complete. Amount of time given to students to work is up to each teacher. | -The students will be able to create their 3-dimensional scaled hotel models. |
| 9. Final PowerPoint Creation  
*This lesson will take several sessions to complete. Amount of time given to students to work is up to each teacher. | -The students will be able to create their final PowerPoint presentations. |
## Hotel Design and Creation Unit Final Rubric

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**Total _______/140**
### Lesson Plan Narrative: Dramatic Art Portrayals Bring Mythology to Life

Artists and authors alike use subtleties, contrasts, and other literary techniques to convey their theme and tell their story; thus, art is an effective vehicle to reinforce literary devices used to enhance literary messages and to parallel the classic works of art and literature. My inspiration for this project was my attendance at the “Pageant of the Masters” which is the highlight of the Laguna Beach Festival of Arts. Approximately twenty pieces of art are featured as two- and three-dimensional tableaux displays. It was difficult to distinguish between the beautifully blended live characters and the backdrop of the paintings. The narration accompanying each painting was very interesting enhanced by musical selections played by a live orchestra, but I kept hoping the characters would come alive and give me an in-depth peek at the interaction of the characters as it related to the artist’s message. Midway through the evening I found myself slightly distracted thinking about how I could adapt the pageant to my classroom and how it would especially enhance my freshman Odyssey/mythology unit.

Project Elements: I have divided the project into five segments so that groups of students may share the workload of researching and displaying art then dramatically enacting the related Greek myth:

1. **NARRATION** of the art and artist (plus appropriate background music). Students weave together entertaining and important educational background in addition to art appreciation aspects such as subtleties, contrasts, etc.
2. **STORYTELLING** of the condensed myth relates to the art piece with key points on the selected Greek god/goddess.
3. **ACTORS SHOWN IN THE ART** remain frozen during the narration then come alive to tell their portion of the story in first person.
4. **MEDIA**. Computer-captured picture of selected art is brought and projected on the Promethean Board. Appropriate music is played.
5. **WORKS CITED** lists all sources.

Assessment: The detailed scoring rubric shown below clearly outlines student expectations.

1. Written script of narration & storytelling by actors is accurate, thorough, and grammatically correct using parenthetical citations where appropriate. R3.8 devices are highlighted and labeled. Theme (W2.2) and descriptive sensory details and feelings of art characters (S-2.1) are underlined and labeled. __/30
2. Oral presentation shows effective speaking techniques (e.g., voice, gestures, eye contact) (L1.9) __/15
3. Media/Visual Aid of art is clear and readily accessible. Actors accurately portray art character’s costumes, props, expressions, & frozen positions enhanced by appropriate music. (L1.7/S-2.4) __/15

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**District:** Moorpark Unified School District  
**School:** Moorpark High School  
**Participant(s):** Ginger Brandenburg  

**Lesson Plan Title:** Dramatic Art Portrayals Bring Mythology to Life  
**Lesson Plan Grade Levels:** 5, 6, 7, 8, 9, 10, 11, 12  
**Lesson Plan Subject Areas:** Language Arts/Reading (SAGE Category), Dance, Foreign Language, History/Social Science, Music, Theater, Science (AMGEN Category), Visual Arts  

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32
4. Actor(s) are animated and tell the story in their own words w/o reading script. (S-2.1/2.6) ____ /15

5. Accurate Works Cited follows MLA format; printout(s) are attached. (R-2.2) ____ /15

6. Notes assessing Listening 1.7, 1.9, 1.11, and 1.14. (Groups attach individual notes) ____ /10

The note taking and reflection portion of the assignment provided worthwhile feedback to the students and deepened their understanding and appreciation of the content standards. A few student comments included the following: L 1.7 Effectively used props: The props in Michael’s group looked exactly like their picture and made the story more real; L 1.9 Verbal and non-verbal techniques: Chris’s group used exaggerated movements and told the story in rhyme which captured my attention, especially when acting out the Harpies’ death; L 1.11 Use of mood and tone to portray the setting The language of Bobby’s group conveyed a serious, mythological mood contrasted from Chris’s fun, light group; L 1-14 Aesthetic impact The background music and costumes used by each group contributed immensely to the aesthetic effect. Two additional student comments were especially gratifying: (1) Beauty in art conjures curiosity in audience and props make plays more realistic; poses affect the quality of plays; taking on the role of the character through inflection and body language enhances the mood and tone; art and music create mood. (2) Art captures all aspects of life in a portrait. These words are replicated exactly as written by the students; I couldn’t have better stated the essence of the project as it relates to life’s lessons portrayed in art and literature.

Reflection: The students loved the opportunity to express their creativity; the excitement was palpable in the days leading up to their presentations. Then, we were rewarded with entertaining projects related to mythology, one of their favorite subjects. We also discovered that there is a wealth of art linked to mythology which prompted me to culminate the unit with a day of visual thinking strategies using a PowerPoint lesson that I created with art, dance, and poetry to reinforce the connections between literary analysis, art inferences, and Odyssey character correlations (see appendix). With each piece of art or dance shown, I posed many questions: What do the figures seem to be feeling? How can you tell? Note intriguing details and ambiguities. If you had to give this work of art a title, what would it be? What is the tone of the piece and the artist’s techniques used? What Odyssey characters might resemble the dancers shown? This unit also helped me refine my craft. On occasion, I employed “visual thinking” as a reading strategy. The students enjoyed drawing stick figures and discovered the value of this reading comprehension technique.

Multiple Learning Styles: A wide range of abilities and interests blend as students gravitate to their skills, preferences, and learning styles of writing, acting, technology, art, music, and mythology.

Highly Adaptable and Beneficial: Perusal of the standards demonstrates the synthesis, analysis, and application of all strands of language arts. The reflection portion revealed the value of good speaking skills in all aspects of life. Additionally, positive student feedback regarding the challenge and enjoyment is very pleasing. Students performed eagerly and did not want to let down their team or look foolish. I enthusiastically recommend adapting this project to other literature, as well as history, science, music, and almost all grade levels. After showing my culmination PowerPoint, I wondered if the students grasped the value of connecting art and literature. Bobby’s comment answered my question: “Exploring the subtleties in both revealed lessons in all aspects of life.”
Lesson Plan Narrative: Surfin’ Safari 2010 - 2011

During the course of the student’s freshman year in Intro to Social Studies, students learn about the world we live in. They get a brief introduction of the world on varying topics including topography, geology, oceanography, biological systems, ecology and a general overview of various countries political and economical social systems. What makes the Surfin’ Safari project so unique and different is the students now get to focus on connecting what they learn about the world in general with every other major interdisciplinary subject taught at the high school level. Instead of getting the traditional generic approach to learning using lectures and the textbook, the students get the opportunity to see how enthralling and exciting it is to study Intro to Social Studies and connect what they learned in this class with other knowledge gained from their other courses. For example, why is it important for students to study geography? By completing the Surfin’ Safari adventure the students will not only see and experience the value of studying their planet but understand the value of getting a full and well rounded education. Students will be excited to see a class that offers a unique approach to teaching and expose them to the most important subject they will ever learn in the classroom; the world we live in.

The project truly allows the students personal expression. Although we utilize a textbook as a guideline for class pacing, the structure of the project allows the students to research and experience history that is not simply confined to the typical survey course offered by textbooks. The semester will begin with the students placed into groups. As they develop their groups over the course of the semester, they will compile research and data from the lesson that are being taught on a daily basis in the classroom. Toward the middle of the semester the teams will begin to select their world trip destinations and place their plan into action. They work on putting their research together in a real working model. All the areas of the project incorporate various learning styles and mediums. By the end of the semester the groups will have completed, presented and created a real world working model of a Surfin Safari adventure worthy of the greatest trips ever undertaken.

Step No. 1 – Compiling Research & Data on the “Destination World”

The first part of the assignment after the groups have been assigned is to develop a basic business plan which includes creating a group name, logo development and delegation of responsibilities. The group will then create their dream Surfin’ Safari adventure with a minimum of four locations they must travel to. They will research locations and create a general organization chart related to their trip. Within their organizational development the group must research historical reasons for going to each of their selected locations. They must include the current political status of each location and determine it’s current political climate. Once the students have determined the locations and political environment they must now complete an extensive geographical study of their destinations. After completing the above requirements the student teams will have to plan and create an extensive budget. They will analyze all the necessary trip expenses from airfare, hotels, car rentals, food and all other vital resources to make their trip feasible. After the students have planned the trip, developed and
organized their trip, planned a geographical study, prepared a financial budget they will collaboratively write a research paper. Their final group paper will include all the written information they have compiled including all budget worksheets and the final itinerary.

Step No. 2 – The Multi-Media & Oral Presentations

After the students have completed their research, written report requirements and reflective journals they must complete the project by creating a PowerPoint presentation. The students will deliver an oral presentation to the class regarding their Surfin’ Safari using PowerPoint, visual displays and a trip brochure outlining their major findings and information regarding their trip. In today’s technological driven world, this is the portion of the project that receives the most attention and excitement from the students. The oral presentation now gives the student’s the chance to showcase their entire research and showcase places in the world in which we live.

Step No. 3 – Surfboard Design

In our current educational system there is a definite loss of vocational courses offered. Students rarely get to experience the chance to apply their class work or knowledge to the real world. The teacher then guides the students through a hands on lesson on the art of making a surfboard. Each group learns how surfboards are designed and manufactured. The groups then are assisted in the development of ordering the foam blank, shaping the blank and glassing their surfboard. Before the final surfboard is completed the teams then create and artistic interpretation or image on the surfboard of the actual trip they have planned. The students love seeing the final product of a real working surfboard with artwork that they have created. It is a wonderful way to tie the project together.

Personal Reflection
The beauty of this whole project is in its real world application. By taking the students outside the classroom by using the internet, news and print media to gather information the student then becomes a part of the classroom learning environment. They begin to see destinations in the world not just as places in a textbook but places they might actually want to visit in the future. Just the ability to utilize cross-curricular knowledge and apply it to a semester long project that is something the students see as a real world working model makes this project a huge success with the students. The interdisciplinary focus (listed below) drives this project and gives it unlimited potential for others to expand on or modify to their teaching strengths and weaknesses.

    English: Journal writing, report writing
    Science: Oceanography, geology, topography, …
    Environmental Science: Pollution impact, population studies,…
    Geography: Trip locations, country locations and environments…
    Business: Trip planning, finances and budgeting…
    Social Science: Historical and current political studies of travel locations
    Vocational: Surfboard design
    Math: Surfboard design, currency exchange…
    Fine Arts: Logo design, surfboard design, brochure and media presentations…

Assessment
• teacher driven research checks
• guided rubric for all areas of the project
• reflective journals
• data collecting journal
• group written reports
• oral presentations
• surfboard design
Content Standards
Common Core State Standards for Mathematics
English Language Arts
Social Sciences: 12.6 (1 – 6), 12.7, 12.8
Historical & Social Science Analysis Skills – historical research evidence, point of view
Career and Technical Education/Visual Arts – 1.0, 2.0, 3.0, 4.0
Career Preparation Standards: time management, planning, task allocation skills, presentation skills, organization and collaboration, gathering data and evidence for support
Lesson Plan Narrative: Carrots Grow in Dirt (And other discoveries about our food system)

One of the most thrilling parts of being a teacher is coming up with that one idea that you just know will change your students’ lives. And then, after you put the idea in place, you realize somewhere between convincing your principal to get behind you and coming up with another excuse as to why your still at work at 7:00 at night, there it is, the end result of the lesson that makes the hairs on your arm stand at attention as you realize what your students have learned.

This is what happened to me. A simple solution to getting kids connected with food in a healthy way and making a rather small leap to assisting kids in developing empathy, a greater understanding of the importance of a group of people who are often overlooked in our society and a desire to make change.

It all started when I saw an incredible disconnect between school children and our food system. Our students are so unaware of where food comes from, it’s shocking. These are children that live in an agricultural society, literally surrounded by food growing, and yet, they never thought about where food came from and more importantly how it gets to us. I began simply by taking my students to a working organic farm in Oxnard. Now, we’re not talking a hay ride, pet the pony kind of field trip. No, this was a true farm experience. First, students got up close and personal with a strawberry field that was part of a global food system. They acted out all the steps of how we get food. Then they got out of that luscious sandy loam dirt, picked up a farm basket, and started picking. They picked six different vegetables, and loved them all. At each row they were encouraged to taste what they picked (after the first row, they needed no more encouragement), then they discussed what they were eating, roots, leaves, stems, fruit, or flowers. It was magical to see their eyes light up when they tasted kale (“Hey teacher, how do you spell that?”) for the first time, or when I caught one student secretly picking extra broccoli and putting it in his pocket, (when I asked him about it later he said, “It’s just so good, I wanted more!”), or when one student said, “Carrots grow in dirt, and they are delicious!”.

As the morning went on, the students had these “ah ha” moments when they realized their backs hurt, the sun was getting hot (it was only 65 that day), and that the stinging nettle weeds felt like getting stung by a bee, not that that deterred them. Then like a light bulb appearing above their heads, they got it. People, very hard working people, spend their days picking food so we can eat. Many of them started to realize that their family members worked as part of the food system… some worked in packing plants, in fields, and at grocery stores. The food suddenly became real to them. A connection was made. It seemed to me it was the first step in having a healthy relationship with food.

After we left the field (boxes on heads, hips and in front of bellies), we headed to the farm house where the students ate their lunches and talked with one another about how most of their lunches were part of a global food system and some discovered their lunches had food from the local food system, (thank you Oxnard and Santa Paula farm workers!) A few also discovered their food was not that healthy, and much of it ended up in
the trash, (a couple even tried to barter for oranges!). After lunch students helped turn the compost pile, feed chickens, gather eggs and breathe fresh air. All in all, a great day of learning, experiencing and growing. The rumblings of what was to come continued from the field, to the farm house, onto the bus and spilled into the classroom. Imagine a giant basket of vegetables tumbling down the road with us as we continued through our day. When we returned the extended fun began! We completed our farm journals, completed out K-W-L chart (WOW! We learned a lot!), and got excited about vegetables. When I gave out the weekend homework assignment, you would have thought I handed out tickets to Disneyland. Students went home that weekend with their produce boxes and cooked with their families. The assignment was to make a recipe card of their meal and either draw or take pictures of the final product. It was absolutely priceless on Monday to hear them chattering down the hall telling their friends about all the things they made with their vegetables.

Since then, we have put a lot of thought towards our food system. My students tell me that they see farm workers on their way to school, or when they drive to the next town over and they remember how hard it was to pick vegetables for just an hour. And they always, bring up those stinging nettle weeds, OUCH! They also talk a lot about how the food at school, in their homes, and at their cousin’s house is SOOOOO unhealthy. We now talk a lot about making change; change in our homes, change in our community, and change in our school. My second graders have started a letter writing campaign to convince the cafeteria at our school to have a fresh veggie bar available to all students, and to have a vegetarian option each day, or at least on Mondays, (Yeah! Meatless Mondays!). It’s just awesome to see… the healthy relationship with food, the desire to make change and to be a change maker, the empathy for the worker and the understanding that we are so fortunate to live in an area so rich in agriculture.

What is so wonderful about this all is to see kids taking learning outside the box. From this one trip to the farm we have had countless lessons, discussions and projects. We write and draw about the farm, we write for change, we show appreciation for those who work hard to bring us food, we talk about the long term effects of the global food system versus a local food system, (yes, first and second graders talk about this), we look up different nutritional information for various fruits and vegetables, we analyze food labels (“Are they trying to kill us with all this sugar teacher?!”), we look up new recipes for kale and we sit in awe of all the beautiful agriculture around us. It’s a great feeling to see these future leaders in action… look out America, your future is getting brighter!

Students were assessed through journal writing, classroom discussions, participation in follow-up activities, and a written exam asking the question, “What did you learn that was most interesting?”

State Standards: Science, 1st grade: 2 a-e, 4 a-e, 2nd grade: 2 a-f, 3 c, e, 4 a-g. ELA 1st grade: 1.1, 1.2, 1.3, 2.1, 2.2, 2nd grade: 1.1, 1.2, 2.1, 2.2. Social Science, 1st grade: 1.6, 2nd grade: 2.4.
Wits Rather than Fists, Communicating a Critical Conscience in Society

One of the most impacting contributions teachers can make to students is teaching them how to develop critical thinking skills and use them to interact in civilized ways rather than in violent outbursts in today’s society. Students must become sophisticated consumers amidst media diets to peel back the layers of persuasion, propaganda, gloss, and gritty truth to get at the heart of issues and communicate with wit rather than rage. In our complex world, students must be able to think deeply to discern the truth in a communication maze sometimes shrouded in smoke and mirrors on radio, TV, newspapers, the Internet, and advertising. Engaging students in a unit of study that uses art, an 18th century pamphlet titled “A Modest Proposal,” the novel, Candide, and modern day current events to target social ills and change behaviors yields students who become sophisticated consumers of art, reason, fact, and fiction. Channeling students’ passionate energy into creating responses to their environments through constructive advice for public consumption turns apathetic adolescents into more engaged citizens who express their opinions in creative, nonviolent ways on controversial issues. Students learn that satirists perform an important function in society when they expose errors and absurdities that may not be initially noticed because custom, apathy, and familiarity have blinded people to them, and rather than being a negative force in the world today, they express optimism in the hope that once problems are seen, people will work together constructively to correct them.

For this critical thinking unit, students first study devices of satire and read the novel, Candide, examining the satire in the novel. Then they engage in in-class writing, Combating the Cliffsnotes Syndrome, where they analyze a chapter of the novel and note specific targets of Voltaire’s satire, along with examples of satire such as irony, overstatement, mockery, parody, etc. Next students read “A Modest Proposal” and discuss how Jonathan Swift’s satire exposed economic and moral issues of individuals suffering inequality. For this portion of the unit, students work in groups to identify satire in their reading, analyze paintings to discover satire, and create modern day skits that target social ills needing change using specific satirical devices to get their points across more effectively.

A. For this group satire workshop, students form groups to discuss the art transparency, A Cottage Girl with Dog and Pitcher by Thomas Gainsborough, shown on the Promethean board. They bounce their ideas off each other in this open-ended activity as they “read” the painting as text and link their ideas to their homework reading, sharing their findings. Group members each have specific responsibilities that keep them focused and their artwork discussions reveal that paintings can work as metaphors for pitiful conditions faced in life regardless of the time period.

B. After discussing paintings and the artistic elements that create visual satire, groups identify and link satirical devices used in Swift’s “A Modest Proposal.” Spirited discussion ensues as students share their group ideas with the whole class, correctly arguing that there are several interpretations for each choice as they have found specific examples of mockery, sarcasm, irony, overstatement, understatement, and pathos with accompanying
commentary on a wide range of social criticisms. Once students share their interpretations with their peers, lively discussions continue as they debate about the real meaning of the works. This leads them to link their newly discovered meaning about art and literary texts to their observations about the modern world today as they discuss social ills or conflicts in society.

C. Next students use satire to address a selected social problem through skits presented to the class. Their energy runs high as they consider the wide range of available social ills and devices they use to broaden each other’s understanding of this important mode of social criticism. Skits created have concerned cell phone use, world hunger, violence, gender discrimination, drunk drivers, poverty, apathy, school budget issues, etc. Students are delighted to discover how creative they all are and how effective they are at incorporating satirical devices and identifying those in others’ skits as well as honing in on the social criticism targets. They find that they can address serious issues with wit and humor and not resort to fisticuffs or worse.

D. Additionally, students create political cartoons to target social ills that they would like to see changed. Apathy is nonexistent as students present their satirical cartoons to the class and detail their sophisticated persuasion techniques to the spirited attention of their peers. One student addressed technology and weight gain and had women flying into space on the shuttle as future weight watchers, losing 397 pounds per person stating, “Finally, a new and improved weight loss program.” This opened the door to serious discussion of some harmful practices engaged in by some students and allowed us to share resources available to help students conquer image problems while they openly heard the support of their peers. Other cartoons addressed difficulties in face-to-face communication versus texting or Facebook contacts, common (or uncommon) courtesy, unclean school bathrooms, childhood obesity, outsourcing, consumerism, college admissions processes, etc.

For this satire unit, students approached these tasks in a variety of ways through their own learning styles and intelligences. Their opinions were varied and there were many opportunities for right answers with the open-ended tasks. Working in groups helped them to practice social interactions that led to more effective listening and flexibility as well as a variety of approaches that led to success. For skits, some students focused on tone of voice, attitude, and presentation skills while others created personas that would best exhibit their messages. Incorporating creative thinking in this unit enabled students to go outside the box and have fun while they learned. They thoroughly enjoyed it and asked for repeat performances of creative learning activities; we ended the unit with the understanding that they will continue to embrace the “wits rather than fists” concept using satire and critical thinking as they become more astute information age consumers and creators. This three-week unit can be adapted to core literature through anticipation activities, group interactions, art analysis, essays, skits, speeches, and political cartoons. State Framework: This unit supports many elements of the framework: Use of precise language and sensory details in writing, high level thinking activities, interdisciplinary and group activities, integration of listening, speaking, reading, and writing that guide students through a range of thinking processes. General, CP, GATE, and AP students have benefited from these activities with success for all. As core literature for my seniors, over a two hundred have participated with enthusiasm. Materials and Resources: Candide novels, “A Modest Proposal,” overhead projector or Promethean board, art transparency/s.
GROUP NAMES: ______________________________________________________________________

Learning Goal: Students will understand how specific devices of satire are used to address social ills to enable individuals to positively impact change in society with wits rather than fists.

SATIRE GROUP ACTIVITY:
Groups: Select a 1) leader 2) recorder 3) timer 4) facilitator 5) encourager

A. Transparency discussion:

GROUPS: Compare and contrast A Cottage Girl with Dog and Pitcher (Thomas Gainsborough, 1788) and “A Modest Proposal.”
*Common theme ideas, mood/tone, elements that contribute to the tone.
*What do you think the artist was trying to accomplish in this painting compared to Swift’s purpose in “A Modest Proposal.”

TRADE GROUP ROLES BY SHIFTING TO THE LEFT

C. Identify a modern day social ill/conflict in today’s society and use satire to expose this situation through a brief skit to the class. Incorporate at least 3 devices of satire in your skit, but don’t announce them; let the other groups identify them. Remember the purpose of satire is to change individuals & humor is a good thing. Pay special attention to tone. You are saying something totally outrageous with a straight face, and your attitude toward your subject, characters, and audience is important. The use of irony is imperative and there should be an incongruity between what you say and what is actually meant. You may also use a persona, a mask or created voice such as the unfeeling economist through which Swift sets forth his work. Sample topics: world hunger, terrorist actions, racial profiling, political parties, treatment of men/women, athletes on the take, drunk drivers, cell phone use, etc.

D. Create a political cartoon targeting one social ill incorporating specific devices of satire + creator’s note.

B. Satirical devices used in “A Modest Proposal” —Discuss, identify, and analyze effects of specific devices of satire in “A Modest Proposal.” Also discuss theme ideas and record quotes on one worksheet with all group members’ names next to their specific contributions.

A. Transparency discussion (25 pts.) _____
[thematic links, mood/tone, artist’s purpose on Writing Application Sheet]

B. Satirical devices used on “A Modest Proposal” (25 pts.) _____
[Identify 5+ devices of satire on worksheet]

C. Modern day social ill skit with (3+) satirical devices (25 pts.) _____
[Satirical devices – 10 points; presentation skills: tone, persona, etc. – 10 points]

D. Political cartoon with creator’s note addressing social ill (25 pts.) _____

TOTAL (100 pts.) ______

2.3 Deliver oral responses to literature that demonstrate a comprehensive understanding of the significant ideas of literary works (e.g., makes assertions about the text that are reasonable). 2.5 Recite selections with attention to performance details to achieve clarity, force, and aesthetic effect and to demonstrate an understanding of the meaning. Reading 2.4 Make warranted and reasonable assertions about the author’s arguments by using elements of the text to defend and clarify interpretation.
Lesson Plan Narrative: It’s a Beautiful Day in the Neighborhood:

“Our older buddies are coming! Time to open up our neighborhood!” a student exclaimed, in a firefighter costume running to her handmade fire station. Envision four classrooms transformed into neighborhoods. Student created homes and businesses fill the classroom space. Colorful roads guide visitors’ feet. Neighborhood signs, buildings, commerce, services, and uniforms set the tone as middle school students come to tour the neighborhoods.

The “Bank” is open! Student shoppers browse and purchase goods. A “fire” is put out. The veterinarians teach about their live animals. A restaurant serves pretend food. “Next time, no speeding,” a peace officer hands out a ticket. After two months of research, direct instruction, and student collaboration, grades K-2 presented their neighborhood project to peers and families.

Our school year curriculum opened with “All About Me,” a student-centered study of ourselves. We then transitioned into the explorative investigations of our families and ancestors, culminating into a celebration of learning, the Fall Family Festival. Our previous projects planted the seeds for a student-centered neighborhood project.

“It’s a Beautiful Day in the Neighborhood” is a multiple discipline, student-centered project designed to teach geometry, money math, paragraph writing, and geography by connecting students to their communities in the real world. To begin the project, students created a model of their home as part of their homework. The models were collected in the classroom and our neighborhood project was launched. Students helped craft the project by creating charts describing what they already knew about neighborhoods, what they wanted to know about neighborhoods, and how they wanted to learn about neighborhoods. Our K-2 team collected student input and designed a standards-based project. From these conversations, the teachers learned what the students were most curious about and organized first-hand learning opportunities for them. In our immediate community the children visited the landfill, the police station, the fire station, the Post Office, the library, City Hall, the Farmers’ Market, a local factory, local businesses, and a grocery store. Meanwhile, students received direct instruction in geometry, money math, paragraph writing, and geography in the classroom.

After building this foundation of knowledge, the students incorporated their model homes and what they learned about neighborhoods to construct their own neighborhoods inside the classroom. Students worked in small teams to create the key features of a neighborhood. By running the shops and interacting as consumers and producers the neighborhoods were brought to life at our culminating event.

Our team used a standards based project planning form created by the Buck Institute for Education to integrate multiple subjects and craft a neighborhood project that was adaptable for K-2 classes, or higher. We began with
the end in mind by choosing relevant math, English language arts, and social science California Content Standards to guide our planning.

By documenting their findings in this project the students learned to write clear and coherent sentences and paragraphs that develop a central idea. By exploring geometry in construction and the use of money in a neighborhood’s economy students learned to describe and classify plane and solid geometric shapes, identify the value of coins, show different combinations of coins that equal the same value, solve problems using combinations of coins and bills, and use the decimal notation and the dollar and cent symbols for money. By investigating local neighborhoods and creating model neighborhoods in the classroom students recognized the ways in which they are all part of the same community. They understood the concept of exchange and use of money to purchase goods and services, identified specialized work that people do, located on a simple letter-number grid system the specific locations and geographic features in their neighborhood, and understood the role and interdependence of buyers and sellers.

Since writing, geometry, geography, and money math are at the heart of this project it can be easily adaptable to other grades by increasing the complexity of the academic content.

“What do you know and want to know about neighborhoods?” This question jump-started our student focused project KWL chart and inspired related field trips. “What did you learn about neighborhoods?” was the final KWL assessment question. In between, student success was measured through the use of our “Project Rubrics”. Rubric expectations were communicated to students to support their success. The rubrics were aligned with appropriate standards to challenge student learning and they were designed to include the use of multiple intelligences.

Success was measured in the “Student Self Reflection” activity. Students commonly reflected on their excitement and happiness with their student-created neighborhoods. “Our Neighborhood” books (a collection of maps, paragraph writing, money math, and geometry) were evidence of student learning.

The Neighborhood project has had a positive effect on student behavior, as well as student learning and achievement. This project was exciting for students and created a process for divergent creative thinking. Students had a great deal of control over the final project which resulted in a high degree of motivation. The various neighborhood field trips gave students firsthand experience of what many workers in their neighborhood do on a daily basis. Participating in “role play” of neighborhood workers in the classroom also allowed students to have a better understanding of a functioning. One of the most exciting parts of this project was observing how the cooperative groupings allowed for organic conflict resolution skills to be strengthened.

