2016 IMPACT II
Curriculum

“Commitment to Quality Education for All”
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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This cross-curricular unit requires students to apply concepts and background knowledge of insects and ecosystems to create an imaginary environment where invented, 3D printed insects can survive. Students’ creativity is channeled through an outlet where they demonstrate their learning by constructing a newsletter, a 3D printed insect, and a documentary that brings their imagination to life.
3D Printed Entomology

This unit began with activities that taught background information of ecosystems, stressing Some of the projects included a live webcast from the tundra and magazine collages.

Next, I gave my students the following writing prompt.

You are an entomologist. You have discovered a new insect in the Room 30 Ecosystem. Write about your discovery. Be sure to include a description of what the insect looks like, where it lives (its habitat), what it eats, how it contributes to its ecosystem, what adaptations is has to help it survive, and other information from your brainstorm. Your journal entry must include at least 8 of the following vocabulary:

consumer
pollinator
producer
seed dispersal
adaptation
camouflage
extinction
habitat
hibernate
mimicry
predator
prey
species

Then, they were instructed to draw a picture and label the different parts of an insect. Students were pointed to entomology websites, and some brought in real insects to observe.

Once their insects existed in their journals, they created them on an iPad using an app called 123D Creature. While they were creating their insects they were also writing a description of the “Room 30” ecosystem in which the insects were discovered.
Prompt:

Write a paragraph or two that describe the Room 30 Ecosystem where you discovered your insect. Be sure to include the following:

1. A description of the classroom
2. What living and nonliving things are found in the ecosystem
3. How the living and nonliving things interact and how the living things need the non-living things to survive
4. Correct spelling
5. Indent
6. Write in complete sentences
7. Use correct grammar

As the students finished designing their insects they uploaded them to the cloud. Then downloaded the insects to a computer connected to the 3D printer and printed them.

Students wrote an second article. This one was about the “entomologist” who discovered the insect.

Write a biography on your fictional entomologist. Make sure you write in the 3rd person. You are not talking about yourself, you are writing about Dr. _______. To write your biography please include the following:

1. The name of your Dr. (that's your name)
2. Where they received their Ph.D.
3. Why the Dr. is interested in studying insects
4. What their most notable discoveries are
5. Describe how the Dr. discovered the insect in Room 30
6. What their favorite insect is and why
7. Anything else you can think of.
8. Be sure to write in the 3rd person.
9. Indent.
10. Write in complete sentences
11. Check spelling and grammar

You will also need to take a picture of the Dr. in action. Have a partner take a picture of you while you "study" or "discover" your insect.
Students put their writing pieces into a newsletter template on an iPad. They also had to create a nature video of their insect. The app iMotion was used to make a stop motion animation using their insect. The video was then imported into iMovie where they voiced over their footage. This video was uploaded to YouTube and the students then created a QR code, which they inserted into their newsletters.

The final product was a spectacular newsletter with 3 articles, images, and a qr code that takes the reader to their nature video. In addition to the newsletter, we labeled and mounted the insects to our class bulletin board.

Sample of Newsletter
Sample of Video

Images
**Technology used:**

3D printer and software

iPads

Class wiki

Word processors

Autodesk 123D website

123D Creature (iPad App)

iMotion HD (iPad App)

iMotion (iPad App)

Songify (iPad App)

Dropbox (iPad App)

Others
California Science Content Standards

Grade 4 Life Sciences

Organisms depend on one another and on their environment for survival. As a basis for understanding this concept:

a. Students know ecosystems can be characterized by their living and nonliving components.

b. Students know that in any particular environment, some plants and animals survive well, some survive less well, and some cannot survive at all.

c. Students know plants depend on animals for pollination and seed dispersal, and animals depend on plants for food and shelter.

English-Language Arts Content Standards

1.0 Writing Strategies

Students write clear, coherent sentences and paragraphs that develop a central idea. Their writing shows they consider the audience and purpose. Students progress through the stages of the writing process.

Organization and Focus

1.1 Select a focus, an organizational structure, and a point of view based upon purpose, audience, length, and format requirements.

1.2 Create multiple-paragraph compositions:
   a. Provide an introductory paragraph.
   b. Establish and support a central idea with a topic sentence at or near the beginning of the first paragraph.
   c. Include supporting paragraphs with simple facts, details, and explanations.
d. Conclude with a paragraph that summarizes the points.
e. Use correct indentation.

1.3 Use traditional structures for conveying information (e.g., chronological order, cause and effect, similarity and difference, posing and answering a question).

Research and Technology

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.

1.9 Demonstrate basic keyboarding skills and familiarity with computer terminology (e.g., cursor, software, memory, disk drive, hard drive).

Evaluation and Revision

1.10 Edit and revise selected drafts to improve coherence and progression by adding, deleting, consolidating, and rearranging text.

Assessment

Each writing piece was assessed with a rubric. The ecosystem writing piece was scored on scientific content. The insects they created were scored on having the same parts of an insect. The overall quality of the project was given a final grade based on effort.

Effects on Student Learning and Achievement

This cross-curricular unit requires students to apply concepts and background knowledge of insects and ecosystems to create an imaginary environment where invented insects can survive. Students’ creativity is channeled through an outlet where they demonstrate their learning by constructing a newsletter and documentary that brings their imagination to life.
2016 Ventura County Impact II Grant

District: Ventura Charter School
School: Ventura Charter School
Participant(s): Laura Bingham and Holly Johnson

Lesson Plan Title: Home Is Where The Habitat Is
Lesson Plan Grade Levels: Pre-K
Lesson Plan Subject Areas: Science (Amgen Category)

Our project focused on Habitats. We began with the Backyard Habitat so that we could begin by using students' prior knowledge. From there, we formed Crews each one focusing on a different Habitat, becoming the experts. We had guest speakers and took field trips. Students created books and dioramas of habitats. Students also worked on two community projects, making an Official Certified Wildlife Habitat at school and creating a trail guide for children to be used at the Ojai Meadows Preserve.
Our Project

The animal habitats project was scaffolded to start small and branch out to the larger worldwide picture. We began our project by inviting students to take a closer look at our very own backyard. Students made observations on walks around campus and on field trips through our own local habitats at places such as the beach in Santa Barbara and the Ojai Valley Meadows Preserve. We explored the diversity among both plant and animal life. Students had the opportunity to watch both ladybug and butterfly larvae metamorphose through the pupa and adult stages of life. We read many books about the backyard habitat. Students were able to identify that a habitat must include food, water and shelter for its inhabitants. Students kept Science journals chronicling the life cycles of these insects. When ladybugs and butterflies became adults, the students set the insects free in the classroom gardens. This was an exciting and bittersweet moment for our Kindergartners! Students created various butterfly art pieces including making butterfly magnets by using coffee filters and food coloring. Students also helped make smoothies using fruits and vegetables grown in their own school garden beds. They were able to use the Vitamix from the Captain Planet Garden Grant we had received that year.

Students decided that they wanted to make our butterfly garden a Certified Wildlife Habitat with the National Wildlife Federation. To do this we needed to meet specific criteria. In addition to having specific plants, such as native and drought tolerant, we needed to create cover for animals, a safe place for animals and insects to raise their young, and create a water source. Kindergartners created insect hotels using logs, moss, and rocks. Our students also created a bird bath using clay pots. It is now future Kindergartners responsibility to make sure this bird bath stays full with water. It certainly was an exciting day when our Certified Wildlife Habitat sign was installed!

To extend our learning of the backyard habitat we took a field trip to the Santa Barbara Natural History Museum. At the museum students were led on an exploration through the Museum Backyard. Students were able to dig for bugs, hold insects such as pill and stink bugs, touch reptiles, make mud pies, float boats and sticks down a creek, and perform on an outdoor stage.

World Animal Habitat Study

After exploring our backyard habitat, we focused on global animal habitats. We formed crews, where each crew was responsible for studying a different habitat. Kindergartners discussed what makes a great crew. They decided that crews should listen to each other, offer ideas, get along, and be kind.

Each crew worked on a flap book describing the habitats soil, water source, climate, geography, flora, and fauna. They became experts of that particular habitat and shared with each other what they had learned.

Students brainstormed about what type of animals live in desert, ocean, forest, and polar/arctic habitats. They then branched out to give their crew a name and create their crew posters. Creating this poster helped establish the crews and give children an introduction on how to work together. Students were introduced to “teamwork rubrics” and filled out the rubrics periodically throughout the project to reflect how effective their crew was working and how they could improve their work as a crew.

Students then worked on murals depicting their habitat. They painted the environment to include native plants and land features. Students hunted for photos of animals in magazines to add to the murals. These murals
were displayed in our classrooms to share each crew’s learning. Students each chose a different animal from their habitat and created a book, describing the animal’s characteristics and description, its diet, who their prey or predators were and interesting facts. Students then created dioramas of their animals in their habitat and were required to show the animal, its food and water source, and its shelter. Students created a museum. They came dressed appropriately for their habitat and assumed the role of researchers and scientists from that field. Parents and other students visited the museum, allowing Kindergartners to share all of their habitat knowledge. Students used rubrics to assess their own presentations and teachers used both formal and informal assessments throughout the project to assess progress, work habits, teamwork, and learning targets.

We then proposed a driving question to our Kindergartners: “How can we as conservationists, use what we know about animal habitats and what animals need to survive to create a trail guide that will educate other children about lessening human impact on animal habitats.” We took a field trip to the Ojai Valley Meadows Preserve. Students were asked to observe what animals they found living in this habitat. Upon return, students began creating drawings of animals that made their home in the meadow preserve. Over several weeks, students continued to refine these drawings, adding more detail each time, until they had their final product which would become part of our trail guide. These trail guides are now being used at the preserve for students to locate various habitat animals from the preserve.

This project had a positive effect on students. They learned how to work effectively in a crew, learned a great deal about habitats and were very proud of their contribution to their community with both the creation of a Certified Wildlife Habitat at their school, as well as their creation of a trail guide that will be used by many children in the surrounding community.
Supporting Documents for Kindergarten Animal Habitats Study:

Home is Where the Habitat Is

Play, incorporating animistic and magical thinking is it important because it fosters the healthy, creative, and emotional growth of a child; forms the best foundation for later intellectual growth, provides a way in which children get to know the world, and creates possibilities for different ways of responding to it. Fosters empathy and wonder. – Rachel Carson, A Sense of Wonder

Introduction to Project: Our Backyard Habitat

- Students took a walkabout on campus to explore our school plants, insects, and animals.
- Kindergarteners used the Think, Puzzle, Explore thinking routine before our walkabout. Students discussed what they knew and wondered about life in our backyard habitat. Students brainstormed how we would acquire answers to our questions. Kindergarteners agreed that one way to research animal habitats is to go directly into the field!
- Students discovered many insects and birds in our school backyard habitat. They also explored the gardens. Some of our fruit and vegetables we had planted earlier in the year were even ready for harvesting!

Our Backyard Habitat: Ladybug and Butterfly Life Cycles

- Students were able to observe and record the changes in the life cycle of Painted Lady butterflies.
- We also observed the life cycle of ladybugs!
| Students recorded observations about the ladybug and butterfly life cycles in a nature journal. | Students kept notes for about a month, while investigating these insect life cycles. |
Our Backyard Habitat: Lifecycle of a Butterfly Art

Students replicated the butterfly life cycle using various pasta shapes for each stage of development. Couscous was used as the egg, rotini for the larva, shell pasta as the pupa, and bowtie as the adult.

Our Backyard Habitat: Release of Our Insects

It was a bittersweet, but exciting day when the Kindergarteners released our butterflies. Here they are releasing our ladybugs into our gardens we planted earlier in the year. Students loved learning that our ladybugs are also beneficial insects and help our garden to grow healthy and strong.
Our Backyard Habitat: Art and Extensions

We created butterflies using coffee filters, clothes pins, and liquid watercolors. Students also learned about plant parts, recreating a plant using various materials and labeling each part.

Our students and volunteer parents made the most of our new Vitamix that we acquired from the generosity of the Captain Planet Foundation Grant in 2014. We made delicious smoothies using kale and bananas grown on campus. This activity was valuable in teaching students about growing our food and how nutritious food can also be tasty!
At the Santa Barbara Natural History Museum’s Backyard exhibit, students were able to get up close and personal with insects and dirt. Students made mud pies, dug in the dirt to find worms, touched snakes and other reptiles, and observed movement of water by racing wooden boats down a creek.
Our Backyard Habitat: Community Service Project: Certifying a School Garden

Students needed to fulfill several criteria to certify our butterfly garden as a wildlife habitat. One of the requirements was to establish a water source for animals and insects.

We designed a bird bath using clay pots and a clay dish. Each student added their own personal touch with their handprint.
To certify our garden as a wildlife habitat we had to create shelter for animals and insects to raise their young and create cover for wildlife. Students added moss and different types of noodles to pinecones and logs to meet this need.

Our butterfly garden is certified by the National Wildlife Federation as a Certified Wildlife Habitat!

Our wildlife habitat is complete!

Here is our certificate stating that our garden is a Certified Wildlife Habitat from the National Wildlife Federation. We also made the paper!
Global Animal Habitats: Forming Our Crews

Our Kindergartners were introduced to the idea of a crew. We created a mind map of what we felt qualities of a cooperative crew would be. After our discussion, students met with their crews.

We branched into four crews. Each crew represented a different global animal habitat: Desert, Forest, Ocean, and Arctic/Polar. Students worked together to create crew posters. They had to discuss their thoughts and make compromises to create a crew name.
Students created murals depicting their habitat. They painted the background to exhibit landforms and plants they researched. Students cut photos from magazines of animals that live in their habitat. They also drew and cut out other animals from their habitat that they could not find in magazines.

Students were proud to display their crew poster on their animal habitat murals!

Global Animal Habitats: Habitat Flap Book

Students created flap books about their habitat. They researched their habitat using a variety of sources including magazines, websites, apps, and books. Students wrote and illustrated pages about soil, water, climate, geography, flora, and fauna.
Global Animal Habitats: Field Trip to Ty Warner Sea Center
Our Kindergartners visited the Ty Warner Sea Center in Santa Barbara. We learned many things about not only the ocean animal habitat, but also our own local animal habitat! Students were able to touch and investigate animals such as sharks, sea cucumbers, sea stars, and manta rays. Students were so inspired by this trip. Their inquiries were focused and relative. Not only did our Ocean Habitat crew bring back valuable information, but the rest of our Kindergartners were able to use their new knowledge to gain a deeper understanding of their own animal habitats.

Global Animal Habitats: Guest Speaker Live from the Nautilus

We had the privilege to webcam live with the Nautilus crew. Students were able to view the ship on the ocean heading for the Galapagos Islands. We heard from Melissa Baffa, a marine biologist, onboard the Nautilus. She discussed animals that she has seen and works with out in the field. Students were able to interact with her, asking her and Socktopus (a sock puppet scientist) questions about their journey and the ocean habitat.
| Students used a variety of resources for their research. | Students read animal magazines such as Zoobooks, investigated apps and websites about animals, and read books about specific habitats. |
Students created digital posters using the PicCollage app on our class iPads. We worked on these posters during our center rotation time. Requirements for the posters included sharing a photo of your animal of study, a food source, a water source, and shelter. Students were also encouraged to include other animals, predators as well, that could be found in their habitat.

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<td>Includes researched animal, multiple food sources, water sources, and shelter.</td>
<td>Includes researched animal, multiple food sources, water sources, and shelter.</td>
<td>Includes researched animal, one food source, water source and shelter.</td>
<td>Does not include researched animal, food source, water source, and/or shelter.</td>
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<td>Includes native habitat plants.</td>
<td>Includes native habitat plants.</td>
<td>Does not include native habitat plants.</td>
<td>Does not include native habitat plants.</td>
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<tr>
<td>Includes other animals from habitat.</td>
<td>Does not include other animals from habitat.</td>
<td>Does not include other animals from habitat.</td>
<td>Does not include other animals from habitat.</td>
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Students extended their thinking as we reached Level 4 of Webb’s Depth of Knowledge. Each student created a diorama of their habitat using shoeboxes and materials from both our classroom and home. Students were required to include their animal of study, a water and food source, and shelter.

Students covered their boxes in paper and paint. They used materials such as straw, cotton, clay, pipe cleaners and plastic toys to recreate their habitats.

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<th>Animal Habitat Diorama Rubric</th>
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<td>Diorama includes researched animal, water source, food source, and shelter to raise their young.</td>
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<td>Diorama is constructed neatly, with no part of the box exposed. There is a variety of color and the landscape reflects that of the natural habitat.</td>
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Our Kindergarten classes visited the Moorpark Training Zoo to get an up close look at some animals from around the globe. We participated in a presentation about animals such as the donkey and turkey vulture. After the presentation we toured the zoo, learning about animals from various habitats such as the jungle, desert, forest, and swamp. Our students heard from zookeepers about tigers, frogs, alligators, tortoises, howler monkeys, and many more amazing animals. The students also went on an animal alphabet scavenger hunt. Students were identifying, classifying, and investigating many different types of animals and gaining a deeper understanding of each animal’s function in their habitat.
At the Santa Barbara Natural History Museum, students explored different habitats from all over the world. They investigated the mountain and woodland habitat, getting up close to frighteningly large Grizzly Bears. They learned about Southern California’s wild animals, such as the mountain lion, raccoon, and possum. Students were taught about the diversity of birds and insects by docents and learned how the native Chumash used various animals for food and tools.
Gray Wolves

Description

Most of the time, wolves live in packs of family members. Wolves have strong jaws and can kill anything that lives in the forest.

Diet

Gray Wolves are carnivores, so they eat meat. They hunt deer, elk, and other animals.

Enemies

Some of the enemies of gray wolves are large mammals like bears and cougars.

Fun Facts

Gray Wolves have a great sense of smell.
Kindergartners created books about an animal from their habitat. Some animals included gray wolves, thorny devils, rattlesnakes, and pythons. Students read articles from the internet and class library books about their animals. They researched the characteristics of their animal, “enemies” (predators or prey), diet, habitat, and fun facts. Each book included a picture of the animal in its habitat.
### Animal Book Rubric

<table>
<thead>
<tr>
<th></th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Writing</strong></td>
<td>Writing is thoughtful and contains multiple details about animal on each page.</td>
<td>Writing is thoughtful and contains some details about animal on most pages.</td>
<td>Writing is somewhat connected to topic and contains some details on most pages.</td>
<td>Writing is not connected to topic and does not contain details on most pages.</td>
</tr>
<tr>
<td><strong>Student included</strong></td>
<td>Student included two detailed, multi-colored illustrations.</td>
<td>Student included two multi-colored illustrations, with some detail.</td>
<td>Student included two illustrations, with limited detail and color.</td>
<td>Student submitted one or no illustrations.</td>
</tr>
</tbody>
</table>

### Local Animal Habitats: Field Study at Ojai Meadows Preserve

![Field Study Image 1](image1)

![Field Study Image 2](image2)

![Field Study Image 3](image3)

![Field Study Image 4](image4)
Our Kindergartners visited the Ojai Meadows Preserve to get a closer look at our own local habitats in Ventura County. We heard from docents about local animals such as the ground squirrel, rattle and gopher snakes, turkey vultures, and western toad. Students learned how the animals are connected to the plants and other animals. Docents taught children about how animals like the rattlesnake will feed on prey such as ground squirrels. Children thought about what would happen to the rattlesnake if ground squirrels were to suddenly become endangered. Having these discussions and observing some of the animals in the field elucidated for the children how all living things are connected and we must be gentle with our earth.