By the end of project, students had experienced what it meant to build consensus and the importance of including all stakeholders in the decision-making process. The students were very proud of their individual and group projects. The Neighborhood Exhibit allowed students to showcase their final project and share what they learned with their parents and the rest of the school community.
### First-Hand Research

- **Inspiring:** Guest Architecture Presentation
- **Relevant to the Real World:** Farmers’ Market Field Trip
- **Supports Other Areas of Curriculum:** Landfill Field Trip

### Exciting for Students

- **Fire Department Field Trip**

### Non-Textbook Driven

- **Clothing Design**

### Brings a New Point of View

- **Riding public transportation**

### Constructing Neighborhood

- **Encourages divergent/creative thinking**
- **Student-centered**
- **Will work with the range of abilities in the classroom**
### Examples of Neighborhood Buildings

<table>
<thead>
<tr>
<th>The Fire Station</th>
<th>The Post Office</th>
<th>The Public Library</th>
</tr>
</thead>
</table>

### Neighborhood Presentations

### Student Work

<p>| Neighborhood Book | Proud Authors | Paragraph Writing |</p>
<table>
<thead>
<tr>
<th>Working in the Neighborhood</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Withdrawing money from the bank</td>
</tr>
<tr>
<td>2. Visiting the hospital after a fire</td>
</tr>
<tr>
<td>3. Serving it up at the fancy restaurant</td>
</tr>
<tr>
<td>4. Selling food at the market</td>
</tr>
<tr>
<td>5. Writing letters at the Post Office</td>
</tr>
<tr>
<td>6. Map Making</td>
</tr>
</tbody>
</table>
Our Neighborhood Project Rubric

Project Based Learning:
Overview – Project Based Learning (PBL) is experiential, active, process learning based on thematic studies and integrates various subject areas across the curriculum. PBL utilizes multiple intelligences, different learning styles, student interest, and personal choice. Students work to communicate ideas effectively through oral and visual presentation methods and to engage and respond meaningfully to material as an active listener. Students deliver focused, coherent presentations and develop products that convey ideas clearly and relate to the background and interests of the student.

<table>
<thead>
<tr>
<th>Project</th>
<th>With Assistance</th>
<th>Developing</th>
<th>Independent</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Make brief narrative, informational, dramatic, and descriptive presentations using clear and specific vocabulary to communicate. | | | | 1. Presentations  
Students presented their neighborhood projects to peers, adults and older buddies. |
| Participate in related cooperative activities, writing, discussions, art, and field trips. | | | | 2. Field Trips, Building Projects, etc.  
Students worked cooperatively to build neighborhoods, worked individually to build mini-homes and attended connected field trips. |
| Visual and written product demonstrates learning. | | | | 3. Neighborhood Books  
Students wrote paragraphs, narratives, did math research, and compiled it all in books. |

With Assistance = This means your child needs support from an adult in order to be successful. Support and practice at home is very helpful in this area.
Developing = This means your child is beginning to show the ability to do this skill independently but may need adult assistance at times.
Independent = This means your child consistently shows the ability to use this skill and is able to apply the skill in new learning situations.
A portfolio reflection used by students to help them explain why a chosen piece of work is important to them, and to articulate their own academic growth.
Lesson Plan Narrative: Every Drop Counts

“I realized that our country is partly responsible for the scarcity of water, but also that we have the choice helping to fix some of the problems,” said one student. “Yeah… we can change the world,” another responded. ~A conversation heard between two students in my classroom.

Because our quality of life will be significantly influenced by science and technology in the 21st century, it is important for all citizens to be scientifically literate. The ¾ graders and I built a science curriculum around the question, “Why is water important?” I integrated different educational support programs, such as the CA state adopted curriculum FOSS, Project Wet, many independently designed lessons, fieldtrips, and the CA Content Standards.

I used different instructional pedagogies to explore the science of water, such as a inquiry, hands-on active learning, multisensory methods, discussions, investigations, experiments, inquiry, reading, videos, research, and reflection. We observed and recorded water in different states and played being components of the water cycle. We explored concepts such as, global water supply, water purification, water treatment, and water conservation. Students participated in activities to understand water molecules, filtering water, water in our bodies, salt marshes, among many others. One favorite set of experiments, titled, The Water Olympics, involved activities such as, “Pole Vaulting,” “Balance Beam,” and “Sculling,” in which we performed experiments to construct knowledge about cohesion, adhesion, and the surface tension. (Science Standards: Grade 3 - 3C, 3D, 5A, 5B, 5C, 5D, 5E, Grade 4 - 1A, 1E, 5A, 5B, 5C, 6A, 6B, 6C, 6D, 6E, 6F)

To connect water to our daily lives, students documented their personal water use. We collected information over time and analyzed our data creating class graphs and tables in math. We brainstormed strategies to conserve water. We “jig-sawed” a book on “Water Conservation,” and students read expository material, summarizing and note-taking. Partnerships created presentations with visual aids to educate others. (Reading Grade 3 – 3.1, Grade 4 – 2.1 and Listening and Speaking: Grade 3- 2.1, 2.2, Grade 4 - 2.2, 2.4)

To learn what happens when water down the drain, we visited the local waste-water treatment plant, learning how cleaned water is brought back into the local river. Kids studied maps to see our local mountains, rivers, lakes, urban areas, and ocean as part of our local watershed. We invited guest speakers into class, watched a slide show on our watershed, and heard from local surfers. (History-Social Science Grade 3 – 3.1, Mathematics Grade 3 – 3.0, Grade 4 - 1.0)

During two fields trip to the beach students played science games and admired the beauty of our coastline. They learned about how water flows through watersheds collecting trash and depositing it in the ocean. The ocean currents bring it to the North Pacific Gyre, where it becomes “plastic soup” for wildlife. To make a difference, our stewards of the Earth cleaned two beaches, taking note of the effects the trash may have in the oceans.
Students learned about the effects oil spills have on the environment and marine life. Using recent events, such as the oil spill on the Gulf Coast as a platform, we experimented with cleaning water after an oil spill. Children set up “oil spills” in the classroom, using olive oil, feathers, plants, fake hair, sand, and saltwater to mimic a spill. Student’s teams were provided tools (soap, strainer, brushes) to clean “the spill.” They directly saw the impact on the environment. (Listening and Speaking Grade 4 – 1.10)

We explored global water issues as well, felt it’s beauty, and saw the challenges in acquiring clean water. After our field trip to the “Our Thirsty World” exhibit in LA, we had an amazing class discussion. The exhibit featured award winning photography on the precarious state of the world’s fresh water. Children saw our precious most precious resource from environmental, social, political, and cultural perspectives. One child commented, “I realized that our country is partly responsible for the scarcity of water, but also that we have the choice helping to fix some of the problems,” said one student. “Yeah… we can change the world,” another responded.

After numerous science experiments, field trips, and discussions children in Room 7 felt great compassion for developing countries lacking access to clean water, and were especially drawn to places they had learned about in Africa. To make a difference in the world, the children in Room 7 decided to raise money to support a non-profit organization that helps people have access to clean water. (And yes, they came up this idea on their own!) The class voted to contribute to Ryan’s Wells”, a non-profit, started by a young boy. To raise money, the children and I decided to do what we do best… we decided to write! Over the next several weeks students explored water through free-verse poetry. They completed the writing process: brainstorming, drafting, revising, editing, and publishing. All published pieces were assessed using a writing rubric. We combined technology with our writing by digitally recording our poetry, making a class CD of Room 7 Poetry Inspired by Water. The children decorated CD Covers with scenes inspired by water. We hosted a CD RELEASE PARTY at a local Ice Cream Shop, selling our CD’s and sharing information on our learning. All proceeds were donated to the non-profit, “Ryan’s Well’s.” This project may seem like a small drop in the bucket, but kids in Room 7 will tell you…“every drop counts!” (Writing Grade 3 – 1.0, 1.3, 2.2, Grade 4 – 1.0, 1.10)
Author __________________________ Date __________________

Title of Poem __________________________

<table>
<thead>
<tr>
<th>Editing Checklist</th>
<th>Author</th>
<th>Partner</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clarity</strong> – Will this make sense to a stranger? Fixed confusing spots.</td>
<td></td>
<td></td>
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<tr>
<td><strong>Punctuation</strong> –</td>
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<tr>
<td>Ending marks</td>
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<td></td>
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<tr>
<td>Quotations marks</td>
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<td></td>
<td></td>
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<tr>
<td>Capital letters</td>
<td></td>
<td></td>
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<tr>
<td><strong>Line Breaks</strong> – line breaks make sense when you read it</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Spelling</strong> – No-excuse words spelled correctly</td>
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<tr>
<td><strong>Stanzas</strong> – Poem is “paragraphed” for setting change, dialogue, and new character</td>
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<tr>
<td><strong>Other: Choose a writing strategy</strong></td>
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</tbody>
</table>
# WATER PROJECT RUBRIC

Name ________________________

Date ________________________

<table>
<thead>
<tr>
<th></th>
<th>EXCELLENT</th>
<th>GOOD</th>
<th>ADEQUATE</th>
<th>INCOMPLETE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TALK</strong></td>
<td>Entertaining presentation focusing on the big ideas</td>
<td>Insightful talk about big ideas</td>
<td>Useful presentation of big ideas</td>
<td>Presentation is very brief or unfocused</td>
</tr>
<tr>
<td><strong>VISUALS</strong></td>
<td>Poster extends listeners’ knowledge</td>
<td>Poster enrich the presentation</td>
<td>Poster provides minimal information</td>
<td>Poster not used</td>
</tr>
<tr>
<td><strong>RESEARCH</strong></td>
<td>Research used in 2-3 ways and integrated into performance</td>
<td>Research is integrated into the performance</td>
<td>Research used minimally</td>
<td>Research is not used</td>
</tr>
<tr>
<td><strong>OVERALL IMPRESSION</strong></td>
<td>Impressive presentation challenges others to think in new ways</td>
<td>Inviting presentation engages others’ knowledge</td>
<td>Informative presentation enhances visitors’ knowledge</td>
<td>Presentation wasn’t useful</td>
</tr>
</tbody>
</table>

**COMMENTS**
Project Self Evaluation

Project Name: ____________________________

What I love most about my project is ______________________________________________________
                                                                                       ______________________________________________________
                                                                                       ______________________________________________________
                                                                                       ______________________________________________________

Two of the most important things that I learned by exploring the question, “Why is water important?”
1.  ________________________________________________________________________________
                                                                                       ______________________________________________________
                                                                                       ______________________________________________________
                                                                                       ______________________________________________________

2.  ________________________________________________________________________________
                                                                                       ______________________________________________________
                                                                                       ______________________________________________________
                                                                                       ______________________________________________________

If I were to do project again, what I would do different would be to: __________________________
                                                                                       ______________________________________________________
                                                                                       ______________________________________________________
                                                                                       ______________________________________________________

The thing that I learned about ME was: _____________________________________________
                                                                                       ______________________________________________________
                                                                                       ______________________________________________________
                                                                                       ______________________________________________________
Lesson Plan Narrative:

88.8 Talk Radio is an activity that promotes critical analysis, provides oral presentation opportunities and allows students to express their opinions in a safe and respectful environment. When I introduce the activity, I hand out a questionnaire for each student. The questionnaire asks for a “moniker” and interesting facts such as favorite activities, favorite place in the world and future occupation. When I use this questionnaire sheet to introduce them during the talk radio activity, I really play up the student information and make a big deal about “Mr. Adams” calling from Europe. Valuing their future aspirations, supporting their ideas and listening to their personal opinions is a best practice that promotes camaraderie and esprit de corps in the classroom. I also find that making a big deal out of their talk show character helps them feel at ease for the requirements of the activity because many students find oral presentations difficult.

Our first attempt at the Talk Radio activity features a whole class activity and one article from a local newspaper. I find a current article that will interest the students and I model reading the article, making margin notes, developing related level questions, writing a summary and citing the source of the article. Modeling my expectations is a best practice that I use on a daily basis. Modeling and providing clear rubrics promotes confidence and ensures successful participation in the activity. After I model my expectations, I provide immediate feedback to students as we make a practice run with volunteers. During the feedback portion of the introductory activity, I encourage students to offer feedback that is clear in nature and offers a specific comment supported by an example. This kind of feedback is a best practice that also promotes camaraderie in the classroom because we develop an environment that supports the learner, mistakes and all. Students quickly learn that some of the mistakes they make are mistakes that their colleagues could use some help with as well.

As I use the activity throughout the year, I find opportunities to extend the focus across the curriculum. On Talk Radio Fridays, we have a class set of newspapers delivered and we scour the newspaper for articles related to a theme. We have found articles related to the environment, the constitution, as well as entertainment for a talk show on the lighter side. I only receive enough newspapers for one class to thoroughly read and mix up the sections so I take advantage of the e-editions that many newspapers are now offering. One class will use the physical newspaper and the other will use the e-edition on our classroom computers. The e-edition offers a great key word search option so I can introduce the theme and we can brainstorm key words to find related articles. This aspect of the activity incorporates the best practice of teaching across the curriculum and using a variety of resources to implement the activity.

This curriculum supports the following State Standards for 8th Grade: Reading 2.4 and 2.6; Writing 1.2; Written and Oral English Language Conventions 1.1, 1.5, 1.6; Listening and Speaking Strategies 1.2 and 1.7. When I grade the student, I will purposely focus on one particular standard and inform the students what I am looking for. Listening and Speaking Strategies are a difficult standard to master for some students and defining
the standard expectations and modeling the behavior helps them develop as listeners and speakers in the classroom.

Talk Radio is an activity that allows me to teach the students how to read a news article, how to summarize, cite a source and ask relevant questions during a presentation. This activity encompasses so many aspects of the curriculum in an exciting fast paced activity that makes the kids ask – where did the time go? After I collect their introduction material, I focus on providing them with newspapers and e-edition papers on a regular basis. As we develop our skills, I may assign the article and give students a day or two to read and prepare for their assignment. As students gain confidence, I will designate Friday as Talk Show Radio day and students will have 30 minutes to read the newspaper and find their specialty article. I provide handouts that outline their job descriptions and expectations as well as model the activity before we jump in as professional talk show panelists.

After the students read their article, write notes and develop questions - I draw random names and assign our panelists, audience members and callers. The panelists sit in front of the class in four designated chairs. The callers and audience members stay in the general classroom area. I am the moderator and I introduce our panelists in a radio like voice and encourage them to give a brief synopsis of their article. After each panelist has spoken, I “answer” the phone and recognize the callers using the information from the introduction paper. Students love the attention and creative use of this information. The callers are required to ask questions from the first level of thinking and then as the rounds progress, I ask them to use second and third level questions. As we near the end of our call in show time, I might wander into the audience and see if any of the audience members have questions or comments. Of course, certain students find this impromptu kind of activity a little unsettling, so I provide them with an article the day before and allow them time to prepare for one particular job. The activity is wrapped up by a final statement given by each of the panelists and then we decide as a class if we have exhausted our interest in all of the articles. Some students may request that we use a certain article for a Socratic Seminar and we discuss as a class how we might extend the activity. Each student is assessed on their job description and how they develop questions, write summaries and cite the article.
Name______________________________________________________________

Preferred Moniker____________________________________________________

Favorite activities (sports, hobbies, talents...)____________________________
_____________________________________________________________________
_____________________________________________________________________

Pets or favorite animal________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Favorite place in the world____________________________________________
_____________________________________________________________________
_____________________________________________________________________

Future occupation____________________________________________________
_____________________________________________________________________
_____________________________________________________________________

88.8 RADIO
88.8 RADIO

1) Read the article.

2) What question is the author answering?

3) Questions about the “answer”... provide the details for who, what, where, when, why, how, so what?

WHO:

WHAT:

WHERE:

WHEN:

WHY:

HOW:

SO WHAT:

4) Does your original question still fit or does it need to be modified?

5) What is your opinion about this article? Be prepared to state your opinion and support with details and connections.

6) Take a look at your questions. Are they all level one type questions? Develop level two and level three questions – at least one of each. This will help you if you are selected as a panelist or a caller.

7) After the radio show, write a short paragraph summarizing the article. After the summary, write a paragraph about your radio show experience. Did you have enough information as a panelist to answer your callers? Did you have different levels of questions as a caller? What do you need to do differently next time?

8) Provide a citation for your article using MLA format.
Congratulations! You have been selected to appear on the 88.8 Radio Talk Show! This is a tremendous honor and your opinions will be heard by hundreds and thousands of listeners. Well maybe not hundreds or thousands – but at least 30 of your closest colleagues! Your Job – Be prepared. Read the article and know your stuff. Inquisitive callers want to know the facts as well as your opinion.

Step One: You will have the opportunity to share your article by giving a short synopsis. Be prepared with the main ideas – get rid of the fluffy details.

Step Two: The callers will be allowed to call-in after every panelist has shared a synopsis of their article. Be prepared for basic who what where when why how questions at first… but stay on your toes – you may be asked for an opinion or two so be prepared with your notes. Remember, you are the specialist on this highly prestigious radio show!

Step Three: Prepare a final statement for your listeners. Perhaps you will leave them with a question or two?

We are so glad to have you in our audience! On occasion, our stage manager likes to step into the audience to feel the pulse of the common listener. Are you alive and soaking it in? I suggest you take detailed notes and formulate an opinion or level question(s) of your own.

Congratulations! Your call has made it through the hundreds of calls pouring in from around the globe! Your Job – Be prepared. Listen to the panelist and make notes of details that catch your attention. Remember to formulate questions from all three levels of questioning.

Level One Questions: These can be answered by facts contained in the text. Who? What? Where? When?

Level Two Questions: These require some analysis and interpretation on your part. For example: Infer - is there obvious bias on the part of the writer (or the panelist)? OR How does this text relate to you?

Level Three Questions: These questions are intended to provoke a discussion of an idea or issue. This would be a perfect time for that So What? question. Make a prediction or an if/then suppositional statement.
LEVELS OF QUESTIONING – Examples based on Costa’s Levels of Inquiry

LEVEL ONE – Gathering Information (recall, define, identify, describe, recognize details)

Who is the article about?

What is the article about?

Where does the event featured in the article take place?

When did the event take place?

The answers to these questions are explicit and can be found in the text.

LEVEL TWO – Think About the Information (make inferences, relate to, analyze, distinguish, explain, compare, contrast, classify the details)

Why did the event happen? (This could be stated or you may have to make an inference or determine the cause based on information – even personal background knowledge)

How does this compare to another event?

The answers to these questions are implicit (implied though not plainly expressed) and readers must infer answers from what is written in the text.

LEVEL THREE – Applying the Information to New Situations and Making Judgments (conclude, justify, predict, speculate, evaluate, hypothesize, if/then)

If this happened to you (or a family member), how would you respond?

Who was at fault here? Who should be held responsible?

The answers to these questions are based on the reader’s prior knowledge and experience.
Lesson Plan Title: Parents as Partners, An Art Collaborative
Lesson Plan Grade Levels: 1, 2, 3
Lesson Plan Subject Areas: Language Arts/Reading (SAGE Category), Mathematics (AMGEN Category), History/Social Science, Science (AMGEN Category), Visual Arts

Lesson Plan Narrative: Parents as Partners: An Art Collaborative

Every child is an artist. The problem is how to remain an artist once we grow up.
-Pablo Picasso

We could not agree more with Pablo Picasso. Our twenty four second graders express themselves in at least twenty four different ways. They are imaginative, bold, and proud of their creations. We recognize and celebrate the importance of classroom art. However, how do we carve out time in a standards-based curriculum to develop the artist in each child? How do we manage complicated art instruction with enough support for our growing class sizes?

Our creative solution was to invite our parent community to join us in an original art instruction program. This resulted in a year-long undertaking between parents and teachers in a unit now entitled Parents as Partners. In our Parent as Partners program, teachers identify specific core curriculum and art concepts. We then generate a project to extend classroom learning. Our parents then enter the classroom to direct this art project in one of 3 small-group rotations on a bimonthly basis. Parents lead discussions on technique and curriculum correlation. The projects are carefully designed to be hands-on and experiential. Each project is open-ended. This allows us to differentiate instruction for each child’s specific needs, strengths, and areas for improvement.

Self confidence is an integral part of our unit. One way we build confidence in each budding artist is through literature. The book Ish by Peter H. Reynolds demonstrates that creations are best when they are “ish” and not exact replicas of another’s sample or famous creation. Our gallery walks also build confidence. Mid-way through an art session, we stop and walk the room. Students verbalize what they “notice,” such as “I notice that Kayla used an equal amount of black and orange in her Positive/Negative pumpkin” rather than, “I like Kayla’s!” Additionally, our classrooms are adorned with the students’ own masterpieces. They brighten our physical surroundings, validate each child’s effort, and provide colorful curriculum correlations. Parents as Partners is an exciting course of study because it is original unit created in response to our children’s needs. It embraces art, confidence, California state standards, and high expectations.

Although this has become a year-long unit, we have identified a sample of six lessons to create an effective scope and sequence of art technique.

1. Positive/Negative Pumpkin Does a negative space have shape? Students explore the relationship between positive and negative space because one can't exist without the other. Each student creates a black and orange pumpkin applying the concept of negative space.
2. Mosaic Pumpkin Students learn that small pieces of glass, stone, or other materials can be used to create a pattern or picture. We use small pieces of paper to create a sample of what we harvest in our school’s new garden beds, a pumpkin. Students learn about the importance of vines, stems, roots, and seeds.

3. Textile Art- Students discover that art includes using fibers to construct practical or decorative objects. Parents teach the children how to sew a hot pad using a needle and thread. This project correlates to our social studies unit, Life Long Ago and Today. Students discuss how most families acquire their clothing and practical objects in the year 2011 then compare and contrast this to years past.

4. Resist Painting Our young artists use water colors and crayons to create a scene inspired by the book Tops and Bottoms by Janet Stevens. They notice that wax and water do not mix but can be used to create interesting textures.

5. Sculpture: Students explore various examples that have three dimensions: height, width and depth. Students then shape their own art using a hard material (clay). Each sculpture is fired in our kiln and glazed. We correlate this to our unit on geology, rocks, and fossils.

6. Weaving: This textile art uses two separate sets of yarns or threads to form a fabric or cloth. Students replicate this experience with interlaced paper to form a heart for Valentine’s Day.

Three things are measured when assessing: creative expression, communication, and demonstration of beginning skills using the given tools. The teacher and parents use observation and informal authentic assessment.

- Did the final project present a positive-negative space? Can the student describe positive and negative space?
- Does the mosaic represent a pumpkin? Are small pieces used to cover the surface? How well can the student describe the importance of roots, stems, and leaves?
- Is the hot pad decorative and sewn on all four sides? Can the student describe differences between life today and life long ago?
- Was the application of color enough to allow the paint to resist the wax?
- Can the shape stand up like a dinosaur? Was a dinosaur-shaped sculpture molded out of a mound of clay?
- Is there a consistent pattern in the weaving?

The artist should be able to vary each project to demonstrate uniqueness, an understanding of vocabulary, and describe the colors, lines, and feelings presented in the lesson. Parents lead discussions, giving our young artists opportunities to connect their art to the curricular content.

Human beings are artists. Experiencing art has proven to play a vital role in developing students’ capacities for critical thinking, creativity, imagination, and innovation. Marginalized students can successfully express themselves through the Arts whereas they may struggle in doing so through paper and pencil tasks. Multiple learning styles are cultivated through our unit because students use their minds, their hands, and their imaginations. Behavior is improved as a result of experiencing success in alternate ways of expression. When students are motivated to learn, they achieve more and take greater pride in their work. With the assistance of parents, young artists have a greater opportunity to become persistent problem-solvers, confident and able to plan and think creatively.
Standards Addressed

**Visual Arts**

*Artistic Perception*

1.1 Perceive and describe repetition and balance in nature, in the environment, and in works of art.

1.2 Identify the elements of art in objects in nature, the environment, and works of art, emphasizing line, color, shape/form, texture, and space.

*Creative Expression*

2.0 Students apply artistic processes and skills, using a variety of media to communicate meaning and intent in original works of art.

2.1 Demonstrate beginning skill in the use of basic tools and art-making processes, such as printing, crayon rubbings, collage, and stencils.

2.2 Depict the illusion of depth (space) in a work of art, using overlapping shapes, relative size, and placement within the picture.

**Life Sciences**

2. d. Students know there is variation among individuals of one kind within a population.

2. f. Students know flowers and fruits are associated with reproduction in plants.

**Number Sense**

4.0 Students understand that fractions and decimals may refer to parts of a set and parts of a whole

**Measurement and Geometry**

2.0 Students identify and describe the attributes of common figures in the plane and of common objects in space

**Historical and Cultural Context**

2.1 Students differentiate between things that happened long ago and things that happened yesterday.

3.1 Explain how artists use their work to share experiences or communicate ideas

3.2 Recognize and use the vocabulary of art to describe art objects from various cultures and time periods.

1.2 Recognize and use the vocabulary of art to describe art objects from various cultures and time periods.

1.3 Identify and discuss how art is used in events and celebrations in various cultures, past and present, including the use in their own lives.
Earth Science

Earth is made of materials that have distinct properties and provide resources for human activities.

c. Students know that soil is made partly from weathered rock and partly from organic materials and that soils differ in their color, texture, capacity to retain water, and ability to support the growth of many kinds of plants.

d. Students know that fossils provide evidence about the plants and animals that lived long ago and that scientists learn about the past history of Earth by studying fossils.

e. Students know rock, water, plants, and soil provide many resources, including food, fuel, and building materials, that humans use.
Literature Links

*Shape Space*, Cathryn Falwell

*Alexander and the Wind-Up Mouse*, Leo Lionni

*Mole’s Hill*, Lois Ehlert

*The Amazing Book of Shapes*, Lydia Sharman

*Cleopatra*, Diane Stanley and Peter Vennema

*The Quiltmaker’s Gift*, Jeff Brumbeau

*Sam Johnson and the Blue Ribbon Quilt*, Lisa Campbell Ernst

*The Seasons Sewn*, Ann Whitford Paul

*Tops and Bottoms*, Janet Stevens

*Amelia Ellicott’s Garden*, Liliana Stafford and Stephen Michael King

*The Curious Garden*, Peter Brown

*Mama, Do You Love Me?* Barbara M. Joosse

*Nessa’s Story*, Nancy Luenn

*Whale Brother*, Barbara Steiner

*Zorah’s Magic Carpet*, Stefan Czernecki

*Annie and Old One*, Miska Miles

*The enchanted Tapestry*, Robbert D. San Souci
Positive/Negative Pumpkin

Pumpkin Mosaics
Lesson Plan Title: What is Funny? The Art of Comedy and Standing Up for Each Other
Lesson Plan Grade Levels: 6, 7, 8, 9, 10, 11, 12
Lesson Plan Subject Areas: Language Arts/Reading (SAGE Category), History/Social Science, Theater

Lesson Plan Narrative:

“Laughter is the shortest distance between two people.”
Victor Borge

According to the Healthy Kids Survey, nearly 30% of 7th graders in Ventura County report being verbally, physically or sexually harassed by students who are not “joking around.” The survey concludes, “too many of our youth are being bullied in our schools, in the neighborhood, and in cyberspace.” In response to such findings, students and I began exploring what it means to bully, how to prevent bullying, and what to do if one is the target of or witness to bullying. Still, even with anti-bullying curriculum and a common language and awareness about bullying in place, we would see students engaging in bullying behavior. When we would call out the behavior, students would often answer, “I was just kidding,” or “We’re just joking around.” Students thought that they were being “funny.” They didn’t realize that what they sincerely perceived as playing or joking was hurtful and/or quite damaging to their peers. The question arose, “What is funny?” We began to ask, for example, “Is it funny when someone slips on a banana peel? Is the person who slips laughing?” We began to appreciate how complicated humor is and started making the claim that unless everyone is laughing, the joke isn’t funny. With this idea in mind, I developed this five-week unit, “What’s Funny? The Art of Comedy and Standing Up for Each Other.” This curriculum engages students in the exploration of humor. This unit is taught in the technology elective and reaches approximately 250 students annually.