Local Animal Habitat: Community Service Project: Developing the Trail Guide
Students chose their favorite meadow animal to draw for the trail guide. While creating their pictures students learned the importance of revision. Students created 4 drafts before moving on to their final version. Students worked in pairs for peer review of each others work. We worked on beginning with what we liked about a person’s work, what we notice, and ending with a suggestion. It was amazing seeing the transformations of their pictures after time and effort were put into them. Students were very proud of their efforts and understood the value of high-quality work.
Local Animal Habitats: Producing a Trail Guide for the Ojai Land Conservancy

The Ojai Meadows Preserve is full of many beautiful plants and animals. On your hike try looking for some of the species below.

a. _______   e. _______   i. _______
b. _______   f. _______   j. _______
c. _______   g. _______   k. _______
d. _______   h. _______   _______

MEADOW PLANTS AND ANIMALS
COYOTE
RED-TAILED HAWK
WESTERN ROAD
CALIFORNIA POPPY
DIXX
RABBIT
TURKEY VULTURE
Gopher Snake
WESTERN RAVEN
Hummingbird
MONARCH BUTTERFLY
Our Kindergartners generated many ideas for what they wanted to trail guide to look like. One thing was for certain, they wanted their trail guide to be specifically for children. The Ojai Land Conservancy was thrilled that our students wanted to create this for their visitors. We collaborated with this organization to decide which animals to include in the guide. Students voted to make our pamphlet interactive. We used student artwork of animals found in the meadow habitat as part of this seek and find trail guide. It is currently available at the Ojai Meadows Preserve.

Global Animal Habitats: Culminating Event
The excitement in our classrooms was tangible on our culminating day. The entire school and parents were invited to learn about our animal habitat adventures. Students were encouraged to come dressed as a researcher in their field of study. Students shared their dioramas, books, art work, and digital posters. We also presented our two community service projects: the wildlife habitat and our trail guide. Our visitors included adults and children of all ages. It was a proud day indeed!

Other Rubrics Used During Animal Habitats Project

Student Self-Reflection

Work Ethic Rubric
Home Is Where the Habitat Is: Learning Targets

#1: I can describe a backyard habitat.

#2: I can identify important components of a habitat.

#3: I can present information learned through writing, art, and presentation to a variety of audiences.

Kindergarten CCSS Addressed

This project was designed with the Next Generation Science Standards in mind. We focused on the presentation expectation in Kindergarten which was to help students formulate answers to questions. The question we focused on was, “Where do animals live, and why do they live there?” Students developed an understanding of what animals need to survive and their relationship between their needs and where they live.

<table>
<thead>
<tr>
<th>English Language Arts</th>
<th>Science: K-ESS3 Earth and Human Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CCSS.ELA.WK.2</strong> Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.</td>
<td><strong>K-ESS3-1</strong> Use a model to represent the relationship between the needs of different plants or animals.</td>
</tr>
<tr>
<td><strong>CCSS.ELA-Literacy.WK.7</strong> Participate in shared research and writing projects.</td>
<td><strong>K-ESS3-3</strong> Communicate solutions that will reduce the impact of humans on the land, water, air and/or other living things in the local environment.</td>
</tr>
<tr>
<td><strong>CCSS.ELA-Literacy.WK.8</strong> With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.</td>
<td><strong>Disciplinary Core Ideas:</strong></td>
</tr>
<tr>
<td><strong>CCSS.ELA-Literacy.SL.K.1</strong> Participate in collaborative conversations with diverse partners about Kindergarten</td>
<td><strong>ESS3.A Natural Resources</strong> Living things need water, air, and resources from the land and they live in places that have the things they need.</td>
</tr>
<tr>
<td></td>
<td><strong>ESS3.C Human Impacts on Earth Systems</strong> Things that people do to live comfortably can affect the world</td>
</tr>
</tbody>
</table>
topics and texts with peers and adults in small and larger groups.

around them. But they can make choices that reduce their impacts on the land, water, air and other living things.

<table>
<thead>
<tr>
<th>Crosscutting Concepts</th>
<th>Cause and Effect</th>
<th>Systems and System Models</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CCSS.ELA-Literacy.SL.K.1.A</strong> Follow agreed upon rules for discussions (e.g. listening to others and taking turns speaking about the topics and texts under discussion.)</td>
<td>Events have causes that generate observable patterns.</td>
<td>Systems in the natural and designed world have parts that work together.</td>
</tr>
<tr>
<td><strong>CCSS.ELA-Literacy.SL.K.2</strong> Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CCSS.ELA-Literacy.SL.K.3</strong> Ask and answer questions in order to seek help, get information, or clarify something that is not understood.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CCSS.ELA-Literacy.SL.K.6</strong> Speak audibly and express thought, feelings and ideas clearly.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Suggested Field Trips for Animal Habitat Study

<table>
<thead>
<tr>
<th>Santa Barbara Ty Warner Sea Center</th>
<th>Ojai Meadows Preserve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moorpark Training Zoo</td>
<td>Santa Barbara Zoo</td>
</tr>
<tr>
<td>Santa Barbara Natural History Museum</td>
<td>Carpinteria Seal Sanctuary</td>
</tr>
<tr>
<td>Ellwood Beach Monarch Butterfly Preserve</td>
<td>Channel Islands Visitor Center</td>
</tr>
<tr>
<td>Ventura Botanical Gardens</td>
<td>Ventura River Preserve</td>
</tr>
<tr>
<td>Local Beaches</td>
<td>Visits by various scientists and marine biologists</td>
</tr>
</tbody>
</table>
Students will explore the properties of different materials. Student will use what they have learned about the properties of the different materials to engineer a boat that will stay upright and float even when it is pulled from one end of a large container of water to the dock (other end). They will describe how the given data from the test provided evidence of the suitability of different materials for the intended purpose.
2nd Grade Engineers: Building a Boat that Floats

This second grade physical science unit builds student knowledge about the properties of matter and the reasons materials are used for similar and different purposes or functions. At first, students are asked to make observations using their sense of touch, sight, smell and sound (sense of taste is not encouraged in the science lab). After categorizing and classifying objects according to specific characteristics and including testing materials that absorb or do not absorb water, students are then introduced to the concept of reversible and irreversible changes. Then students are asked to work with a partner and design an object out of Legos. The following day, students take apart that object and design something new out of the exact same Legos.

The final project is to work in teams of two to three members and make a boat that floats. Once the class has tested their boats in a small container of water, the teacher tells the students that they are to imagine that their boat’s engine has broken down and needs to be towed to shore. Students have to decide where they want to put their tow line on their boat. After placing the tow line, boats are then taken outside to a big container of water and pulled to see which boat can reach the shore the fastest without sinking or tipping over. Students learn that it is important to decide where to put their tow line, so that it doesn’t sink or tip over. This additional component adds excitement and the extra challenge of redesigning their boat if it sinks or tips over.

The following NGSS Disciplinary Core Ideas are covered in this unit:


- Matter can be described and classified by its observable properties.
- Different properties are suited to different purposes.
- A great variety of objects can be built up from a small set of pieces.

PS1.B: Chemical Reactions

- Heating or cooling a substance may cause changes that can be observed.
- Sometimes these changes are reversible, and sometimes they are not.

Throughout this unit students are highly motivated and engaged because they are learning how to observe like scientists and plan, test and redesign like engineers. They learn to plan and work well with their team partners. Students are assessed through teacher created worksheets and through their science journal entries, but the most important assessments are their oral presentations on their Lego creations and on their boat’s original design and redesign.
Properties of Matter
2nd Grade

Taking an “extension of the notion of worldview” approach
(Basterram, Trumbull & Solano-Flores, 2011)
Pre-assessment
(Diagnostic)

- Worksheet is given to all students in which students must identify which “key word” best completes the sentence.
- Pre-assessment is given in both Spanish and English.
- Sentences that are provided to students are relatable to their everyday lives.
- Teachers can use this assessment to analyze the background knowledge and understanding of their student both in the subject matter as well as their academic language.
PRE-ASSESSMENT WORKSHEETS

Describing Matter

1. A rock is rough and _______.

2. A tortilla is round and _______.

3. A kitten is cuddly and _______.

4. Lemons are _______.

5. Cake is fluffy and _______.

6. A dime is hard, metallic and _______.

7. Ice is wet and _______.

8. The Sun is bright and _______.

Word Bank

- sweet
- hot
- cold
- round
- sour
- hard
- flat
- soft

1. A rock is rough and _______.

2. A tortilla is round and _______.

3. A kitten is cuddly and _______.

4. Lemons are _______.

5. Cake is fluffy and _______.

6. A dime is hard, metallic and _______.

7. Ice is wet and _______.

8. The Sun is bright and _______.

Word Bank

- sweet
- hot
- cold
- round
- sour
- hard
- flat
- soft
Factors to take into consideration when reviewing student assessment:

1. Student experiences play a role in their response (hot/sweet/flat tortilla, the lemon is round/sour/sweet)
2. Other terms or concepts within the assessment may be new or comprehended differently by the student (fluffy, cuddly)
3. Previous lessons may not have been well assessed or understood by students (the sun is round, hot, flat)
Assessment is provided in both Spanish and English.

Visual aspect provides alternative method to assessing students understanding.
IMPLEMENTATION OF THE LESSON THROUGH A HANDS-ON INQUIRY BASED APPROACH
INTRODUCTION TO THE PROPERTIES OF MATTER

Read “My 5 Senses” and use that to introduce the Science Notebook.

Read whole class- Feely Bugs- David A. Carter connected to the sense of touch.

Read “Second Grade National Geographic Science Book Sample” with class using discussion questions with the whole class.

** Getting students involved on multiple levels of learning. Using their senses as well as academic reading and writing.
LESSON #1

ENGAGE (Move to the Lab)
Give each group one tile from game board set that has a colored 6 or 9 on it. These tiles have similarities as well as differences for each group to describe using only their sight.

Teacher writes the descriptive words (If there is time, students could sort the words) on the board mentally categorizing them: color, shape, size, texture, and material. Students decide on categories.
After sharing out have students pick up the object and use both their sense of touch and sight to describe the other side. Continue writing the words student use to describe within appropriate categories.

EXPLORE (lab)
Give students a tray full of different objects to sort. Have the students first look at the objects without touching them, so that they can discuss with their partners how they will sort their objects. Each group will write how they plan to sort their objects before sorting looking for patterns to be able to identify the category.
Before students begin explain, that scientists/engineers often change their plan after they have started working and realizing that another way might better, so they rewrite their plan.
Ask students if it is o.k. to change their plan.
Have a discussion and then encourage students to write a new plan and try another way to sort their objects.

EXPLAIN (class discussion/video/article)
Ask students to share their first plan and then explain why they decided to change their plan. What was it about the objects that made them to decide to rewrite their plan and sort their objects following a different property?
<table>
<thead>
<tr>
<th>Materials</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponge</td>
<td>Color: yellow</td>
</tr>
<tr>
<td></td>
<td>Smooth or Rough: rough</td>
</tr>
<tr>
<td></td>
<td>Hard or Soft: soft</td>
</tr>
<tr>
<td></td>
<td>Elastic or non-elastic: non elastic</td>
</tr>
<tr>
<td></td>
<td>Other: it's skwishing</td>
</tr>
<tr>
<td>Sandpaper</td>
<td>Color: tan</td>
</tr>
<tr>
<td></td>
<td>Smooth or Rough: rough</td>
</tr>
<tr>
<td></td>
<td>Hard or Soft: hard</td>
</tr>
<tr>
<td></td>
<td>Elastic or non-elastic: non elastic</td>
</tr>
<tr>
<td></td>
<td>Other:</td>
</tr>
<tr>
<td>Water</td>
<td>Color: clear = transparent</td>
</tr>
<tr>
<td></td>
<td>Smooth or Rough: smooth</td>
</tr>
<tr>
<td></td>
<td>Hard or Soft: soft</td>
</tr>
<tr>
<td></td>
<td>Elastic or non-elastic: non elastic</td>
</tr>
<tr>
<td></td>
<td>Other: water has a wavy shape</td>
</tr>
<tr>
<td>Ice</td>
<td>Color: clear</td>
</tr>
<tr>
<td></td>
<td>Smooth or Rough: smooth</td>
</tr>
<tr>
<td></td>
<td>Hard or Soft: hard</td>
</tr>
<tr>
<td></td>
<td>Elastic or non-elastic: non elastic</td>
</tr>
</tbody>
</table>
Lesson #2

Applying knowledge and concept from previous lesson into new lesson that utilized students understanding.

<table>
<thead>
<tr>
<th>ENGAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Show students pictures of prototypes. (Origami Satellite) Engineers prototype using different materials than they will use to actually create the object.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXPLORE (lab)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Looking at the LEGO's they have, design and build something of their choice (no wheels, no people). Once their creation is complete, remove the unused LEGO's.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXPLAIN (class discussion/video/article)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record data: Count LEGO's /graph colors and numbers</td>
</tr>
<tr>
<td>Describe what they created using their 5 senses AND draw a model of it in their notebook.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXTEND (another lab?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disassemble object and create creation #2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EVALUATE (science notebook or formal assessment)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students describe evidence from observations (first hand or from media) including:</td>
</tr>
<tr>
<td>The characteristics (e.g. size, shape, arrangement of parts) of the original object.</td>
</tr>
<tr>
<td>That the original object was disassembled into pieces.</td>
</tr>
<tr>
<td>That the pieces were reassembled into pieces.</td>
</tr>
<tr>
<td>That the pieces were reassembled into a new object or objects.</td>
</tr>
<tr>
<td>The characteristics (e.g. size, shape, arrangement of parts) of the new object or objects.</td>
</tr>
</tbody>
</table>

** Understanding that objects are made up of smaller objects and can be taken apart (assembled, disassembled and reassembled)
LESSON #3 (SUMMATIVE)

**EXPLORE (lab)**
Students in pairs will build a boat using the knowledge they have gained by testing the boat materials over the past week.
Students choose as a pair and agree on the items they will use to create their boats.

**EXPLAIN (class discussion/video/article)**
In their Scientific journal students will write an initial statement about why they chose specific materials for their boats. We chose _______ because__________. Draw a model of their boat in their journal as well.

Students will test their boats (in a small tub of water) to see if they will sink or float. They should redesign as needed.

**EXTEND (another lab?)**
Tell students the situation: "Your boat is out in the ocean, it breaks down and needs to be pulled in. Where would you like to attach the line to have it pulled back in?" Students then decide where they want the hole punched in their boat and a line is attached. In a large tub of water students will try to pull the boat and see if they chose the correct place to attach their line. If possible or necessary, they will make adjustments to their design and chose another location for the pull line. Results including reflections on how well it worked. "When we put the boat in the water, I observed__________. I think it _______ because__________. " and ask students to explain what happened when they towed their boat.
Alondra

Materials for Our Boat

<table>
<thead>
<tr>
<th>Choose no more than 4</th>
<th>✓ What you need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk or juice carton</td>
<td>✓</td>
</tr>
<tr>
<td>toothpicks (limit 4)</td>
<td>✓</td>
</tr>
<tr>
<td>tongue depressors (limit 4)</td>
<td>✓</td>
</tr>
<tr>
<td>Coffee stirrers (limit 4)</td>
<td>✓</td>
</tr>
<tr>
<td>foil</td>
<td>✓</td>
</tr>
<tr>
<td>Paper plate</td>
<td>✓</td>
</tr>
<tr>
<td>Colored paper</td>
<td>✓</td>
</tr>
<tr>
<td>wax paper</td>
<td>✓</td>
</tr>
<tr>
<td>sponge</td>
<td>✓</td>
</tr>
<tr>
<td>rubber band (limit 2)</td>
<td>✓</td>
</tr>
</tbody>
</table>

My boat kind of floated but me and my partner are going to fix it. We are going to put more foil to make it float.

Christian and Luis, it was a tie. It did not sink. It did not capsize.
2nd Grade Engineers: Building a Boat that Floats

Brief Description:

Estimated Unit Duration: 3 Weeks

Language of instruction is English and Spanish for our Bilingual track. Students will explore the properties of different materials. Students will use what they have learned about the properties of the different materials to engineer a boat that will stay upright and float. They will describe how the given data from the test provided evidence of the suitability of different materials for the intended purpose.

Next Generation Science Standards

2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

2-PS1-2 Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.

2-PS1-3 Make observations to construct and evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.

2-PS1-4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.

Big Ideas

Students will understand how to use their senses to observe and describe natural and man-made objects.

Students will understand how properties are useful in describing natural and man-made objects.

Students will provide evidence of the suitability of different materials for the intended purpose.

Students will understand that temperature can cause changes in matter that will be either reversible or irreversible.

Goals of an Inquiry-based science lesson for language development

1. Providing hands-on activity that is less dependent on formal mastery of the language instruction

2. Developing language acquisition in the context of authentic communication about science knowledge and practices

3. Promote students’ communication of their understanding in a variety of formats, including written, graphic, oral and gestural
4. Development of grammar and vocabulary, as well as familiarity with scientific genres of speaking and writing
5. Language functions develop simultaneously with science inquiry and process skills.

Science Goal: Students can articulate what materials they used to be successful in making a boat that floats and stays upright when pulled.

Role: The student will be taking the role of a design engineer.

Audience: The students will be presenting to their peers and teacher, with an option of using technology, explaining the materials they used and why they worked or didn’t work.

Situation: Based on their observations, students will choose from a variety of materials to engineer a boat. Then create an analysis where they explain how their material has the properties that are best suited for its intended purpose.

Product/Performance & Purpose: Students will test their boat to see if it floats and stays upright when pulled. Then they will have an opportunity to redesign and make changes if their original design did not meet one of the aforementioned criteria.

Success Criteria: Students will show their understanding by choosing materials appropriate for water and constructing a shape that will allow the boat to move without tipping. Students must be able to explain their choices.

INTRODUCTION TO THE PROPERTIES OF MATTER

formative assessment

· Read “My 5 Senses” and use that to introduce the Science Notebook-- science notebooks are used as a means for students to jot down what they’ve learned and to refer back to throughout the lesson. These notebooks are also used to make connection to real world scientists and engineers
· Read whole class- Feely Bugs- David A. Carter connected to the sense of touch.
· Read “Second Grade National Geographic Science Book” with class using discussion questions with the whole class.
LESSON #1:

PART 1: Properties of a material
1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties – visual only
2. Analyze data obtained from testing different materials to determine which materials have the properties that are similar – reanalyzing and using 5 senses,
   ** Multiple forms of learning and academic demands are enlisted; Writing is incorporated and students are asked to use descriptive words that they have learned to describe these properties
   Verbal explanation of their thought process
   Collaboration and discussion

PART 2: Reversible and irreversible
3. Make observations to construct and evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object – give students a frozen leaf and a “fresh” leaf
4. Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot – ice-cube melting and turning into a liquid
   ** Again students are asked to write down or draw their observation using the new words that they have learned and words that they have learned in previous lesson

Open-ended questions are asked of the students to foster critical thinking and deeper meaning, while allowing the teacher to assess their understanding and their ability to apply the concepts, words that they have learned:
1. How do we describe the things the things around us?
2. How do properties of objects help me understand my world?
3. Can temperature create changes in matter that are irreversible?
   ** “Clear”, “translucent” and “transparent” (Some students described ice as being translucent, which is correct. Ice isn't really transparent, but water is.) were used to describe water and ice – noticed that these terms were learned in first grade. The Next Generation Science Standards for 1st grade require that students plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light.

LESSON #2:

Make observations to construct and evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object. –
1. Using LEGOS students are asked to build a new object
2. This object is documented in their notebooks
3. Key words from previous lessons are used to explain their object (size, texture, colors, etc)
4. Object is broken down and a new one is reassembled

** Understanding that objects are made of smaller pieces
** Applying that some properties of some objects can be changed (reversible and irreversible changes)

LESSON #3:
Summative assessment

Using Lesson #1 and Lesson #2 as the base for applying understanding and concepts to build a boat
** testing students understanding and knowledge in the properties of the materials that they select to construct their boats

Keeping in mind that the property of some objects change
Some changes are reversible and others are irreversible
- Students selected materials that were provided to assemble a boat
- Although many students were successful in assembling a boat that floated, some students chose to use a sponge as the base of their boats. This decision was observed by teachers as being due to the fact that when students were learning the properties of the sponge, when the sponge was placed in water it floated. However, when objects were placed on top of the sponge (sail of the boat), the weight caused their boat to sink.

Result of Lessons and Assessments

Vocabulary presented in pre-assessment had been taught in 1st grade, so the second teachers wanted to see how much the students had retained and if they could apply them correctly. Also, the students background and personal experiences did affect the way in which they interpreted these vocab words. During the activities these vocabulary words were used and reused so that students were able to connect them to their lesson and gather a better understanding of how scientists and engineers analyze the properties of materials in order to chose the correct material for what they are building or creating.

Students were able to apply their understanding throughout the lessons and post-lesson in different formats (drawing, diagrams, writings and building)

Finally, students were able to test their boats and redesign them to improve the functionality of the boat. Students presented their results and how they made changes to their original structure.
**ENGAGE**

Read *Rainboots* to introduce and engage  
Discuss what worked, didn’t work and why  
Give students 4 cups of water and paper towel, felt, paper, and aluminum foil and have students test how much water each material will absorb.

**EXPLORE (lab)**

Students in pairs will build a boat using the knowledge they have gained by testing the boat materials over the past week.  
Students choose as a pair and agree on the items they will use to create their boats.

**EXPLAIN (class discussion/video/article)**

In their Scientific journal students will write an initial statement about why they chose specific materials for their boats. We chose ______ because_________. Draw a model of their boat in their journal as well.

Students will test their boats (in a small tub of water) to see if they will sink or float. They should redesign as needed.

**EXTEND (another lab?)**

Tell students the situation: “Your boat is out in the ocean, it breaks down and needs to be pulled in. Where would you like to attach the line to have it pulled back in?” Students then decide where they want the hole punched in their boat and a line is attached. In a large tub of water students will try to pull the boat and see if they chose the correct place to attach their line. If possible or necessary, they will make adjustments to their design and choose another location for the pull line.  
Results including reflections on how well it worked. “When we put the boat in the water, I observed___________. I think it ______ because ___________. “ and ask students to explain what happened when they towed their boat.

**EVALUATE (science notebook or formal assessment)**

Students will read the story “Hiking Hat” write about this prompt  
Present using Tellegami if there is time

Today you will be an inventor and a designer. Here is your task:  
Choose one material other than paper for a hiking hat. Tell what material you will use. Explain WHY this material is a good choice for a hiking hat. Think about the criteria for a good hat that we talked about yesterday.
### 5E Learning Sequence

#### Lesson 2

<table>
<thead>
<tr>
<th>ENGAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ask students if we can take apart a car or a toy and make something else out of it. Have a classroom discussion before giving students the task.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXPLORE (lab)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Looking at the LEGOs they have, design and build something of their choice (no wheels, no people). Once their creation is complete, remove the unused LEGOs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXPLAIN (class discussion/video/article)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record data: Count LEGOs /graph colors and numbers</td>
</tr>
<tr>
<td>Describe what they created using their 5 senses AND draw a model of it in their notebook.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXTEND (another lab?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disassemble object and create creation #2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EVALUATE (science notebook or formal assessment)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students describe evidence from observations (first hand or from media) including:</td>
</tr>
<tr>
<td>The characteristics (e.g. size, shape, arrangement of parts) of the original object.</td>
</tr>
<tr>
<td>That the original object was disassembled into pieces.</td>
</tr>
<tr>
<td>That the pieces were reassembled into pieces.</td>
</tr>
<tr>
<td>That the pieces were reassembled into a new object or objects.</td>
</tr>
<tr>
<td>The characteristics (e.g. size, shape, arrangement of parts) of the new object or objects.</td>
</tr>
<tr>
<td>Have students present what they first made by sharing their drawings in their journal and then sharing what they created with the same LEGOs the second time around.</td>
</tr>
</tbody>
</table>
2016 Ventura County Impact II Grant

District: Ventura Charter School
School: Ventura Charter School
Participant(s): Ivy Brown and Jessica Murphy

Lesson Plan Title: Celebrating Californians Both Past and Present
Lesson Plan Grade Levels: 3-4
Lesson Plan Subject Areas: Foreign Language; History/Social Sciences; Language Arts/Reading; Music; Theater; Visual Arts

Students used the platform created by the study of Native Americans and the Spanish, our first immigrants, to expand their definitions of the words "Immigrant", California, and American. Through the lens of celebrating immigration we studied the Gold Rush, Transcontinental Railroad (including the Chinese Exclusion Act), the Dust Bowl, growth of the arts, and current border control issues. Students empathized with the perspectives of both our government and the immigrants from each era.
Celebrating Californians Past and Present: The Thread of Immigration that Connects Us All

“Give me your tired, your poor, your huddled masses yearning to breathe free...
I lift my lamp beside the golden door.”
~Emma Lazarus

“Mom/Dad, I have to build a replica of a mission by Friday. I’m gonna need lots of help.” Words to this effect are uttered annually at dinner tables by 4th graders across California.

Learning about the Chumash and Mission era is part of California’s State Standards and a rite of passage for 3rd and 4th graders. Once 4th graders (and their parents) finish their model of a mission, they have learned California’s history up to 1833. However, 1833 is just the beginning of California’s longstanding connection to immigration; a connection sometimes celebrated and other times rejected.

Our team of teachers believe students must learn that the immigration thread is woven throughout history and continues through present day. Most pieces of this thread are beautiful and are woven in courageous and uplifting stories; a few are ugly and woven in stories of racism and exclusion. Both of these perspectives need to be shown. To guide our students through this discovery, we created our driving question, “How has immigration shaped California?” We knew this topic was going to dive deep to expose the reality California’s immigrants have faced upon arrival, generation after generation.

Launching Our Project

Students discovered our driving question via a silent gallery walk. They analyzed posters filled with photographs, tables and graphs, and newspaper headlines, depicting our seven case studies. Students analyzed these collages in “crews” (groups they would remain in throughout the next three months) and realized they all pointed toward immigration.

Each case study was composed of:

1. Teacher-made Google Slides with corresponding note-catchers
2. Read alouds (historical fiction and nonfiction)
3. Nonfiction articles
4. A step inside (Making Thinking Visible (MTV) routine where students “step inside” a photograph and write a historical fiction piece demonstrating perspective and content understanding) posted on our class Kidblog account.
5. Field trips/guest speakers
6. Art
7. All artifacts collected throughout the project were added to their “Project Binder” with tabs separating each case study.

60
Case Study #1- The Chumash

With our driving question as our lens, we studied the original Californians, the Chumash. Using the MTV routine Think/Puzzle/Explore we brainstormed what we knew or wanted to know. We dove into Chumash culture by reading Badger Claws of Ojai, visiting the Thousand Oaks Chumash Interpretive Center, and creating Chumash art showing their legends and beliefs.

Case Study #2- Early European Explorers

Then the first thread of immigration appeared...explorers. Students understood why explorers would be curious about the Chumash, but struggled to grasp why explorers wanted to assimilate the natives into their Spanish culture.

Our discussions collided with current events when Father Serra became Saint Serra. While visiting the Chumash Center, we heard our docent speak vehemently about why Father Serra shouldn’t be canonized; at the missions we heard the opposite. With these two perspectives in mind and using the MTV routine Tug-of-War, students debated this controversial issue.

Case Study #3- The Gold Rush

After the mission period, students learned the thread of immigration appeared again in the form of ‘49ers. With the discovery of gold, the world seemed to show up on California’s doorstep, and in a hurry. Using the Parks Online Resources for Teachers and Students (PORTS) Program, we took a virtual field trip to Columbia, CA. We also had guest speakers from Ventura Outreach teach students to “pan for gold”. Throughout this case study, students read the historical fiction book, By the Great Horn Spoon, engaged in Readers Theater and created a Gold Rush scrapbook.

Case Study #4- The Transcontinental Railroad/ Chinese Exclusion Act

Students learned that to accelerate travel to the gold fields and achieve our manifest destiny, a railroad connecting East to West was built, much on the backs of the Chinese. We read the historical fiction books The Iron Dragon and Coolies showing how young Chinese workers faced terrible working conditions. Students also learned how beautiful the Chinese culture is by visiting Ventura’s Chinatown and practicing Tai Chi and Chinese characters. Students also learned how our government feared the Chinese were a threat to American jobs and created the Chinese Exclusion Act and Angel Island to reduce immigration from China.

To deepen their appreciation of the culture and racism endured, we took Amtrak into Union Station and visited LA’s Chinatown. There we had a private tour of the Chinese American Museum and visited a Taoist Temple. To curb the expense of this extended day field trip, we held a fundraiser.

Case Study #5- The Dust Bowl

The thread of immigration appears next in the 1920’s when the Dust Bowl brought an influx of migrants. To understand the cause and scope of this natural disaster, we discussed the impacts of overfarming and how the dehydrated topsoil resulted in the gigantic dust storms that devastated the area. We used photographs by Dorothea Lange to frame our discussion and empathize with those displaced by this disaster.

Case Study #6- Arts and Entertainment
In this case study, students created the slideshows. First, we discussed how immigration from different countries brought different cultural ideas, shaping California’s entertainment industry. Each crew was assigned an artist from this era (Ansel Adams, Walt Disney, Charlie Chaplin, etc.). Using the jigsaw approach, they researched and presented their collaborative Google slides. Slideshows included clips of Charlie Chaplin’s films or Sidney Poitier discussing racism in Hollywood. Articles and alternative sources (video biographies) were made available to accommodate all reading levels.

Case Study #7-Current Immigration

Our final case study showed the thread of immigration no longer in the past, but fresh in today’s newspapers. After learning about Angel and Ellis Island in the early 1900’s, we read articles about Syrian refugees and explored interactive maps showing immigration patterns. We also heard perspectives on today’s immigration issues from three guest speakers: a new citizen from Russia, a “dreamer” who crossed the border undocumented, and an asylum lawyer in Manhattan. Lastly, we read Home of the Brave, a novel from the perspective of a Sudanese refugee who moves to the United States.

Culmination

To share and celebrate their learning, students ended this project with a culminating performance. They performed time-period songs, read Step-Insides and poetry, performed Reader’s Theater, and displayed their art to a packed auditorium of parents, peers, and staff. We ended the show singing, “This Land is Your Land” and waving American Flags.

Assessment

Throughout this project students were assessed on their understanding of the content through writing and discussions.

Formative- Classroom discussions, Google Slides presentations, and thinking routines provided informal assessments showing which students needed additional support and which were excelling.

Summative- Step Insides for each case study were written using a rubric for guidance and uploaded to Kidblog where parents and peers could give feedback. This was guided and assessed using a rubric.

An informational/expository essay was written about a case study of their choice using an outline and rubric for support. Each essay discussed topics such as what positive and negative impacts each era brought to California. The essay was five paragraphs: an introduction, three body paragraphs, and a conclusion.

With the completion of this project, students understood that immigrants throughout history were vital to the development of the California that they know today. More importantly, they also saw that today’s immigrants are continuing to redefine what it means to be a Californian and an American.
California Common Core State Standards
for Celebrating Californians Past and Present

Grade 3
Social Studies
3.2 Students describe the American Indian nations in their local region long ago and in the recent past.

   1. Describe national identities, religious beliefs, customs, and various folklore traditions.
   2. Discuss the ways in which physical geography, including climate, influenced how the local Indian nations adapted to their natural environment (e.g., how they obtained food, clothing, tools).
   3. Describe the economy and systems of government, particularly those with tribal constitutions, and their relationship to federal and state governments.
   4. Discuss the interaction of new settlers with the already established Indians of the region.

Informational Reading

Key Ideas and Details:
CCSS.ELA-LITERACY.RI.3.1

Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

CCSS.ELA-LITERACY.RI.3.2

Determine the main idea of a text; recount the key details and explain how they support the main idea.

Integration of Knowledge and Ideas:
CCSS.ELA-LITERACY.RI.3.7

Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

CCSS.ELA-LITERACY.RI.3.9
Compare and contrast the most important points and key details presented in two texts on the same topic.

**Range of Reading and Level of Text Complexity:**
CCSS.ELA-LITERACY.RI.3.10

By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2-3 text complexity band independently and proficiently.

**Writing:**
CCSS.ELA-LITERACY.W.3.2

Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

**CCSS.ELA-LITERACY.W.3.2.A**

Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.

**CCSS.ELA-LITERACY.W.3.2.B**

Develop the topic with facts, definitions, and details.

**CCSS.ELA-LITERACY.W.3.2.C**

Use linking words and phrases (e.g., also, another, and, more, but) to connect ideas within categories of information.

**CCSS.ELA-LITERACY.W.3.2.D**

Provide a concluding statement or section.

**Research to Build and Present Knowledge:**
CCSS.ELA-LITERACY.W.3.7

Conduct short research projects that build knowledge about a topic.

**CCSS.ELA-LITERACY.W.3.8**

Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.
Range of Writing:
CCSS.ELA-LITERACY.W.3.10

Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Speaking and Listening

Comprehension and Collaboration:
CCSS.ELA-LITERACY.SL.3.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others’ ideas and expressing their own clearly.

CCSS.ELA-LITERACY.SL.3.2

Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

CCSS.ELA-LITERACY.SL.3.3

Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

Presentation of Knowledge and Ideas:
CCSS.ELA-LITERACY.SL.3.4

Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.

Creative Expressions

Apply Vocal and Instrumental Skills

2.1 Sing with accuracy in a developmentally appropriate range.

2.2 Sing age-appropriate songs from memory, including rounds, partner songs, and ostinatos.
Historical and Cultural Context

Diversity of Music
3.2 Sing memorized songs from diverse cultures

Role and Development of the Visu
3.1 Compare and describe various works of art that have a similar theme and were created at different time periods.

Grade 4

Social Studies
- Students describe the social, political, cultural, and economic life and interactions among people of California from the pre-Columbian societies to the Spanish mission and Mexican rancho periods.
  1. Discuss the major nations of California Indians, including their geographic distribution, economic activities, legends, and religious beliefs; and describe how they depended on, adapted to, and modified the physical environment by cultivation of land and use of sea resources. 2. Identify the early land and sea routes to, and European settlements in, California with a focus on the exploration of the North Pacific (e.g., by Captain James Cook, Vitus Bering, Juan Cabrillo), noting especially the importance of mountains, deserts, ocean currents, and wind patterns. 3. Describe the Spanish exploration and colonization of California, including the relationships among soldiers, missionaries, and Indians (e.g., Juan Crespi, Junipero Serra, Gaspar de Portola). 4. Describe the mapping of geographic basis of, and economic factors in the placement and function of the Spanish missions; and understand how the mission system expanded the influence of Spain and Catholicism throughout New Spain and Latin America. 5. Describe the daily lives of the people, native and nonnative, who occupied the presidios, missions, ranchos, and pueblos. 6. Discuss the role of the Franciscans in changing the economy of California from a hunter gatherer economy to an agricultural economy. 7. Describe the effects of the Mexican War for Independence on Alta California, including its effects on the territorial boundaries of North America. 8. Discuss the period of Mexican rule in California and its attributes, including land grants, secularization of the missions, and the rise of the rancho economy.

- Students explain how California became an agricultural and industrial power, tracing the transformation of the California economy and its political and cultural development since the 1850s.
  1. Understand the story and lasting influence of the Pony Express, Overland Mail Service, Western Union, and the building of the transcontinental railroad,
including the contributions of Chinese workers to its construction. 2. Explain how the Gold Rush transformed the economy of California, including the types of products produced and consumed, changes in towns (e.g., Sacramento, San Francisco), and economic conflicts between diverse groups of people.

- Discuss immigration and migration to California between 1850 and 1900, including the diverse composition of those who came; the countries of origin and their relative locations; and conflicts and accords among the diverse groups (e.g., the 1882 Chinese Exclusion Act).
  - 4. Describe rapid American immigration, internal migration, settlement, and the growth of towns and cities (e.g., Los Angeles).
  - 5. Discuss the effects of the Great Depression, the Dust Bowl, and World War II on California.
9. Analyze the impact of twentieth-century Californians on the nation’s artistic and cultural development, including the rise of the entertainment industry (e.g., Louis B. Meyer, Walt Disney, John Steinbeck, Ansel Adams, Dorothea Lange, John Wayne).