I. Establishing who we are.
The first part of this unit is about facilitating middle schoolers’ understanding that no one is more valuable as a person than anyone else. Middle school students often focus on being popular, good at sports, being “smart,” etc. So, we take multiple intelligences tests and discuss the idea that we all have strengths and weaknesses. We read articles about how to improve in challenging areas. We acknowledge that what we focus on gets stronger. For example, it’s not that, “I’m not good at Math.” What’s probably truer is, “If I want to be better in Math, I need to practice and/or get help.” The students also engage in classroom discussions of what it means to be “cool.” During one of these discussions, a student talked about her brother who has Down’s Syndrome and isn’t seen as “cool” by many people. Then she said, “But if you get to know him, he’s super cool. I love him so much.” It was one of those magical teaching/learning moments. All people have value on this planet. No one is “better” than anyone else.

II. What is bullying?
The second part of this unit is about defining bullying. For this section, I use the anti-bullying curriculum, “Let’s Get Real.” We discuss the definition of bullying, and the students fill out a school climate survey. We discuss the reasons why people are bullied (race, gender, class, popularity, looks, ability, etc.). We watch the powerful video that comes with the curriculum and discuss what to do if we are the targets of or witnesses to bullying. These lessons focus on empathy. This has been an eye-opening part of the curriculum. The students
are often very honest about what is happening on campus. Some students have even admitted to being bullies and have pledged to change their behavior. Students also read American Born Chinese, a high-interest, graphic novel about identity, race, bullying and self-acceptance and love. The final lesson in this segment deals with giving students models of what to say/do when they see bullying happening on campus or in the community.

III. What is funny? The history of American comedy.
In order to address the issue of middle schoolers saying, “We were just joking,” we make the claim that a joke is only funny if EVERYONE is laughing. If any student (or group) is being isolated (by race, gender, ability, sexual orientation, etc), then a joke is not funny. The kids are asked to place jokes/events on a number line continuum between isolating or building community. For example, if someone calls a club on campus “gay,” is that isolating or building community? I claim that the people in that club AND anyone who is gay is being isolated by that comment, therefore it’s not funny.

So what is funny? Students next engage in the study of comedy. I use selections from the PBS documentary “Make ‘Em Laugh: the Funny Business of America” to introduce American comedy. The students watch clips from comedians such as: Charlie Chaplin, Harold Lloyd, the 3 Stooges, Carol Burnett, Lucille Ball, Steve Martin, Richard Pryor, Paul Lynde, Urkel, Jerry Seinfeld, Billy Crystal, Chris Rock, and the Simpsons. We discuss whether the comedians are isolating individuals or building community. We explore different genres of comedy (such as parody, slapstick, and satire), and discuss historical perspectives. And, watching these comedic greats, we laugh a lot together. We build community in our classroom.

IV. What makes me laugh? Powerpoints on comedians.
In the final assignment, students are asked to think about their own thinking (meta-cognition) and what makes them laugh. Each student creates a powerpoint about his/her favorite comedian. They explore whether their comedians isolate or build community and the type of humor employed. The students integrate history, writing, and technology and learn how to create powerpoints, include hyperlinks, and present effectively.

Humor is complicated. And when the students analyze comedians, they see that adults are not always good models of building community. Still, in our classroom we focus on being inclusive, building community, and putting an end to bullying. We are becoming aware of others’ feelings and how our words and actions affect others. At the end of this unit, students reported an increased awareness and sensitivity to bullying and increased confidence in their ability to be allies.

Seeds for future units: media representations of teachers and student/teacher relationships; cyberbullying.
WHAT IS FUNNY?

ISOLATING INDIVIDUALS/GROUPS  BUILDING COMMUNITY
Please cut out the following scenarios and determine the extent to which they isolate or build community. Then glue the boxes where you think they belong on the spectrum of funny. The most isolating scenarios belong on the far left hand side. The most inclusive scenarios belong on the far right hand side of the spectrum. Some scenarios may lie somewhere in between.

One student pulls a chair out from another student, and she falls on the ground. The student is hurt and embarrassed.

Two students tell a group of girls that no one likes them because they read in the library at lunch.

A student does an excellent impression of a teacher. The teacher is impressed at the student’s skill.

A opossum runs in through the computer lab’s open door, grabs a student’s apple and rushes out into the grass to eat it.

A group of “popular” students tell a group of students who go to the resource room for help that they are retarded.

By coincidence, 6 students all sneeze at exactly the same time.

Some students in PE tell a 6th grader that she’s too fat.

An 8th grade boy slaps a girl’s buttocks as she’s walking to class.

A spider lands on the document camera and looks big on the screen. All of the students and the teacher are surprised.

A student is drawing a map on the board and then becomes a little embarrassed when he realizes that the drawing looks like a private part of the male body.

One student calls a club on campus “gay.”

Some students do a wacky dance at the Talent Show.
What is Funny? – Guide to Video Clips

We’re going to watch a clip from the PBS documentary *Make ‘Em Laugh: the Funny Business of America*. Please fill in the following information regarding the clip:

1. Name of Comedian ______________________________________________________

2. Approximate time period of the clip _______________________________________

3. Name of movie/show/performance (if applicable) ___________________________

4. What do you see? _______________________________________________________

5. What did you hear? _____________________________________________________

6. How does this clip make you feel? _______________________________________

7. What type of humor is this comedian employing? How do you know?
   ____________________________________________________

8. Do you think the comedian in this clip is isolating individuals/groups or building community? Why?
   ___________________________________________________

On a scale of 1-10, how much did you enjoy this clip?
# Powerpoint Rubric

<table>
<thead>
<tr>
<th>Category</th>
<th>Points</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Content (See Slides Handout)</strong></td>
<td>3 points</td>
<td>The content is written clearly and concisely with a logical progression of ideas and supporting information. The project includes at least 7 slides. The project gives the audience a clear sense of the main idea.</td>
</tr>
<tr>
<td></td>
<td>2 points</td>
<td>The content is written with a logical progression of ideas and supporting information. The project includes most of the slides required to give a sense of the main idea.</td>
</tr>
<tr>
<td></td>
<td>1 point</td>
<td>The content is vague in conveying a point of view and does not create a strong sense of purpose. Many slides are missing</td>
</tr>
<tr>
<td></td>
<td>0 points</td>
<td>The content lacks a clear point of view and logical sequence of information. Sequencing of ideas is unclear. The project seems unfinished.</td>
</tr>
<tr>
<td><strong>Text</strong></td>
<td>3 points</td>
<td>The fonts are easy-to-read and point size varies appropriately for headings and text. Use of italics, bold, and indentations enhances readability. Text is appropriate in length for the target audience and to the point. The background and colors enhance the readability of text.</td>
</tr>
<tr>
<td></td>
<td>2 points</td>
<td>Sometimes the fonts are easy-to-read, but in a few places the use of fonts, italics, bold, long paragraphs, color or busy background detracts and does not enhance readability.</td>
</tr>
<tr>
<td></td>
<td>1 point</td>
<td>Overall readability is difficult with lengthy paragraphs, too many different fonts, dark or busy background, overuse of bold or lack of appropriate indentations of text.</td>
</tr>
<tr>
<td></td>
<td>0 points</td>
<td>The text is extremely difficult to read with long blocks of text and small point size of fonts, inappropriate contrasting colors, poor use of headings, subheadings, indentations, or bold formatting.</td>
</tr>
<tr>
<td><strong>Layout</strong></td>
<td>3 points</td>
<td>The layout is visually pleasing and contributes to the overall message (tone) with appropriate use of headings, subheadings and white space.</td>
</tr>
<tr>
<td></td>
<td>2 points</td>
<td>The layout uses horizontal and vertical white space appropriately.</td>
</tr>
<tr>
<td></td>
<td>1 point</td>
<td>The layout shows some structure, but appears cluttered and busy or distracting with large gaps of white space or uses a distracting background.</td>
</tr>
<tr>
<td></td>
<td>0 points</td>
<td>The layout is cluttered, confusing, and does not use spacing, headings and subheadings to enhance the readability.</td>
</tr>
<tr>
<td><strong>Citations</strong></td>
<td>3 points</td>
<td>Sources of information are properly cited and the audience can determine the credibility and authority of the information presented. All sources of information are clearly identified and credited using appropriate citation format.</td>
</tr>
<tr>
<td></td>
<td>2 points</td>
<td>Most sources of information use proper citation format, and sources are documented to make it possible to check on the accuracy of information.</td>
</tr>
<tr>
<td></td>
<td>1 point</td>
<td>Sometimes copyright guidelines are followed and some information, photos and graphics do not include proper citation format.</td>
</tr>
<tr>
<td></td>
<td>0 points</td>
<td>No way to check validity of information.</td>
</tr>
<tr>
<td><strong>Graphics, Sound and/or Animation</strong></td>
<td>3 points</td>
<td>The graphics, sound and/or animation assist in presenting an overall theme and enhance understanding of concept, ideas and relationships. Original images are created using proper size and resolution, and all images enhance the content. There is a consistent visual theme.</td>
</tr>
<tr>
<td></td>
<td>2 points</td>
<td>The graphics, sound and/or animation visually depict material and assist the audience in understanding the flow of information or content. Original images are used. Images are proper size, resolution.</td>
</tr>
<tr>
<td></td>
<td>1 point</td>
<td>Some of the graphics, sounds, and/or animations seem unrelated to the topic/theme and do not enhance the overall concepts. Most images are clip art or recycled from the internet. Images are too large/small in size. Images are poorly cropped or the color/resolution is fuzzy.</td>
</tr>
<tr>
<td></td>
<td>0 points</td>
<td>The graphics, sounds, and/or animations are unrelated to the content. Graphics do not enhance understanding of the content, or are distracting decorations that create a busy feeling and detract from the content.</td>
</tr>
<tr>
<td><strong>Writing Mechanics</strong></td>
<td>3 points</td>
<td>The text is written with no errors in grammar, capitalization, punctuation, and spelling.</td>
</tr>
<tr>
<td></td>
<td>2 points</td>
<td>The text is clearly written with little or no editing required for grammar, punctuation, and spelling.</td>
</tr>
<tr>
<td></td>
<td>1 point</td>
<td>Spelling, punctuation, and grammar errors distract or impair readability. (3 or more errors)</td>
</tr>
<tr>
<td></td>
<td>0 points</td>
<td>Errors in spelling, capitalization, punctuation, usage and grammar repeatedly distract the reader and major editing and revision is required. (more than 5 errors)</td>
</tr>
</tbody>
</table>

**TOTAL POINTS** __/18
| Slide 1 - Title Slide | *Title  
*Name of Comedian  
*Your name  
*Picture  
Notes: |
| --- | --- |
| Slide 2 – Brief Biography | *Facts about the person’s life  
*5 bulleted key facts (on which you can elaborate as you present)  
*Ppt is for presentations. Don’t write everything you’re going to say.  
Notes: |
| Slide 3 – Why do you think this comedian is funny? | *Why is this person funny?  
*Type of humor – What type of humor is employed? Defend your choice.  
(parody, slapstick, satire, sarcasm, spoof, surrealism, other?)  
*Is the comedy expected/unexpected or familiar/unfamiliar? Defend your choice.  
Notes: |
| Slide 4 – Examples of jokes | *Give 2 or more examples of the comedian’s jokes/humor.  
*Make appropriate choices!  
*Be sure to find examples of jokes that are community builders.  
*hyperlink  
Notes: |
| Slide 5 – Isolating or building community? | *In general, does this comedian isolate or build community (or both)? How?  
*You’ve already given examples of community building jokes.  
(HINT: We’re looking for funny that builds community.)  
*What are most of this comedian’s jokes/comedic moments about?  
Notes: |
| Slide 6 – Conclusion | *Summarize why you think this comedian is funny.  
*What did you learn?  
Notes: |
| Slide 7 Bibliography- | *Use appropriate formatting (See formatting guide.)  
*References in Word.  
Notes: |
Lesson Plan Title: Walk Like An Egyptian: Live It-Be It
Lesson Plan Grade Levels: 4, 5, 6, 7, 8
Lesson Plan Subject Areas: Language Arts/Reading (SAGE Category), History/Social Science

Lesson Plan Narrative: Walk Like an Egyptian: Live It, Be It

To really understand an ancient civilization a student should try to “live it” and “be it” in as many ways as possible. For that reason the teacher created a research assignment using technology, visual arts, language arts, and social studies that is standards based. Real life skills were emphasized such as researching, synthesizing information, and creating art. Listening and speaking proficiency in the form of presenting their research to an audience was also crucial. Included is a brief description of the assignment, student work examples, and pictures of the presentations.

Sixth grade students who had access to computers and the internet were assigned to research and create Power Point presentations on ancient Egypt. Each ancient Egypt standard was summarized into individual slides. The areas of study included: map and trade routes, food and diet, dress and clothing, religion, communication, government, and customs and beliefs.

Additional Power Point slides displayed a first person narrative (four paragraphs) of what life was like for a young Egyptian. The outline for the narrative included what daily life was like. After writing the narrative, students created a video recording of themselves reading the narrative and uploaded that into a slide. Students also researched and drew their names in hieroglyphics, took pictures of the art, and included that as a slide as well.

The class was able to attend the Mummies of the World Exhibit at the California Science Center and added a Power Point slide on the afterlife beliefs of the ancient Egyptians. The final assignment was for students to create a self-made pop-up book of their favorite facts of the ancient Egyptians. Once the book was constricted, students took pictures of each page. Then they created a Photo Story video of their book and imbedded it into the last slide of their Power Point.

After Creating the Power Point Presentation:
Once the research was complete students presented their work in the school library to classmates, parents, and school site leaders. Students presented in small groups of four to assess each other’s presentations (positive feedback was written on a comment card and uploaded onto a message board on ThinkQuest.org). Each small group chose one student from their group to present his/her presentation to the larger group using a LCD. Finally, each student uploaded their completed project into Thinkquest.org, which allowed others to explore student’s research as well. The teacher was able to assess the work based on a rubric of ten points per slide (a detailed rubric can be provided upon request). Throughout the project the teacher guided students to internet websites that helped them locate accurate information. This also gave the students an opportunity to be creative in how they gathered and shared information.

Student feedback was very positive as all the students expressed their enjoyment of the study of ancient Egypt. The results proved to be outstanding based on the end of unit exam scores. Parent feedback was very positive as
well. Parents expressed how much they enjoyed seeing their children present such academically rich and creative research projects. As the class and I walked out of the library at the end of the presentations, students proudly strutted to the tune of “Walk like an Egyptian” with a thorough understanding of the ancients Egyptians.
Lesson Plan Title: A Climate for Change
Lesson Plan Grade Levels: 3, 4, 5
Lesson Plan Subject Areas: Language Arts/Reading (SAGE Category), History/Social Science, Science (AMGEN Category), Visual Arts

A Climate for Change
“My Own Two Hands,”
I can change the world,
With my own two hands.
I can clean up the Earth,
With my own two hands,
Gonna make it a brighter place,
Gonna save the human race,
But you gotta use,
Use your own two hands

I asked my Third-graders to make a New Year’s resolution, to lower their CARBON FOOTPRINT. I told them I didn’t expect them to take the pledge until they had been educated on the subject. During the next eight weeks, through the State Standards of 1.0 Writing Strategies, 2.0 Reading Comprehension, 3.5 Social Studies-Economy, 3.0 Life Science-Adaptations, 2.0 Art-Creative Expression, students gained a crucial understanding of ecology, economics, and the negative effect Carbon Dioxide emissions is having on GLOBAL WARMING and/or CLIMATE CHANGE.

EDUCATE YOURSELF
Students were put into six cooperative groups and given one guiding question to research on NASA’s CLIMATE/KIDS website. (Note: The “at risk” students were in my group, the other groups were managed by student leaders.) Each group became experts on their particular “Big Question.”
1. What does Climate Change Mean?
2. What’s the Big Deal with Carbon?
3. What is Greenhouse Effect
4. How Do We Know the Climate is the Changing?
5. What is happening To the Ocean?
6. What Can We Do to Help?

NASA’s website WILL NOT allow “cutting and pasting,” so students REALLY had to use their reading skills, writing skills, artistic skills, and computer skills to produce an answer to their question. Each student was GRADED on the products they produced. They were expected to give a simplified answer using Microsoft Word or hand-written and provide further understanding by producing an illustration by using their Googling skills or artistic freehand. A GROUP GRADE was given on the Diagrams they produced cooperatively.
MANAGING the unit was easy! We worked weekly on the unit during our Computer Lab time and daily using DIFFERENTIAL INSTRUCTION, where students who mastered their lessons early were exited from the group to work on their project independently at their seat or on one of our three classroom computers. Furthermore, it was integrated into our daily Social Studies and Science textbook lessons; soon students began to see the relationships between the economy and the ecology of our Nation and Planet.

EDUCATE YOUR CLASSMATES
Group leaders photographed the text, illustrations, and diagrams that their groups produced and I put them together in a DOCUMENTARY film for the class to see (14 min. DVD enclosed). Students were given a copy of the “Big Questions,” and asked to answer them after watching the film. We watched and discussed the film for several days. As students mastered the “Big Questions” they were offered the opportunity to sign a declaration stating, “I promise to be a wiser consumer, and in doing so lower my carbon footprint.” With a little re-teaching, 100% of my class had a proficient understanding of the concept of Climate Change. Each student stated a specific way THEY WOULD CHANGE in their lifestyle to lower their carbon footprint.

EDUCATE YOUR FAMILY
Next, I asked my students to become an Advocate for our Climate Crusade in their family. Their job was to viewed the DOCUMENTARY with their family and clarify any questions they might have. Next, they instructed them on how they could, as a family, make a change in their everyday life to lower their carbon footprint. Then each FAMILY was asked to pledge to MAKE A CHANGE in their lifestyle that would lower their family’s carbon footprint and sign our declaration. “I promise to be a wiser consumer, and in doing so lower my carbon footprint,” poster now has 146 signatures and involves not only the students’ immediate families, but has gone on to involve some of their extended families too!

Think globally, ACT LOCALLY
Before students can think globally, they need to CONNECT LOCALLY to nature. I became a TEACHER-RANGER-TEACHER last summer with the Santa Monica National Park and made my motto for this school year, “NO CHILD LEFT INSIDE!” It may surprise you to find out that while most students can name loads of product symbols, like the NIKE sign, and McDonald’s golden arches, few are able to name even one native animal or plant. After an in-depth study 1st trimester of the Mediterranean Biome, my students took a wild animal of the Santa Monica Mountains and did a multimedia report on it. Next, the National Park funded a fieldtrip for us to visit the Chumash Satwiwa Village, in Newberry Park. There we learned about biodiversity and how the Chumash lived sustainably. NONE of my 3rd grade students had ever visited the National Park before! Now many students attend National Park events regularly with their families because all my students are on the mailing list of the National Park Outdoors Calendar. Furthermore, my whole class has become Jr. Park Rangers and two have earned all three pins. Students have, “unplugged their video games and plugged into nature!”

THINK GLOBALLY, act locally
One of the hardest things students had to develop during this unit was a “worldview.” To get students connected worldwide, I participated in the PEACE CORPS WORLD-WISE SCHOOLS program. We were teamed with a volunteer from Ventura County who is serving in Benin, West Africa as an environmental consultant. She works with adolescents in an environmental club and an English Class. Our classes have been exchanging postcards and letters. We have learned a lot about their Muslim culture, desert climate, and deforestation problem. The climate change has REALLY caused hardships in their lives! Both of our classes are planting an ORGANIC GARDEN at our individual schools. As an international team we have pledged to help the Earth by PLANTING NATIVE TREES in our communities. Our acorns, the potting supplies, and the “know-how” came from an environmentalist in Ojai. Students established a red-worm farm to create our rich soil. To commemorate our African partnership we sent the Benise pins and they sent us patches made of African cloth.
Lesson Plan Narrative: The Civil War Social Network

CCS 8.10.4 and 8.10.5

In middle school, if an assignment is hip, fun and familiar the battle to engage students is half won. The Civil War Social Network (CWSN) is all of that while it gives students practice in historical source review and computer graphic organization as they meet the California Content Standard 8.10.4 (Abraham Lincoln) and 8.10.5 (Jefferson Davis, U.S. Grant and Robert E. Lee).

In pre-assigned groups, each of four students is assigned one of the four leaders from the Civil War. The teacher can do the assignment of leaders, but I like to have students pull names from a basket. They are then to create, on 11” x 17” paper, a mock facebook page for their character. I reserve our computer lab for two days, enough time for students to search and print materials about their character.

The project first requires that students include a profile photo of their leader. They must research the life of the character so that they can choose six friends for their page, who are pictured with their name under the leader’s profile picture.

In the “Info” section of their page, they are required to list the following information about their leader:

Birthday
Hometown
Parents
Married to
Children

Under “Personal” they are to include three quotes from their character.

In a section labeled “Education and Work” they are to list school and universities attended if available. In addition they are to list (in resume fashion, most recent first) employer, position, time period and a description of the kind of work required by the position(s) in the employment section.

Whether on facebook, ipods or smart phones, applications (apps) are lots of fun. On their Civil War Social Network page, students must name and describe five apps that their Civil War leader might use. The description must describe how the person would use the application in conjunction with their involvement in the Civil War. Some are obvious: Google Earth, for example, could be used for mapping battle plans. But last year, one student made a very convincing argument for using FarmVille to plan crop and livestock use as food for the troops.
The most difficult requirement is the News Feed. Students must use their six friends (and their leader) in a conversation about a specific battle. They must include at least ten feeds with the picture and name of the person “posting” the statement. Two of the posts must include a picture related to the battle (map, portrait of an officer, landscape scene for example). The post must be appropriate to the friend making it; Mrs. Lee and James Longstreet, for example, might have very different perspectives on the Battle of Gettysburg.

Although student get points for including all the elements from the rubric, the most points come from the News Feed section. Student posts much indicate that the student has, in fact, researched a battle which will be reflected in the content of the news feeds themselves.

On the day that the CWSN pages are due, students meet with their groups for the final element. They are to create a ten-question, facebook-style quiz using their four characters. They are allowed to choose their theme. They develop the questions together as a group with each member of the group an expert on one leader. From Twilight to football teams, the themes for the quizzes are often very clever, and the answer choices based on the characters show impressive insight.

The Civil War Social Network can be done in class, at home, or a combination of both. Because I don’t know which families do not have access to a home computer, I make sure to provide computer time at school so students without home computers are not at a disadvantage. 11” x 17” paper is provided as well as access in the classroom to colored pencils, scissors and glue sticks. Students may use home computers to print out elements of their page, but they may do most of the work by hand if they wish.

The biggest challenge? Keeping them from making REAL, online pages for their leader.
District: Pleasant Valley School District  
School: Los Primeros School of Sciences and Arts  
Participant(s): Debbie Moore

Lesson Plan Title: Solar S'mores  
Lesson Plan Grade Levels: 3, 4, 5, 6, 7  
Lesson Plan Subject Areas: Science (AMGEN Category)

**Lesson Plan Narrative:** Solar S’Mores

Exploring alternate sources of energy expands thinking skills and encourages students to be proactive in the area of science and energy as it brings to light community awareness that fossil fuels have a finite lifespan. In the project, Solar S’Mores, students explore the world of solar energy and bring it into their own backyard to power student made solar ovens.

As part of the 4th grade state standards in science, we study forms of energy and discuss their use in our daily lives. With that discussion came the question, if energy making resources are finite, what will happen when they run out? How are the fuels and energy methods currently in use affecting our environment? What changes need to be made and why? Is clean energy (hydroelectric, wind, or solar power) cost effective and will it preserve the environment for future generations?

This created a lively discussion among students regarding the pros and cons of traditional methods of securing energy. We compared and contrasted resources necessary for heating homes, cooking, powering machinery, and fueling transportation along with recent environmental tragedies such as nuclear contamination and oil spills. Students debated the benefits of nuclear power, natural gas, electricity, batteries, coal, oil, wind, and solar power. This type of thinking and discussion is relevant to the real world and allows children to apply critical thinking skills.

Solar power was the energy source we chose to expand our scientific horizons with an intense three week unit of study. We would test its ease and value as a viable energy alternative to traditional methods. Students were excited to research ways to harness the sun’s energy, learn how to direct it, and measure its energy force. The vocabulary of the discipline was introduced in a song written especially for this project to the tune of - “You Are My Sunshine”. Words necessary to the scientific vocabulary such as alternative energy, heat, ambient temperature, greenhouse effect, absorption, reflectors, and insulation were easy to learn and remember in this catchy tune (which is attached at the end of the grant).

The Solar S’Mores project progressed through the scientific method model. A hypothesis was formed. By allowing 66 fourth grade students to construct solar ovens out of pizza boxes, we could test it. All students actively participated in this kinesthetic activity as they measured, cut, and assembled their personal solar ovens over a two day period. Assessments were ongoing as each box was checked for a solar window covered with plastic for the greenhouse effect and a reflector of foil to direct the sun’s rays into the box. Each also had an insulator and a black absorption sheet to prevent the heat from transferring out through the bottom of the box onto the ground. Students ran a test to check temperatures at five minute intervals. They paired up in small groups to assist each other and gather data. This allowed them time for self reflections and assessment. Glitches occurred…the boxes were light… the wind caught the reflectors and flipped some of the boxes over. The school thermometers maxed out at 130 degrees F. or 100 C., the LED thermometers couldn’t be seen in direct sunlight.
in the boxes, the display turned black. Students came together in small groups after the dry run to brainstorm remedies for the problems.

On our final day of the project students got their supplies of marshmallows, chocolate, and graham crackers and put together their S’mores. They closed their boxes and proceeded to the playground to decide on the best solar location for the project.

Students used their higher level thinking skills for a location of their groups’ solar ovens. Which would work best: asphalt, concrete sidewalk, the top of the ball equipment shed? What about reflection off the walls, or the wind? Each team took these elements and conditions into consideration and chose a location for their boxes. As the temperatures in the boxes increased, students viewed a chemical changes in the marshmallows as they cooked, and physical change in the chocolate as it melted.

Although science was the chief curricular area in our project, embedded within was mathematics as charts and tables were created to record and compare temperatures in Celsius and Fahrenheit over specific intervals of time. Technology was introduced with the use of a laser thermometer to measure temperatures over 130 degrees F. which occurred… much to our surprise! Singing helped us with the vocabulary, and art was an added bonus when we took out our S’mores and saw that it had left a negative image on the black absorption paper. To assess the project students wrote a summary of the experiment beginning with their hypotheses, experiment, data collection, results, and conclusion. As a multiple measure, we also took a science test with questions related to the solar oven experiment.

The value of this project was evident as it sparked student excitement and allowed everyone to participate regardless of their academic level. By working in groups, students had the benefit of each other’s input. They helped classmates and cross-checked temperatures for accuracy. At the end of the experiment, everyone was eager to eat their product! All students were able to be successful and make conclusions about solar energy. As an extension, many students recreated the experiment at home demonstrating their understanding and expansion of the solar concept. Students were inspired to try to fry eggs, make cheese tortillas, try bacon, and a variety of other food items. One student used her oven to make art negative image leaf prints. Another got her temperature over 150 degrees by putting her oven on top of her black car’s hood at noon.

Solar S’Mores instructional value is vast. Inspiring students to think of the future and be aware of alternative energies as well as being concerned about the planet makes for responsible citizens. By hands on science exploration, we are encouraging children to think outside the box and strive to for new energy solutions.
Solar Energy Song
To the tune of: You Are My Sunshine

You are my sunshine,
my solar sunshine
alternative power
in the form of **heat**

Using reflectors
Black insulators
Greenhouse effect using solar
can’t be **beat**

Reflecting sun rays
To the black paper
Absorbs the heat
and makes it **stay**

The insulator
won’t let it transfer
The degrees climb
the rest of the **day**

Temperature’s rising,
My chocolates melting
The marshmallow
starts to **cook**

I cannot wait to
eat my project
Solar energy was all
that it **took**
Solar Science Test

Write the letter of the definition on the blank next to the vocabulary word.

1. solar energy: ______   A. a material that prevents the transfer of heat or electricity
2. physical change ______   B. the temperature of free flowing air
3. radiant heat ______   C. energy powered by the sun’s heat rays
4. greenhouse effect ______   D. can direct or cast back the sun’s rays
5. absorb ______   E. a change in matter that can be returned to its original form
6. reflector ______   F. heat that radiates from an element that warms objects
7. ambient temperature ______   G. to soak or hold
8. insulator ______   H. sun rays penetrating into a closed area that traps air. The air will be heated and cannot escape

9. Name two types of energy that are used to make things work in your home.
10. What is meant by the phrase; Go green?
11. Why did the temperature continue to rise in the box over time?
12. Explain why solar energy would be a better source of alternative energy for people living in California rather than those living in Alaska?

Explain the purpose of each element in your solar box:

13. Reflector:
14. Insulator
15. Black paper:
16. Solar window:
17. Give an example of the greenhouse effect:

18. If you want to be cool on a sunny day, what color shirt should you wear and why?

Bonus Question:

19. Why should we explore alternative forms of energy?
Solar Energy Song
To the tune of: You Are My Sunshine

You are my sunshine,
my solar sunshine
alternative power
in the form of heat

Using reflectors
Black insulators
Greenhouse effect using solar
can’t be beat

Reflecting sun rays
To the black paper
Absorbs the heat
and makes it stay

The insulator
won’t let it transfer
The degrees climb
the rest of the day

Temperature’s rising,
My chocolates melting
The marshmallow
starts to cook

I cannot wait to
eat my project
Solar energy was all
that it took
Lesson Plan Title: A Spark for Life
Lesson Plan Grade Levels: 2, 3, 4
Lesson Plan Subject Areas: Language Arts/Reading (SAGE Category), History/Social Science

Lesson Plan Narrative:

"Twenty years from now you will be more disappointed by the things that you didn't do than by the ones you did do. So throw off the bowlines. Sail away from the safe harbor. Catch the trade winds in your sails. Explore. Dream. Discover."

~ Mark Twain

Right before summer last year, our staff decided that for our next school year, we would focus our studies on the theme of “Spark”. A spark is a passion in life that creates excitement and enthusiasm within oneself. As our team began to think of ways to have our students explore their own sparks, we realized we too needed to find our sparks. After much thought, one teacher decided to explore her love of music through piano and dance, one teacher decided to cultivate her spark for running by training for a half marathon, and one teacher focused her love of reading by joining a book club. With our own sparks materializing in our lives during the summer we were ready to inspire our students to find their own.

As the school year began, we each explained our spark to our students and how we are so excited by our spark that no one had to make us do it. In fact, we couldn’t wait to do it each day. Students then brainstormed possible sparks they might have (art, writing, soccer, cooking, ice skating, etc.). Students then narrowed their sparks down to one they wanted to focus on and wrote paragraphs on a memory they held in their hearts of a time they did that spark.

Now that students were becoming more fluid during discussions of their sparks in class, they next would be interviewing a family member on their spark to encourage the same types of conversations at home. To prepare them for the interview a reporter from the Ventura County Star Newspaper came to teach us about interviewing. She discussed important interviewing tips such as asking open-ended questions and asking follow-up questions. Then students wrote possible interview questions to ask a family member or friend about their spark to make a home-school connection.

With knowledge of their own sparks, we wanted them to see how a spark could transform their lives, so we held a “Spark Day”. Spark Day was a day where students could see sparks in action in others’ lives. The day started with all three classes watching a slide show by Prana, a man who rode his bike from Washington State to Tierra del Fuego (the tip of South America) to spread his message and spark of peace. Then students broke into smaller groups and chose other presentations on sparks they wanted to hear. One parent had a spark for makeup and became a makeup artist for plays. She showed the kids how to apply fake noises and warts. One parent shared how he honed his spark for music and learned how to record music. He then created beats on his computer and kids rapped silly songs they created about ice cream or recess into his microphone. Lastly, we had a community member who had a spark for dogs who then became a K-9 handler at his police station. They watched the dog obey commands and chase down mock criminals.
After seeing all the many different directions a spark can take you, from Tierra del Fuego to the police department, students then created a SMART goal (Specific, Measureable, Attainable, Resources, Timely) for a spark they wanted to pursue and submitted their goal to their teacher for approval. Some students chose to cook a new recipe each day; others chose to take their spark of math and create a mock rollercoaster on the computer and then built it. After they chose the goal for their spark, students were assigned a day to share their passion with peers in the format of small group centers. Students prepared for their center by completing a worksheet that asked for a step-by-step list of what the students in their center would be doing. Next the worksheet asked for what materials would be used, what strategies the student would use if others were not paying attention, and what the student would do if students completed their center early. Lastly, students attached a work sample of what students would be completing in their center and waited for teacher approval.

For two weeks, students engaged others in a taste of their spark. So much was learned about everyone’s passions outside of school and the hidden talents that we didn’t know existed (BMX biker, talented dancers, amazing artists!)

Throughout the process, our team checked in at grade level meetings to discuss the progress we were seeing in our classes and the ways students were truly connecting to each other. At the start of the year students that seemed timid were now the talk of the class once others realized he/she did tae kwon do too or was really good at tap dancing. Students between the classes were even talking to each other about their sparks and what they were doing to pursue their sparks at home. “Spark” became a common language between our three classes. The study of our sparks then led us into our next study of people who took their sparks to the next level: biographies! Students were so versed on what they loved to do in life, they picked someone to study who also had a similar spark. For example, one naturalist student picked Rachel Carson and a basketball player chose Michael Jordan.

After the completion of our spark project, students were more in touch with their inner passions and learned that they can keep their spark throughout their life. Some people can make a career out of their spark and others do it just for themselves. But no matter what the future holds, students learned to never stop pursuing their passions because it feeds your soul and it just might ignite a spark in someone else.
# STUDENT SPARK CENTER RUBRIC

**Name __________________________**

**Date __________________________**

<table>
<thead>
<tr>
<th></th>
<th>EXCELLENT</th>
<th>GOOD</th>
<th>ADEQUATE</th>
<th>INCOMPLETE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TALK</strong></td>
<td>Entertaining presentation focusing on the big ideas of center</td>
<td>Insightful talk about big ideas of center</td>
<td>Presented some big ideas of center</td>
<td>Presentation is very brief or unfocused</td>
</tr>
<tr>
<td><strong>VISUALS</strong></td>
<td>Has useful and informative visual displays that are utilized during center</td>
<td>Has an useful display but is not a resource for the center</td>
<td>Visuals have little information</td>
<td>No visuals</td>
</tr>
<tr>
<td><strong>OVERALL IMPRESSION</strong></td>
<td>Impressive center that engages all students and is led independently.</td>
<td>Fun and creative center that engaged most students.</td>
<td>Most students were unengaged because of disorganization, but idea was creative.</td>
<td>Students are unengaged and center is not appealing.</td>
</tr>
</tbody>
</table>

**COMMENTS**
FIRST STUDENTS EXPERIENCED ADULT-LED SPARK CENTERS

Adult sharing her spark of world travel and different cultures

Adult sharing his spark of music by recording silly songs with the kids

Police Officer sharing his spark for dogs. Students watch the discipline and obedience the dog has for the officer.

THEN STUDENTS LED THEIR SPARK CENTERS

Adult sharing her love of stage make-up

Student- Led center on her spark of singing
Student-Led center with parent support on his spark of tae kwon do

Student-Led center on her spark of tap dancing

Student-Led center on her spark of fashion design.

Student-Led center on her spark of soccer. She’s coaching this student how to properly kick a ball

Student-Led center on his spark of comic strips
Cultivating My Spark Proposal

My Spark is: __________________________________________

Make your spark SMART!

Follow these steps to help you create a SMART goal for your spark. At the bottom you’ll put it all together in one SMART goal.

Specific:
Each week I will engage in at least one activity to cultivate my spark. Possible specific activities:

• __________________________________________

• __________________________________________

• __________________________________________

• __________________________________________

• __________________________________________

• __________________________________________
Measureable:
I will measure the progress toward my spark goal by (journal, photos, drawings, deadlines, etc.):

______________________________

______________________________

______________________________

Achievable (realistic):
I can achieve my goal in 2 months.
☐ Place a check mark in the box if you have checked in with yourself and your parents to confirm your goal is achievable.

Resources:
I will use the following resources (objects and people) to support the cultivation of my spark:

• ____________________________

• ____________________________

• ____________________________

• ____________________________

• ____________________________
Timely:
I will complete the following in 2 months to cultivate my spark:

________________________________________________________________________

________________________________________________________________________

Now put it all together:
Example of a SMART spark goal:
I will take piano lessons every Monday for an hour and practice 3 additional days a week in between practices. Each month I will learn 2 new songs and will play them for my friends and family. I will use my piano teacher, the internet, and piano books as resources so that at the end of two months I can perform 4 pieces of music for my classmates that speak to me.

My SMART goal for my spark is:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
“A Spark for Life” Content Standards

Activity: Writing multi-paragraph narrative about a memory they had doing their spark.

Grade 2

Writing Applications
2.1 Write brief narratives based on their experiences:
   a. Move through a logical sequence of events.
   b. Describe the setting, characters, objects, and events in detail.

Grade 3

Writing Applications
2.2 Write descriptions that use concrete sensory details to present and support unified impressions of people, places, things, or experiences.

Grade 4

Writing Strategies
1.2 Create multiple-paragraph

Activity: Students interviewed a parent on his/her spark using the skills taught and took notes. Also, students listened to adults share about their spark during Spark Day. Lastly, students created, prepared, organized, and facilitated their own 30-minute center for a small group of students teaching how to do their own spark.

Grade 2

Listening and Speaking Strategies
1.1 Determine the purpose or purposes of listening (e.g., to obtain information, to solve problems, for enjoyment).
1.2 Ask for clarification and explanation of stories and ideas.
1.3 Paraphrase information that has been shared orally by others.

Speaking Applications
2.2 Report on a topic with facts and details, drawing from several sources of information.

Grade 3

Listening and Speaking Strategies
1.1 Retell, paraphrase, and explain what has been said by a speaker
1.8 Clarify and enhance oral presentations through the use of appropriate props (e.g., objects, pictures, charts).

Grade 4

Listening and Speaking Strategies
1.1 Ask thoughtful questions and respond to relevant questions with appropriate elaboration in oral settings.
1.2 Summarize major ideas and supporting evidence presented in spoken messages and formal presentations.
1.5 Present effective introductions and conclusions that guide and inform the listener’s understanding of important ideas and evidence.

**Activity:** Studying/researching a famous person whose spark made an impact on his/her life and others and then presenting the information to parents in a museum night.

**Grade 2**

**People Who Make a Difference**

2.5 Students understand the importance of individual action and character and explain how heroes from long ago and the recent past have made a difference in others’ lives (e.g., from biographies of Abraham Lincoln, Louis Pasteur, Sitting Bull, George Washington Carver, Marie Curie, Albert Einstein, Golda Meir, Jackie Robinson, Sally Ride).

*Depending on what spark each student had some standards addressed were:
- Math standards (For example, the student who used geometry (a 3rd and 4th grade standard) to design and build a rollercoaster).
- Physical Education standards (soccer drills, basketball skills, tap dancing, tae kwon do moves)
- Art standards (students with a spark for art used different mediums such as fabric and oil pastels in their art centers)
- Music standards (For example, one student’s center taught students to sing in rounds).
Lesson Plan Narrative:

The goal of this project is to provide an opportunity for students to personally collect samples of local rockfish that will be used in a 6 week unit on DNA bar-coding. Samples will be collected on a fishing boat by students, while being supervised by marine biologist experts. Students will learn how to identify fish species, take and store tissue samples for future DNA testing. Upon the completion of the sample collection, students will engage in a 6 week unit on DNA bar-coding. During this time, students will isolate DNA from the tissue sample, amplify the DNA using the Polymerase Chain Reaction and then sequence the DNA. The final sequence will be submitted to the national Barcode of Life Database (BOLD).

To rapidly and accurately monitor the diversity of life in the world's oceans, scientists around the globe are now working on a large-scale project to generate and catalog short DNA sequences or barcodes for all species of marine microbes, plants, and animals. In this unit, students will apply many of the core techniques associated with recombinant DNA technology to participate in this worldwide effort and to help build a database to store and retrieve these sequences. During the laboratory component of the unit, students will isolate genomic DNA from local rockfish species, use PCR (polymerase chain reaction) to copy a segment of the cytochrome c oxidase subunit 1 gene (COX-1) from each rockfish specimen, subclone the COX-1 fragments into a plasmid vector, obtain the corresponding nucleotide sequences of the DNA fragments, and analyze the sequences with bioinformatics tools available through both the Barcode of Life Data Systems (BOLD) and the National Center for Biotechnology Information (NCBI).

High school students in the Biotechnology and AP Biology course will complete a 6 week unit on DNA Bar-coding of Rockfish. Students will need to collect Rockfish samples by fishing in particular regions of the Channel Islands Coast prior to this. Aboard the ship, students will be guided by marine biology experts from the Coastal Marine Biolabs. Students will learn to identify Rockfish, take tissue samples and properly store samples for future testing. Following the sample collection, students will perform several labs with the samples and learn extensive background information of the biological concepts and techniques of DNA fingerprinting. This program will bring advanced, locally-relevant, cutting-edge, and engaging applications of science, technology, engineering and math (STEM) into the classroom and laboratory. The unit content will focus on the role of genetics in understanding marine biodiversity, and on widely-applied recombinant DNA techniques and bioinformatics tools to generate and analyze genetic fingerprints or barcodes from local marine fishes. Students will be submitted and published as part of the national DNA bar-coding project. Based on the success of the Barcoding Life's Matrix course at Coastal Marine Biolabs (CMB) and my previous years’ experience working on this project, I expect that students' work will culminate in the submission of new rockfish DNA barcodes to BOLD and NCBI’s GenBank, two widely utilized repositories of scientific and genetic information. CMB is a member organization of the Consortium for the Barcode of Life and will assist me and my students in
submitting the genetic data obtained from their work. Importantly, for any submission made to this global initiative, students will be appropriately cited as authors/contributors.

Meeting Standards and Positively Affecting Students During the laboratory component of the unit, students will isolate genomic DNA from local rockfish species, use PCR (polymerase chain reaction) to copy a segment of the cytochrome c oxidase subunit 1 gene (COX-1) from each rockfish specimen, subclone the COX-1 fragments into a plasmid vector, obtain the corresponding nucleotide sequences of the DNA fragments, and analyze the sequences with bioinformatics tools available through both the Barcode of Life Data Systems (BOLD) and the National Center for Biotechnology Information (NCBI). These are all major concepts studied in the Biotechnology and AP Biology course, which are comprised of approximately 60 11th and 12th grade students. The instructional materials for Barcoding Life’s Matrix align with multiple sets of standards and course descriptions. There are numerous relevant California State Standards integrated into the curriculum from the Biology/Life Science, Chemistry and Investigation and Experimentation sections. The curriculum also meets numerous topics from the AP Biology course blue print and aligns perfectly with the molecular biology laboratory required by the Advance Placement Board.

Furthermore, several National Science Education Standards areas are exemplified including: Science Teaching Standards, Standards for Professional Development for Teachers of Science, Content Standards: 9-12 and Science Education Program Standards.

Students will participate in an application of all the skills they have been learning throughout the school year. This project will bring meaning to the skills they have mastered and will inspire students to further study in the world of science. Furthermore, students will contribute to a large-scale project to generate and catalog short DNA sequences or barcodes for all species of marine microbes, plants, and animals. The benefits this will have for their future are numerous: identify species with high confidence, aid in taxonomic research, study endangered species, protect species, study the changes occurring in species and many more.
Lesson Plan Narrative: “IRON CHEF: BATTLE RATIONAL NUMBERS”

Welcome to School Stadium and Battle “Rational Numbers”! In these episodes, students will face many battles involving formidable opponents. Each activity will involve at least one “challenge” with one of the “secret ingredients”.

Let the Battle Begin: Students are introduced to the secret ingredients—fractions, decimals and percents via a flipchart downloaded from Promethean Planet. This flipchart has many hands-on/interactive activities. The students become more familiar with fractions, and re-introduced to decimals. The new opponent—percents—is also presented. Included in this flip chart are 3 short videos (Brain Pop.com: “Converting Fractions to Decimals”, “Decimals”, and “Percents”) about rational numbers.

Battle Scavenger Hunt: Why and where do we use rational numbers? Students were sent on a scavenger hunt in the newspaper. (Adapted from Delightful Decimal and Perfect Percents, Lynette Long, 2003). They were divided into 3 groups of 3: one person was in charge of finding fractions, one the equivalent decimal and the third, the equivalent per cent. A chart was created with their results. The fractions were more challenged. Students had to write about this as a warm up activity. As a homework activity, students had to have a scavenger hunt in their house and write down where they found fractions, decimals and percents in their home.

Battle Book: students had to demonstrate their skills in battling rational number problems in their textbook. (Holt Mathematics, Course 2) After I demonstrated how to compare fractions (using cross multiplication), decimals and percents, students were given individual white boards to demonstrate their learning. After some repeat instruction, students were able to tackle the independent seat work successfully.

Battle RAFT: A RAFT (Role, Audience, Format, Topic) is a type of writing assignment in which students are given a specific role and have to write on a specific topic in a specific format to a specific audience. In this case, students were again divided into 3 groups of 3, but this time, they were grouped as fractions, decimals and percents. They had to write a letter to one of the other groups explaining why it was “better” to be them and how to “become” them (how to change a fraction to a decimal, etc.) Students were given a letter writing template to assist them in this activity.

Battle Art: (Adapted from “Mathematics Teaching in the Middle School, Vo.13, #1, 8/2007; Masterpieces to Mathematics: Using Art to Teach Fractions, Decimal and Percent Equivalents; by C.Scaptura, J Suh, and G. Mahaffey). After viewing pieces of art by Ellsworth Kelly and other mosaicists, students had the opportunity to create their own artwork. Students were given a 100 square grid. Rather than cutting squares, I laminated the grid on which the students created their “masterpieces” with color markers. They were to use 5 colors (one of
which could be blank white squares). When they were satisfied with their design, they had to fill in a table with the fraction, decimal and percent of each color.

Battle Cooking/Measuring: Again, students were divided into groups of fractions, decimals and percents. Students had to create measuring cups with decimals and percents (This time, the fraction group had it easy!). Students had to “cook” a no bake pie. After assuring their measurements were close to accurate, students had to bake a cheesecake. (Prior to cooking, we defined some of the cooking terms: beat, fluffy, stir, blend, chill, and garnish). Also, each group had to assign jobs for themselves. Three “judges” were called in to decide which form of the rational numbers baking battle “reigned supreme”. The winner was decimals!

Final Battle: For their final battle, students had to choose an activity from a choice board and expectation information to demonstrate their understanding of rational numbers. They were also provided with a scoring rubric.

The lessons described above had the students totally engaged in the learning process. What ordinarily could be thought of as dull and boring, rational numbers became a positive learning experience for the students. The lessons were exciting for the students and enabled them to see how rational numbers impact their daily lives.

Key Standard: NS 1.2 – Add, subtract, multiply and divide rational numbers (integers, fractions and terminating decimals)

NS 1.3- Convert fractions to decimals and percents

Key Standard: NS 1.5 – Know that every rational number is either terminating or a repeating decimal and be able to convert terminating decimals into reduced fractions

Key Standard: NS 2.2- Add and subtract fractions by using factoring to find a common denominator
Lesson Plan Title: Art Gallery of the Civil War

Lesson Plan Grade Levels: 4, 5, 6, 7, 8, 9, 10, 11, 12

Lesson Plan Subject Areas: Language Arts/Reading (SAGE Category), History/Social Science, Music, Visual Arts

Lesson Plan Narrative: Art Gallery of the Civil War

Understanding war is extremely difficult for adults, and it is especially difficult for adolescents who tend to think in very absolute terms. Middle schoolers tend to label ideas as good or bad, right or wrong, black or white. But history and war are complicated, so I created this unit to try to get students to think holistically about the shades of grey regarding the Civil War. The purpose of the Art Gallery of the Civil War is for students to think about the costs of war by becoming modern day artists who showcase various aspects of the Civil War.

In this 3-week unit, students create art pieces that showcase the significance of the geography, cultural beliefs, and material realities of the people in the North and South. They have complete choice of medium (visual art, music, dance, poetry, culinary arts, etc.). They create various artwork that illustrate:

1. the development of slavery
2. the geographic, economic, transportation, and/or cultural aspects of the North and South
3. a flag of the Union or Confederacy
5. an abstract drawing and poem about President Lincoln
6. the costs of war – letter to loved ones

The students had complete artistic freedom and were given a rubric to guide their creations.

To help facilitate students’ understanding of the major issues involved in the Civil War, I divided the classroom between North and South with blue painter’s tape. Students in the South focused on the geography, transportation, economy, culture, images, and leaders of the Confederacy. On the other side, students in the North focused on the geography, transportation, economy, culture, images, and leaders of the Union. Students also learned songs from their region. The Rebels sang Dixie Land, the Yellow Rose of Texas, and Johnny Rebel. The Yanks sang Yankee Doodle, Marching Through Georgia, and the Battle Hymn of the Republic.

To begin, all the students looked at the development of slavery. The students created works of art that illustrate the slave trade and/or slave labor. The California state standards ask students to understand how geography was key in determining the economic and cultural elements of both sides. So, I found illustrations of the North and South. The northern images included raging rivers that could turn paddle wheels, rocky coast lines, poor soil, developing urban areas, and textile industry. As a result of the poor soil and fast flowing waters in the north, manufacturing developed. Students in the North colored these images of the Union (or created their own) and wrote of their significance on “placards” that were mounted next to their creations as in an actual art gallery. In the south, the geography was quite different. The soil was rich and fertile. Slow moving rivers were not able to turn paddle wheels that could support industry. As a result, the south became a predominately agrarian society.
Students used coloring pages (or created their own) of images such as cotton fields or slow moving rivers. The geography of the south contributed to the development of slavery. Students learn how, as agriculture increased along with the invention of the cotton gin, more slaves were used to support the southern economy. The use of slaves affected the culture as well. People had more free time in the South than in the North. They had a slower pace of life and more leisure time. The Northerners did the work themselves and had less leisure time. The students thus understood the major differences in the geography, cultural, and economic realities of the North and South.

With this understanding in place, the students read about Lincoln’s election, succession, Ft. Sumter, and the subsequent 4 years of terrible civil war. Students then created maps (or cakes!) with flags of the Union or Confederacy. They also created images and brief biographies of important leaders from their sides. All students also had to create an abstract image of President Lincoln along with a poem of what Lincoln saw, heard, said, felt and thought during the war. In this way, students created both written and artistic representations of the key players in the War Between the States.

Finally, to bring home the idea of the cost of war and the sacrifice involved in defending one’s beliefs and way of life, students were asked to imagine themselves as soldiers on the battle field headed to the battle of Gettysburg. I had students put their heads down on their desks, and I told them that they were headed to what we know now was the bloodiest battle of the Civil War. At Gettysburg, during the 3 days of fighting, over 57,000 men lost their lives. I told them that they very well might not survive the next day’s battle. I then played the PBS recording of the Letter of Sullivan Ballou. The students were moved! Some were in tears. I then asked the students to write a last letter to a loved one. The students wrote to a variety of recipients: their families, grandparents and friends. The students took this assignment very seriously. Many made the connection with the men and women serving in Iraq and Afghanistan today. This lesson really brought home the costs of war and the sacrifice involved in going to war.

This unit was extremely successful. Students made dioramas, played instruments, wrote poetry, baked cakes, drew, painted, sang, and wrote love letters to their families and friends. The students reported really enjoying this unit. In addition, they performed extremely well on classroom and state assessments on the Civil War.

History Standards: 8.6.1, 8.6.3, 8.6.4; 8.7.1, 8.7.2, 8.7.3, 8.7.4; 8.8.2, 8.8.5, 8.8.6; 8.9.2, 8.9.4, 8.9.5; 8.10.1, 8.10.2, 8.10.3, 8.10.4, 8.10.5, 8.10.6, 8.10.7

ELA Standards: Reading 1.3; Writing Applications 2.1; Written and Oral English Languages Conventions 1.1, 1.3, 1.5, 1.6; Listening and Speaking Strategies 1.1, 1.2; Speaking Applications 2.5
July 14, 1861  Camp Clark, Washington  My very dear Sarah:  The indications are very strong that we shall move in a few days—perhaps tomorrow. Lest I should not be able to write again, I feel impelled to write a few lines that may fall under your eye when I shall be no more . . . I have no misgivings about, or lack of confidence in the cause in which I am engaged, and my courage does not halt or falter. I know how strongly American Civilization now leans on the triumph of the Government and how great a debt we owe to those who went before us through the blood and sufferings of the Revolution. And I am willing—perfectly willing—to lay down all my joys in this life, to help maintain this Government, and to pay that debt . . . Sarah my love for you is deathless, it seems to bind me with mighty cables that nothing but Omnipotence could break; and yet my love of Country comes over me like a strong wind and bears me irresistibly on with all these chains to the battle field. The memories of the blissful moments I have spent with you come creeping over me, and I feel most gratified to God and to you that I have enjoyed them for so long. And hard it is for me to give them up and burn to ashes the hopes of future years, when, God willing, we might still have lived and loved together, and seen our sons grown up to honorable manhood, around us. I have, I know, but few and small claims upon Divine Providence, but something whispers to me—perhaps it is the wafted prayer of my little Edgar, that I shall return to my loved ones unharmed. If I do not my dear Sarah, never forget how much I love you, and when my last breath escapes me on the battle field, it will whisper your name. Forgive my many faults and the many pains I have caused you. How thoughtless and foolish I have often times been! How gladly would I wash out with my tears every little spot upon your happiness . . . But, O Sarah! If the dead can come back to this earth and flit unseen around those they loved, I shall always be near you; in the gladdest days and in the darkest nights . . . always, always, and if there be a soft breeze upon your cheek, it shall be my breath, as the cool air fans your throbbing temple, it shall be my spirit passing by. Sarah do not mourn me dead; think I am gone and wait for thee, for we shall meet again . . . Sullivan Ballou was killed a week later at the first Battle of Bull Run, July 21, 1861. Born March 28, 1829 in Smithfield, R.I., Ballou was educated at Phillips Academy in Andover, Mass.; Brown University in Providence, R.I. and the National Law School in Ballston, N.Y. He was admitted
to the Rhode Island Bar in 1853. Ballou devoted his brief life to public service. He was elected in 1854 as clerk of the Rhode Island House of Representatives, later serving as its speaker. He married Sarah Hart Shumway on October 15, 1855, and the following year saw the birth of their first child, Edgar. A second son, William, was born in 1859. Ballou immediately entered the military in 1861 after the war broke out. He became judge advocate of the Rhode Island militia and was 32 at the time of his death at the first Battle of Bull Run on July 21, 1861. When he died, his wife was 24. She later moved to New Jersey to live out her life with her son, William, and never re-married. She died at age 80 in 1917. Sullivan and Sarah Ballou are buried next to each other at Swan Point Cemetery in Providence, RI. There are no known living descendants. Ironically, Sullivan Ballou’s letter was never mailed. Although Sarah would receive other, decidedly more upbeat letters, dated after the now-famous letter from the battlefield, the letter in question would be found among Sullivan Ballou’s effects when Gov. William Sprague of Rhode Island traveled to Virginia to retrieve the remains of his state’s sons who had fallen in battle.
Art Gallery of the Civil War

Students will become modern day artists who showcase a Civil War Art Gallery.

The art pieces will illustrate students’ understandings of the Civil War Era within United States History.