**Reading**

*Reading Informational Text*

- Determine the main idea of a text and explain how it is supported by key details; summarize the text.
- Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.
- Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.
- Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.

*Range of Reading and Level of Text Complexity*

- By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

**Writing**

- Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

**Historical and Social Sciences Analysis Skills**
Chronological and Spatial Thinking
- Students place key events and people of the historical era they are studying in a chronological sequence and within a spatial context; they interpret time lines.
- Students explain how the present is connected to the past, identifying both similarities and differences between the two, and how some things change over time and some things stay the same.
- Students use map and globe skills to determine the absolute locations of places and interpret information available through a map’s or globe’s legend, scale, and symbolic representations.
- Students judge the significance of the relative location of a place (e.g., proximity to a harbor, on trade routes) and analyze how relative advantages or disadvantages can change over time.

Research, Evidence, and Point of View
- Students differentiate between primary and secondary sources.
- Students pose relevant questions about events they encounter in historical documents, eyewitness accounts, oral histories, letters, diaries, artifacts, photographs, maps, artworks, and architecture.

Historical Interpretation
- Students summarize the key events of the era they are studying and explain the historical contexts of those events.

Visual and Performing Arts

Music
- Students not only sing and play melodies and accompaniments in various forms and from many cultures but also compose melodic patterns—a precursor to writing music.

Theater
- They also learn that storytelling and theatrical traditions from many cultures are a part of the history of California and that the entertainment industry has an important role in the state.

Visual Arts
- Connecting the visual arts and California history, they can discuss the content of works created by artists from various cultures.
### Opener: Silent Gallery Walk

| Students discuss gallery walk in crews | Students recording observations on their notecatcher | 1 poster from silent gallery walk on current immigration |

### Notecatcher

<table>
<thead>
<tr>
<th>Gallery Number</th>
<th>I notice...</th>
<th>I wonder....</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
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<tr>
<td>5</td>
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**Reflection:**

________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
### Think, Puzzle, Explore

<table>
<thead>
<tr>
<th>THINK</th>
<th>PUZZLE</th>
<th>EXPLORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>What do you <strong>think</strong> you know about the Chumash?</td>
<td>What <strong>questions</strong> or <strong>puzzles</strong> do you have about the Chumash?</td>
<td>How can you <strong>explore</strong> the Chumash?</td>
</tr>
</tbody>
</table>

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**Step Inside Images, one per case study.**

**Gold Rush Step Inside**

**Mission Step Inside**

**Chumash Village Step Inside**

**Chinese Exclusion Act Step Inside**

**Current Immigration Step Inside**

**Transcontinental Railroad Step Inside**

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**Rubric for Step Insides:**
<table>
<thead>
<tr>
<th>Quality Criteria</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative Beginning</td>
<td>Introduction is gripping and uses vivid imagery, dialogue, and/or action</td>
<td>Introduction is interesting and uses some description</td>
<td>Introduction is standard. For example, “One day…”</td>
<td>Introduction doesn’t connect to the rest of the story.</td>
</tr>
<tr>
<td>Clarity of Story</td>
<td>Story clearly moves through beginning, middle, and end easily without any loose ends remaining.</td>
<td>Story moves through beginning, middle, and end easily but does leave some loose ends.</td>
<td>Parts of the story make sense, but a few are confusing.</td>
<td>Story does not make sense.</td>
</tr>
<tr>
<td>Shows not Tells using vivid verbs, adjectives, similes/metaphors</td>
<td>Has 6 or more examples of vivid imagery.</td>
<td>Has 4,5 examples of vivid imagery.</td>
<td>Has 2,3 examples of vivid imagery.</td>
<td>Has 0,1 examples of vivid imagery.</td>
</tr>
<tr>
<td>Use of historical facts</td>
<td>Has 8 or more historical facts effortlessly woven in</td>
<td>Has 5-7 historical facts woven easily and some seemed forced</td>
<td>Had 2-4 historical facts</td>
<td>Had 0-1 historical facts</td>
</tr>
<tr>
<td>Spelling &amp; Mechanics</td>
<td>No spelling or mechanic issues</td>
<td>All 3rd/4th grade level words are spelled correctly and all 3rd/4th grade mechanics rules are followed</td>
<td>Some lower grade words are misspelled and some mechanics are not followed, but it doesn’t affect the clarity of the story</td>
<td>Many words are misspelled and there are many mistakes with mechanics making it difficult to follow the story.</td>
</tr>
</tbody>
</table>

Overall Score:
Out of 20 points overall.
17-20 pts = 4
13-16 pts = 3
9-12 pts = 2
0-8 pts = 1
Chumash Life

I woke up with the sound of wind blowing on my ap. The door was open.

*That is unusual.* I thought. I looked all around outside, then looked at the sun... I woke up late! I leaned further out of my ap, then ducked right back in. The shaman was coming. I had missed the sweat house ceremony!. "A brave can never miss a ceremony like this one," I said, mad at myself. Then I got an idea.

I looked to see my fellow braves walking out to hunt. This had to be quick. I grabbed my bow and arrow. I was about to go out when I saw the shaman walking in my direction. Finally he turned away to the dance rack. He was wearing a big feather hair piece, he was going to dance. I watched him, then finally when I knew no one was watching... I jumped out and ran behind the bushes that were next to my ap.

Suddenly, the shaman stopped dancing, I wondered why he stopped. I knew that the shaman was smart but I *had* sneaked out so quietly. Then the shaman stepped out of the dance rack. I was thinking about what the shaman would do to me. I couldn't even think about what I should do now, I had so many worries about what the shaman would do later. The shaman started going around the burnt out fire and making bigger circles around, and around.

I started getting more worried when the shaman stopped right in front of me. I was sure shaman would really hurt me, Then everything was quiet for quite a while. The shaman took a deep breath, "Come out, Wolf Gray," he said, very calmly.

I came out, with my voice shaking. I said, "Hello, how are you today? I'm not so good myself. Thanks for asking... I just sle--"

I was interrupted by the shamans soft voice, "Yes Wolf Gray, I know. I was at the sweat house, like always. Now, is there something you would like to say?"

I thought for a moment then took a deep breath, "Nope! I'm not fond of saying things. So I'm going over there with the rest. See you later!".

A hand stopped me. The Shaman still wanted to talk this over.

"Hold it! Just where do you think you're going?" he said, strictly.

I hesitated for a while
The Shaman started talking again,

"Here is the thing, I'm going to send you back to your ap and tomorrow I will send you to your aunt and uncles...to live there."

"What? To live there! I couldn't think about leaving my mother and father! Shaman, there must be another way! I can't live all the way at Uncle's village!" I cried to him,

"You have already taken the tests!" The shaman was right. I already was a brave. I thought about what else I could do to help the village and stay with my family. I got an idea.

"I know! I'll make dinner for everybody in my neighborhood! Then will you let me stay, Shaman?"

The Shaman thought it was a good idea, I could tell. "Well, if you're up to the challenge, Wolf Gray, you can do it. It is very hard to hunt for everybody. You know that, right, Wolf?"

"Of course I'm up to the challenge! I will get started right away, Sir!"

I headed the direction that rest of the hunters were headed in. I hoped to first catch a deer. Walking down the trail, I noticed a big shadow behind a bush. I took my bow and one arrow, and put my arrow carefully in my bow... Stretch... BANG! I shot it! I noticed it didn't fall like a deer would fall. I looked behind the bushes. It turned out that it was just a big rabbit. *hmm it is pretty big.* I Thought. at least I had a start.
"I'll give this to one of the people in the small family of three. I put it in my acorn sack. As I began walking again, I heard footsteps. I saw something that I knew was a deer (I saw its ears). Carefully, I placed my arrow in my bow and BAM! I shot it also. That thing was so heavy, I tried to put it in my acorn sack. It was too big. I then tried to put it around my neck. It was so heavy, I couldn't shoot from my bow. I decided to leave it there.

I made a line with a stick wherever I went, so I would know the way back. As I walked, I heard a rustle in the bushes behind me. I stopped to listen for a few seconds. It seemed to stop, so I kept walking. I heard it again, closer this time! I turned around, dropped the stick, got my bow and arrow, and I got ready to shoot. the bush kept rustling. I lost my patience and shot the whole bush! I saw the dead body of a rabbit?

Is it a raccoon? No... a rabbit, I thought. I looked closer, it looked like another rabbit to me, it was quite large, though. I know it is yummy and it could feed a family of four. I stuffed that big thing in my acorn sack. It seemed it was heavier than the deer. I picked up the stick and continued my line.

I saw the creek and wanted to get some water. I can fish there, too, I thought. For me, my mother, and my father. I got a net that I found almost buried near the creek. I put it in the water and chased the fish in the net, because that was all I could do. I got exactly three fish.

I put the fish in my acorn sack, then slid it a little more back because I knew it would start to smell bad. I heard footsteps. They were very quiet footsteps, actually they were so quiet I could barely hear them... Then they got louder and louder and louder until I didn't just hear what it was, I saw it! It was Golden Eye, the great big grizzly bear! I placed my bow and arrow pointing directly at Goldeneye. BANG! I shot him. WAM! He fell to the ground. I came up to him I stared and stared... Chumash don't eat bears.

I heard more footsteps. "This better not be a grizzly," I muttered to myself. I almost got my bow out, but saw that it was a person walking toward me. I looked closer and saw it was the shaman. The shaman saw the bear at my feet and started running, he had an excited look on his face.

"is-this yours? “he asked, panting.

"Yes, but I didn't get food for every body," I mumbled sadly. "I missed five people."

"True, but you did get Goldeneye, We've been trying to hunt him for years!" he said for staring at me, then Goldeneye, then me again.

"Can I-- " I was interrupted by the shaman.

"Yes you can live with your mother and father!" The shaman was so happy, which made me happy, which made my mother, who just walked in, happy- wait, my mother who just walked in? I ran over to her.
"Mother, come see this!" I said while I took her over to see the bear."I get to still live with you!? she gasped and squeezed me!

---

Field Trip to Chumash Interpretive Center in Thousand Oaks

Students listen to Grey Wolf discuss why he believes Father Serra should not be Saint Students take notes on their field work pages in front of an ap Students walk through the village
Students explore aps

Enjoying the beautiful oak trees during our visit

Grey Wolf teaching students the Chumash welcome song

California Missions- Art and Field Trip

Students are looking at the architectural features of the Ventura Mission, guided by our docent.

Student works on his mission sketch before painting and finally mod-podging tissue paper down to create the final art piece.

Complete art piece. All 21 were made and displayed at our culmination event.

One slide from our slideshow showing the video links and thinking routine used to discuss the controversial topic of Father Serra becoming a saint.

Father Junipero Serra Becomes a Saint!

On September 23, 2015, Father Serra was named a saint by Pope Francis in the eyes of the Catholic church

Tug of War!

How do Christians feel about Junipero Serra becoming a saint?

Catholic Priest Perspective 1  Priest Perspective 2

How do Native Californians feel about Father Serra becoming a saint?

Video 1 Interview  Video 2 Protest
## Gold Rush- Guest Speakers, Art, and Writing a Step Inside

<table>
<thead>
<tr>
<th>Students dressed up in costumes of the 1850s with our guest speaker</th>
<th>Students viewed the <em>outrageous</em> priced the general store was charging for everyday items.</th>
<th>Student working on his first draft of his Gold Rush Step Inside.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students panning for gold, working on getting the swirl just right!</td>
<td>Completing one page of his gold rush scrapbook.</td>
<td>Page about the different routes of travel to the gold field and a map of California outlining the location of popular mines.</td>
</tr>
</tbody>
</table>
Page showing the life of an immigrant during the gold rush

Class display of scrapbooks

Cover of completed scrapbook

Notecatcher from student's binder about famous Americans during the Gold Rush: Mark Twain, Sam Brannan

Notecatcher from student's binder showing different mining methods
**Transcontinental Railroad Google Slides:**

<table>
<thead>
<tr>
<th>What examples of progress/change do you see in the painting?</th>
<th>Why Would Americans Want a Transcontinental Railroad?</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
</tbody>
</table>

In the Google Slideshow about the transcontinental Railroad, students analyzed this painting, titled *Manifest Destiny.*

<table>
<thead>
<tr>
<th><img src="image3.png" alt="Image" /></th>
<th>Google Slideshow</th>
</tr>
</thead>
</table>

Google slide: Map of train lines before the Transcontinental railroad was built.

**Chinese Exclusion Act:**

**Teacher-made Slideshow**

<table>
<thead>
<tr>
<th><img src="image4.png" alt="Image" /></th>
<th>Propaganda against Chinese. Image shown in our Google Slideshow</th>
</tr>
</thead>
</table>

Slide in Google Slideshow showing anti Chinese sentiment
<table>
<thead>
<tr>
<th>Image</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Image" /></td>
<td><em>Field Trip to Local Chinatown with docents</em></td>
</tr>
<tr>
<td><img src="image2.jpg" alt="Image" /></td>
<td>Tai Chi at a local Chinatown</td>
</tr>
<tr>
<td><img src="image3.jpg" alt="Image" /></td>
<td>Laundering dirty clothes (an occupation primarily held by the Chinese during the gold rush years and beyond)</td>
</tr>
<tr>
<td><img src="image4.jpg" alt="Image" /></td>
<td>Students wearing traditional Chinese outfit</td>
</tr>
<tr>
<td><img src="image5.jpg" alt="Image" /></td>
<td>A student perplexed by the use of chopsticks</td>
</tr>
<tr>
<td><img src="image6.jpg" alt="Image" /></td>
<td>Students enjoying Chinese yoyo</td>
</tr>
<tr>
<td><img src="image7.jpg" alt="Image" /></td>
<td>Students learning China Chinese characters</td>
</tr>
<tr>
<td><img src="image8.jpg" alt="Image" /></td>
<td>Celebrating Chinese New Year</td>
</tr>
<tr>
<td><img src="image9.jpg" alt="Image" /></td>
<td>Amtrak ride to Los Angeles!</td>
</tr>
<tr>
<td>Image 1</td>
<td>Image 2</td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
</tbody>
</table>

**Field Trip using Amtrak to experience LA’s Chinatown**

<table>
<thead>
<tr>
<th>Our first stop off the train.... The Chinese American Museum</th>
<th>Students listening to stories and seeing old photographs of the Chinese in America</th>
<th>Our docent discussing eastern medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image4.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Dragon Gate showing the start of LA’s Chinatown</th>
<th>Walking toward the Taoist Temple</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Walking into the temple after a brief speech about behavior from our guide</th>
<th>Students amazed by the beauty of the temple.</th>
<th>The alter</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image9.png" alt="Image" /></td>
<td><img src="image10.png" alt="Image" /></td>
<td><img src="image11.png" alt="Image" /></td>
</tr>
<tr>
<td>Walking into the plaza at Chinatown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statue of Bruce Lee</td>
<td>Walking through the Olvera Street</td>
<td>Train ride home!</td>
</tr>
</tbody>
</table>
Student creating her Chinese character art after numerous attempts

Finished Chinese Calligraphy Banner

Our class bulletin board

Dust Bowl- Excerpts from Slideshow

Dorothea Lange - Famous Works

Images from slideshows. We discussed how Lange shown a light on the true struggles of those displaced by the Dust Bowl.

Famous picture “Migrant Mother”

Population Changes in 1930s

One huge event that impacted the population of California was the Dust Bowl.

Video HERE
### Arts and Entertainment

<table>
<thead>
<tr>
<th>Students collaborating on their California Artist Presentations</th>
<th>Students presenting their Dolores Del Rio Slideshow</th>
</tr>
</thead>
</table>

### California’s Art and Entertainment Culture

**Learning Target:** I can analyze the impact of an influential artist on the culture of entertainment in California by creating and presenting a Google slideshow with my crew.

The Californian artists we will study were involved in the movie industry, photography and entertainment.

### Film Industry History

- **1890s** - the first motion picture film and cameras were invented
- The first films were under a minute long and were silent films
- **1905-1920s** Nickelodeon Theaters - live acts and films mixed together
- **1927** - Sound was added to films for the first time

---

Excerpt from Slideshow showing the artists whose career took off as Hollywood and the arts exploded

Students learned where the word “nickelodeon” came from early films.
### Note-catcher from student’s binder showing notes about theme parks, photography, and the film industry in the early 1900s.

### Current Immigration - Art piece and Excerpts from Slideshows that were used to guide our discussions.

<table>
<thead>
<tr>
<th>Students painted the Statue of Liberty with the poem by Emma Lazarus at the bottom.</th>
<th>Discussion: That almost half our class probably had an ancestor come to America via Ellis Island</th>
<th>Vocabulary: What a refugee is</th>
</tr>
</thead>
</table>

**Ellis Island**

- Many of these immigrants were processed at Ellis Island in New York City.
- More than 12 million immigrants arrived at Ellis Island between 1892 and 1954.
- 40% of Americans can trace their heritage to Ellis Island.

**Refugee:** someone who immigrates to escape war or danger.

*Text Connection: A Long Walk In Water & Home of the Brave*
Challenge: Borders

- Other parts of the world are impacted by war, harsh landscapes, and floods.
- Many people cross those borders illegally and are feared or ignored.
- People who do so are called undocumented immigrants.

Discussion: The dangers in illegally immigrating to the United States

Challenge: Legal Residency

- Can require living in the United States for a long time without legal status.
- Can require money or lawyers.
- Filling out lots of paperwork.
- If someone is living undocumented, they can be deported.
- Deportation to the backcountry of origin.

Discussion: What deportation means and why legal residency is difficult

To escape natural disasters

- Drought can cause famine and starvation.
- Floods: extreme shortage of food.
- Diseases can spread.
- Earthquakes, floods and hurricanes can devastate whole nations.

Discussion: Why do people immigrate to escape natural disasters

Notecatcher from student's project binder about Immigration Past and Present

Front of Nonfiction article from project binder
Aid workers help the refugees. There are special problems in helping kids without parents. Their journeys can be very dangerous. The children can be attacked or robbed.

Some Youngsters Expected To Send Money Back Home

Kids also may feel much pressure. Some families hope the children will work and send back money. Others hope that the children will be allowed to stay in the other country. Then, the family can join them.

Michael Bocheniek is an expert on children’s rights. He works for Human Rights Watch in London. It is a human rights group. The children are desperate to find safety, he said. It is the reason they make the dangerous journey.

In Berlin, Kowefi was happy. He and the children are together in a refugee camp. The children call or text their parents each day.

Refugees Hoping For A Fresh Start, Family Reunion

Kowefi has asked to stay in Germany. It will be some time before he knows the answer.

Kowefi remembers the sad goodbye in Syria. He promised his brothers he would take good care of the children.

He said it is hard to believe they are all safe. He hopes the families will be together again one day.

1. Kids are leaving Syria with no parents
2. It takes a while to get to Germany and it is dangerous
3. Germany officials say millions of children need help
4. Children were expected to send money back
5. The children could be attacked or robbed
6. Thousands of children risk to Europe each day
<table>
<thead>
<tr>
<th></th>
<th>4-Exceeds Standard</th>
<th>3-Meets Standard</th>
<th>2-Below Standard</th>
<th>1-Far Below Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Central Idea</strong></td>
<td>Central Idea is well focused, accurate, and consistently present throughout the writing.</td>
<td>Central Idea is accurate, and mostly present throughout the writing.</td>
<td>Central Idea is mostly accurate, and writing sometimes veers off topic.</td>
<td>Central Idea is not present or contains multiple errors. writing consistently veers off topic.</td>
</tr>
<tr>
<td><strong>Supporting Details</strong></td>
<td>Strong supporting details are present and accurate. They enhance the clarity of the central idea.</td>
<td>Supporting details are present, accurate, and relate to central idea.</td>
<td>A few supporting details are present, some do not relate to central idea.</td>
<td>Support is lacking due to inaccurate, unclear, or absence of details.</td>
</tr>
<tr>
<td><strong>Organization</strong></td>
<td>Strong introduction, body, and conclusion. Correctly paragraphed with smooth and varied transitions.</td>
<td>Introduction, body, and conclusion are present. Correctly paragraphed with smooth transitions.</td>
<td>Introduction, body, and conclusion are sometimes unclear. Some correct paragraphing with limited transitions.</td>
<td>Introduction, body, and conclusion are unclear or not present. Incorrectly paragraphed with very few or no transitions.</td>
</tr>
<tr>
<td><strong>Sentence Structure</strong></td>
<td>Sentences are varied in structure, and all contribute to the clarity and purpose of the writing.</td>
<td>Sentences are varied in structure and mostly contribute to the clarity of the writing.</td>
<td>Sentences are mostly simple in structure, with 1-2 run-ons/fragment. Some sentences may not contribute to clarity.</td>
<td>Sentences are all simple in structure, with 3 or more run-ons and/or fragments. Many are unclear in meaning.</td>
</tr>
<tr>
<td><strong>Conventions</strong></td>
<td>No errors in spelling, grammar, punctuation, and capitalization.</td>
<td>Very few errors in spelling, grammar, punctuation, and capitalization.</td>
<td>Errors in spelling, grammar, punctuation, and capitalization which interfere with clarity.</td>
<td>Many errors in spelling, grammar, punctuation, and capitalization which greatly interfere with clarity.</td>
</tr>
</tbody>
</table>
The Transcontinental Railroad

Immigration has shaped California over time. One major historical event that brought immigrants to California was the building of the transcontinental railroad. From 1862 to 1869, the railroad created many jobs that attracted immigrants from around the world to California.

The immigrants who came to CA to build the railroad mostly came from China and Ireland. Some of the reasons they came to CA were that most people needed money. In China there was a rebellion which kept many people from getting food. In Ireland there was a disease on their potatoes called potato famine. Usually the man in a family would come from China or Ireland and come to CA, get a job on the railroad and hopefully when the railroad is done their family could come to CA and live with them.

The immigrants had very important jobs, but they were not always treated fairly. Some of their hardships were having to work with very explosive things like nitroglycerin. They did even harder things than white people and they still got paid less money. And if they work with explosive stuff, they have a risk of exploiting into pieces. They had to work in hot weather and cold weather.

Some positive impacts of the TCRR were fast travel, safer transportation and economic growth. It would only take 6 days to travel to the Atlantic Ocean to the Pacific Ocean before the TCRR it would take 6 months. People could transport their cattle much faster. Businesses would order something for their business and they would get their order much faster. The TCRR was used for many things.

Some negative things of the TCRR were avalanchers, messing up and nitroglycerin. If they ever messed up on the railroad it would be a big disaster. And it went through native americans homes and I am pretty sure native americans don't like that. People could find and kill buffalo much faster and they would only use the skin, but the native americans ate the buffalo. When you reach the sea nevada there may be an avalanche. Overall, life in California would not have been the same without the transcontinental railroad.

The End
Culmination of Project- Performance for Parents and Staff

Students singing a Chumash Welcome/Friendship Song to welcome the audience

Student sharing her Chumash Step Inside

Student reading her expository essay on the Chumash

Student reading his Mission Step Inside about an escape from the mission!

Students reading their expository essay about the Mission Period

Students introducing and providing background about the Gold Rush era

The auditorium is standing room only!

Readers’ Theater about Gold Rush

Readers’ Theater about Gold Rush
<table>
<thead>
<tr>
<th>Image</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readers Theater about the Transcontinental Railroad (cameo by Abraham Lincoln)</td>
<td>Students reading their two-voice poem where one student writes from the perspective of an undocumented child and the other writes as a wealthy American child</td>
</tr>
<tr>
<td>Students sharing their step-insides about current immigration</td>
<td>Students sing “This Land is Your Land” as our finale while a teacher plays the guitar</td>
</tr>
<tr>
<td>Parents enjoying the finale performance</td>
<td>Two voice poems about current immigration</td>
</tr>
</tbody>
</table>
2016 Ventura County Impact II Grant

District: Conejo Valley Unified School District
School: Thousand Oaks High School
Participant(s): Ashley Cooper and Toni Young

Lesson Plan Title: Expressing Yourself: Creative Writing in Biology
Lesson Plan Grade Levels: 9-10
Lesson Plan Subject Areas: Science (Amgen Category)

With the implementation of the CCSS/NGSS students are being challenged in ways they have never experienced. This unit provides an opportunity for students to demonstrate their understanding of the Biology curriculum through various creative writing projects. These lessons open doors of their imagination that have never been utilized in a lab setting. Students engage, explore, and invent writing samples that intertwine their comprehension of our Biology studies with their creative side!
With the implementation of the Common Core and NGSS, students are expected to demonstrate their understanding of the curriculum through a variety of strategies. These new standards require students to delve to deeper levels of Webb's Depth of Knowledge. In support of student learning, teachers are encouraged to differentiate their projects to allow students to be imaginative in their work. As a science teacher, I never imagined that I would be implementing a creative writing project in each of my units of study throughout the year. To my surprise and delight, my Biology students look forward to these projects each unit and continue to exceed my expectations with their bodies of work!

**Lesson #1 - Sowing Seeds Of Our "Poet" Tree:** Each student will have the opportunity to create a poem that incorporate vocabulary words from our Introduction to Biochemistry Unit. Students are encouraged to think outside of the box and be as descriptive possible with their poetry creations! To challenge you most gifted students you can have a class competition to determine which student can incorporate the most words in the correct context! Students are reminded that their poems do not need to rhyme, but do need to provide enough supporting detail to demonstrate an understanding of the terms that are selected for their literary masterpieces.

This lesson was the first opportunity to engage in a creative writing activity in Biology, so the guidelines were kept to a minimum in an effort to spur on creativity!! The only requirement that was must incorporate five vocabulary terms or elements from the periodic table, in the correct context, into their poem. Students appreciated the open nature of the assignment that is rarely felt in science. In future creative writing projects there will be more formal expectations and assessment rubrics. This vocabulary review/mastery activity can be applied to any content area or grade level.

**Lesson #2 - Never Too Old For A Story:** This lesson was developed as a strategy to engage my students to support their understanding of the complicated chemical reaction of photosynthesis. By simplifying the curriculum to a level that is suitable for elementary students, the 9th grade students had to truly understand the content. The creative application of writing a children’s book helped to reduce the students’ anxiety when dealing with photosynthesis and opened up new channels of expression and understanding. Most of the students exceeded my expectations with their effort, enthusiasm, and final projects! Children’s stories are usually easy to understand for the pint-sized participant, but contain a strong lesson/message for the reader to learn from. The simplicity of a children's book also helps to connect the reader to prior experiences and informs the audience of new knowledge.

As with any editor that works at the big publishing houses, the teacher needs to establish the expectations for this creative writing activity. The teacher will describe the guidelines for this activity:

- The story needs to transform the complex chemical process into age appropriate descriptions for an elementary aged audience.
- Students will develop a detailed narration that includes the details of the light reaction and Calvin Cycle for the process of photosynthesis
• Students will create illustrations that are either hand-drawn or computer generated.
• Students will use their lecture notes regarding Photosynthesis, diagrams of the chloroplast, or their textbook as resources to confirm the scientific accuracy of their story.
• Students are encouraged to stretch their imagination to make their creative writing fun, interesting, and informative for the audience. Think of The Magic School Bus Adventures or the Dr. Seuss Science series.

The Children's Book Project Handout describes the expectations and provides the assessment rubric for this project to guide the students throughout this assignment.

The Creative Process - Students were provided a short collaboration period, no more than 5 minutes, to brainstorm ideas with their neighbors to discuss strategies to incorporate creative techniques into their writings. Students will then use the rest of the section of this lesson to work independently to sketch the outline of their book.

Lesson #3: The “Most” Important Poem

In the spirit of the book, The Important Book, by Margaret Wise Brown, this lesson asks students to identify important topics that support their understanding of Genetics. As the class begins our brainstorming session, it is critical to remind students that this activity is meant to apply their creativity in an effort to maximize their understanding of concrete scientific concepts that have been covered in the Genetics Unit. This lesson was designed to serve as a review, but can be modified to be used as an introduction of a unit to incorporate new vocabulary terms. To use this creative writing lesson as an introduction, the teacher would need to front load the vocabulary terms, assist students in visualizing the context for each term, and provide supporting details to intertwine the words so the overall concept of heredity was evident to the students.

Partner Brainstorming: Students will work with their neighboring partner to list as many topics that are associated with their study of genetics as possible. Students are not committing to using these terms in their creative writing pieces, but only creating a list of potential terms or inspiring. The students will record their brainstorming ideas onto their project handout.

Class Brainstorming: After about 1 minute, each student pair will select a representative to write at least one of their topics on the front board to create a word wall to serve as inspiration during the creative writing process in the next section.

The "Important" Poem Template: Once all of the ideas have been recorded, the students are introduced to the very simple template that serves as a guide to develop these “important” poems.
Lesson#4: Personification Poem of Organelles
This activity will enable students to bring their cell organelle to life through the process of personification. Students will use the attached handout as a guideline as they incorporate poetry across curriculum and support the ELA Common Core standards of writing for the students.
Standards Addressed Through Creative Writing in Biology

Lesson #1 - Sowing Seeds Of Our "Poet" Tree:

Common Core Standards: W.9-10.2d, L.9-10.1,
NGSS Standards: HS-PS1-1.
Science and Engineering Practice: Obtaining and communicating information
Crosscutting Concepts: Energy and Matter

Lesson #2 - Never Too Old For A Story

Common Core Standards: SL.9-10.4
NGSS Standards: HS-LS1-5, HS-LS1-7
Science and Engineering Practice: Developing and using models
Crosscutting Concepts: Energy and Matter

Lesson #3 - The "Most" Important Poem

Common Core Standards: W.9-10.1d, W.9-10.2d, W.9-10.3e
NGSS Standards: HS-LS1-1, HS-LS3-1
Science and Engineering Practice: Constructing explanations, Obtaining, evaluating, and communicating information
Crosscutting Concepts: Patterns

Lesson #4 - Cell Organelle Personification Poem

Common Core Standards: W.9-10.5, W.9-10.4
NGSS Standards: HS-LS1-2
Science and Engineering Practice: Developing and using models, Obtaining, evaluating, and communicating information
Crosscutting Concepts: Structure and Function
Title of Unit: **Creative Writing in Biology**
Teacher: Ashley Cooper and Toni Young
School: Thousand Oaks High School
Grade: 9\textsuperscript{th} but can be adapted for all grades k-12
Lesson #1 - Samples of Student Work for “Poet” Tree Lesson
Families are just like groups, they have the same thoughts, which in our case are valence electrons.

Our writing is just like periods, we start on the far left and make it to the end of the page. Most things are compounds, they are made up of 2 or more substances.

Everything is made up of atoms, you, me, and everything in this world.
Within an atom, there is a nucleus big and dense full of protons and neutrons. These atoms come together making molecules and an element is made from 1 kind of atom. An example of this is phosphorus. There is hydrogen, silicon, and all laid out on the table for you.
Lesson #1: Sample of Student Work

One day while I was sitting at my school, I learned about a molecule.

It was so small, it was not able to compete with the Periodic Table.

Atoms that are positive and negative are called ions. Atoms have the same number of protons and electrons.
Lesson #1: Leaf Template
Lesson #1: Leaf Template
Cover Sheet for Impact II Grant

Title of Unit: **Creative Writing in Biology**

Teacher: Ashley Cooper and Toni Young

School: Thousand Oaks High School

Grade: 9th but can be adapted for all grades k-12
Lesson #2 — Never Too Old For A Story

Students had the opportunity to share their creative writing creations in front of the class. This was one of the most enjoyable and memorable day of the school year!

This image demonstrates the amazing quality work by the Biology students when they are given the green light to intertwine their creativity with their comprehension of the curriculum. This assignment was hugely successful and supported student learning of a complicated scientific concept!
Children’s Biology Book

One way to truly learn a subject is to teach it to someone who knows nothing about the topic. This first requires you to closely exam the subject and break it down to its important concepts and then you need to develop simple ways to explain those concepts – maybe metaphors, analogies or simple models. This creative writing project will reinforce your narrative writing skills you are developing in your English/ELA class with the new Common Core Standards.

The Task:

1. Choose one topic for study from our Biology class, either Photosynthesis or Cellular Respiration, and develop a children’s book reaching young children about that topic. Your target audience should be from kindergarten to third grade.

2. The Book needs to include both words and illustrations.
   a) You may use humor to convey the information.
   b) Think about how to make your topic interesting to kids, information and entertaining.
   c) You may use a variety of media: drawing, photos, cartoons, paint, crayons, etc.
   d) Your book must be scientifically correct so use your textbook and lecture notes as resources!

3. You may work independently or in collaborative pairs.

Assessment Rubric:

<table>
<thead>
<tr>
<th>Task</th>
<th>Value</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy of Information</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Quality of Work</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Creativity</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Self-Assessment</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td></td>
</tr>
</tbody>
</table>
An Interactive Story
For Camryn and Teagan

Welcome to Seth's World of Photosynthesis

What is Photosynthesis?

Photosynthesis may sound like a big word, but it is actually pretty simple.

*Photo* means "light" in Greek.

*Synthesis* is the Greek word for "putting together."

How Do Plants Eat?

Animals and people eat food, but plants don't eat anything.

Photosynthesis is how plants eat.

They use this process to make their own food.

To better understand what photosynthesis is and how it works, we need to go over a few words called terms.
New Terms to Learn

Sunlight
Sunlight consists of rays from the sun.
This is also known as sunshine.

Carbon Dioxide
Carbon dioxide is a colorless gas that is in the air. It has a faint sharp odor and a slightly sour taste.

Water and Oxygen

Water
When moisture falls from the sky, it can be in the form of rain, snow, hail or sleet.
This is called precipitation.

Oxygen
Oxygen is the most common chemical element found on Earth. It is one of the main elements that makes up air and it is important for the survival of all plants and animals.

Plants Need Three Things

Plants stay in one place since they are able to make their own food.
They do need three things: Carbon Dioxide, Water and Light

A Leaf

Let's start out with a leaf.
Leaves can be found on trees and need sunlight and water to grow.

Photosynthesis begins here!

Sunlight is converted to Glucose and Oxygen.
Carbon Dioxide and Water are used.

Tree with Roots

The roots hold (absorb) water.
Let's Put What We Have Learned So Far, Together

Green plants such as trees use carbon dioxide, sunlight, and water to create sugars.

Carbon dioxide makes up a very small percent of the air. Plants and animals depend on it for life. Plants make their nutrients (food) with it.

Water and Light = Chemical Energy

Chemical Energy and Carbon Dioxide = Sugar

1. Chloroplasts trap light energy
2. Water enters the leaf
3. Carbon dioxide enters the leaf through stomata
4. Sugar leaves the leaf

Light and Dark Reaction

The whole process doesn’t happen all at once.

Photosynthesis is divided into two parts. The first part is called light dependent reaction.

This reaction happens when the light energy is captured and pushed into a chemical called ATP.

Glucose and Chemical Reactions Needed for the Calvin Cycle

Glucose

Chemical Elements

Glucose is a sugar that plays an important role in the metabolism of most living organisms.

A chemical element is a basic substance. It cannot be broken down into simpler substances.

It is manufactured by plants and certain bacteria during photosynthesis.

Chemical elements are the building blocks for everything that takes up space in the universe.

The Calvin Cycle

The second part is called the Calvin Cycle. The Calvin Cycle is a series of biochemical reactions that happen in the chloroplasts of photosynthetic organisms.
During photosynthesis, light energy is converted into chemical energy and is stored. The Calvin Cycle depends on light and uses the energy to convert carbon dioxide into organic compounds that can be used.

Plants need Water, Sunlight and Air to Grow

Camryn and Teagan

Let's plant something together and start the process of Photosynthesis
Plants are alive just like you and I

They keep us alive leaking oxygen into the sky

But why, why plants, just why?

Out of the plant to everything alive.

People, Dogs, Cats, Fish.

You can then use oxygen to make a wish

The way of doing this is photosynthesis.
It helps us have run and have fun
It makes energy, for photosynthesis to begin to run
Who else could it be, but the sun?

The sun is fun, but fills plants' stomach
It gives plants the energy to make their own food
What food you ask? Whatever the plant can choose
Now that the plant has eaten some food
It's time to share with somebody new
The plant's friend Calvin would like a chew
He needs all the energy the light has given you
If you choose not to share it won't end well
Calvin needs you to so he can process to.

\[
\text{H}_2\text{O} \quad \rightarrow \quad \text{O}_2
\]

\[
\text{CO}_2
\]

\[
\text{Calvin Cycle}
\]

\[
\text{ATP} \quad \rightarrow \quad \text{NADPH} \quad \rightarrow \quad \text{NADP}^+ \quad \rightarrow \quad \text{ADP} + \text{Pi}
\]

\[
\text{Light reactions}
\]

\[
sugar
\]
Now it's time that we got to you.

You need oxygen that the plant doesn't use.

All the plant loves is Carbon Dioxide, Eww.