The art pieces should highlight:

1. The development of slavery
2. The geographic, economic, transportation, and or cultural aspects of the North and South
3. A flag of the Union and Confederacy
5. An abstract drawing and poem about Lincoln
6. The costs of war- letter to loved one

<table>
<thead>
<tr>
<th>Topic</th>
<th>Choice #1</th>
<th>Choice #2</th>
<th>Choice #3</th>
<th>Choice #4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Slavery Grade: /10</td>
<td>illustration</td>
<td>Spiritual / Song</td>
<td>Quilt Square</td>
<td>Free Choice</td>
</tr>
<tr>
<td>2. Image of the North Grade: /10</td>
<td>illustration</td>
<td>Collage</td>
<td>Diorama/Set</td>
<td>Free Choice</td>
</tr>
<tr>
<td>3. Image of the South Grade: /10</td>
<td>illustration</td>
<td>Collage</td>
<td>Diorama/Set</td>
<td>Free Choice</td>
</tr>
<tr>
<td>4. Flag- Union/Confederacy Grade: /10</td>
<td>illustration</td>
<td>Pencil Sketch</td>
<td>Baking/ Cookie</td>
<td>Free Choice</td>
</tr>
<tr>
<td>5. Abstract Portrait of a Lincoln Grade: /10</td>
<td>Portrait</td>
<td></td>
<td></td>
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<tr>
<td>6. The Cost of War Grade: /10</td>
<td>Letter</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Rubric:</td>
<td>10-9</td>
<td>8-7</td>
<td>6-5</td>
<td>4&lt;below</td>
</tr>
<tr>
<td>-------------------------</td>
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<tr>
<td><strong>Creativity and Interest</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>The art is a creative view of the students’ interpretation; it shows originality and a high amount of personal reflection; the author’s writing thoroughly extends the audience’s understanding of, and interest in the topic.</td>
<td></td>
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<tr>
<td>The art is a creative view of the students’ interpretation; it however lacks some originality and personal reflection; the author’s writing helps the audience to understand and takes interest in the topic.</td>
<td></td>
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<tr>
<td>The art lacks a creative view and could be a copied view of another person’s work; the writing minimally helps the audience to understand and takes interest in the topic.</td>
<td></td>
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<tr>
<td>The art is copied piece of another student and the writing does not help the audience to understand and take interest in the topic.</td>
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<tr>
<td><strong>Historical Content</strong></td>
<td></td>
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<tr>
<td>Artwork shows an accurate historical representation of slavery, the North and the South, a Union or Confederate Flag, the costs of war through a soldier’s eyes, and an abstract portrait of Abraham Lincoln based on the Gettysburg Address. The art pieces should highlight the significance of the Civil War major themes, events, and individuals</td>
<td></td>
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<tr>
<td>Artwork shows some accuracy with its historical representation or portrayal; it highlights the significance of the topic in relationship to the Civil War Era’s major themes, events, and individuals</td>
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<tr>
<td>Artwork shows little accuracy as a historical representation or portrayal; the significance of the topic is not really shown in relationship to the Civil War Era’s major themes, events, and individuals</td>
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<tr>
<td>Artwork is not accurate as a historical representation or portrayal; it however does not highlight the significance of the topic in relationship to the Civil War Era’s major themes, events, and individuals</td>
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<tr>
<td><strong>Grammar and Spelling</strong></td>
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<tr>
<td>The writing is error free and clearly written; proof reading was done; the voice of the author reflects his or her understanding of content/themes.</td>
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</tr>
<tr>
<td>The writing is generally clear but has a few noticeable errors; it needs further proof reading; the voice of the author reflects his or her understanding of content/themes.</td>
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<tr>
<td>The writing has many errors that cause the reader to misunderstand. The author’s writing needs to be reorganized to reflect his/her understanding of content/themes.</td>
<td></td>
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<tr>
<td>The writing has many errors and what is being said cannot be understood, the author needs to re-write or redo the piece.</td>
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<tr>
<td><strong>Presentation and Organization</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The art and writing is well organized; the piece shows pride, time, and effort put into the creations to help other people understand the key concepts.</td>
<td></td>
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<tr>
<td>The art and writing is somewhat unorganized; evidence shows pride, time, and effort put into the creations to help other people understand the key concepts.</td>
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</tr>
<tr>
<td>The art and writing are unorganized and appear to be somewhat careless; however there’s evidence that pride, time, and effort were put into the creations to help other people understand the key concepts.</td>
<td></td>
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<tr>
<td>The art and writing are messy and completely unorganized, little effort is presented to help other people understand the key concepts.</td>
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</tbody>
</table>
Lesson Plan Narrative:

This unit is designed to engage students in critical thinking throughout the student’s two-week study of nuclear power and alternative energy sources. Typically this chapter is designed without hands-on activities, lending itself to a non-engaging experience that is dry, hard to visualize and difficult to comprehend. This nuclear debate activity allows students to become interested in a very important topic while taking ownership in the outcome of their energy choices.

In the first several labs, students are becoming familiar with terms and structure/functions related to nuclear energy. They are critically thinking about how things work and determining outcomes regarding decay, half-life, reprocessing and storage of nuclear fuel sources. The activities are designed to stir a bit of anxiety as to where nuclear waste will be stored, where it is currently stored and the hazards and risks involved. After determining how things work, students will become integrated in a debate which will serve to further strengthen their understanding of nuclear power in a "real" hometown scenario. The students will decide if we should convert Ormond Beach's Steam Generating Power Plant into a self-contained Nuclear Power Plant. This feisty and exciting activity challenges the students to “think on their feet” similar to a lawyer in a courtroom. With real student judges (from previous years) and time constraints (on each round played), this simulation is perhaps the most exciting activity I have ever done with my students. Students choose one of four teams to defend: 1. The Citizens (Anti-Nuclear), 2. City Government (Pro-Nuclear), 3. California Environmentalists (Anti-Nuclear) and 4. Nuclear Power Industry (Pro-Nuclear). They then divide the work amongst their own team members to learn about all aspects of nuclear power and teach one another each critical piece daily. During the week long debate, each team is reconfiguring strategies and context related to the performances given in the "courtroom" the previous day. Students begin to network out of class and even within other periods to gain more pertinent documentation and facts than their opponents. It becomes a schoolwide "buzz" and the excitement gains momentum each day. Finally, the closing arguments are heard and the points totalled to determine if we will build the nuclear power plant on Ormond Beach. The post labs challenge students to go beyond their texts and debate information to research global politics and worldwide demands and choices for energy. All of these alternative sources of energy help create a greener future, yet none of them produces the massive amounts of energy as nuclear power. Students will be making choices as to amounts of power in regards to safety and emissions. As educated citizens, these students will determine the future of Ventura County's power sources and ultimately the nation's power choices.

This activity supports California State Standards 11a-g including each variable within the standard. The lessons that I have designed begin with a PowerPoint on Nuclear Power and labs relating to half-life, radioactivity and waste processing and conclude with the debate and civic responsibility activities.
This curriculum is assessed in several ways. The lab activities are done in lab groups of 3 and each individual has their own write up to hand in for a grade. The debate is scored as a team (there are 4 teams) and each individual person contributes to this score. If an individual does not participate at all, they will be writing a 5 page typed paper on each of the four sides in the debate and their personal discussion piece of which side they supported and why. This rarely happens due to the frenzy of involvement, yet a student who is absent for 2 days might benefit more from the essay.

This curriculum positively affects student learning as students are choosing which position they wish to argue and which direction they wish to pursue (as they defend and attack their opponents) each day. Each team is in charge of their own destiny and during each progressive interaction, the students will reconvene to determine their own night's homework in relationship to their opponents arguments/responses the previous day. I am constantly amazed at the volumes of factual information presented by the students, and each year there are new issues pertaining to nuclear and non-nuclear alternatives. This is by far my students favorite 2 weeks of the school year!
Radioactive Decay

Alpha Decay
- 2 protons & 2 neutrons $^4_2\text{He}^{2+}$

Beta Decay
- High speed electron $-e_0$  

Gamma Decay
- High-energy electromagnetic radiation!

Positron Decay
- Positively charged electron $+e_0$
<table>
<thead>
<tr>
<th>Type of Radiation</th>
<th>Half-Life</th>
<th>Decay Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uranium-238</td>
<td>4.5 x 10^6 years</td>
<td>Thorium-234</td>
</tr>
<tr>
<td>Thorium-234</td>
<td>2.6 minutes</td>
<td>Providence-224</td>
</tr>
<tr>
<td>Providence-224</td>
<td>1.16 minutes</td>
<td>Uranium-234</td>
</tr>
<tr>
<td>Uranium-234</td>
<td>2.33 x 10^7 years</td>
<td>Thorium-230</td>
</tr>
<tr>
<td>Thorium-230</td>
<td>2.34 x 10^6 years</td>
<td>Helium-226</td>
</tr>
<tr>
<td>Helium-226</td>
<td>1500 years</td>
<td>Radon-222</td>
</tr>
<tr>
<td>Radon-222</td>
<td>3.8 days</td>
<td>Polonium-218</td>
</tr>
<tr>
<td>Polonium-218</td>
<td>3.05 minutes</td>
<td>Radon-224</td>
</tr>
<tr>
<td>Radon-224</td>
<td>20.8 minutes</td>
<td>Rubidium-223</td>
</tr>
<tr>
<td>Rubidium-223</td>
<td>79.7 minutes</td>
<td>Potassium-214</td>
</tr>
<tr>
<td>Potassium-214</td>
<td>1.5 x 10^9 seconds</td>
<td>Lead-210</td>
</tr>
<tr>
<td>Lead-210</td>
<td>22 years</td>
<td>Lead-210</td>
</tr>
<tr>
<td>Lead-210</td>
<td>5 days</td>
<td>Lead-210</td>
</tr>
<tr>
<td>Lead-210</td>
<td>140 days</td>
<td>Radon-222</td>
</tr>
</tbody>
</table>
**Why Shouldn't Ventura County Become the Home of a Nuclear Power Plant?**

*We’ll Tell You Why Not.*

_Brought to you by the Active Environmentalists of California_

---

<table>
<thead>
<tr>
<th>Nuclear Waste Is Hazardous</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Radioactive for tens of thousands of years</td>
</tr>
<tr>
<td>• Has leaked into the environment before</td>
</tr>
<tr>
<td>• Chernobyl: people still suffering</td>
</tr>
<tr>
<td>• Causes cancer, birth defects, death, etc.</td>
</tr>
<tr>
<td>• Billions of pounds of waste already</td>
</tr>
<tr>
<td>• Millions of contaminated acres</td>
</tr>
<tr>
<td>• 1/20 exposed to radiation get cancer</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Ormond Beach is an Environmental Conservatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Halaco incident left area heavily polluted</td>
</tr>
<tr>
<td>• 5000 sq feet already contaminated</td>
</tr>
<tr>
<td>• Within the revival process</td>
</tr>
<tr>
<td>• Already a water treatment plant there</td>
</tr>
<tr>
<td>• One of the three wetlands in the area</td>
</tr>
<tr>
<td>• Build on top of nesting grounds</td>
</tr>
<tr>
<td>• Living near plant increases chances of Leukemia in children, study shows</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Not a Long Term Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Only 60 years of Uranium left</td>
</tr>
<tr>
<td>• Takes 12 years to build a plant</td>
</tr>
<tr>
<td>• Average plant shuts down in 30 years due to instability</td>
</tr>
<tr>
<td>• Where will all of the nuclear waste go?</td>
</tr>
<tr>
<td>• Cannot completely rely on it</td>
</tr>
<tr>
<td>• We’ll sink deeper into debt by building them because the government won’t make anything to compensate the cost</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>There Are Other Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Wind power: windmills can be put in many parts of California/other parts of U.S.</td>
</tr>
<tr>
<td>• Geothermal: where there is ground water, there is energy</td>
</tr>
<tr>
<td>• Hydro-powered mills: off the coast of anywhere</td>
</tr>
<tr>
<td>• Solar Panels: can pay off &lt; 20 years, never run out of sunlight</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Uranium Mining Contributes to Global Warming</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Mines often abandoned after Uranium supply is depleted significantly</td>
</tr>
<tr>
<td>• Natural sulfides mix with ground water, creating acid lakes</td>
</tr>
<tr>
<td>• Surrounding area so acidic that vegetation cannot grow</td>
</tr>
<tr>
<td>• Acidic water mixes with clean water in the water cycle, bringing about acid rain, a main contributor to global warming</td>
</tr>
</tbody>
</table>
The Future Is In Our Hands

- Hazardous nuclear waste can contaminate the world of our children
- After the Halaco disaster, we should learn from our mistakes
- *Do not succumb to the fear of not having an immediate solution.* Long-term is the way to go.
- Put solar panels on your house. Be the difference.
- **Global warming is a reality.** We must do what we can to keep it from getting out of control.
- The earth has been here a lot longer than humans have. What a shame it would be if we didn’t pay the proper respects.

Thank you
Nuclear Power and Alternative Energies: A Two Week Unit

Karen Reynosa
Jan. 2011
**Description of Study:**

Nuclear Power is part of the Chemistry curriculum in high school. There are usually 2-3 chapters devoted to the study of nuclear fuel, nuclear transformations, nuclear mutations and nuclear chemistry. This unit of study will focus on the integration of critical thinking and Bloom’s Taxonomy to engage all students in the content and articulation of both nuclear and alternative energies.

**California State Standards for Nuclear Chemistry:**

**Nuclear Processes**

11. Nuclear processes are those in which an atomic nucleus changes, including radioactive decay of naturally occurring and human-made isotopes, nuclear fission, and nuclear fusion. As a basis for understanding this concept:

- **a.** Students know protons and neutrons in the nucleus are held together by nuclear forces that overcome the electromagnetic repulsion between the protons.
- **b.** Students know the energy release per gram of material is much larger in nuclear fusion or fission reactions than in chemical reactions. The change in mass (calculated by $E = mc^2$) is small but significant in nuclear reactions.
- **c.** Students know some naturally occurring isotopes of elements are radioactive, as are isotopes formed in nuclear reactions.
- **d.** Students know the three most common forms of radioactive decay (alpha, beta, and gamma) and know how the nucleus changes in each type of decay.
- **e.** Students know alpha, beta, and gamma radiation produce different amounts and kinds of damage in matter and have different penetrations.
- **f.* Students know how to calculate the amount of a radioactive substance remaining after an integral number of half-lives have passed.
- **g.* Students know protons and neutrons have substructures and consist of particles called quarks.

**Grade Level:** 10-12  
**Content Area:** Chemistry and Chem Comm Classes
Lesson Plan #1: Nuclear Power PowerPoint Lecture

Objective: Students will take notes on the PowerPoint Lecture and use Cornell Notes to leave a column for questions. They will make a list of thoughts and questions as we will delve into misconceptions/truths about nuclear power.

Hypothesis: (In all cases students will make an educated guess as to the outcome of each lab/activity)

Materials: PowerPoint Lecture slides, paper, books

Procedure: 1. Students will take notes on slides.

2. Students will pair and share with their seat mates throughout the lecture at various key points discussing concepts and writing down short paragraphs to show understanding.

3. Students will work out problems with seat mates and as a group.

4. Guided practice will occur using alpha, beta, and gamma radiation and electron and positron interactions.

5. Students will work on worksheet for independent practice relative to guided examples.

Data: Students will have problems as their data and will utilize these examples to address their guided and independent practices. We will go over all answers and problems in class the next day.

Conclusion: Students will write down any misconceptions or questions related to nuclear power and we will use these to open up our discussion tomorrow.

Bloom’s Taxonomy: Knowledge, Comprehension and Application

Gardner’s 8 Intelligences: Linguistic, Logical, Naturalist/Moral
Lesson Plan #2: Becoming a Nuclear Power Plant

Objective: Students will “act out” a nuclear power plant with the instructor’s guidance to exhibit how the steam generation occurs and how the energy is produced. They will be able to draw and discuss the process at the end of the session.

Hypothesis:

Materials: plunger, meter sticks (4), beaker, water, cookie sheet, goggles, squirt bottles, flashlight, poster or diagram of power plant.

Procedure: Follow the nuclear power plant simulation activity and set up 7 volunteers to participate in this activity.

1. You may want to sketch the basic structure of a nuclear power plant on the board (or posterboard) and then have the students simulate the power plant. Students can also “pass glass” by having water in a beaker passing from the water pump to the core to the steam generator etc.
2. First student is the water pump and will use the plunger to simulate pumping water up and down.
3. The second and third students are the core and control rods each with 2 meter sticks. The control rods person stands directly above the core person (on table or desk) and inserts the rods into the core to stop the domino effect.
4. The fourth and fifth students are the steam generation portion. One person stands on table or desk with a cookie sheet and goggles. The other lays on the floor with a squirt bottle spraying water up to the cookie sheet overhead.
5. The sixth person is the turbine who will receive the steam and crank the seventh person’s arm simulating the generator who will turn on the flashlight.
6. After the simulation discussion, students will pass the glass and show water transfers while stating what they are doing.

Data:

Sketch a “simulated” nuclear power plant on the back of this paper and show each student and their “job”. Sketch a real nuclear power plant on the back of this paper.

Conclusion: In paragraph form, discuss how energy is produced in nuclear fission and how water is needed. Discuss where the water comes from and where it exits. Determine how much energy is produced in a power plant and what size plant Ventura would need to send energy to 100,000 people.

Bloom’s Taxonomy: Knowledge, Comprehension, Application, Synthesis and Evaluation

Gardner’s 8 Intelligences: Linguistic, Logical, Bodily/Kinesthetic, Spatial, Naturalist/Moral,
Lesson Plan #3: Natural Radioactive Decay of U-238 Lab

**Objective:** To write out the series of equations for the decay of U-238 into stable Pb-206 and graph the results showing alpha and beta decay.

**Hypothesis:**

**Materials:** Pink (elements and their mass numbers and atomic numbers), blue (alpha decay) and yellow (beta decay) packets of cards. One packet for each lab group. Paper and pencil.

**Procedure:** Starting with U-238, determine which card comes next (alpha or beta decay) and determine which product it decays into. Hints below:

- U-238 eventually becomes stable Pb-206
- Put elements in order of atomic # (this is not necessarily the correct order but will help)
- Alpha particle is a helium molecules (4/2 He)
- Beta particle is an electron (0/-1 e)

**Data:** Write out and number each nuclear equation on the back of this paper.

Begin with: \( \text{substance} \rightarrow \text{decay product} + \text{particle} \) [Hint: There are 14 equations]

Graph mass vs atomic mass number on graph paper for each decay and show where the alpha and beta decays are on the lines that you will connect.

**Conclusion:** Answer in complete sentences on the back of this page.

1. Discuss the 5 types of radioactive decay and the differences and similarities of each.
2. What is nuclear transformation? Where does this occur?
3. What is half-life? How does this concept work?
4. What instruments are used to detect radiation? How much is too much?
5. What is C-14 dating and how is this used in science and technology?
6. What is the difference between fusion and fission and which produces more energy? Why don’t we use this?

**Bloom’s Taxonomy:** Knowledge, Comprehension, Application, Synthesis

**Gardner’s 8 Intelligences:** Linguistic, Logical, Spatial, Interpersonal, Naturalist/Moral
**Lab #4: Understanding Half-Life**

**Objective:** To determine the relationship between time and the number of radioactive nuclei that decay and to incorporate this concept to radiation treatments for cancer.

**Hypothesis:**

**Materials:** 80 pennies per shoebox per lab, internet

**Procedure:**
1. Place 80 pennies on heads and close the shoebox.
2. Shake the box several times and then open. Remove the tails.
3. Count the # of decayed atoms (tailsium and mark on data table.
4. Record the # of undecayed headsium.
5. Repeat for a total of 5 half-lives.
6. Copy your data onto the board. Record the class data in your table.
7. Graph your undecayed atoms-vs-the number of half-lives for your lab group and then a second line (different color) for the class data on the same graph.

**Data:**

<table>
<thead>
<tr>
<th>Number of half-lives</th>
<th># of decayed atoms (T)</th>
<th># of undecayed atoms (H)</th>
<th>Class totals (T)</th>
<th>Class totals (H)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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</table>

**Conclusion:** (Answer on back of this paper in complete sentences)
1. Describe the appearance of your 2 graph lines.
2. Which set of data (your lab group or the class data) provided a more convincing demonstration of half-life?
3. How many undecayed headsium nuclei would remain out of a sample of 600 headsium nuclei after 3 half-lives? Show your work.
4. Name one similarity and one difference between your simulation and actual radioactive decay.
5. How could you modify this simulation to demonstrate that different isotopes have different half-lives?
6a. How many half-lives would it take for 1 mole of any radioactive atoms (use Avogadro’s number to start) to decay to 6.25% (0.376 x 10²³ atoms)?
6b. Would any of the original radioactive atoms remain after 10 half lives? How about after 100 half-lives? Explain.
7a. In this simulation is there any way to predict when a particular penny will “decay”?
7b. If you could follow the fate of an individual atom in a sample of radioactive material, could you predict when it would decay? Why or why not?
8. What other ways could you use to model the concept of half-life?
9. Research at least 2 chemicals that are used in cancer treatments that have half-lives and discuss their decay factors and how they interact in the human body.

**Bloom’s Taxonomy:** Knowledge, Comprehension, Application, Synthesis, Evaluation

**Gardner’s 8 Intelligences:** Linguistic, Logical, Spatial, Interpersonal, Naturalist/Moral
Lab #5: Chain Reaction Activity and The Dilution of Fissionable Material

Objective: This activity will illustrate the process of a chain reaction by involving students in a “blindfolded” chain rxn. Discussions will also include the dilution of fissionable material.

Hypothesis:

Materials: paper, chem. books, internet

Procedure: 1. Have each student crumple paper to make one paper wad each.
2. Separate students as far from each other as your space allows. Their desks (if single desks) are perfect.
3. Each student is a fissionable U-235 atom with a neutron to send out at random when struck by another neutron.
4. The teacher will tell students to close their eyes and then throw out a couple of neutrons. If a student gets hit by the neutron, then she will throw her paper wad randomly in the air. The teacher will need several neutrons to get the process started.
5. When the reaction ends and there are no more paper wads flying, as students to open their eyes and raise a hand if they were “struck by a neutron, fissioned, and threw out their neutron”. Tally the responses
6. Have students pick up their “nuclear waste” and repeat experiment at least 3 times. Move students closer for the 4-6 trials and tally results.

Data: Make your own data table for this experiment on the back of this sheet.

Conclusion: (Answer in complete sentences on the back of this sheet.)
1. Why were fewer people struck by paper the first 3 trials as compared to the last 3 trials? What does this represent?
2. How can a situation be created where more people are struck by paper wads?
3. How is this like a nuclear core? Explain.
4. Describe the effect that each of the following has on a nuclear chain reaction:
   a. Processing of uranium ore
   b. Cladding on the fuel rods in a reactor core
   c. Moderator
   d. Spacing of the fuel rods in the reactor core
   e. Control rods
   f. Time

Bloom’s Taxonomy: Knowledge, Comprehension, Application, Synthesis

Gardner’s 8 Intelligences: Linguistic, Logical, Bodily/Kinesthetic, Spatial, Interpersonal, Naturalist/Moral
Lab #6: High Level Nuclear Waste and Chemical Reprocessing Discussion

**Objective:** To understand how nuclear waste occurs and is stored and to determine the efficacy of reprocessing nuclear fuel.

**Hypothesis:**

**Materials:** Article “Doing Something About High-Level Nuclear Waste” by George Wicks and Dennis Bickford, Video: Nuclear Energy/Nuclear Waste.

**Procedure:**
1. Have students read and highlight their own xeroxed article by Wicks and Bickford.
2. Write comments and questions as they are reading article next to text.
3. Get in groups of 4-6 and discuss important concepts of each page and write a group paper of comments and questions.
4. Have one person stand up for the entire group and discuss the group comments.
5. Watch the video and answer the worksheet questions as you view.

**Conclusion:** Research high level nuclear waste and discuss the following in essay format:
- Where are the nuclear power plants in the USA located?
- How much waste is produced annually?
- Where is the waste stored?
- What is the half-life of this waste?
- What are the long term goals for this waste?
- What is reprocessing?
- Where does this occur?
- What is the future outlook for nuclear power in your opinion?

**Bloom’s Taxonomy:** Knowledge, Comprehension, Application, Synthesis, Evaluation

**Gardner’s 8 Intelligences:** Linguistic, Logical, Bodily/Kinesthetic, Spatial, Interpersonal, Intrapersonal, Naturalist/Moral
Lab #7: Debate Project Nuclear Power in Ventura

Objective: To choose a debating “side” and determine whether a nuclear power plant should be built on Ormond Beach in Oxnard.

Scenario: The state of California is gaining 20 million residents by the year 2020. Already, energy is in short supply for the citizens of Southern California. The year is 2009 and you will determine the future energy source for Ventura. About 39% of our energy is in the form of petroleum, 24% natural gas, 23% coal, 8% nuclear and 6% renewable energy sources. Ventura has the incredible chance to determine the fate of energy production in this half of the state. The steam generating plant at Ormond Beach can be converted into a nuclear power plant by the year 2015. The land is readily available and energy contracts are substantial. You must decide the fate of this possibility. There are many groups which stand to benefit from a “yes” vote on this plant, however, there are grave concerns by numerous other groups representing a “no” vote. You must decide whether future populations in Ventura will reap the benefits of nuclear power or savor the building defeat of a power plant in their beach community.

The Teams:

Residents of Ventura, CA: Opposed to the building of the power plant for various reasons. These include safety issues, numerous risks, cost factors, and environmental aesthetic detractions. Furthermore, the rights of these citizens have been abrogated by the city of Ventura whose council wishes to build the plant for economic reasons. Extremely vocal and political. All citizens are registered voters.

City Council of Ventura, CA: This council is pro-nuclear power plant. Elected officials of Ventura are responsive to its citizenry and wish to be pro-active with the power deficiencies in this state. By looking forward and providing clean, cheap power to its residents, Ventura will be the first city in the new millennium to build a nuclear plant and harness energy. Further sales of this commodity will allow for incredible revenue for the residents of Ventura. This will further aid schools, colleges and other funding items which have been underfunded in recent years due to state budget cuts.

California Environmentalist Group: This environmental group deems any nuclear power plant unsafe and obsolete. They are vehemently opposed to nuclear energy due to its use of radioactive elements and the inability to dispose of them. Also, conservation of energy is their prime focus to re-educate the population and sway them from an energy dependent way of life. Flora, fauna and possible devastation of habitat on Ormond Beach are also a concern. Group name and its spectrum of issues will be chosen by the team itself.

Nuclear Power Industry: Encourages use of nuclear power to wean Americans from oil. Wishes to install several viable plants in California, with the first prototype in Ventura. The Nuclear Power Industry feels it has borne the brunt of negative press unfairly and has funneled millions of dollars into research and development aimed at improving its efficiency and its safety mechanisms. The industry has asked Ventura to seriously consider its request to become the new energy mecca for Southern California. Jobs, money and economic stability are awaiting Ventura residents.
Hypothesis:


Procedure: 1. Choose teams based upon personal preference, not your friends.
2. Research the topic and begin to bullet main ideas and gather articles and resources.
3. Determine who will give the opening statement. One or many in team.
4. Design at least 15 questions that you can ask your opponents daily.
5. Have well designed answers readily available w/ sources highlighted and ready to exhibit for the “court” and “judges”.
6. Be prepared for 3 rounds of Q/A.
7. Determine who will write and speak for the closing arguments.

Data: Persons debating have own data and resources, highlighted and organized to promote and debate their points. Judges have grading grid.

<table>
<thead>
<tr>
<th>Nuclear Power Debates Grading Grid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residents of Ventura</td>
</tr>
<tr>
<td>Opening (15)</td>
</tr>
<tr>
<td>Round 1 (20)</td>
</tr>
<tr>
<td>Round 2 (20)</td>
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<tr>
<td>Round 3 (20)</td>
</tr>
<tr>
<td>Closing (15)</td>
</tr>
<tr>
<td>Conduct Pts. (10)</td>
</tr>
<tr>
<td>Totals (100)</td>
</tr>
</tbody>
</table>
**Conclusion:** Write a one page essay that includes the following:

* What was your opinion of the topic question before we started the debate?
* What did each team support and why?
* How do you feel now that the debate is over? Did your opinion change? Why or why not?
* What should we do as a society to increase our energy production?

**Bloom’s Taxonomy:** Knowledge, Comprehension, Application, Synthesis, Evaluation

**Gardner’s 8 Intelligences:** Linguistic, Logical, Bodily/Kinesthetic, Spatial, Interpersonal, Intrapersonal, Naturalist/Moral
Lab #8: Politics and Global Nuclear Power

**Objective:** To research current nuclear agendas and policies around the world and compare and contrast their policies.

**Hypothesis:**

**Materials:** Internet, books, magazines

**Procedure:**
1. Choose 5 countries (plus the USA) that use some nuclear power and other sources for energy.
2. Research the percentage of each source utilized and what the functions are for each. (Example: Petroleum 45%, function: transportation, machinery)
3. Determine if the country is in the process or proliferation or dismantling nuclear power plants.
4. Research the energy policies of each country and give an accurate depiction of their future energy plans.