But he is friendly and shares, lucky for you.
Cover Sheet for Impact II Grant

Title of Unit: Creative Writing in Biology
Teacher: Ashley Cooper and Toni Young
School: Thousand Oaks High School
Grade: 9th but can be adapted for all grades k-12
Gregor Mendel
Experiments with pea plants
The nucleus contains genes
One or more alleles
Traits represented by genes
A genotype is the genetic makeup
A phenotype is the physical characteristics
Yellow peas crossed with green peas
Punnet Squares
Express traits as recessive, dominant, or codominant
On the study of genetics
My Important Poem: Genetics

**Individual Brainstorming:** List as many terms or concepts that have been reviewed as part of our Genetics Unit. These ideas will serve as inspiration for the creative writing project we will complete during today's lesson.

**Partner Brainstorming:** Listen carefully and share your ideas with your partners.

**Class Brainstorming Session:**

**Rough Draft of Your "Important" Poem:**

The important thing about __________________________ is __________________________.

Really interesting fact #1 __________________________

Really interesting fact #2 __________________________

Really interesting fact #3 __________________________

But the most important about __________________________ is __________________________.

_______________________________ (repeat from the first line)
Peer Editing Session Protocol:

Organize yourself into your lab groups of 4 students each. Create a circle so you can work as a team. Give your paper to the person on your right. Then follow the directions below to edit each other’s work.

First Peer Edit: The Biology teacher. Students will look to identify areas of strength where the author correctly describes the genetic concept by marking the line with a star. The peer editor will also mark statements that are not scientifically sound with a question mark and number so the author knows to go and review the content. Students will write a note at the bottom of the paper that explains the question mark and why the content needs to be corrected or clarified to be more scientifically accurate.

Example of Peer Edit Notes:

- ?#1 - You need to review the definition of an allele. I do not believe it is used correctly in this line.
- ?#2 - You need to review the stages of meiosis. I think you have confused the details inn this line.

Second Peer Edit: The English teacher. Students will look to identify areas of strength where the author uses creative writing skills by marking the statement with a star. The peer editor will also mark statements that are not grammatically correct or do not meet the standard of poetic excellence with a question mark so the author knows to go and review the content.

Example of Peer Edit Notes:

- ?#3 - You should review the sample template to make sure you are listing 3 important facts.
- ?#4 - You need to check the spelling.

Third Peer Edit: A Fellow Biology student. Students will look to identify areas of strength where the author captivates the audience and informs the audience by marking the line with a star. The peer editor will also mark statements that do not support the assignment’s objective with a question mark so the author knows to go and review the content.

Example of Peer Edit Notes:

- ?#5 - You should use more imagery in the description to make the poem more interesting.

Student groups will rotate one more time and the original author should receive their paper back again!

Now that you have your own paper, take the opportunity to review your peers’ comments, ask questions, or get clarification on their suggested edits. You will be tasked with creating your final draft as homework.
The "Important" Poem Rubric

Using Margaret Wise Brown's *The Important Book*, you were challenged to explain the importance of a concept or term that you learned through your study of the Introduction to Genetics Unit.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Excellent 5 points</th>
<th>Good 5 points</th>
<th>Fair 3 points</th>
<th>Poor 2 points</th>
<th>Missing 0 points</th>
<th>Points Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factual Information</td>
<td>At least four unique, interesting facts are included.</td>
<td>At least three unique, interesting facts are included.</td>
<td>Three common facts are included.</td>
<td>At least three facts are included but there are incorrect</td>
<td>Less than three facts are included.</td>
<td></td>
</tr>
<tr>
<td>Accuracy</td>
<td>All facts are accurate.</td>
<td>Facts are accurate with no more than one minor error.</td>
<td>Facts are accurate with no more than two minor errors.</td>
<td>The artifact contains at least one major error or three minor errors.</td>
<td>The artifact contains at least two major errors.</td>
<td></td>
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<tr>
<td>Organization</td>
<td>All information is well organized and flows in <em>The Important Book</em> pattern.</td>
<td>Information is well organized with no more than one minor error.</td>
<td>Information is well organized with no more than two errors.</td>
<td>Information is poorly organized with more than three errors.</td>
<td>Information is disorganized and difficult to follow.</td>
<td></td>
</tr>
<tr>
<td>Message</td>
<td>The message is clear and strong. Easy for listener to understand.</td>
<td>The message is clear. The listener would have understood.</td>
<td>The message is clear. Most listeners would understand.</td>
<td>The message is unclear and difficult to understand.</td>
<td>No message was present in the poem.</td>
<td></td>
</tr>
<tr>
<td>Creativity</td>
<td>The writer uses multiple literary devices to bring the poem to life.</td>
<td>The writer uses two literary devices to bring the poem to life.</td>
<td>The writer uses one literary device to bring the poem to life.</td>
<td>The writer uses no literary devices but it does not enhance the poem.</td>
<td>The writer uses no literary devices throughout the poem.</td>
<td></td>
</tr>
<tr>
<td>Brainstorming Sheet and Rough Draft</td>
<td>Student uses the handout to maximize the writing experience and builds from the rough draft.</td>
<td>Student uses the handout to organize the writing process and builds from the rough draft.</td>
<td>Student worked with the handout but did not complete all sections and submitted a rough draft.</td>
<td>Student completed the handout but did not submit the rough draft.</td>
<td>Student did not submit the handout.</td>
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</tbody>
</table>
GENE POEM

The important thing about alleles is that they are a type of gene.

People use Punnett squares to figure out what they mean.

If they're recessive or dominant determines what you see,

The different combinations change the looks of you and me.

But the most important thing about alleles is that they are a type of gene.

[Diagram of a Punnett square with labels for genotype and phenotype]
The important thing about genetics is it is the core of a revolution in understanding biology.

When crossing a heterozygous gene and a homozygous there is a 50/50 probability like flipping a coin.

A punnett square can help determine the probability.

Independent assortment helps account for the many genetic variations.

But the most important about genetics is it is the core of a revolution in understanding biology.
My Important Poem

The important thing about probability is that it's the likelihood that a particular event will occur. It's true that it's used to predict the outcomes of genetic crosses and to predict the average outcome of a large number of events. However, it cannot predict an exact outcome of an individual event.

But the most important about probability is that it's the likelihood that a particular event will occur.
The Important Poem

The important thing about phenotypes is the dominant and recessive traits that determine the way you look.

Dominant and recessive traits have patterns in generation like patterns in poems. The probability of your phenotype can be determined through punnett squares.

Phenotypes are seen and are physical rather than genotypes which are the genetic makeup.

But the most important thing about phenotypes is they make up your physical traits through dominant and recessive genes.
Cover Sheet for Impact II Grant

Title of Unit: **Creative Writing in Biology**
Teacher: Ashley Cooper and Toni Young
School: Thousand Oaks High School
Grade: 9th but can be adapted for all grades k-12
Lesson #4 – Personification of Organelle Poem
The mitochondria might jump out of the textbook as your students will bring their organelle to life with drawings.

Students participating in the Peer Editing Protocol in collaborative pairs.
Cell Organelle Personification Poem Activity

Name: ___________________________ Period: ___________________________

Your selected organelle: ___________________________

Facts from your research: structure, function, size, location in the cell, interesting facts

1. ____________________________________________

2. ____________________________________________

3. ____________________________________________

4. ____________________________________________

5. ____________________________________________

Guidelines and Brainstorming for Your Creative Writing:

1. **First Stanza** - Describe the **physical features** of the organelle. Focus on what makes the organelle unique or special to the cell. Keep in mind you are personifying the organelle, so bring it to life!

2. **Second Stanza** - Highlight the **function** of the organelle in the cell's daily function. What is the organelle's responsibility in the cell? How does the organelle complete this role? Is the organelle a hard worker/slacker? Be creative and descriptive!

3. **Third Stanza** - Create a **personality** of the cell's organelle. If the cell was a person what would his or her attitude be and why? How would the organelle handle daily their daily routine? What is the organelle's outlook on life in the cell?

4. **Fourth Stanza** - Share what your organelle would say in a **conversation** with you. What is the organelle's message to the world? What is the organelle's favorite saying? Find your organelle's voice and share it through your poem

Once you have listed your research facts and brainstormed ideas for each stanza, use a separate sheet of paper to create the rough draft of your personification poem. You will have an opportunity to collaborate with your peers in an editing session so do not focus on your first draft being perfect... let your ideas flow and we will work on the structure later!
Peer Editing Session Protocol:

Organize yourself into your lab groups of 4 students each. Create a circle so you can work as a team. Give your paper to the person on your right. Then follow the directions below to edit each other’s work.

First Peer Edit: The Biology teacher. Students will look to identify areas of strength where the author correctly describes the genetic concept by marking the line with a star. The peer editor will also mark statements that are not scientifically sound with a question mark and a number so the author knows to go and review the content. Students will write a note at the bottom of the paper that explains the question mark and why the content needs to be corrected or clarified to be more scientifically accurate.

Example of Peer Edit Notes:

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Example of Peer Edit Notes:

- ?#5 - You should use more imagery in the description to make the poem more interesting.

Student groups will rotate one more time and the original author should receive their paper back again!

Now that you have your own paper, take the opportunity to review your peers’ comments, ask questions, or get clarification on their suggested edits. You will be tasked with creating your final draft as home.
<table>
<thead>
<tr>
<th>Claiming Your Cell Organelle</th>
<th>Nuclear Envelope</th>
<th>Ribosomes</th>
<th>Mitochondria</th>
<th>Chloroplast</th>
<th>Vacuole</th>
<th>Cytoskeleton</th>
<th>Cytoplasm</th>
<th>Flagella</th>
<th>Nucleolus</th>
<th>Centrioles</th>
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<td><strong>Nucleus</strong></td>
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<td><strong>Cell Wall/Cell Membrane</strong></td>
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Cell Organelle Personification Poem Activity

Name: ___________________________ Period: ______

Your selected organelle: NUCLEUS

Facts from your research: structure, function, size, location in the cell; interesting facts

1. Every cell is the ultimate powerhouse. They generate energy for the body to function.
2. The nucleus contains chromosomes which are long, thin structures present within a cell.
3. Separated from Cytoplasm by nuclear envelope
4. The Nucleus communicates with the ER
5. The Nucleus manages its growth, allowing for growth of the cell

Guidelines and Brainstorming for Your Creative Writing:

1. First Stanza - Describe the physical features of the organelle. Focus on what makes the organelle unique or special to the cell. Keep in mind you are personifying the organelle, so bring it to life.

   Nucleus: Tough, round, at the center of the cell, all power

   About the cell

2. Second Stanza - Highlight the function of the organelle in the cell's daily function. What is the organelle's responsibility in the cell? How does the organelle complete this role? Is the organelle a hard worker/slacker? Be creative and descriptive!

   Nucleus: the queen organ, cell by cell, all instructions
   As it hard works

3. Third Stanza - Create a personality of the cell's organelle. If the cell was a person what would his or her attitude be and why? How would the organelle handle daily their daily routine? What is the organelle's outlook on life in the cell?

   The nucleus is happy because it's happy because it's in control
   Something else might be bad. It's happy because it's in control

4. Fourth Stanza - Share what your organelle would say in a conversation with you. What is the organelle's message to the world? What is the organelle's favorite saying? Find your organelle's voice and share it through your poem

   It would say: Honey I got this. It's a message in
   "I got this!" and a famous saying, "You best go work!"

Once you have listed your research facts and brainstormed ideas for each stanza, use a separate sheet of paper to create the rough draft of your personification poem. You will have an opportunity to collaborate with your peers in an editing session so do not focus on your first draft being perfect... let your ideas flow and we will work on the structure later!
In the nucleus, the center as we call, I course on instructions that I do very well.

They call me the brain because I house all the instructions like a main frame.

I'm often called a sassy boss giving instructions, do as I come across.

#1: How does the nucleus house all the instructions? Mention DNA

#2: Provide an example of how you are a sassy boss, more description.

#3: What is a main frame?
I am the nucleus.
The center of the cell.
I contain all the instructions.
I do that very well.

I am known as the brain.
The controller of all.
I am friends with the organelles
We always have a ball.

I am often called a sassy boss.
Giving out orders to all I come across.

I always try to cheer the organelles on.
But I am a control freak.
I must hurry them along.
When people think Green they think of me.
I'm always looking in order with my thylakoids aligned.
I admit I have some extra space, but it's all stroma.

Sure I might be a bit greedy, taking water and CO₂,
but I also give you air and glucose.
I'm constantly changing from ADP & NADP⁺ to ATP & NADPH.

I'm always in the limelight.
I'm the reason you're alive.
I am Green.
I go Green because I'm a
oxygen making machine.

*The Chloroplast*
I think it's the mitochondria. The mitochondria's main job is to perform cellular respiration. So, it takes in nutrients from the cell, breaks it down, and turns it into energy. This energy is then used by the cell to carry out various functions. The mitochondria also helps the cell to move, extracts energy from food for the cell, controls the growth of the cell, and regulates the temperature of the cell. As you can tell, this organelle is very important in maintaining cellular homeostasis.
# 2016 Ventura County Impact II Grant

<table>
<thead>
<tr>
<th>District:</th>
<th>Ventura Unified School District</th>
</tr>
</thead>
<tbody>
<tr>
<td>School:</td>
<td>Anacapa Middle School</td>
</tr>
<tr>
<td>Participant(s):</td>
<td>Laurie Curtis-Abbe</td>
</tr>
</tbody>
</table>

**Lesson Plan Title:** Read Across America Middle School & Elementary Schools Collaboration  
**Lesson Plan Grade Levels:** 8  
**Lesson Plan Subject Areas:** Language Arts/Reading

A literary collaboration takes place on or near March 2nd for 40-55 middle school students and three elementary school campuses in celebration of National Read Across America Day. The 8th graders are trained for more than three weeks in how to be storyteller/teachers creating 5-step lesson plans, learning classroom management techniques, practicing stage presence and performance skills, and supporting each other within project-based groups. Thirty-45 minute performances are done in all classes.
Read Across America Collaboration Field Trip

3 Elementary Schools & 40 8th Grade Middle School Teacher/Storytellers Share a Love for Books

The Read Across America Collaboration Field Trip is designed to empower and rise up 8th grade Language Arts students to be teacher/storytellers to three campuses of Pre-K through 5th grade elementary school children. It is a month-long opportunity for 13 and 14-year-old-young adults to train and work together for a real-world purpose within project-based learning (PBL) groups designing interactive, creative, and engaging 5-step lesson plans. Within those individual and group-shared formal lesson plans, they role model for younger children their knowledge of and love for language and books on National Read Across America (RAA) Day (March 2nd) in English and other languages.

RAA Information, Commitment Forms, and Sign-ups:

At the end of January, interested Language Arts 8 students are given the “Teacher/Storyteller Training & Field Trip Student Commitment Information and Form” (attached) describing the history of the RAA collaboration, the sign-up process, training commitment and duration, creation of three grade-level appropriate 30-45 minute group lesson plans for classrooms throughout the campuses, and the culminating March 2nd field trip to the three local elementary schools. Students who read and speak a language beyond English are encouraged to participate, including those from the Two-Way Immersion Program (Spanish) and Music Department (music as a second language).

10 Lunchtime Training Sessions, Team Building, Lesson Planning, & Dress Rehearsals:

Within four weeks, a tight team culture is built among the participating 8th graders. The training sessions begin with establishing positive behavioral guidelines, modeling strategic “Tips & Tricks for Teaching & Storytelling” (attached), and showing how to select grade-level appropriate books.

Students can pick their own teams, but it is more effective if the adult instructor pre-plans the teams, mixing up genders and ability levels and thereby separating friends. Scaffolding with supportive, heterogeneous grouping, along with the PBL team-building activities during training and role-playing with the “Behavior Management Strategies” handout (attached), pushes students to build new and inter-dependent friendships. With an impending deadline (March 2nd) where they will be on stage for 30-45 minutes in at least three elementary classrooms without adults rescuing them, they MUST work together to strategically plan their “5-Step Lesson Plans” (attached), which are evaluated by their peers and instructor.

Peer and self-assessments are done most days with the “RAA Teaching/Storytelling Feedback” forms (attached) and during dress rehearsals with the “Field Trip Performance Checklist” (attached). The 8th graders must organize and check in with each other concerning their tasks: Mapping out their campus routes; working within a set and tight schedule; executing lively and creative teaching/storytelling lesson plans; and maintaining three or more different, well-behaved, and engaged classrooms of elementary school children.

Community Service/Volunteering Hours:

The 10 lunchtime trainings and 3+ hours of RAA teaching/storytelling performances are accepted for their middle school Community Service/Volunteering logs.
Teaching/Storytelling Performance:

Being classroom instructors for 30-45 minutes, at least three times in one day, and with the support and encouragement of their colleagues on the team and in the audience becomes the greatest summative assessment for this multi-faceted project. Using their grade-level appropriate books with a variety of props, accessories, costumes, puppets, and/or handouts to complete their lesson plan objectives, they complete the field trip with victory and joy (see attached 2016 photos).

Follow-up:

After the field trip, the “Follow-up Inventory” (attached) helps the students and adult instructor to evaluate the process and experience. RAA is truly a celebration day of sharing multiple languages and literacy.

Alignment with 12 California Common Core State Standards:

1. Reading Standards for Literature 6-12: CCSS ELA – 8.2 Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.
2. Reading Standards for Literature 6-12: CCSS ELA - 8.3 Analyze how particular lines of dialogue or incidents in a story or drama propel the action, reveal aspect of a character, or provoke a decision.
3. Reading Standards for Literature 6-12: CCSS ELA - 8.6 Analyze how differences in the points of view of the characters and the audience or reader (e.g., created through the use of dramatic irony) create such effects as suspense or humor.
4. Writing Standards 6-12: CCSS ELA 8.2.a.b.c.d.e.and f Write informative/explanatory texts, including career development documents (e.g., simple business letters and job applications), to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
5. Writing Standards 6-12: CCSS ELA 8.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
6. Writing Standards 6-12: CCSS ELA 8.5 With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.
7. Speaking and Listening Standards 6-12: CCSS ELA 8.4.a Plan and present a narrative that: establishes a context and point of view, presents a logical sequence, uses narrative techniques (e.g., dialogue, pacing, description, sensory language), uses a variety of transitions, and provides a conclusion that reflects the experience.
8. Speaking and Listening Standards 6-12: CCSS ELA 8.5 Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.
9. Speaking and Listening Standards 6-12: CCSS ELA 8.6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.
10. *Language Standards 6-12: CCSS ELA - 8.3* Use knowledge of language and its conventions when writing, speaking, reading, or listening.