**Data:** Make a table with all of your information. You will need several columns for each of the 6 countries. Take your time planning your columns and make this as comprehensive as possible.

**Conclusion:** Discuss your findings in essay format citing specific examples of your research within the text. You may want to make pie charts to show the comparisons and contrasting information within the 6 countries. Be prepared to read your essay to the class and give your own opinions on your findings.

**Bloom’s Taxonomy:** Knowledge, Comprehension, Application, Synthesis, Evaluation

**Gardner’s 8 Intelligences:** Linguistic, Logical, Bodily/Kinesthetic, Spatial, Interpersonal, Intrapersonal, Naturalist/Moral
Lab #9: Fission vs. Fusion and the Atomic Age

**Objective:** To understand the difference between fission and fusion and to timeline the history of the nuclear age.

**Hypothesis:**

**Materials:** accounting tape (for timeline), colored pencils, history books, internet, chem. book

**Procedure:**

1. Make a t-chart for fission and fusion. Determine the definitive terms, the functions, structures and characteristics of each. Brainstorm in a team and research all there is to know regarding fission and fusion.

2. Make a timeline of the historical perspectives involved in the nuclear age. Sketch a picture of each definitive moment and place the dates on the timeline.

3. Hang your timeline in the classroom and be prepared to discuss it.

**Data:** T-chart and timeline products

**Conclusion:** In a paragraph, determine whether you think the nuclear age has benefited mankind or hurt our progress as a planet. Give specific examples to back up your position and include what you feel the future should entail.

**Bloom’s Taxonomy:** Knowledge, Comprehension, Application, Synthesis, Evaluation

**Gardner’s 8 Intelligences:** Linguistic, Logical, Bodily/Kinesthetic, Spatial, Interpersonal, Intrapersonal, Naturalist/Moral
Lab #10: Alternative Energy Sources

Objective: To introduce students to the various alternative sources of energy and do a comparative analysis on all. To devise an energy plan for the city of Ventura.

Hypothesis:

Materials: internet, chem. book, reference books, etc.

Procedure: 1. In pairs, determine the different alternative fuel sources available on the planet. Be sure to include methanol, ethanol, natural gas, electricity and hydrogen. You may find more and add them.
2. Make a data table with the a) fuel source, b) impact on Global Warming, c) other pollution hazards, d) pros, cons and e) potential annual CO₂ emissions.
3. Make a second data table using different energy sources available on the planet. Be sure to include fossil fuels, natural gas, coal, oil shale, tar sands, biomass, syn-fuels, nuclear power, geothermal energy, solar, wind and wave power. You may find more and add them.
4. In this second table be sure to include those listed in #2 a-e and include estimated availability of the resource (i.e. 30-50 yrs.), and cost of system.

Data: Two data tables mentioned above.

Conclusion: After reviewing the data, revise an energy plan for the city of Ventura. Be sure to look at energy consumption presently and determine how we can supply 100,000 people with the appropriate amounts and types of energy. Make a poster presenting your ideas and write a brief synopsis that you can give a city hall to the Mayor of Ventura at the next council meeting.

Bloom’s Taxonomy: Knowledge, Comprehension, Application, Synthesis, Evaluation

Gardner’s 8 Intelligences: Linguistic, Logical, Bodily/Kinesthetic, Spatial, Interpersonal, Intrapersonal, Naturalist/Moral
This unit is designed to engage students in critical thinking throughout the student’s two week study of nuclear power and alternative energy sources. Typically this chapter is designed without hands-on activities, lending itself to a non-engaging experience that is dry, hard to visualize and difficult to comprehend. It is my hope that students will become interested in this very important topic while taking ownership of the outcome of our energy choices.

In the first several labs, students are becoming familiar with terms and structure/functions related to nuclear energy. They are critically thinking about how things work and determining outcomes via decay, half-life, reprocessing and storage. The articles are designed to stir a bit of anxiety as to where nuclear waste will be stored, where it is currently stored and the hazards and risks involved. After determining how things work, students will become integrated in a debate which will serve to further strengthen their understanding of nuclear power in a hometown scenario that could be potentially “real”. This feisty and exciting lab challenges the students to “think on their feet” similar to a lawyer in a courtroom. With real judges and time constraints, the simulation is perhaps the most exciting activity I have ever done with students. The final labs challenge students to go beyond their texts and research global politics and worldwide demands and choices for energy. These sources of energy are real. They are available and highly utilized in many industrialized and developing nations. Furthermore, there are new technologies surfacing each year filled with promise and zero emissions.

In each of these activities students will have to use Bloom’s Taxonomy to recall previous knowledge, understand meanings, apply what they have learned, synthesize parts to create a whole and make evaluative judgments about the material. Also, the incorporation of Gardner’s multiple intelligences will be used minus the musical component.

In short, the nuclear power unit was exciting to prepare and allowed for me to experience both Bloom’s Taxonomy and Gardner’s Multiple Intelligences myself as I prepared this project for my students. I was able to think critically which allowed for me to give this opportunity to my students.
Lesson Plan Title: Facebook Frenzy: How to Like AP Statistics with Social Networking Data
Lesson Plan Grade Levels: 11, 12
Lesson Plan Subject Areas: Mathematics (AMGEN Category)

**Lesson Plan Narrative:** Facebook Frenzy: How to Like AP Statistics with Social Networking Data

Students in the millennial generation regard behaviors like tweeting and texting, along with websites like Facebook, YouTube, Google and Wikipedia, as everyday parts of their social lives and their search for understanding. They are sometimes called Generation C because they are connected, communicating, computerized, community oriented, and basically always clicking. The topic of social networking therefore provides an intrinsically motivational focus for students to study statistical methods presented in an AP Statistics class. In this unit, students study various aspects of Facebook and other social networking sites with real data and practice inference procedures to answer stimulating questions about social networking.

A long-term goal for students who have taken AP Statistics is that they will understand studies they read about long after the class has ended. By organizing the AP Statistics standards with a single cohesive theme, students are able to recollect the topics more than if they have been presented as a disconnected set of procedures. Students may not remember all statistical procedures several months after we study the topic, but if I refer to a memorable problem such as Tweeting with t-distributions or Facebook Mobility and Conditional Probability, they remember the purpose of the calculation and how to compute it.

This unit supports many of the state standards for AP Statistics: determining confidence intervals (Standard 17), calculating the p-value for a statistic (Standard 18), and becoming familiar with the chi-square distribution and chi-square test (Standard 19). Students are expected to use technological tools throughout the course, and the lessons in this unit provide conceptual understanding by stressing both formulas and the graphing calculator. The unit includes rigorous calculations, deductive thinking, real-world examples, decision-making, and experimental methods.

**Topic:** Contingency Tables and Conditional Probability
**Activity:** Facebook Mobility and Conditional Probability
A recent study revealed that Americans are spending nearly three hours per day on their mobile phones. They are educating themselves, conducting business, managing finances, instant messaging, and emailing. But perhaps the most interesting finding from the new data is the fact that more people are using the mobile web to socialize (91%) compared to the 79% of desktop users who do the same. Students use this data to learn about contingency tables and conditional probability.

**Topic:** Significance Test Basics
**Activity:** Poking Around with p-values
In this activity students collect data about Facebook “poking” behavior. (When a user goes on Facebook, they may see a little portion of the screen saying that they have been “poked” by someone. Facebook claims that a poke can be used "to say hello" to your friends.) In this activity students are asked to “poke” someone with their
student responders. Is there an association between the gender of the “poker” and the “pokee”? We use statistical analysis to find out.

**Topic:** Exponential Growth and Linearizing Data  
**Activity:** The Facebook Sensation and the Coefficient of Determination  
In this activity students examine the growth in the number of Facebook users since its creation in 2004. They use least squares regression procedures to estimate the number of users in future years if the current rate of growth were to continue. In the process they learn about interpolation and extrapolation.

**Topic:** The Binomial Formula  
**Activity:** A Bernoulli Trial Facebook Style  
According to the Pew Research Center, 73% of teenagers use some kind of social networking. This probability is used to introduce students to the Binomial Formula. (This formula gives the probability of having \( k \) successes in \( n \) trials.)

**Topic:** Binomial and Geometric Distributions  
**Activity:** Famous Facebook Folks  
Students play a game in which they guess which Facebook pages are the most popular. In this way students learn geometric probability formulas. They also learn to find binomial probabilities using the Binomial Formula.

**Topic:** Sampling Distributions and Standard Errors  
**Activity:** Status Updates and Standard Errors  
How many times do students update their status on Facebook? We use this data to learn about the standard error of a mean. What percent of the class has ever updated their status on Facebook? We use this data to learn about the standard error of a proportion.

**Topic:** One Proportion \( z \) Confidence Interval  
**Activity:** Binomial Blogging  
Do students know where the word blog comes from? Blog is a word that was created from two words: “web log”. Blogs are usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video. In this activity we find the proportion of students who know this handy piece of information (collected with student responders) in order to introduce students to the steps of constructing a confidence interval for a proportion.

**Topic:** Confidence Intervals for a Mean  
**Activity:** Texting and Tweeting with \( t \)-distributions  
Twitter is a platform that allows users to share 140-character-long messages publicly. Users can “follow” each other as a way of subscribing to each others' messages. In this activity students “tweet” a message using student responders connected to a Promethean board. We collect data about the average size of each tweet and construct a confidence interval using a \( t \)-distribution.

**Topic:** Confidence Intervals for a Mean  
**Activity:** Got Friends on Facebook?  
Students with Facebook accounts confidentially report the number of friends they have on the site. We use this data to calculate a confidence interval to estimate the mean number of Facebook friends high school students have.

**Topic:** Hypothesis Testing for a Mean (One Sample Paired \( t \)-Test)  
**Activity:** Let’s Speak About Leetspeak  
What is the average number of chat acronyms students can identify? Is this number greater or less than the number of state capitals they can identify? Students use the difference between scores on two quizzes to answer
this question using hypothesis test procedures. (Leetspeak is a type of online jargon in which a computer user replaces regular letters with other keyboard characters to form words phonetically. Though it was originally used by hackers and gamers ("leet" is a vernacular form of "elite"), leet is moving into the Internet mainstream and is also used by millennials.)

**Topic:** Hypothesis Testing for a Mean (Two Sample Test)
**Activity:** Facebook Addiction Prediction
Are males or females more enthusiastic about Facebook? Students take an online quiz that gives a score for their use of Facebook. This provides data to use as an introduction to two-sample inference procedures. They follow significance test steps to see if there is a meaningful difference between the average mean scores for males and females.

**Topic:** Hypothesis Testing for a Proportion
**Activity:** Facebook Gobbledygook
Students take a short multiple choice quiz about Facebook using student responders. Are they just guessing, or do they really know the answers? We use inference procedures to find out.

**Topic:** Hypothesis Testing for Two Proportions
**Activity:** Trends Between Friends
Is Facebook more popular than YouTube? How about Google and eBay? Is Facebook significantly more popular in the United States than in France? Students perform statistical analysis using data about the popularity of these websites.

**Topic:** Chi-Square Procedures
**Activity:** Chi-Square and Foursquare
Is there an association between the type of cell phone a user has and the type of social media he/she prefers? Students learn about the Chi-Square Test for Homogeneity/Independence by looking at data about this. (Foursquare is a location-based social networking website for mobile devices. This service is available to users with GPS-enabled mobile devices, such as iPhones, Android mobile phones and Blackberries. Users “check-in” at venues using a mobile device and obtain points.)

Results of chapter tests, final exams and the AP exam administered by the College Board are used to assess the success of the curriculum. In addition, at the end of the unit, students are required to think of ten research topics related to Facebook and identify the type of statistical method that would be appropriate to answer each question. Students often encounter the most difficulty in the course when they need to determine the correct statistical procedure to use for different types of questions.

Students enjoy collecting information about themselves. They enjoy mathematics much more when concrete examples are used for learning abstract equations. Math underlies nearly every aspect of our existence, and this unit emphasizes the connection of advanced statistical concepts to the world around us. Students find these activities interesting and amusing, so student learning and achievement are enhanced.
A recent study revealed that Americans are spending nearly three hours per day on their mobile phones. They are educating themselves, conducting business, managing finances, instant messaging, and emailing. But perhaps the most interesting finding from the new data is the fact that more people are using the mobile web to socialize (91%) compared to the 79% of desktop users who do the same. We will use this data to learn about contingency tables and conditional probability. It has been estimated that approximately 28% of cell phone users have smart phones (but this number is currently rising). We will also assume for our calculations that all of these desktop users also have cell phones.

Let $S$ be “socializes on the web”
Let $M$ be “has a mobile phone”

<table>
<thead>
<tr>
<th></th>
<th>$S$</th>
<th>$\sim S$</th>
<th>$M$</th>
<th>$\sim M$</th>
<th>$P(M)$</th>
<th>$\sim M$</th>
<th>$P(\sim M)$</th>
<th>Total</th>
</tr>
</thead>
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<td>.28</td>
<td>.51</td>
<td>.72</td>
<td>.18</td>
<td>.82</td>
<td>1.00</td>
</tr>
<tr>
<td>$\sim M$</td>
<td>.82</td>
<td>.18</td>
<td>.28</td>
<td>.51</td>
<td>.72</td>
<td>.18</td>
<td>.82</td>
<td>1.00</td>
</tr>
</tbody>
</table>

$$P(S \mid M) = \frac{P(S \text{ and } M)}{P(M)} = .91$$

$$P(S \text{ and } M) = .91 \times .28 = .25$$

$$P(S \mid \sim M) = \frac{P(S \text{ and } \sim M)}{P(\sim M)} = .79$$

$$P(S \text{ and } \sim M) = .79 \times .18 = .14$$
In this activity we will collect data about Facebook “poking” behavior. (When a user goes on Facebook, they may see a little portion of the screen saying that they have been poked by someone. Facebook claims that a poke can be used "to say hello" to your friends.) In this activity you will “poke” someone with your responder. Then we will use inference procedures to see if we can make a claim about “poking” behavior.

Steps to Follow for a Significance Test:

Define the parameter.
Write the null and alternative hypotheses.
Test the assumptions.
Name the test.
Find the test statistic.
Obtain the p-value.
Make a decision.
Summary with context.
Do female high school students tend to "poke" other girls more frequently than they "poke" males?

\[ \hat{p} = \text{proportion of girls who poked girls} = 0.62 \]

\[ H_0: \ p = 0.50 \]

\[ H_a: \ p > 0.50 \]

**Assumptions:**
- SRS (no)
- Normality: \( 0.62(20) > 10 \) but \( 0.38(20) < 10 \) (no)
- Independence: \( N \geq 10(20) \) (yes)

**Significance Test:** 1 Proportion \( z \)-test

**Test statistic:**

\[
 z = \frac{\hat{p} - p_0}{\sqrt{\frac{\hat{p}(1-\hat{p})}{n}} - \sqrt{\frac{0.62(0.38)}{20}}} \\
 z = 1.11
\]

\( p \)-value = \( P(z > 1.11) = 0.13 \) from normalcdf(1.11, E99)

Fail to reject \( H_0 \) since \( 0.13 > 0.05 \)

We do not have sufficient evidence to support the claim that females on Facebook tend to "poke" girls more than they "poke" boys.
**Topic:** Exponential Growth and Linearizing Data

**Activity:** The Facebook Sensation and the Coefficient of Determination

In this activity you will examine the growth in the number of Facebook users since its creation in 2004. Then use least squares regression procedures to estimate the number of users in future years if the current rate of growth were to continue. Discuss interpolation and extrapolation.

![Graph of number of users against number of months](http://nescoresource.wordpress.com/2009/07/17/why-you-belong-on-facebook/)

![Graph of number of users against log (number of months)](http://nescoresource.wordpress.com/2009/07/17/why-you-belong-on-facebook/)

![Graph of log (number of users) against log (number of months)](http://nescoresource.wordpress.com/2009/07/17/why-you-belong-on-facebook/)

Number of Months | Number of Users (in millions)
--- | ---
0 | 0
10 | 1
22 | 5.5
34 | 12
38 | 20
44 | 50
54 | 100
59 | 150
60 | 175
62 | 200
65 | 250
67 | 300
70 | 350
72 | 400
77 | 500

**LinReg**

\[ y = a + bx \]

\[ a = -120.8664596 \]

\[ b = 5.894409938 \]

\[ r^2 = 0.7296708132 \]

\[ r = 0.8542077108 \]

**LinReg**

\[ y = a + bx \]

\[ a = -2306266.251 \]

\[ b = 0.0401752524 \]

\[ r^2 = 0.9871470394 \]

\[ r = 0.9935527361 \]

**LinReg**

\[ y = a + bx \]

\[ a = -3.518721315 \]

\[ b = 3.227636663 \]

\[ r^2 = 0.9575979964 \]

\[ r = 0.9785693621 \]

Let $\hat{y}$ = predicted number of users.

$x$ = number of months

$\log \hat{y} = -0.23 + 0.04x$

$\hat{y} = 10^{-0.23 + 0.04x}$

$\hat{y} = 10^{-0.23} \times 10^{0.04x}$

$\hat{y} = 0.5888 \times 1.0965^x$

<table>
<thead>
<tr>
<th>$x$</th>
<th>$\hat{y}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>935 million</td>
</tr>
<tr>
<td>85</td>
<td>1.5 billion</td>
</tr>
<tr>
<td>90</td>
<td>2.3 billion</td>
</tr>
<tr>
<td>95</td>
<td>3.7 billion</td>
</tr>
<tr>
<td>100</td>
<td>5.9 billion</td>
</tr>
<tr>
<td>110</td>
<td>14.8 billion</td>
</tr>
</tbody>
</table>

Therefore, if the growth of Facebook continues at its current rate, the number of users would be about twice the population of the Earth in less than 3 years. This is an example of extrapolation.

We need to be careful of making predictions outside the range of data we have.
Topic: Binomial and Geometric Distributions

Activity: Famous Facebook Folks

Though Facebook caps the number of friends at 5,000 on personal accounts, an unlimited number of people can join a person’s fan page. Lady Gaga, for example, recently became the first living person to score over 10 million fans on Facebook, beating out Barack Obama, among others.

The Huffington Post tracked down the top 50 most popular people on Facebook--based on the number of fan page fans--to compile a list of the hottest people on the network.

Facebook founder Mark Zuckerberg isn’t one of the Facebook elite, but all that could change by next week--Facebook’s numbers are famously volatile, and fan pages can grow overnight by tens of thousands.

The Binomial Formula gives the probability of having \( k \) successes in \( n \) trials. The geometric probability formula gives the probability of taking a certain number of trials before getting a “success”.

\[
P(X = k) = \binom{n}{k} p^k (1 - p)^{n-k}
\]

\[
P(X = n) = (1 - p)^{n-1} p
\]

You will work in pairs. One person will have the list of the most popular Facebook folks, and the other person will draw a card that has two names on it. One of the people on each card is currently a famous Facebook person and the other one is not. The person who draws the card needs to guess which person is popular on Facebook. The person with the list will keep track of the number of successes in 50 trials. You also need to keep track of the number of trials it takes to make the first correct guess.

When you have completed the activity, you have two tasks to complete:

1. What is the probability that you would have the number of successes that you got? (Write a complete probability statement.)

2. Complete a chart that gives the binomial and geometric probabilities for \( n = 0 \) to \( n = 50 \).
**Most Popular Facebook Pages 2011**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Adam Sandler</td>
</tr>
<tr>
<td>22</td>
<td>Akon</td>
</tr>
<tr>
<td>31</td>
<td>Zach Galifianakis</td>
</tr>
<tr>
<td>24</td>
<td>Alicia Keys</td>
</tr>
<tr>
<td>28</td>
<td>Lionel Messi</td>
</tr>
<tr>
<td>29</td>
<td>Ashley Tisdale</td>
</tr>
<tr>
<td>23</td>
<td>Ashton Kutcher</td>
</tr>
<tr>
<td>21</td>
<td>Avril Lavigne</td>
</tr>
<tr>
<td>4</td>
<td>Barack Obama</td>
</tr>
<tr>
<td>19</td>
<td>Beyonce</td>
</tr>
<tr>
<td>14</td>
<td>Bob Marley</td>
</tr>
<tr>
<td>32</td>
<td>Britney Spears</td>
</tr>
<tr>
<td>37</td>
<td>Chris Brown</td>
</tr>
<tr>
<td>6</td>
<td>Cristiano Ronaldo</td>
</tr>
<tr>
<td>36</td>
<td>David Beckham</td>
</tr>
<tr>
<td>17</td>
<td>David Guetta</td>
</tr>
<tr>
<td>26</td>
<td>Drake</td>
</tr>
<tr>
<td>11</td>
<td>Eminem</td>
</tr>
<tr>
<td>50</td>
<td>Fifty Cent</td>
</tr>
<tr>
<td>35</td>
<td>'General' Larry Platt (aka 'Pants on the Ground')</td>
</tr>
<tr>
<td>7</td>
<td>Hugh Laurie (aka Dr. House)</td>
</tr>
<tr>
<td>30</td>
<td>Jackie Chan</td>
</tr>
<tr>
<td>33</td>
<td>Jason Mraz</td>
</tr>
<tr>
<td>46</td>
<td>Jay-Z</td>
</tr>
<tr>
<td>41</td>
<td>Jeff Dunham</td>
</tr>
<tr>
<td>45</td>
<td>Jet Li</td>
</tr>
<tr>
<td>38</td>
<td>Johnny Depp</td>
</tr>
<tr>
<td>9</td>
<td>Justin Bieber</td>
</tr>
<tr>
<td>44</td>
<td>Justin Timberlake</td>
</tr>
<tr>
<td>47</td>
<td>Kanye West</td>
</tr>
<tr>
<td>18</td>
<td>Katy Perry</td>
</tr>
<tr>
<td>34</td>
<td>Kobe Bryant</td>
</tr>
<tr>
<td>2</td>
<td>Lady Gaga</td>
</tr>
<tr>
<td>49</td>
<td>LeBron James</td>
</tr>
<tr>
<td>8</td>
<td>Lil Wayne</td>
</tr>
<tr>
<td>5</td>
<td>Megan Fox</td>
</tr>
<tr>
<td>1</td>
<td>Michael Jackson</td>
</tr>
<tr>
<td>43</td>
<td>Michael Jordan</td>
</tr>
<tr>
<td>42</td>
<td>Michael Phelps</td>
</tr>
<tr>
<td>27</td>
<td>Miley Cyrus</td>
</tr>
<tr>
<td>40</td>
<td>Rafael Nadal</td>
</tr>
<tr>
<td>15</td>
<td>Rihanna</td>
</tr>
<tr>
<td>25</td>
<td>Roger Federer</td>
</tr>
<tr>
<td>12</td>
<td>Selena Gomez</td>
</tr>
<tr>
<td>20</td>
<td>Shakira</td>
</tr>
<tr>
<td>39</td>
<td>T.I.</td>
</tr>
<tr>
<td>10</td>
<td>Taylor Swift</td>
</tr>
<tr>
<td>48</td>
<td>Tiesto</td>
</tr>
<tr>
<td>3</td>
<td>Vin Diesel</td>
</tr>
<tr>
<td>13</td>
<td>Will Smith</td>
</tr>
</tbody>
</table>

(http://www.huffingtonpost.com/2010/07/09/facebook-most-popular-the_n_640965.html#s111784&title=50__50)
**Topic:** Hypothesis Testing for a Mean  
(One Sample Paired t-Test)

**Activity:** Let’s Speak About Leetspeak

Leetspeak, or "leet" for short, is a type of online jargon in which a computer user replaces regular letters with other keyboard characters to form words phonetically. Though it was originally used by hackers and gamers ("leet" is a vernacular form of "elite"), leet is moving into the Internet mainstream and is also used by millennials.

What is the average number of chat acronyms students can identify? Is this number greater or less than the number of state capitals they can identify? In this activity you will use the difference between scores on two quizzes to answer this question using hypothesis test procedures.

1. Take the state capital quiz.
2. Take the texting acronym quiz.
3. Find the difference in the percent scores for each of these quizzes. (Subtract your texting acronym quiz score from your state capital quiz score.) Round to the nearest percent.
4. Use your student responder to report this difference. (Do not use decimal points.)
5. We will use the mean difference for the estimate in our test statistic and perform a One Sample Paired t-Test.

\[
t = \frac{\bar{d} - \mu_0}{s / \sqrt{n}}
\]

\[M = \text{the mean difference between the 2 scores}\]
\[H_0: \ M = 0\]
\[H_a: \ M \neq 0 \ (2 \text{ tailed test})\]
Assumptions:
- SRS (yes)
- Normality (yes-Central Limit Theorem)
- Independence (yes - N ≥ 400)

**One Sample Paired t-Test for Means**

- test statistic: \( t = \frac{\bar{d} - \mu_0}{s / \sqrt{n}} \)
- \( t = \frac{12.93}{1.90} \approx 6.80 \)
- \( P\text{-value} = P(t < -3.56 \text{ or } t > 3.56) = .001 \)
- 2-tail df (3, 56.99) \( \leftrightarrow \) calculator

**Reject** \( H_0 \)

**Summary:** Students are more able to identify state capitals than they are to identify texting acronyms. However, since our sample was not an SRS, these findings should not be generalized.

http://www.netlingo.com/acronyms.php
<table>
<thead>
<tr>
<th>Texting Abbreviations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2moro - Tomorrow</td>
<td>LOML - Love Of My Life</td>
</tr>
<tr>
<td>2nite - Tonight</td>
<td>LYLAS - Love You Like A Sister</td>
</tr>
<tr>
<td>ASAP - As Soon As Possible</td>
<td>LYM - Love You Miss You</td>
</tr>
<tr>
<td>B4N - Bye For Now</td>
<td>MHOTY - My Hat’s Off To You</td>
</tr>
<tr>
<td>BCNU - Be Seeing You</td>
<td>NIMBY - Not In My Back Yard</td>
</tr>
<tr>
<td>BF - Boyfriend</td>
<td>NP - No Problem</td>
</tr>
<tr>
<td>BFF - Best Friends Forever</td>
<td>NUB - Newbie</td>
</tr>
<tr>
<td>BRB - Be Right Back</td>
<td>OIC - Oh, I See</td>
</tr>
<tr>
<td>BTW - By The Way</td>
<td>OMG - Oh My God</td>
</tr>
<tr>
<td>CWYL - Chat With You Later</td>
<td>OT - Off Topic</td>
</tr>
<tr>
<td>CYA - See Ya</td>
<td>PPL - People</td>
</tr>
<tr>
<td>DBEYR - Don’t Believe Everything You Read</td>
<td>POV - Point Of View</td>
</tr>
<tr>
<td>DIY - Do It Yourself</td>
<td>QT - Cutie</td>
</tr>
<tr>
<td>DK - Don’t Know</td>
<td>RBTL - Read Between The Lines</td>
</tr>
<tr>
<td>F2F - Face To Face</td>
<td>RT - Real Time</td>
</tr>
<tr>
<td>FUD - Fear, Uncertainty, and Disinformation</td>
<td>THX , TX and THKS - Thanks</td>
</tr>
<tr>
<td>FWIW - For What It’s Worth</td>
<td>SITD - Still In The Dark</td>
</tr>
<tr>
<td>G1- Good One</td>
<td>SWAK - Sealed With A Kiss</td>
</tr>
<tr>
<td>GAL - Get A Life</td>
<td>SYS - See You Soon</td>
</tr>
<tr>
<td>GF - Girlfriend</td>
<td>RTM - Read The Manual</td>
</tr>
<tr>
<td>GR8 - Great</td>
<td>TLC - Tender Loving Care</td>
</tr>
<tr>
<td>ILY - I Love You</td>
<td>TMI - Too Much Information</td>
</tr>
<tr>
<td>IMAO - In My Arrogant Opinion</td>
<td>TTYL - Talk To You Later</td>
</tr>
<tr>
<td>IMHO - In My Humble Opinion</td>
<td>TYVM - Thank You Very Much</td>
</tr>
<tr>
<td>IRL - In Real Life</td>
<td>UOK - Are You Okay?</td>
</tr>
<tr>
<td>ISO - In Search Of</td>
<td>VBG - Very Big Grin</td>
</tr>
<tr>
<td>JK - Just Kidding</td>
<td>WAYD - What Are You Doing?</td>
</tr>
<tr>
<td>K - Okay</td>
<td>WEG - Wicked Evil Grin</td>
</tr>
<tr>
<td>KIT - Keep In Touch</td>
<td>WRUD - What Are You Doing?</td>
</tr>
<tr>
<td>L8R - Later</td>
<td>WTG - Way To Go</td>
</tr>
<tr>
<td>LMK - Let Me Know</td>
<td>WYWH - Wish You Were Here</td>
</tr>
<tr>
<td>LOL - Laughing Out Loud</td>
<td>XOXO - Hugs and Kisses</td>
</tr>
</tbody>
</table>

(adapted from http://textingabbreviations.blogspot.com/)
How many users are currently on Facebook?
A. 1 million  
B. 100 million  
C. 500 million  
D. 1 billion

$H_0: \ p = .25$

$z = \frac{\hat{p} - .25}{\sqrt{\frac{\hat{p}(1-\hat{p})}{n}}}$

What percent of Facebook users log on to the site on any given day?
A. 10%  
B. 25%  
C. 50%  
D. 75%  
E. 90%

$H_0: \ p = .20$

$z = \frac{\hat{p} - .20}{\sqrt{\frac{\hat{p}(1-\hat{p})}{n}}}$

How many friends does the average Facebook user have?
A. less than 100  
B. between 100 and 200  
C. more than 200

$H_0: \ p = .33$

$z = \frac{\hat{p} - .33}{\sqrt{\frac{\hat{p}(1-\hat{p})}{n}}}$

True or False? The Facebook headquarters are in Palo Alto, California.

$H_0: \ p = .50$

$z = \frac{\hat{p} - .50}{\sqrt{\frac{\hat{p}(1-\hat{p})}{n}}}$
## WORLD'S* MOST POPULAR BRANDS ONLINE / April 2010

<table>
<thead>
<tr>
<th>Brand</th>
<th>% of World’s Internet Population visiting brand</th>
<th>Time per person (hh:mm:ss)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google</td>
<td>82%</td>
<td>1:21:51</td>
</tr>
<tr>
<td>MSN/WindowsLive/Bing</td>
<td>62%</td>
<td>2:41:49</td>
</tr>
<tr>
<td>Facebook</td>
<td>54%</td>
<td>6:00:00</td>
</tr>
<tr>
<td>Yahoo!</td>
<td>53%</td>
<td>1:50:16</td>
</tr>
<tr>
<td>Microsoft</td>
<td>48%</td>
<td>0:45:31</td>
</tr>
<tr>
<td>YouTube</td>
<td>47%</td>
<td>0:57:33</td>
</tr>
<tr>
<td>Wikipedia</td>
<td>35%</td>
<td>0:13:26</td>
</tr>
<tr>
<td>AOL Media Network</td>
<td>27%</td>
<td>2:01:02</td>
</tr>
<tr>
<td>eBay</td>
<td>26%</td>
<td>1:34:08</td>
</tr>
<tr>
<td>Apple</td>
<td>26%</td>
<td>1:00:28</td>
</tr>
</tbody>
</table>

Source: The Nielsen Company

*Global refers to AU, BR, CH, DE, ES, FR, IT, UK & USA only

## Facebook Reach and Usage by Country / Apr 2010 (Home & Work)

<table>
<thead>
<tr>
<th>Country</th>
<th>% Reach of Active Users</th>
<th>Time per Person (hh:mm:ss)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>66%</td>
<td>7:00:21</td>
</tr>
<tr>
<td>Australia</td>
<td>63%</td>
<td>7:45:28</td>
</tr>
<tr>
<td>United States</td>
<td>62%</td>
<td>6:43:22</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>62%</td>
<td>6:19:59</td>
</tr>
<tr>
<td>Spain</td>
<td>57%</td>
<td>4:04:53</td>
</tr>
<tr>
<td>France</td>
<td>57%</td>
<td>4:33:05</td>
</tr>
<tr>
<td>Switzerland</td>
<td>45%</td>
<td>4:18:47</td>
</tr>
<tr>
<td>Germany</td>
<td>27%</td>
<td>3:42:50</td>
</tr>
<tr>
<td>Brazil</td>
<td>26%</td>
<td>1:46:50</td>
</tr>
<tr>
<td>Japan</td>
<td>3%</td>
<td>0:31:38</td>
</tr>
</tbody>
</table>

Source: The Nielsen Company
Lesson Plan Narrative:

Young people increasingly use style differences to define themselves both visually and socially. Personal items such as clothing and hairstyle allow adolescents to create a sense of identity and affiliation with a particular group or subculture. These youth subcultures, or styletribes, which include surfer, hip/hop, gothic, grunge, and others, can be recognized by unique clothing, hairstyles, make-up and accessories. They often share common interests in sports, fashion, music, and/or lifestyle. Styletribes cross cultural and international borders, being driven by trends in marketing, mass media, and technology. Propelled by the explosive growth in forms of visual media such as television, film, video games, and the internet, styletribes have had a profound effect on marketing, attitudes towards youth, and modern social movements.

Styletribes, are an important aspect of adolescent identity and are especially relevant for today’s educators. The inclusion of the visual elements associated with styletribes in the art curriculum can help art teachers meet three specific objectives. First, it can help students make more informed choices when forming a personal identity, aiding in the transformation of young people from mere spectators to analytic, discriminate consumers. Second, the visual imagery associated with youth styletribes can be an effective means of making the art curriculum more meaningful for students. Finally, aesthetic values imbedded in styletribes and youth culture can be a relevant source for developing lessons that meet the visual arts standards in areas such as historical and cultural context, creative expression, and aesthetic valuing.

Using images and ideas from popular culture sites such as styletribes can also be a means to increase student motivation and achievement. The cultural artifacts associated with styletribes are often more meaningful and relevant to our students than more traditional images such as paintings by masters such as Van Gogh and Picasso. A higher degree of motivation and relevance can therefore lead to improved learning and the production of high quality art. While works of art from the great masters continue to be an important part of the art curriculum, using images from cultural sites that are important to our students can be an effective way to motivate them to create works of art that are outstanding in concept, quality, and creativity.

In this lesson the students study several styletribes, paying particular attention to the clothing, hairstyle, language, values, and history related to these styletribes. Using this knowledge, the students are asked design new styletribes, describing the look, values, and history of their new tribes. The students use mixed media to create small, three-dimensional figures showcasing their new tribes as well as three-dimensional environments in which to place these figures.

Before presenting the slide show and lecture, I present the concept of styletribes to my students. I give a general definition of styletribes using examples that they would be familiar with such as gothic, hip-hop, and
surfer-skater. I ask the students to start paying attention to the styletribes they see in their community, considering the defining characteristics of these tribes. Finally, I mention that as part of our upcoming unit, I will require them to invent a new styletribe.

The lecture/discussion consists of a PowerPoint presentation that includes images and text covering the concept of styletribes. It provides examples of popular styletribes and presents a more in-depth description of the surfing styletribe (Appendix C). The presentation makes extensive use of images and text to describe the history, values, clothing styles, literature, and music associated with these styletribes.

The studio portion of this unit provides an opportunity for the students to apply what they learned in the presentation/discussion to meet several of the California Fine Arts Content Standards as well as develop their understanding of how popular culture can affect choices related to personal identity. The students are asked to work with a partner to develop an idea for a new styletribe based on the information in the presentation/discussion. Each pair is asked to invent a new styletribe using one of three options. The first option is to choose a category of people by random out of a hat (Appendix E). These categories, such as FBI agents, zookeepers, and chess players all share a common interest, occupation, or hobby. With the second option, the students make up a sub-category of the surfing styletribe. The students may combine surfing with another styletribe or another category of people. Finally, the students have the option of making up a styletribe from a particular category of people. This could be a combination of other styletribes and/or a completely new styletribe.

Once the teams decide on their styletribe, they are asked to complete a written assignment in which they write a detailed description of this styletribe. This description must include the look, values, and history of their styletribe as well as a glossary of at least 5 made-up slang terms with definitions related to their styletribe.

Using their answers from the written assignment, each team creates two three-dimensional figures depicting typical members of their styletribes as well as a small constructed environment demonstrating the type of place members of their styletribe could be found. The figures are constructed out of paper mache over an armature made from chenille stems. The clothing, hair, and accessories are constructed out of candy wrappers, construction paper, yarn, and other media. In addition to demonstrating the look associated with their new tribe, the students are required to create figures that are proportionally correct, move in the same way a human moves, and demonstrate skills in craftsmanship and design. The environments are created out of a variety of found materials such as cardboard, cloth, small toys, yarn, printed material, and wire. The studio portion of the unit requires the students to meet several of the California Middle School Visual Art Content Standards such as: developing skills in new media, interpreting reality and fantasy in three-dimensional works of art, describing how art reflects cultural values, and designing and creating an expressive figurative sculpture.
Each student will have a handout as they follow along with the teachers' demonstration.
STYLETRIBE ASSIGNMENT CATEGORIES

SLED DOG RACERS
CHESS PLAYERS
MOUNTAIN CLIMBERS
LIFE GUARDS
FBI AGENTS
DOG TRAINERS
REALITY SHOW PANELISTS
WEATHERMAN/WOMAN
CIRCUS PERFORMERS
FAST FOOD COOKS
MAGICIANS
ASTRONAUTS
POKER PLAYERS
BIRD WATCHERS
STAMP COLLECTORS
CLASSICAL MUSICIANS
OPERA SINGERS
INVENT A STYLETRIBE

Due Date:____________

Names: __________________________________Period #:______________

Category of styletribe (The one you drew):_________________________________

The name of your styletribe (The name you invented):__________________________

Write your answers on separate paper and staple those to this sheet. At least one half page per question.

Be sure your answers are legible and well written. You may type your answers on a computer as well.

1. **Clothing and the "look" of your tribe.** Describe what types, colors, styles that your tribe prefers. Include hairstyles, shoes, accessories, makeup, etc. Be sure to be specific.

2. **General Description.** Describe your new tribe. Think of items like music, cars, sports, movies, books, technology, special objects, values, etc. Include a list of at least 5 slang words unique to your tribe and the meaning of those words.

3. **History.** Describe the origin of your tribe. How did it get started? Who started it? Were there any historical events that influenced your tribe? You guessed it, be super-dooper specific.
Lesson Plan

Title:
Styletribes

Grade Level:
6-12

Duration:
20-22 class periods

Big Idea:
Young people often assume style-centered roles based on the images, values, and ideas they come in contact with through visual culture.

Overview:
The students will study several styletribes, paying particular attention to the clothing, hairstyle, language, values, and history related to these styletribes. Using this knowledge, combined with a more detailed, ethnographic examination of the surfing styletribe, the students will invent and design new styletribes, describing the look, values, and history of their new tribes. The students will use a variety of media to create small, three-dimensional figures showcasing the look of their new tribes as well as three-dimensional environments in which to place these figures. These environments can be thought of as small stages in which the styletribe figures play the various roles associated with their tribe.

7th Grade California Visual Art Standards
2.1 Develop increasing skill in the use of at least three different media.
2.4 Design and create an expressive figurative sculpture.
2.5 Interpret reality and fantasy in original two-dimensional and three-dimensional works of art.
3.1 Research and describe how art reflects cultural values in various traditions throughout the world.

Objectives:
- The students will demonstrate an understanding of styletribes and how they are related to personal identity by participating in a lecture discussion of several prominent styletribes combined with a more detailed, ethnographic description of the surfing styletribe. They will also demonstrate this understanding by completing a figurative sculpture assignment in which they will create a three-dimensional human figure of a member of a new
styletribe as well as a three-dimensional environment related to the look, interests, and values of this tribe.

- The students will demonstrate an ability to create an armature of a human figure, base the figure on human proportions, and effectively use mixed media to adorn this figure in clothing and accessories that reflect their new styletribe.
- The students will be able to identify the characteristics, including the look, values, and history of several popular youth styletribes.
- They students will use their knowledge and understanding of styletribes to describe the major characteristics and values associated with their invented styletribes.
- The students will be able to identify through both class discussion and teacher interviews, the connection between the visual culture related to styletribes and the choices they make regarding their own personal identities and the roles associated with these identities.

**Sequence of Instruction:**

- **Pre-instruction**

  Several weeks before the start of the unit the teacher will preview the assignment by leading a short discussion of the phenomenon of styletribes and asking the students to begin observing styletribes in their school and community. Secondly, the teacher will ask the students to begin saving and bringing to class candy wrappers to be used on the upcoming styletribe figure assignment. Finally, at least one week before the start of the unit, the teacher will ask the students to select a partner for the unit. The teacher will require that the students finalize their choice of partner no less than two days before the start of the unit.

- **Motivation/Context Builder**

  **Day 1**
  The students will view a PowerPoint presentation introducing the concept of styletribes. This presentation will include a short overview of six modern styletribes and a more in-depth, ethnographic overview of the styletribe associated with surfing (Appendix A). During the presentation, the teacher will lead a class discussion asking students to share their observations about the concept of styletribes and the specific styletribes presented in the PowerPoint. The teacher will place an emphasis on the look, values, and history of each styletribe.

- **Instruction and Class Work**

  **Day 2**
  First, the teacher will give an overview of the entire unit including a description of the two studio assignments. Second, the teacher will introduce the written portion of the assignment. The written assignment will require the students to work with their partners and complete the following tasks:
  1. Decide on a category of people from which to invent a new styletribe. These categories are to be based on items such as a shared interest in sports, hobbies,
music, film, and/or literature; shared values; and a shared sense of fashion and visual identity. The students will be given the choice of making up a completely new styletribe on their own, selecting a predetermined category of individuals from a hat (Appendix B), or combining a category of individuals and morph that with surf culture.

2. Complete and turn in a description of their new styletribe including a description of the interests, values, look, and history of this tribe. (Appendix C)

Day 3
The teacher will demonstrate the styletribe figures portion of the assignment. On the first day of this portion of the unit the teacher will demonstrate how to create an armature out of chenille stems. The teacher will place an emphasis on creating correct human proportions through demonstration, example and student participation in exercises pointing out the correct length of appendages and heads. The figures will be required to meet the following criteria:

1. Each figure must display correct human proportions (i.e. head size, arm and leg length, torso size, shoulder width).
2. The figures may only bend at the necks, shoulders, elbows, wrists, waist, knees, and ankles.
3. Before the paper mache is applied, each figure must be freestanding.
4. The figures must be decorated with media that demonstrates the clothing, accessories, and hairstyle associated with the students' new styletribe.

Days 3-5
The students will construct their armatures. The teacher will provide a handout diagramming how to create a figure out of chenille stems. During this time, the teacher will monitor the students' progress, providing assistance as needed and insuring that the armatures are well constructed, demonstrate human proportions, and are free-standing.

Day 6-8
The teacher will demonstrate how to cover the armatures in paper mache. Particular emphasis will be on craftsmanship, including the requirement that the students use at least three coats of paper mache.

Days 9-13
The teacher will demonstrate how to use candy wrappers, construction paper, and other materials to create the "look" of the students' invented styletribes. The students will use these materials to create clothing, shoes, hair, and other accessories for their styletribe figures.

Day 14
The teacher will lead a critique/discussion in which the students will describe their styletribe figures to their classmates, pointing out how they used the various materials to show the look and values associated with their new tribes. In addition, the students will be given the opportunity to describe what they thought was successful about their own and their classmates’ figures.

**Days 15-19**
The teacher will introduce the styletribes environment project. In this project the students will be required to make a three-dimensional scale environment for their figures. The students will be required to make sculptures that show the type of environment where their styletribe members would be found. The students will be required to use colors, materials, and objects that reflect the values and style of their tribes. The students will use cardboard, poster board, construction paper, and other materials to construct these environments.

**Day 20**
The teacher will lead a final critique/discussion of the styletribe environments with the individual figures placed in the environments. Besides discussing the separate styletribe environments and describing specific items that were successful, the students will be asked to complete four follow-up questions about the unit.
A group of people whose clothing, hairstyle, values, and interests set them apart from the larger culture to which they belong. They often share common interest in lifestyle, music and/or sports.
**Examples**

**GOTHIC**

**The Look**
- Black clothing
- Black hair (dyed)
- Eyeliner
- Black lipstick
- Black fingernails
- Pale skin (it's the vampire thing)

**Description**

- **History**
  - Started in London in the 1980's goth rock.
  - Influenced by punk rock, horror movies and 19th century gothic literature.

- **Music**
  - The Cure
  - Bauhaus

- **Movies**
  - The Matrix
  - The Crow

- **Books**
  - Vampire Chronicles

**Examples**

- Black makeup
- Black hair (dyed)
- Eyeliner
- Black fingernails
- Pale skin (it's the vampire thing)
**Description**

**History**
- Inspired by science fiction writers such as Jules Verne and H. G. Wells.
- Started by science fiction writers in late 1980's

**Aesthetic**
- Gowns, vests, petticoats, pocketwatches, goggles mixed with punk styles such as leather and metal accessories.

**Objects**
- Modern objects are "modded" with 1890's style brass, metal, and wood.
**Grunge**

**The Look**
- Flannel shirts
- "Surfer" hair
- Old jeans
- Faded T's
- Canvas sneakers
- "Garage Band" look

**Values**
- Anti-glamour
- Depression
- Teen angst

**History**
- Started in Seattle
- Associated with alternative/grunge music
- Soundgarden
- Sonic Youth
- Nirvana

**Characteristics of Music**
- Loud!
- Distorted electric guitar
- Power chords
- Heavy drums
- Guitar solos
- Themes of rebellion (values)

**Metal**

**The Look**
- Black clothing
- Long/big hair
- Tight leather pants
- Metal studded accessories

**Bands**
- Led Zeppelin
- Black Sabbath
- Iron Maiden
- Judas Priest
- Metallica

**Characteristics of Music**
- Loud!
- Distorted electric guitar
- Power chords
- Heavy drums
- Guitar solos
- Themes of rebellion (values)
DESCRIPTION

THE LOOK
• "SOPHISTICATED"
• ITALIAN SUITS
• THIN TIES
• TURTLENECKS
• MINISKIRTS
• ARMY COATS
  (FOR KEEPING WARM
  ON YOUR SCOOTER
  AROUND LONDON)

HISTORY
• STARTED IN LONDON
  IN THE LATE 1950'S
• AGAINST TRADITIONAL
  SOCIETY

SCOOTERS
• CONSIDERED A
  FASHION ITEM
• LOTS OF ACCESSORIES-
  ESPECIALLY MIRRORS!

MOD

EXAMPLES

HARAJUKU
**HARAJUKU**

**THE LOOK**
- Combines traditional Japanese clothing with modern fashion
- Mismatching clothes
- Elements of punk and goth

**HISTORY**
- Named after area around Harajuku station in Tokyo
- Influenced by teens and street performers in the area

**VALUES**
- Emphasizes fashion
- Attention getting
- "Kawaii" cute and playful

**AND NOW...**
• 2000-1000 B.C. - Surfing starts in Polynesia and Peru.
• 1784 - Captain Cook is the first European to witness surfing.
• 1907 - George Freeth puts on the first surfing demonstration on the mainland U.S.
• 1911 - Jack London writes a series of magazine articles popularizing surfing.
1920-1935 - Olympic gold medal winner, Duke Kahanamoku tours the world promoting surfing.

1928 - Tom Blake invents the hollow surfboard.

1959 - Gidget

1966 - The Endless Summer

1965 - Ride the Wild Surf

1978 - Apocalypse Now

1987 - North Shore

1991 - Point Break

2007 - Surf's Up
Important objects

And of course...

Surfboards
Boarders

"The Boarders styletribe's clothing is a snow boarder jacket with an Oneill shirt. They have skater hair, which is shorter than surfer hair but still messy."

"Our tribes' car will have a surfboard on top of a van with stuff for the mountains, surf, and cement. They would be listening to rock music on their I Pods."

"They use surf lingo with a ragged tone. Most of them play guitar, base, or drums."
"The look of our styletribe is like a feminine FBI agent with a little glam and mod thrown in. The hairstyle is long, bleach blonde worn in a high ponytail with banana bangs. Common accessories worn by our tribe are sunglasses, a big belt with a holster with a laser, tazer, and other weapons that a secret agent would need."

"The origin of our tribe is partly from London, England (mod) and partly from America (F.B.I. and glam). This tribe got started when young women were into wearing a sophisticated style, but they also didn't want to be seen as weak and they wanted to prove that they could put up a fight without being too manly."

slang:

cage:  F.B.I. hideout
light:  gun
Bubbly:  pretty, cute, fun
"Our tribes' clothing consists of a suit with gold or silver pants. It is a combination of skinny jeans and petticoats and ties. Their hairstyles reflect the styles of the 70's and 80's such as afros and dreadlocks."
"Rumptious is what people in our tribe say when they think something looks good. Friskadelic means cool and classy. Vumilicious means something tastes awesome."

"Our tribe originated in Venice, California in 1889. It was started by two homeless men that found a violin and a harp and started to jam. Later they became famous and performed many times in Los Angeles. Their big event was when they went to the Sydney Opera House and rocked Australia's world."
Trash Can Men

"Trash Can Men wear recycled clothing from the trash they pick up. They wear a trash can hat that can pop open so people can throw trash in it."

"Their Newbery Prize winning book is called The Little Trash Man that Could."

"The Trash Can Men tribe was started in 2 B.C. in Iraq. It started when a person picked up a rock and put it in a hat."

"Their most prized possession is their claw to pick up trash. These are very stylish."
"The members of the Zookeepers styletribe wear a lot of faux animal prints and crazy patterns. To become one with their animal friends they wear animal ear headbands and tails. In addition, to protect them during their dirty work they wear knee-high neon colored rubber rain boots."

"Every Sunday they get together and watch their favorite team, the Wyoming Penguins, play football, and close the night with a game of Hungry, Hungry Hippos."

"Their prized possession is their pooper-scooper and when they reach the highest level of zoo keeping the receive one in solid gold."
"They colors and styles of clothing that the tribe prefers are rasta purple colored vests, checkered shirts, dreads, gold shoes, and wrist bands."

"The music that inspires our tribe is Bob Marley. In Maday there are no cars, but scooters and motorized bobsleds instead. The sport that inspires Maday is bobsledding."

"The person who started Maday was a hip-hop icon named Afrika Bombaata."
Victorian Vamps wear red and black. Their clothes are a combination of the Victorian era and modern punk. They have pale white skin. Their hair is midnight black and they have blood red streaks in their hair."

"Victorian Vamps' choices of music range from metal to classical such as Bach, Mozart, and Pachabel."

"Their least favorite show is Buffy the Vampire Slayer (What did vampires ever do to you !?!?!!)."

slang:

vamps: other member of the styletribe
O-negative: awesome, cool
stake to the heart: a phrase that means betrayal, an insult/curse
Thespians

"Thespians became a styletribe in 2007 in New York when a group of college performing students who loved the theater felt the need to have a slightly different look than everybody else because not everyone loved the theater like they did."

"Thespians treasure the souvenirs they get from plays or musicals they go watch. They also treasure signatures they get from their favorite theater performers."

slang:

lope: great
ticsone: line
inkment: playbill
sickle: wrong
"Our tribe is based on abstract and colorful designs. It is dark and rebellious with a little *spritz.*"

"Magic Punk got started in the Dark Ages when younger girls thought that burning witches was unfair so they started their own look and did magic tricks in a way that wouldn't make people think they were witches."
Magic Punk Environment
### Lesson Plan Narrative:

One of my students’ favorite short stories in our textbook anthology is “The Landlady” by Roald Dahl. It is an unusual, intriguing tale that is chock full of foreshadowing, which both the main character, Billy, and the reader are unaware of until the end when Billy meets his dreadful fate. The character, Billy, dies of poisoning from his landlady’s tea at the end of the story, and it is assumed he will join the other embalmed “tenants” on the fourth floor. As part of the California language arts state standards, Literary Response and Analysis 3.2, students are required to “identify events that advance the plot and determine how each event explains past or present action(s) or foreshadows future action(s).” I decided that, instead of simply going through the story and identifying the instances of foreshadowing, it would be more engaging and creative for students to create a board game in which the players would be confronted with the same pitfalls that Billy faced in the story. By creating a board game, students would not only have to identify the events that advance the plot or foreshadow future action, but they would also have to use higher-order thinking as they speculate on what would happen if events took an alternate course.

I grouped my students into teams of four, in which each student was given a specific responsibility. Their roles were

(i) Leader: the person who oversaw the game’s production, making sure that the materials were in place and that deadlines were met.

(ii) Artist: the person who drew the board design.

(iii) Rules and Directions manager: this team member had to make up the rules and directions in a clear, concise manner. (This addresses the state standard Writing Applications 2.6 “a. Identify the sequence of activities needed to design a system, or explain the bylaws of an organization.
b. Include all the factors and variables that need to be considered”)

(iv) Questions Creator. Every game needed to have a set of 25 question cards. The questions needed to be concise, straightforward, and directly relate to “The Landlady.” As players answer the questions, they would, in fact, also be demonstrating their knowledge and understanding of the plot, setting, characters, and themes of the story.

The group firstly had to decide which role each member would take. They then brainstormed on their game’s design. They could model their game after a design such as used in Monopoly, Chutes and Ladders, Candy Land, Trivial Pursuit or any board game that they were familiar with, or preferably they could make up a game entirely of their own creation. Whatever design they chose to use, they needed to include “pitfalls” or setbacks that were the same pitfalls that Billy faced in Roald Dahl’s story. The students also had to create their own game pieces, design a box illustrated with the Landlady theme, and give their board game a title. I instructed the students that when they had completed their game, they would play it to make sure that it worked as expected.
My students enjoyed this project immensely. I was pleasantly surprised at the variety of game designs: some groups adhered to a ready-made format such as Monopoly, while others branched out and designed something entirely original. One game had the players bound on a course toward the fourth floor of the house unless they could escape in time. By missing the answers to the question cards, they would hasten their demise! I was particularly pleased with the care and creativity that went into their game boards. By allowing students in the group to have a specific task, they could delegate these tasks according to their particular abilities, and as a result, were able to focus on their part of the game design. The one area that necessitated teacher input was the question cards: my students found it challenging to phrase a question clearly and succinctly. However, that challenge was so standards-based (Writing 1.7. “Revise writing to improve organization and word choice after checking the logic of the ideas and the precision of the vocabulary”) that I was pleased that it was part of the project.

I decided that the most effective and authentic assessment of the game would be a peer review. I created a rubric whereby the game was judged on three criteria: creativity of design (was the game engaging?), clarity of instructions, and quality of questions. I asked the groups of students to circulate around the classroom and play the games of their peers: they would move from table to table and play each game. At each table was an evaluation sheet that was filled in by the “visiting” team, who had to judge the game and fill in scores for each category. There was a space for a comment at the bottom of the evaluation sheet: I asked the students to make sure that, whether it was praise or criticism, their comment should be constructive and encouraging.

Finally, I asked the students to write a reflection on their project. I wanted the students to write three paragraphs in which they were to think about what they were asked to do, what they thought about the process, and what they learned from it. As we have an 8th grade portfolio fair at the end of every year, I wanted the students to reflect on this project while the activity was still fresh in their minds, knowing that many of them will include their board game in their portfolio.
Reflection

Our teacher, Ms. ----, asked us to create a board game based on the story, The Landlady. The expectation for the game was to have a board game that contained 25 question cards, a rules/directions page, and “pitfalls” or setbacks. This assignment was a fun creative way to learn about foreshadowing and the story. Unlike other projects I have had in the past, this one was a very fun creative way to learn and express the way we felt about the story and how we saw it through our own eyes. The point of this assignment was to get to know the story, about Ronald Dahl, and work with our group partners. To receive an “A” you had to have a game board that was colorful and fun to play.

The process on how our group completed the assignment was that we broke it down into small portions. We had to decide what game we were going to base ours on; such as Candy Land or Monopoly. We chose Candy Land because everybody in our group liked it and some still played it. We each took on a different task to finish our project faster. I drew and colored the board game, Cathy typed out the rules and directions page and made the question cards, Sonia wrote the answer key and helped with the question cards, and Vanessa made the two little people for our board game. We did some of our work in class and some at home. When we were all finished with our parts we put it together coming out with a finished and magnificent board game.