11. *Language Standards 6-12: CCSS ELA - 8.5.a.b.c* Demonstrate understanding of figurative language, word relationships, and nuances in word meanings

12. *Language Standards 6-12: CCSS ELA - 8.6* Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.
12th Annual Read Across America (RAA) Collaboration
Teacher/Storyteller Training & Field Trip Student Commitment Information and Form
February 2-22, 2016 & March 2, 2016

Since 2004, **** Elementary School’s Pre-K through 5th grade classes and **** Middle School’s Language Arts 8th grade students have collaborated in creating a shared National Read Across America (RAA) Day celebration in honor of Dr. Seuss’ Birthday. Since last year, the storytelling/teaching field trip collaboration has now increased to three elementary school campus visits.

Sign-ups for the RAA trainings and field trip begin at 8:15am on Friday, January 22nd in front of classroom 42, with a first come, first sign-up list of those who will participate. Sign-ups will not occur during class time. Students are required to have their fully completed permission slip and commitment form present with them when they are in line on Friday, January 22nd. There are 50 open spots for ****’s Language Arts 8 students to participate in the 12th annual Read Across America Collaboration’s 10 trainings and field trip to ****, ****, and **** Elementary Schools. A waiting list will begin with student number 51.

**** will train participating 8th graders at lunch three times per week from February 2-22 prior to the field trip event in the areas of engaging and effective lesson planning, storytelling, teaching, stage presence, and positive classroom management strategies. The culminating RAA field trip for all trained storyteller/teachers will occur Wednesday, March 2nd from 8:30am – 3:00pm (periods 1-6).

Lunchtime training sessions will be held in Room 42 beginning at 12:35PM sharp and lasting until 1:00pm. Students will be marked tardy if they arrive after 12:35pm. Four tardies will result in being dropped from the RAA participation list. Lunches can be eaten in the classroom during training sessions. 10 trainings x 25min = 250min (4hrs 16min).

It is mandatory that a student who is committed to attending the RAA fieldtrip attend no less than 8 lunchtime training sessions. Ten (10) sessions are scheduled, but a student may have ONLY a maximum of two (2) excused absences before they are dropped from the project list with another student from the waiting list taking their spot.

Excused absences include illness, other fieldtrips, and doctor appointments. A parent-signed note must be shown the day the student returns to school. Otherwise, the absence will be counted as unexcused and the student will be dropped from future RAA trainings and the fieldtrip. Forgetting to show up for a training is an unexcused absence and will cause a student to be removed from the RAA list.

Waiting list students, hoping to replace a student who leaves the RAA list, must attend all training sessions without more than two excused absences. All training sessions for confirmed students and those on the waiting list are considered usable for their Semester 2 Community Service/Volunteering log, due June 1, 2016.

A student is accountable to their three-person team and **** for their training time in preparation for the field trip to the three elementary school campuses. ****’s 8th grade RAA students will spread out over each elementary school campus and be assigned to specific classrooms to teach a 30-45 minute storytelling lesson plan. The trainings will equip RAA students to create and execute a storytelling lesson to various age
levels of elementary-aged children. Absences do not allow an RAA student to be prepared as a storytelling teacher for this multi-campus, collaborative event.

The RAA storytelling/teaching events at ****, ****, and **** Elementary Schools will be from 8:30am – 2:30pm, approximately 1-1.25 hours of Community Service per school site. Combined with the 10 lunchtime training sessions, an RAA student can earn over 7 hours toward their Semester 2 Community Service/Volunteering requirement.

In preparation for the field trip, all confirmed and waiting list RAA students will receive a:

1) 4th period “Early Lunch Release Request”
2) “Front of the Lunch Line Pass”
3) “Lunchtime Hall Pass;”
4) 5th period “Excused Tardy” slip (just in case)

On February 1st, **** will send the **** Middle School faculty a project list explaining the RAA lunchtime trainings and asking for their support and understanding regarding your 12:25pm early lunch release and any 5th period excused tardy up to 1:10pm. Students are NOT entitled to leave their 4th period class early nor arrive late to period 5; excusing them 5 minutes early and accepting them into class with an excused tardy no more than 6 minutes late is a courtesy that their teachers are permitting to them and ****. Students should use the health office’s restroom if they believe they will be counted tardy beyond 1:10pm so as to obtain an office-stamped excused tardy slip.

Please see **** or Principal **** with any concerns or questions.

RAA Student & Parent Commitment to be signed and dated:

1. I, ____________________________, will be on time (12:35PM) to ALL lunchtime training sessions in room 42.
2. I, ____________________________, understand that I am allowed no more than two excused absences, no unexcused absences, and that I must bring a parent-signed note to **** verifying my excused absence on the day that I return.
3. I, ____________________________, understand that if I have a third excused absence, I will be cut from the RAA list and the next person on the waiting list will take my place.
4. I, ____________________________, understand that if I have one unexcused absence that I will be cut from the RAA list and the next person on the waiting list will take my place thereon.

Student’s Understanding of and Agreeing to the RAA Commitment:

X ____________________________ (Student’s signature and date)

Parent’s Understanding of and Agreeing to their Student’s RAA Commitment:

X ____________________________ (Parent’s signature and date)
RAA Teaching/Storytelling Feedback

**Directions:** Check those areas that are being done well. Suggest corrections gently.

**Verbal Response:**
- **Enunciation**
  - Clear voice
  - Varies quick/slow
- **Volume**
  - Varies soft/loud
- **Enthusiasm**
  - Expressive face
  - Expressive eyes
  - Uses body/hands
- __Appears to like the book__

**Physical Response:**
- **Sits close** to audience
  - 1/4 semi-circle
- **Displays pictures**
  - Everyone can see
  - Slow pace
- **Eye contact**
  - Memorized text
  - Scans audience
- **Prop(s)**
- **Checks w/students**
  - Asks questions
  - Makes comments

**More comments?**

✓ __________________________________________
   __________________________________________
   __________________________________________

✓ __________________________________________
   __________________________________________
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**RAA Teaching/Storytelling Feedback**

**Directions:** Check those areas that are being done well. Suggest corrections gently.

**Verbal Response:**
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  - Scans audience
- **Prop(s)**
- **Checks w/students**
  - Asks questions
  - Makes comments

**More comments?**

✓ __________________________________________
   __________________________________________
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✓ __________________________________________
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<th>Team # &amp; Additional Languages</th>
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<td>D Kelley (S)</td>
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<td>M Carson (M)</td>
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<td>5. Korean (K)</td>
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<td>S Borunda (M)</td>
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<td>7. Korean, Music</td>
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<td>A Carey (M)</td>
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5. Korean
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8. Spanish
| 9. Vietnamese, Spanish | 9 – 9:30am:  
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• **Perform:**  
  o 1st/2nd grades (Special Ed), Rm 5 | 10:15 – 11am:  
• **Perform:**  
  o 2nd grade, Rm 12  
  o Spanish requested | Lunch  
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• **Perform:**  
  o Pre-Kindergarten, Rm 2  
  o Spanish requested  
1:35 – 2:10pm:  
• **Audience:**  
  o 1st grade TWI, Rm 10 |
| 10. Music | 9 – 9:30am:  
• **Audience:**  
  o 2nd grade, Rm 13  
  9:30 – 10am:  
• **Perform:**  
  o 3rd/4th grades, Rm 7 | 10:15 – 11am:  
• **Perform:**  
  o 2nd grade, Rm 11 | Lunch  
1 – 1:35pm:  
• **Perform:**  
  o 5th grade, Rm 16  
1:35 – 2:10pm:  
• **Audience:**  
  o 2nd grade TWI, Rm 7 |
| 11. Spanish | 9 – 9:30am:  
• **Audience:**  
  o 1st grade, Rm 2  
  9:30 – 10am:  
• **Perform:**  
  o 3rd grade, Rm 9 | 10:15 – 11am:  
• **Perform:**  
  o 2nd grade, Rm 23  
  o Spanish requested | Lunch  
1 – 1:35pm:  
• **Perform:**  
  o 5th grade TWI, Rm 17  
  o Spanish requested  
1:35 – 2:10pm:  
• **Audience:**  
  o 1st grade TWI, Rm 11 |
| 12. Spanish | 9 – 9:30am:  
• **Audience:**  
  o 1st/2nd grades, Rm 3  
  9:30 – 10am:  
• **Perform:**  
  o Kindergarten, Rm K2 | 10:15 – 11am:  
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  o 2nd grade, Rm 22 | Lunch  
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• **Perform:**  
  o 4th grade TWI, Rm 15  
  o Spanish requested  
1:35 – 2:10pm:  
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Read Across America Collaboration Field Trip Schedule for March 2, 2016
Read Across America Collaboration Field Trip Follow-Up Inventory

**Directions:** Please answer these follow-up questions honestly and thoroughly so as to create a better opportunity and program for next year’s 8th grade teacher/storytellers and their Pre-K through 5th grade students.

1. What books did you read, and do any need repairing or replacing for next year?

2. Do you have any specific advice for next year’s 8th grade teacher/storytellers regarding group rehearsal, book selection, reading age, etc.?

3. Now that you look back on your three teaching/storytelling opportunities, is there anything you would have done differently to make your lesson more effective for your students?

4. In hindsight, is there anything you would have had your team do differently for the students?

5. In what specific ways did you grow as a teacher/storyteller?

6. What would you recommend that the field trip coordinators do differently for next year’s 8th grade teacher/storytellers in order to make it a better reading/teaching experience for everyone?
Read Across America Collaboration Field Trip Sign-Up List

1. __________________________
2. __________________________
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36. __________________________
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Waiting List:
41. __________________________
42. __________________________
43. __________________________
44. __________________________
45. __________________________
46. __________________________
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60. __________________________
Read Across America (RAA) Collaboration Field Trip
Teacher/Storyteller Training Community Service/Volunteering Log

- **Complete entries:** Complete ALL of the following information on this log before stapling it to your Semester 2 Community Service/Volunteering log. Submitting both of them together on Wednesday June 1, 2016. Your RAA log MUST be fully completed and signed by **** on the dates that you performed the training and service. No signature backtracking or forgeries allowed.

- **No more than two excused absences:** You are permitted two excused absences from the RAA lunchtime trainings. Upon returning to school, you must provide **** with a parent-signed note stating the reason for your excused absence. Three excused absences will cause you to be cut from your RAA team, any remaining trainings, and the March 2nd field trip. A student from the RAA waiting list will replace you for the remaining trainings and field trip, even up to the end of the month.

- **No unexcused absences:** One un-excused absence will result in you being cut from any remaining RAA trainings and the March 2nd field trip. A student from the RAA waiting list will replace you for the remaining trainings and field trip, even up to the end of the month.

- **Excused absence procedure:** Any excused absence on a training day requires you to write "Absent" on that line. No minutes will be given for excused absences. Give **** the courtesy of an advance warning for any upcoming excused absences. If you are sick on a training day, email **** and your teaching team members of your excused absence.

- **Training time and tardies:** If you arrive later than 12:35PM for RAA training, do NOT pad the time with untrue minutes. Each training ends at 1:00pm. You will be marked tardy for the training if you arrive after 12:35pm. Four tardies will result in being dropped from RAA. 10 trainings x 25min = 250min (4hrs 16min).

- **12:25pm – 1:00pm:** You will receive: 1) a 4th period “Early Lunch Release Request;” 2) a “Front of the Lunch Line Pass;” 3) a “Lunchtime Hall Pass;” and 4) a 5th period “Excused Tardy” slip (just in case). On February 1st, **** will send the **** faculty a project list explaining the RAA lunchtime training time. They will be asked to provide support and understanding regarding your 12:25pm early lunch release and any 5th period excused tardy up to 1:10pm. You are not entitled to leave class early nor arrive late; this is a courtesy that your teachers are giving you. Use the health office’s restroom if you believe you will be counted tardy beyond 1:10pm so as to obtain an office-stamped excused tardy slip. Please see **** or Principal **** with any concerns or questions.

- **DO NOT LOSE, CRUMPLE, OR DEFACE THIS SIGNATURE LOG!** Keep it flat and in your binder at all times without any extra, unnecessary drawings. Replacements can be printed from ****’s website’s “Classroom Resources” page. No signature backtracking or forgeries allowed.

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<thead>
<tr>
<th>Date</th>
<th>Begin/End Time</th>
<th>Total</th>
<th>Specific Service Provided</th>
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5) 02/10/16
6) 02/11/16
7) 02/16/16
8) 02/17/16
9) 02/18/16
10) 02/22/16
11) 03/02/16 RAA Storytelling/Teaching:

**** Elementary School:

**** Elementary School:

**** Elementary School:

Total Community Service hours/minutes for RAA Training & Teaching/Storytelling: ____________________
**HALL PASS: Read Across America Training**

Name: ________________________________

- 10 lunchtime training sessions
- Room 42
- 12:35-1:00PM

Week 1: 2/2, 2/3, 2/4
Week 2: 2/9, 2/10, 2/11
Week 3: 2/16, 2/17, 2/18
Week 4: 2/22

**HALL PASS: Read Across America Training**

Name: ________________________________

- 10 lunchtime training sessions
- Room 42
- 12:35-1:00PM

Week 1: 2/2, 2/3, 2/4
Week 2: 2/9, 2/10, 2/11
Week 3: 2/16, 2/17, 2/18
Week 4: 2/22

**HALL PASS: Read Across America Training**

Name: ________________________________

- 10 lunchtime training sessions
- Room 42
- 12:35-1:00PM

Week 1: 2/2, 2/3, 2/4
Week 2: 2/9, 2/10, 2/11
Week 3: 2/16, 2/17, 2/18
Week 4: 2/22

**HALL PASS: Read Across America Training**

Name: ________________________________

- 10 lunchtime training sessions
- Room 42
- 12:35-1:00PM

Week 1: 2/2, 2/3, 2/4
Week 2: 2/9, 2/10, 2/11
Week 3: 2/16, 2/17, 2/18
Week 4: 2/22

**HALL PASS: Read Across America Training**

Name: ________________________________

- 10 lunchtime training sessions
- Room 42
- 12:35-1:00PM

Week 1: 2/2, 2/3, 2/4
Week 2: 2/9, 2/10, 2/11
Week 3: 2/16, 2/17, 2/18
Week 4: 2/22

**HALL PASS: Read Across America Training**

Name: ________________________________

- 10 lunchtime training sessions
- Room 42
- 12:35-1:00PM

Week 1: 2/2, 2/3, 2/4
Week 2: 2/9, 2/10, 2/11
Week 3: 2/16, 2/17, 2/18
Week 4: 2/22

**HALL PASS: Read Across America Training**

Name: ________________________________

- 10 lunchtime training sessions
- Room 42
- 12:35-1:00PM

Week 1: 2/2, 2/3, 2/4
Week 2: 2/9, 2/10, 2/11
Week 3: 2/16, 2/17, 2/18
Week 4: 2/22
Read Across America Collaboration Field Trip 2016
Tips & Tricks for Teaching & Storytelling

1. Tuesday, February 2, 2016: Book Choice

Select one that is or has...

✓ Grade-level appropriateness:
  o Length will hold interest, but not be too long (ex: chapter book).
  o Language used is understandable for that grade/age level.
  o Colorful illustrations
  o The pictures are shown in bold, bright colors.
  o A variety of colors are used.
  o If the illustrations are done in black, white, and gray, then plot/characters should more than make up for lack of color (ex: Olivia by Ian Falconer).

✓ Engaging plot and characters that will hold their interest:
  o Characters have qualities/situations that the little kids can relate to.
  o Plot elements are entertaining.
  o There is a definite theme/moral to the story.

✓ Large letters and illustrations are available for **ALL** to see:
  o Position yourself where all students can see the story as you read aloud.
  o If students can't see the words and scenes, they will lose interest **FAST** and become distracted/squirrelly/ill-behaved.

✓ One that **YOU** like!
  o You like the flow of words, plot, characters, etc.
  o You can easily practice it aloud so that it is for the most-part memorized.
  o You believe the little kids will like it, too.

2. Wednesday, February 3, 2016: Physical Response

Sit closely to your audience…

✓ If sitting, choose one just a bit higher than the audience:
  o The audience should be in a semi-circle setting close and around you.
  o While you read the text, show the pictures to the whole group at the same time.
  o Make certain to practice your lines many times before "show time."
  o You might have to display the book on one side of your shoulder as you read aloud and then offer the book slowly from, say, right to left, so all sides of the group can see the illustrations close up.

✓ After reading a page and while showing the illustrations to all:
  o Ask comprehension or probing questions to check for understanding and predicting.
  o Prepare questions in advance.

✓ Eye contact:
- Look at the eyes of your audience when not reading the text.
- Reading of the text should be minimal if it has been memorized.
- Having the book with you is merely for the benefit of the audience.

✔ Turn the page SLOWLY only after ALL have seen the illustration(s).
✔ Enhance the reading experience with visual aids.
  - Bring props, accessories, wear a costume, and incorporate puppets that will go with the
    story prompting discussion or questions from the audience.

3. **Thursday, February 4, 2016: Verbal Response**

Enunciation and volume (intonation) matters…

✔ Speak:
  - Clearly and slowly.
  - Speak loudly or softly.
  - With emotion, as the text dictates.
  - **DO NOT BE MONOTONE,** as it communicates your boredom or fear toward the audience.

✔ Expression and enthusiasm
  - Smile when appropriate.
  - Frown when appropriate.
  - Set the tone of the story with your eyebrows, eyes, mouth, and body language.
  - Lean in like you are sharing a **VERY SPECIAL** piece of information with them that they have
    never heard before.

**Remember that you are educating AND entertaining at the same time.**

✔ Fake it 'til you become it!

✔ If you can't get into your book, then you should either:
  - Select another book no later than next Tuesday and begin memorizing it.
  - **Pretend** you like it, and remember that you are a performer on stage for only 15 minutes per class.
Read Across America Collaboration Field Trip

Team Members’ Information and Classroom Requests

Team Members’ Information: (must have at least one boy and one girl on each team)

1. Name: ____________________________________________
   a. Language(s): ____________________________________
   b. Themes: ________________________________________
   c. Book Selections:
      i. _____________________________________________
      ii. ___________________________________________
      iii. __________________________________________
      iv. __________________________________________
      v. ___________________________________________
   d. Costumes, props, accessories:
      i. _____________________________________________
      ii. ___________________________________________
      iii. __________________________________________
      iv. __________________________________________
      v. ___________________________________________

2. Name: ____________________________________________
   a. Language(s): ____________________________________
   b. Themes: ________________________________________
   c. Book Selections:
      i. _____________________________________________
      ii. ___________________________________________
      iii. __________________________________________
      iv. __________________________________________
      v. ___________________________________________
   d. Costumes, props, accessories:
      i. _____________________________________________
      ii. ___________________________________________
      iii. __________________________________________
      iv. __________________________________________
      v. ___________________________________________

3. Name: ____________________________________________
   a. Language(s): ____________________________________
   b. Themes: ________________________________________
   c. Book Selections:
i. 

ii. 

iii. 

iv. 

v. 

d. Costumes, props, accessories:

i. 

ii. 

iii. 

iv. 

v. 