I decided to include this assignment in my portfolio because I think we did a wonderful job. I am very proud of how this assignment turned out because we all worked hard on it and got it done in a way that we had fun but still followed the directions. From this assignment I have gained knowledge about Roald Dahl, how to predict outcomes and how to create fun board games for my family and I can play.
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Lesson Plan Title: Endangered Animal Expo
Lesson Plan Grade Levels: 1, 2, 3, 4, 5, 6
Lesson Plan Subject Areas: Language Arts/Reading (SAGE Category), Mathematics (AMGEN Category), Science (AMGEN Category), Visual Arts

Lesson Plan Narrative: Endangered Animal Expo

The Unit and its Value
In this unit, science comes “alive” in a culminating, student-centered “Endangered Animal Expo.” Students have an opportunity to explore endangered animals and their habitats with an emphasis on using technology to discover what we can do to help protect these animals. This unit helps to inspire students to make a contribution to conservation while they excel in academics.

Together we make connections to social studies, literature, technology, science, math, performing and visual arts, as we investigate endangered animals and their habitats. Multiple learning styles are addressed, and visual, auditory, and kinesthetic experiences are provided through an integrated curriculum. Students are offered various opportunities to demonstrate their learning and all children are actively engaged in “hands on” experiences. This 8-week unit is prepared for 35 students in grade 4 and can be easily adapted and modified to meet the interests and needs of students in grades 1 through 6.

LEARNING TOOLS
Information is introduced at a pace and level of complexity that allows a depth of understanding and level of mastery appropriate for the learner. Many tools are used including:
- Technology including: Internet websites, Microsoft Word, and Power Point applications
- The New 50 Simple Things Kids Can Do to Save the Earth by Sophie Javna. Students learn how to save species by saving energy.
- What's the Difference? An Endangered Animal Subtraction Story by Suzanne Slade. Students celebrate the huge difference caring people make for endangered animals while practicing subtraction skills.
- Class set of world maps to identify locations of endangered species from the Amazon to Yangtze.
- Island Fox presentation from Ranger Carol Peterson of Channel Island National Park.
- Art resources such as watercolors, color pencils, and color chalk pastels
- Sandra Kaplan’s “Depth and Complexity” icons help students further investigate multiple perspectives, ethics, patterns, big ideas, details, and unanswered questions to help students make connections across the disciplines.

INVESTIGATIONS
We investigate endangered animals and their habitats from many different angles.
- Students work in literature circles to read and discuss Will We Miss Them? Endangered Species by Alexandra Wright, The New 50 Simple Things Kids Can Do to Save the Earth by Sophie Javna, and Down-to-Earth Guide to Global Warming by Laurie David and Cambria Gordon.
Journal Entries – Students write about the day in the life of a specific endangered animal. This type of journal writing encourages divergent and creative thinking as students explore endangered animals and their habitats from different perspectives.

Ethics – Students discuss the definition of ethics and record their thoughts and feelings about ways to help endangered animals. Students research internet websites to discover animal protection agencies and what they can do to help.

Science Experiments – Students learn how oil spills and water pollution have been devastating for many species of fish and birds and experiment to find the best way to clean up these spills and pollution. Using the scientific method of investigation, students work collaboratively to develop questions and form hypotheses. They gather data, form conclusions, and present their newly found knowledge to the class, parents and school in a class science fair.

Dissect Owl Pellets - Students learn about food chains, food webs, and the importance of all living things (and non-living things) in the environment.

Endangered Animal Report – Students use internet resources along with the writing process to complete a five paragraph research report using Microsoft Word.

Mural – Students work collaboratively to create a mural depicting the continents and the endangered animals that live on each of the continents.

Endangered Animal Power Point Presentation – Students complete a PowerPoint presentation describing the endangered animal they research along with photos and ideas about what we can do to help these animals.

What We Can Do to Help Endangered Animals Book – Students work collaboratively to write and illustrate a classroom book describing what we can do to help save animals and our planet. Students present and read this book to other classes as part of an Earth Day celebration and ask students to sign a petition to make a pledge to help save our planet. After students sign our pledge, their name is added to our mural and displayed in our hallway.

Math Investigations – Students graph data collected and calculate the changes in the population of the endangered animal they research.

PRESENTATION AND ASSESSMENT
To conclude our exploration of endangered species around the world and to help educate other students, my students host a classroom “Endangered Animal Expo” which is attended by other classes, parents, and family members. Students take on the role as animal and habitat experts as they present and discuss projects, artifacts, and Power Point presentations. This expo provides students with the opportunity to share their written work, display their creative artwork, journal entries, books, science experiments, and other artifacts. Creating Power Point presentations allows students to share learning experiences. It provides them with an audience that makes learning meaningful and assessments authentic. This exciting event positively affects student learning and also provides students with a greater amount of self-confidence. Students truly become experts in a given field of knowledge, and gain the ability to share their knowledge with peers, other classes, and family members.

Throughout this unit, students develop a deep appreciation of the many difficulties endangered animals encounter. This unit also encourages novelty and uniqueness in the interests and abilities of the learner. The positive and enthusiastic response I have received from teachers and parents from this “Endangered Animal Expo” encourages me to continue developing exciting and innovative units for my students in the future. It is my objective to inspire my students to make a contribution to conservation and become more active members of society as they learn about steps they can take to help preserve our natural resources. My goal is to make science come alive while helping my students make connections between life science and worldly events.

ASSESSMENTS
The use of a rubric helps to assess each and every student-made Power Point presentation, artifact, art project, journal entry, “Depth and Complexity” frame, math project, research report, and science experiment. For an authentic summative assessment, students engage in a one-on-one conference with the teacher to discuss their experience and what they have learned. Students also complete a self-evaluation to assess their work and
participation. The curriculum is also assessed through a combination of standardized quizzes, tests, and projects. Informal assessments include whole-class discussions. I have found that the more varied I can make my assessments, the more data I can collect regarding the comprehension of each standards-based lesson.

CONNECTIONS TO CURRICULUM
This project meets many of California’s fourth grade state standards including:
English-Language Arts Writing 1.0; 1.1; 1.2; 1.4; 1.7; 1.9; 1.10; 2.3.a; 2.3.b; and 2.3.c.
Written and Oral English Language Conventions 1.0
Listening and Speaking Strategies 1.0; 1.2; 1.5; 1.8; 1.9; 2.1; and 2.2.
Science, Investigation and Experimentation 6.0.1. a - f; Life Science 2.a, 2.b, 3.a, 3.b.
Mathematics, Number Sense 2.0, 3.0, Measurement and Geometry 2.0, Algebra and Functions 1.4, Statistics, Data Analysis, and Probability 1.0, 1.1, 1.2
California Social Studies: Geography 4.1.2
Dissecting Owl Pellets

Students learn about food chains, food webs, and the importance of all living things (and non-living things) in the environment.
Ranger Carol Peterson from Channel Islands National Park discusses the Island Fox habitat
Students read and discuss books as they learn about endangered animals and discover what they can do to help.
Endangered Animals Power Point Presentations

Students create Power Point presentations to share their endangered animal expertise and knowledge with others.
Science Fair Presentations

Students learn how oil spills and water pollution have been devastating for many species of fish and birds and experiment to find the best way to clean up these spills using the scientific method of investigation.
The endangered polar bear class quilt provides students with an opportunity to experience creativity in color and design.
Endangered Animal Posters

Endangered animal posters are proudly displayed in the school.

Endangered Animal Masks

Children create masks to depict endangered animals, write legends about these animals, and perform their legends to classmates.
Illustrating Our History: Creating and Sharing Historical Fiction and Visual Art about the Civil War

This student centered, project based, integrated ELA/History/Visual Arts unit came about as our team of History and English teachers began brainstorming about how to fully engage 8th graders in the study of the Civil War during springtime (when their hormonally charged attention is often elsewhere). We agreed that one of the most effective ways to engage ALL students in their learning is through art, music, and kinesthetic activities. As a result, we created Illustrating Our History: Creating and Sharing Historical Fiction and Art of the Civil War, a multiage, art based, and universally accessible unit.

I. Time Travel – A Divided Nation
To begin, we discussed the causes of the Civil War, and the division of the “North” and “South.” After the first shots were fired at Fort Sumter, the classroom was literally divided in half, and students moved their desks to their “sides.” Students in the North created flags, maps, portraits of their heroes, and landscapes of the United States. They also sang Battle Hymn of the Republic and Yankee Doodle. Their Southern counterparts created images of the Confederacy. The songs of the South included Dixie and Yellow Rose of Texas. Clara Barton from the AAUW’s program, Women in History, was a guest speaker in our classroom. She spoke about and engaged students in rifle technology, battlefield sanitation, and women’s roles during the Civil War. Powerpoints and textbooks provided supplementary information.

II. Time Travel – Bringing Historical Characters to Life
The novel Bull Run is made up of sixteen characters, all of whom participated in some way in the Battle of Bull Run. Each character relates his/her experience of the battle through several monologues, non-sequentially developing upon the others but without the characters knowing one another (see included copy of text). As strong believers in voice and choice, we allowed students to select partners and one character from the novel on which they would become experts. Initially, each pair read only the monologues from their characters. Next, to gain an in-depth understanding of their own character, students created life-sized body posters of that character, with illustrations and text to describe the character’s thoughts, emotions, and actions. Students created maps of origin, showing the path their characters took to arrive at Bull Run. With an understanding of their individual characters, students read Bull Run as a class. The vignette style of the novel created an atmosphere of excitement for the students, as they were waiting to share insights about their character as each monologue unfolded. And then the real fun began!

As their assessment and to add depth and complexity to the unit, students created a complete life story of their characters. To create the life stories students made life timelines, storyboards, and plot diagrams. These all led up to the final assessment, the writing and illustration of a historical fiction children’s book based on their characters. The stories had to include historical facts, creative elements, specific grammar structures, hand-
drawn illustrations, and original elements. The students were given a rubric on how they would be assessed on each of these elements. The results were impressive. Both the process and the product guided students to a deeper understanding of the writing process and the Civil War, as well as giving students the opportunity to engage their artistic intelligence.

Art allows for divergent thinking and multiple forms of expression, and students’ ability to create was evident in their children’s storybooks. Some students chose to focus on what they had learned about the Civil War, such as rifle technology or the African American struggle for freedom. Other students focused on their own character’s development outside of the novel, such as life after the war – love, family, career, death. Students accessed a variety of artistic methods and media, as both methods and media were open-ended. From pen and ink to natural found objects, the storybooks showed a range of ability and complexity.

This unit is accessible for all students. Students with various needs participated in the unit, including GATE students and students with special needs. The activities (reading, writing, visual arts, group discussions) self-differentiated and the students contributed and participated successfully at their ability levels. This unit is easily adaptable to other grade levels and areas of curriculum, as children can create storybooks on virtually any topic of instruction.

III. Time Travel – Back to the Future
The final activity consisted of the 8th-graders sharing their storybook creations with live audiences. The students visited a local university, toured the campus, and met with university students from an adolescent literature class. The students engaged in literature circles in which they shared their individual storybooks, and participated in lively discussions about the writing process and students’ experiences exploring the novel Bull Run (which the university students had also read). In addition, the middle-school students read their storybooks to children at a local elementary school, modeling a love for history, the creative process, and the genre of children’s historical fiction. During these field trips, students had the opportunity to discuss life, history, and their futures with university students. These children got to see themselves at the university engaging in learning. They gained confidence, both personal and academic. The skills to create, write, discuss, work in a team, and meet a deadline are real world skills that these students acquired and will take with them as a result of this unit.

Outcomes: Apart from the storybook unit assessment, students scored well on the CSTs. Out of 65 students, 10 received 100% on the Civil War section of the History CST. Overall, students scored highest on this portion of the History CST.

State Standards Addressed:
Language Arts Reading Standards: 3.2, 3.4, 3.6 Writing Strategies: 1.1, 1.4, 1.6 Writing Applications: 2.1 Written and Oral Conventions: 1.1, 1.3, 1.4, 1.5, 1.6 Listening and Speaking Strategies: 1.3, 1.5, 1.7, 1.9 Speaking Applications: 2.1, 2.2 U.S. History: 8.10 – 2, 5, 6, 7
Bull Run Final Assessment and Checklist

For our final, each team of students (two or three) will become authors who create children’s historical storybooks based on a character that they randomly choose from Paul Fleischman's *Bull Run*. *Bull Run* is a historical literature novel based on the first Battle of the Civil War.

Directions:
You and your team will write your storybooks for second and third graders at a local elementary school. In your storybooks, you will depict the lives and events of your character in chronological order beginning first with your character’s birth and then developments to and during the Battle of Bull Run. The last part of the book includes your character’s life after Bull Run and then their death. You will also be taking a field trip to a local university to show your books to university students and visit the campus.

Instructions:
Your storybooks:
MUST BE 14 PAGES IN LENGTH AND CONTAIN:
___ 1 title page placed at the beginning of the book containing:
___ the name of book
___ authors
___ publishing information
___ 1 page “About the Authors” placed at the end of the book
___ 10 pages of writing types (one page equals three sentences)

Format:
___ double-spaced text on 8.5 x 11” paper
___ 12 point Times New Roman font
___ One inch margins on all four sides
___ Normal spacing with indent paragraphs
___ Each page numbered in the bottom-right corner
___ Text must relate to the page’s illustration

10 illustrations
___ 1 Front cover illustration
___ 9 illustrations within the book supported by the text
___ 3 historical Civil War facts from the novel base on themes:

“Sectionalism”- the geography, economy, and culture of the North (Union) and the South (Confederacy).

“The Cost of War”- how the Civil War affected combatants, civilians, the physical environment

___ 5 pieces of information found within the novel to place Bull Run character’s life and experiences in chronological order.
Note: The character timeline is a reference and a formatting tool to place your character’s dates and events in chronological order.

___ 4 pieces of information the team creates about their character that fall outside of the novel.
Note: reference the historical portion of the timeline.
Note: Students’ creative elements must be culturally relevant to eras of history that character’s life. For example, students cannot have their characters fly jet planes, become rock stars, or land on the moon.

Grammatical structures:
_____5 compound sentences within the storybook.
_____5 complex sentences within the storybook.

_____1 page constructed as a historical and character timeline
_____1 map page that shows their character’s state origin

The contents of students’ story books will show what your Bull Run characters:
____ want
____ see
____ do
____ experience
And how your character:
____ changes  (static or dynamic?)

The storybooks will include artwork that can be:
_____ drawn
_____ made with collage
_____ painted
_____ photographed
_____ other (get creative!)
Note: Computer or printout medium like clip art will not be accepted.

Remember, we will be sharing these books with university students during a field trip, where you will explain to university students how and why you wrote your stories and did the artwork you chose to do. Please keep this in mind as you work on these books.

Grading:
The creation of the storybook is a two week project. The grade calculated will be based on a rubric and a 262 point total scale. (90% and above = A and 59% and below = F) The storybook accounts for 40% of the quarter grade. Student pairs will also turn in their portfolio binders.
Due date: April 28, 2010
Lesson Plan Narrative: Munchers, Punchers and Pollinators - Garden Insects

As an integral part of the 6th grade Earth Science curriculum, we have created a garden which serves as a backdrop for many unique and challenging lessons throughout the year. A "living laboratory", the garden brings a rich context for exploring lessons in science, nutrition, math, art, music, social studies and language arts. It allows students to make connections and develop scientific process skills for thinking, inquiry, research and communication while allowing them the freedom to discover their eternal link with the Earth, and ultimately, with their own future.

Though many varied lessons are taught as part of the garden curriculum, one unit which is always fun and exciting is the unit focusing on Garden Insects. In order to function more efficiently in the garden, the students are divided into garden groups of 4 or 5 students each. Each group must research and choose a name for their group from a list of beneficial garden insects - Mac's Field Guide of California. We discuss terms "beneficial and non-beneficial" and determine that there are no "good bugs" or "bad bugs"; every living thing on Earth has a niche that is important to the balance of Earth's systems.

Once the group finds an insect they like, they investigate its size, adult and larval stages, feeding habits and predators. The group will continue to use this name for the remainder of the term. By using only beneficial insect names for garden groups, students begin to recognize these insects. If, for instance, they hear or read something about an Assassin bug, they know that it is a beneficial insect because their friend might have been in the Assassin bug group. This, then, is the first introduction to insects for the group.

Our unit continues with an overview of insects- Bill Nye the Science Guy (Insects). "Visitors to Our Garden" are PowerPoint notes that the students complete as a class and then discuss in their groups as part of small group interactions. We begin with Insect Anatomy, as the students take notes and complete the Insect Drawing, identifying the parts of an insect. The presentation is rich with pictures of insects as general predators, parasites, pollinators and poopers (decomposers). We discuss the role of each niche within the garden setting. Next, we discuss complete and incomplete metamorphosis and draw each cycle with regards to butterflies (complete) and ladybugs (incomplete). Recognizing the larval stages of some beneficial insects is important for gardeners as they differ widely from the adult insect. With the help of books and resources, such as Mac's Field Guides, the students are able to identify these larval forms. We also identify and discuss some beneficial insects and their non-beneficial imposters. These are insects that have adapted their appearance so much as to look almost identical to their "good bug" brethren.

Integrated Pest Management (IPM) is an important issue when discussing the success of agriculture in our area. It is a method which benefits the agricultural industry as well as the natural environment. We discuss the improper use of pesticides, contrast IPM practices and evaluate how important beneficial insects are to the health of our agricultural systems.
Our final activity is the creation of an insect "Wanted" poster. For this activity, students are given an Insect Information sheet to help them organize their research. Students are then given access to the library, computer lab and laptops to research any insect of their choice. Research criteria includes whether the insect is beneficial or non-beneficial, its diet, description of the adult and larval form, its niche (role) in the garden and other pertinent information. Once this information is researched, students then draw a picture of their insect on the Wanted Poster provided. These are then laminated and shared in our classroom and office bulletin boards. Other fun activities include insect puzzles, wordsearch and egg carton insect projects.

The garden and lesson from the garden, such as beneficial and non-beneficial insects, incorporate, teach and reinforce California State Standards for both elementary and middle school students in Science, Art, Language Arts, Math and History. Specifically, it reinforces reading, writing, listening, art and graphics, ecology and ecological roles, food chains/webs and identification of species. Activities are appropriate for students of varying skill and ability levels, including language learners.

Extension and Resources
There are many wonderful activities one can incorporate in this unit. Making an insect net is an easy and fun project. Collecting insects from a neighboring field would offer days of study and investigation. Floral foam in a plate makes a great arena for observing insect’s close-up, and nearby field trips are available to insectaries and IMP facilities.
**Lesson Plan Narrative:** Ordem e Progresso: A Student-Centered Exploration of Brazil through the Arts

“Fifty round trip tickets to Brazil please!” Unfortunately actual world travel is not an option for our classes so instead, when our 50 students insisted to study Brazil, we used the resources available to us to provide our students with authentic cultural experiences. We brought Brazil and its vibrant cultural and geographic landscape into our classroom!

For 9 weeks, a 1st & 2nd and a 3rd & 4th grade class collaborated to design and construct a project that addressed state standards through an exploration of Brazil. This progressive, high-quality, student centered project emphasized student achievement through the arts, academics, and global education. Students and teachers co-developed a “country study” project that featured choice, opportunity for creative expression, and grade-appropriate academic challenge built into each of the learning tasks. At our culminating event students shared their understanding of Brazil, demonstrated mastery of learning objectives, and celebrated their academic accomplishments with our entire school community.

**DEVELOPING THE PROJECT:**
Prior to beginning our country study, students shared their interests and questions about Brazil. Students stated what they know and what they wished to learn about Brazil; inquiries were recorded in their personal Brazil Journals. Teachers facilitated research in books and online to help students develop original questions and project ideas. Student feedback and inquiries were critical to the development of our project so that teachers could design original learning tasks that addressed state standards in ways that are engaging and relevant. Throughout the project, students utilized books, video, music, digital media, and support from specialists to collectively investigate the ways in which a people’s surroundings in Brazil affect their livelihood.

**INVESTIGATION:**
Before each day of learning tasks, teachers showed a teacher-created PowerPoint presentation to introduce skills, concepts, or other relevant information to engage students and pique their interest. In addition, video and audio samples enriched student perspective on Brazilian people and culture. Our investigations addressed standards in English Language Arts, History-Social Science, Physical Education, and Visual & Performing Arts. Flexibility and differentiation were embedded in each learning task so that each grade level received appropriate support and challenge. Each student recorded his or her own learning weekly in a personal Brazil Journal.

Students collaborated in small groups to construct their own understanding of Brazil. Buddy pairs created papier-mâché globes to identify continents and locate Brazil. Students learned about the geographic features of the country and how daily life is affected or influenced by the country’s characteristics. Students studied the people’s history of Brazil and identified Brazilian culture as a “melting pot” which boasts influence from Europe, Africa, and the indigenous people of the land.
Specialists and professionals from the community were invited to share their expertise. A music and dance specialist taught the students how to dance samba, perform Capoeira (a Brazilian martial art), and to play Brazilian instruments such as the berimbau, atabaque, and skëkëre. A Brazilian Jiu-Jitsu instructor demonstrated the martial art to our classes and involved students in drills and exercises. Experienced teachers and parent-volunteers instructed how to play soccer, the most popular sport in Brazil. These unique experiences contributed to a more complete understanding of Brazilian lifestyle.

Students were introduced to Brazilian folklore and the creation stories of Iguazu Falls. After studying folktales and grade-appropriate ELA writing strategies, students applied their knowledge to write their own Iguazu Falls creation stories. Students created original art to accompany their original tales.

Students became intrigued by Carnaval, the most popular holiday in Brazil which involves music, dancing, costume, and parades. Students helped design a culminating event where they shared their understanding of Brazil, demonstrated mastery of learning objectives, and celebrated their academic accomplishments with parents and the school community.

CULMINATION & ASSESSMENT:
The culminating event featured a Carnaval parade throughout the school campus and concluded with a showcase of student learning. Students played Brazilian instruments made in class, wore student made Carnaval masks, and carried cardboard floats to simulate Carnaval. The parade was admired by other students, teachers, families, and school administration. Students presented their globes and identified Brazil and other parts of the world for spectators. Posters were displayed to show what they learned about sports, food, animals, holidays, martial arts, and more in Brazil. Student-written folktales and Brazil Journals were displayed and read aloud to others. Everybody shared açaí (a berry which is native to South America) and coconut juice. Our exploration of Brazil and the Carnaval culminating event has inspired our students to pursue the study of Italy, which is currently in progress. The events and products at the culminating event are evidence of our students’ broadened worldview and academic excellence made possible by innovative and student-centered curriculum.

Teachers took notes to assess participation, folktales and other writing tasks, and artistic efforts while students showcased their newly-acquired skills, understanding of concepts, and multi-cultural knowledge. In progress reports, teachers used a 3-tiered rating system (with assistance, developing, or independent) to report each student’s ability to:

- Make brief narrative, informational, dramatic, and descriptive presentations using clear and specific vocabulary to communicate
- Participate in related cooperative activities, writing, discussions, art, and field trips
- Demonstrate learning through visual and written product

In the end, specific teacher-written comments were included in the progress report to illustrate a more complete picture of each child’s social and academic successes within the project.

The impact of this project is deep and far-reaching. It has created ripples of inspiration and excitement within our students as learners, and their heightened awareness of other cultures has connected them more closely to each other, their local communities, and the globe. Students, teachers, parents, and school administrators alike have all been thrilled to celebrate high levels of student achievement through the arts, academics, and global education.
CONNECTIONS TO CURRICULUM & ADAPTABILITY: This 9-week project was accomplished with 50 students, grades 1-4. The project can be adapted to meet the interests and needs of students K-8. This project easily addresses the following California English-Language Arts Standards, and many others:

- **1st - Writing Applications:** 2.1 Write brief narratives (e.g., fictional, autobiographical) describing an experience. 2.2 Write brief expository descriptions of a real object, person, place, or event, using sensory details.
- **2nd - Writing Applications:** 2.1 Write brief narratives based on their experiences: a. Move through a logical sequence of events. b. Describe the setting, characters, objects, and events in detail.
- **3rd - Literary Response & Analysis:** 3.2 Comprehend basic plots of classic fairy tales, myths, folktales, legends, and fables from around the world. Writing Applications: 2.2 Write descriptions that use concrete sensory details to present and support unified impressions of people, places, things, or experiences.
- **4th - Writing Applications:** 2.1 Write narratives: a. Relate ideas, observations, or recollections of an event or experience. b. Provide a context to enable the reader to imagine the world of the event or experience. c. Use concrete sensory details. d. Provide insight into why the selected event or experience is memorable.

In this project, the posters, Brazil Journals, and student-written folktales are evidence of how English-Language Arts Standards can be taught and authentically assessed. When taught in sequence with another foreign country, students at any level can compare and contrast multiple cultures and develop an even deeper understanding of their own global citizenship.

A comparative investigation of other countries has the potential to encourage students to navigate higher levels of Bloom’s Taxonomy by analyzing, synthesizing, and evaluating multiple sources of information from Kindergarten to 8th grade. For example, at the 5th grade level, students may perform a similar exploration of Brazil and write persuasive compositions with relevant evidence to support the position that Brazil is more culturally diverse than another country because of X, Y, & Z (Writing Applications, 2.4). At the 6th grade level, students might consider writing research reports that support or oppose large-scale soy farming in Brazil with facts, details, examples, and explanations from multiple authoritative sources (Writing Applications, 2.3).
Students are wearing Carnaval masks and holding Brazilian instruments (berimbau, skekare, and others) made in class.

Students share their understanding of Brazil, demonstrate mastery of learning objectives, and celebrate their academic accomplishments with parents and the school community.

Students are wearing Carnaval masks and holding Brazilian instruments (berimbau, skekare, and others) made in class.

Student-made posters, writing, and artwork are viewed by the school community. Teachers collect evidence of participation, mastery of writing skills, and artistic effort.

Students play their instruments in preparation for their performance at the culminating event, a Carnaval Parade through the school.

Global studies support student understanding of the complexity of cultures, diversity of people and land, global issues, and encourage curiosity and interest in different cultures to promote a more globally-connected world.

Multi-age learning across the four grade levels promotes student interaction among members of our community, peer support, and opportunities for leadership. Small group, whole group, and partnership learning provide opportunities for interaction and collaboration in multi-age groups.
Students made Carnaval floats and proudly carried them to simulate an actual Carnaval Parade in Brazil, which they observed in books, video, and photographs.

The entire school community admired the parade, including students, teachers, families, and school administrators.

The application of art allows for authentic personal expression and an enriched understanding of the role of art in other countries, and our own.

A student experiences an actual taste of Brazil when making Brazilian empanadas at school.

As students make connections, they take responsibility for their own learning to become emerging thinkers with theories about the world. Throughout our study, students demonstrate independence, leadership, and social confidence.
Students apply their mastery of English Language Arts writing skills to their newfound knowledge of Brazil and synthesize an original story.

Stories are collected by teachers as evidence of student learning and are assessed.

A Brazilian dance and music specialist instructs a student how to play traditional Brazilian rhythms.

Students construct their own understanding of Brazilian music by learning samba from a specialist, listening to different styles of Brazilian music, and constructing their own Brazilian instruments.

Multiple learning styles were addressed when students learned how to use Brazilian instruments, dance samba, and perform capoeira.
A student paints and original image of a toucan, a brightly-colored bird that lives in the Brazilian rainforest and other parts of South America.

Students connect with Brazilian wildlife through books, video, photographs, and art.

A student practices Brazilian Jiu-Jitsu skills with a trained professional, and native to Brazil.

Our connection to Brazil became kinesthetic when a Brazilian Jiu-Jitsu instructor taught our classes the values, traditions, and special skills that are all part of his martial art.
A second grade student writes, "The river turtle are omnivores and eat fruits, leaves, fish, and mollusks. Females lay eggs on the banks of the river. She lays 30 eggs. I hope I get to see one day."

A second grader uses white glue and pastel on black construction paper to illustrate a Brazilian river turtle.