Classroom Requests:

<table>
<thead>
<tr>
<th>School</th>
<th>Age Level</th>
<th>Classroom #</th>
<th>Teacher Name</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>School #1:</td>
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<tr>
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<tr>
<td></td>
<td>School #3:</td>
<td></td>
<td></td>
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</tbody>
</table>
Read Across America Collaboration Field Trip 5-Step Lesson Plan

Directions: Complete each section to prepare for your teaching/storytelling time with the elementary school students. For each additional book and/or language to be shared and taught, a new lesson plan needs to be completed. Decide how you want your group partners to actively support and assist you during your lesson.

Book title and/or language to be taught: _____________________________________________

- Theme: _____________________________________________
- Grade level & any special needs: _____________________________________________
- Performance time & location: _____________________________________________
- # of students in audience: _____________________________________________

Objectives:

- Students will learn about _____________________________________________
- Students will (action) _____________________________________________

Materials needed:

- Instructor brings (book, costume, props, puppet, accessories, handouts, etc): _____________________________________________
- Students need: _____________________________________________

5-Step Lesson Plan:

1. Anticipatory Set (Hook the audience with a grabber during the first 30 seconds - 2 minutes on stage.):

_________________________________________

2. Introduction (Address mental and physical learning statements about what they can expect to do.):

Today, you will learn about _____________________________________________

You will, also, (action) _____________________________________________

3. Guided Practice (1. Read the book aloud and/or teach the new language; 2. Ask inquiry and comprehension questions with active student participation.):

A. _____________________________________________
B. _____________________________________________
C. _____________________________________________
D. _____________________________________________
E. _____________________________________________
F. _____________________________________________
G. _____________________________________________


Today, you learned _____________________________________________

You, also, (action) _____________________________________________

I hope you _____________________________________________

5. Independent Practice (Offer an optional in-class or homework assignment to reinforce learning.):

___________________________________________
Read Across America Collaboration Field Trip Performance Checklist

Assignments:

☐ Greeter
  1. Says hello to teacher and class upon humbly and confidently entering the room.
  2. Introduces first and last names of self and team to classroom teacher and students after entering room.
  3. Gives an overall introduction statement for the team and what the class is going to learn about.

☐ Thanker
  1. Reminds class of each team member’s name.
  2. Gives an overall closing statement for the team about what was heard and learned.
  3. Thanks class and teacher confidently on behalf of team before leaving the room.

☐ Timekeeper
  1. Gives an agreed-upon-in-advance, discrete hand signal to each teacher/storyteller when nearing the end of their individual performance time.
  2. Is aware of and will discretely signal the whole team for minutes remaining in the room whether as audience members or performers.

Performance reminders:

☐ Posture
  ✓ Body slanted, leaning in to audience
  ✓ Book at shoulder level

☐ Enthusiasm
  ✓ Face, voice, body

☐ Eye contact
  ✓ Speak to/look at audience’s eyes like the face of a clock, 9:30 [left] – 2:30 [right]

☐ Voice
  ✓ Volume, enunciation, inflection

☐ Clear Intro, Body, Conclusion for book with questions (comprehension) and activity (movement)

☐ Audience on floor?
  ✓ 9:30 - 2:30 half circle; assertively direct students to move forward so all can see and hear

☐ Audience in desks?
  ✓ Work the room; don't sit down; back is never to audience

Behavior management strategies:

☐ Eye contact, posture, voice, direction = Confidence

☐ Sandwich approach
  ✓ Address behavior w/a positive spin
  ✓ Tell them specifically what you NEED them to do
  ✓ Praise/ thank them when it is done correctly

Fake it ‘til you become it!
Read Across America Collaboration Field Trip Behavior Management Strategies 2016

1. Three different approaches to working with kids who are exhibiting behavioral problems:
   a. **Aggressive:** dictatorial manner; explosive and yelling; causes kids to rebel and resist
   b. **Passive:** permissively ignores problems; might allow for chaos and disrespect to occur and continue
   c. **Assertive:** alert and aware; predicts and anticipates possible problems; gives kids clear and direct choices that benefit the teacher, student, and class to continue with the learning time
   d. **Good behavior is systematically taught if the teacher has a goal for his/her students.**

2. Behavior can be changed with **direct, specific, and respectful directions**:
   a. Eye contact
   b. Calm voice
   c. Repetitive words/phrases, if needed
   d. Confident body language
   e. Carefully and wisely entering kids’ space, if needed
   f. **Good discipline is a matter of good timing.**

3. 5 Assertive Teaching/Storytelling Strategies to Solve Behavior Problems:
   a. **Maintain self-control** to avoid a power struggle because calm is contagious.
   b. **Say** any of these 6 diffusers with a knowing head nod: *(not necessarily in this order)*
      i. “Nevertheless…”
      ii. “I see…”
      iii. “Okay…”
      iv. “I understand…”
      v. “Probably so…”
      vi. “Mmmm…”
   c. **AND continue** on with your lesson
   d. **OR direct** the student(s) as to what do you need them to do
   e. **OR signal** your team(s) to move in for back up behavioral modification assistance

4. Strategic student **classroom seating and teacher/storyteller locations** during lesson:
   a. Direct where and how you want the kids to sit: Floor, carpet, desks, “criss-cross applesauce”?
   b. Plan where you will teach/storytell: Chair with half-moon seating, working the room, the “catwalk”?

5. **Assertively and encouragingly teach expected behaviors:**
   a. Don’t assume the kids know how to behave or what to do without your directions

6. If the negative student behavior temporarily throws you off course, **ask yourself**:
   a. Can I still teach (ignore)?
   b. Can this disruptive student(s) still learn?
   c. Can other students continue to learn?

7. Build relationships without giving away your authority as their teacher/storyteller.
Read Across America Collaboration Field Trip

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2016 Ventura County Impact II Grant

District: Moorpark Unified School District
School: Moorpark High School
Participant(s): Peter Daland

Lesson Plan Title: Economics of Starting a Small Business in Moorpark, California
Lesson Plan Grade Levels: 12
Lesson Plan Subject Areas: History/Social Sciences

This is a project that is done during the student's senior year in economics. The goal of the project is teach the students real world models of how they could take an idea or concept they have and make it a reality. The course focuses on their own home town communities and lets them experience and see what type of businesses exist within their own community. The goal of the lesson plan is top let students see that they can also be an entrepreneur in the world they live in.
Economics of Starting a Small Business

During the course of the student’s senior year in Economics, students learn about the financial world we live in. They get an in depth view of the various components and factors that make up the world of economics. In order to give high school age students a brief glimpse into the reality of the course material I have the students investigate and develop their own business plan. What makes this 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 economics 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 economics and how can they utilize what they learned in order to become successful after high school? By completing the business plan the students will not only see and experience the value of studying economics but also understand the role economics will play in their future. Students will be excited to see a class that offers a unique approach to teaching and exposes them to the one of the most important subjects they will ever learn in the classroom and utilize during the course of their adult life.

General Project Description

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 information 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 lessons that are being taught on a daily basis in the classroom. Toward the middle of the semester the teams will begin to develop their business plan after weeks of preliminary practice and investigation. The entire project is broken into various components allowing the student teams to incorporate the knowledge taught in class and apply it to the various stages of the project. They work on putting their research together in a real working model. By the end of the semester the groups will have completed, presented and created a real world working model of business plan.

Step No. 1 – Compiling Research & Data

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. Before the student teams begin putting their idea into a realistic working model they must spend hours of research within the community of Moorpark, California. They must evaluate and analyze the strengths and
weaknesses of the current businesses within the community. They must then create a problem solving report on the pros and cons of their observations and explain how their business would benefit their current community. They must also interview local entrepreneurs to help become better acquainted with the pros and cons of going into business for themselves. Once the community walk about portion of the project is completed the student teams then work through a systematic approach to creating a logo and a viable brand. This is one of the most enjoyable portions of the project for the student teams. After studying logo development and the importance of banding your product, the students then work through conceptual thumbnails to a final design that will hopefully catch the complete essence of their product.

**Step No. 2 – Market Assessment**

During the crucial second phase of the project, the student teams now conduct a market assessment. Market assessment research helps the students focus on the competitive strengths and weaknesses of their product within their target market. It helps them identify opportunities to improve their product, and help them ensure their chosen marketing strategies are correctly positioned to achieve maximum relevance and impact within the Moorpark community. Some of the areas the teams asses include the following:

- Defining their market: where does the bulk of your business come from, and/or where they realistically have opportunities to grow.
- Competitive analysis: Conduct a representative sample of the market they have defined. Some of the key elements they focus on: awareness, usage and perceptions of your business and its main competitors, buyer needs and expectations, issues/changes that will affect buyers in the future…

**Step No. 3 – The Multi-Media & Oral Presentations**

After the students have completed their research, written report requirements and reflective journals they then wrap up their business plan project by creating a PowerPoint presentation and presenting the class and a panel of business professionals their business plan concept. 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 sell their concept to the student’s and business professionals panel as if they were actually trying to solicit funds to make their dream business a financial possibility. The ultimate success of the entire project comes when they get feedback from the panel and realize the potential that their business could become a reality.
**Personal Reflection**

The beauty of this whole project is in its real world application. They are able to gain a practical look at how economics and the study of economics might just benefit them in the future as they become active citizens/entrepreneurs in society. So much of education lacks the ability to capture student interest because they do not yet see the relevance to their lives. This project immerses them in their community and they truly see the value of what is being learned and how it applies to them personally. Also 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:** Environmental impact, geology, topography (location of business), …

**Environmental Science:** Pollution impact, population studies,…

**Geography:** Community walk-about, …

**Business:** Marketing, banding, finances and budgeting…

**Social Science:** Historical and current political studies of our community…

**Vocational:** Business plan knowledge…

**Math:** Demographic research…

**Fine Arts:** Logo design, brochure and media presentations…

**Assessment**

- teacher driven research checks
- guided rubric for all areas of the project
- reflective journals
- community walk-about & assessment
- logo development & branding component
- data collecting journal
- group written reports
- powerpoint presentation
- market assessment research component
- oral presentations
- business panel feedback

**Content Standards**
Common Core application (primary focus)

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
Introduction: Approximately 543,000 new businesses open every month in the United States. The Federal government controls an extensive Small Business Bureau to assist the businesses that makes up a majority of businesses in the country. Our class will participate evaluating, understanding the role of an entrepreneur/business to help develop their understanding of the business world.

Project Overview: Steps students will take:

1. Complete the “Personality Traits of a Business Owner” worksheet to determine if they have what it takes to become a business owner.
2. Take notes on the Law of Demand (Notes Outline; Review Sheet)
3. Take notes on the Law of Supply (Notes Outline; Review Sheet)
5. Community Walk-About in order to survey the local economy to determine what consumer demands are being met and what problems exist. (Brainstorm Problems; Map)
6. Cooperative brainstorm of ideas for solving the demand problems (Brainstorm Web)
7. Narrow the group business ideas determine what business they are most suited to run. (Worksheet)
8. Organize their materials into a properly formed business plan.
   a. research and compile business objectives and goals. (Outline)
   b. research and compile a business description containing strengths and weaknesses. (Outline)
   c. research and compile market analysis and strategy in which they seek information on competitors, customers, etc. (Outline)
   d. Research and compile information on financial requirements including operating costs, construction/renovation costs, costs of products, insurance, etc. (Outline)
   e. Research and compile a description of the business’ management and organization. (Outline)
9. Interview a Local Business Owner and create a 1-page newsletter/flier. (Question Sheet; Flier)
10. Create a visual presentation to support your Business Plan.
11. Present business plan to panel of loan officers (students and teacher).
12. Create a final and comprehensive business plan.
Organizing the Business Plan

Small Business Series

The success of your business depends largely upon the decisions you make. A cross-country traveler wouldn't start a trip without a map, and a business owner shouldn't start a business without a sound business plan. Just as the map shows the traveler which routes to take, the business plan shows business owners where they are going and the progress made toward their projected business goal. A business plan allocates resources and measures the results of your actions. The plan helps you to create realistic goals and make logical decisions.

Why Do I Need a Business Plan?

The business plan will serve as your guide. It will:
- Outline a path to follow. A plan listing your business goals and strategies will help you evaluate their potential.
- Provide your bankers and other creditors with valuable information about the condition and direction you plan to take your business.
- Communicate your operations and goals to other interested parties (i.e., employees, suppliers).
- Help you develop as a small business manager. The plan is an excellent tool in defining your personal assets and liabilities; describing competitive conditions, financial needs, promotional activities and staffing requirements.

Writing a Business Plan

On the next page is a summary of the information provided in a business plan. The sections examine the topics and raise key questions vital to your business success.

Is Your Plan Workable?

Stop when you have worked out your outline and rough draft. Take time to re-examine your plan before you back it with time and money. If the plan is not workable, better to learn it now than to realize it six months down the road. Show your plan to someone who has not been involved in working out the details with you. Get an impartial, knowledgeable second opinion. Your banker or other advisor may be of some assistance.

Put Your Plan Into Action

When your plan is as thorough and accurate as possible, you are ready to put it into action. Keep in mind that action is the difference between a plan and a dream. If a plan is not acted upon, it is of no more value than a wishful dream. Make a list of things that must be done to put your plan into action. Give each item a date so that it can be done at the appropriate time. To put my plan into action, I must:
1. Do (Action) ____________ By (Date) ___
2. Etc.

Keep Your Plan Current

Once you put your plan into action, look out for changes. Stay on top of changing conditions and adjust your plan accordingly. Sometimes the change is within your business. Sometimes the change is with customers whose desires and tastes shift. Sometimes the change is technological as when products are created and marketed. The method you use to keep your plan current is up to you. Read trade and business papers and magazines and review your plan periodically. Once each month or every other month, go over your plan to see whether or not it needs adjusting. You must be constantly updating and improving. A good business plan must evolve from experience and the best current information.
Outline of a Business Plan

I. The Cover Letter
The purpose of the cover letter is to inform the reader of the plan, what business goals you have and how you plan to achieve them. A cover sheet goes before the description. It includes the name, address and telephone number of the business and the names of all principals.

II. Summary (appears first, but write last)

III. Business Objectives and Goals
This section gives you a place to answer the following questions.

- Why are you starting a business?
- What are your objectives and goals, professionally and personally?
- What return do you expect from your business in both time and money?
- When do you plan to get it started?
- What is the target date? Sometime in the future is not specific enough. June 1, 1995, gives you a deadline to strive for.
- How will you decide how successful your business is (i.e., gross income, net profit, percentage of local market obtained, number of employees, etc.)?
- What is the time frame for measuring success (i.e., where do I want to be in 3 months, 9 months, 2 years, etc.)?

In answering these questions you will be defining your business. It is probably the most important part of your plan. A narrow definition may limit growth. At the same time, a broad definition may leave you overextended.

IV. Business Description
The business description section is divided into three primary sections. Section 1 actually describes your business, Section 2 the product or service you will be offering, and Section 3 the location of your business, and why this location is desirable (if you have a franchise, some franchisors assist in site selection).
When describing your business, generally you should explain:

- How do you perceive your business? Your entire planning efforts are based on your perception.
- Legalities - business form: proprietorship, partnership, corporation. The licenses or permits you will need.
- How would you describe your business? Is it retail, wholesale, service provider, producer or mail order?
- What product or service will you offer?
- Where will you obtain products or supplies?
- Where will your business be located?
- Is it a new venture or an existing one? If it is an existing business, describe its history.
- Why your business will be profitable. What are the growth opportunities?
- What is unique about your business in comparison to competitors-different products, personalization, quick turn around?
- What are your estimated sales?
- When your business will be open (days, hours)?
- What you have learned about your kind of business from outside sources (trade suppliers, bankers, other franchise owners, franchisor, publications).

[Try to describe the benefits of your goods and services from your customers' perspective. Successful business owners know or at least have an idea of what their customers want or expect from them. This type of anticipation can be helpful in building customer satisfaction and loyalty. And, it certainly is a good strategy for beating the competition or retaining your competitiveness.]
[The location of your business can play a decisive role in its success or failure. Your location should be built around your customers, it should be accessible and it should provide a sense of security. Consider these questions when addressing this section of your business plan:

1. What are your location needs?
2. What kind of space will you need?
3. Why is the area desirable? the building desirable?
5. Are market shifts or demographic shifts occurring? ] (SEE SITE EVALUATION WORKSHEET)

V. Market Analysis and Strategy

The difference between a hobby and a business is PROFIT. Can you make a profit? This may well depend on the analysis of your market, competition and your location for your type of business. A market analysis begins with the question, "Is there a need for my product or service?" To answer this, you must describe the market and your potential customers. Who are your potential customers? Where do they live, what is their age, sex, etc? What are their financial characteristics? What is the size of your market? Is it all of the people in the United States, in Ohio, or perhaps residents in your own neighborhood? A very important question is: What percentage of that market is mine? Will your market increase or decrease? If it grows, will your share grow too? What competition can you expect? Why will customers buy from you instead of the competition? How will you service your market? Will you strive to provide better service, better products or cheaper prices? What are your plans for satisfying your market? Who are your competitors? Your pricing strategy is another marketing technique you can use to improve your overall competitiveness. Get a feel for the pricing strategy your competitors are using. That way you can determine if your prices are in line with competitors in your market area and if they are in line with industry averages. Describe how you plan to promote your product/service. What type of promotion will you utilize-word-of-mouth, advertising, direct mail, personal contacts, through sponsoring events, or other means? If you plan to advertise, state what media you will use: radio, television, newspaper, magazines, telephone book yellow pages, or other. Discuss why you believe this method to be the most effective and what segment of your market you expect to be able to reach.

VI. Financial Information

As accurately as possible, list all your start-up costs including fixed assets such as buildings, equipment, car/truck, and fixtures. Also, list initial operating expenses. Be sure to include inventory, supplies, advertising and promotion costs. In addition, describe your projected statement of operations including cash flow projections (monthly income and expenses), balance sheet, break-even analysis, and contingency fund. Lastly, list the name of the financial institution where your accounts are handled (include copy of loan application). Use the following list of costs to assist in determining the amount of capital necessary to start and remain in business.

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<thead>
<tr>
<th>Star-up Cost</th>
<th>Price</th>
<th>Operating Cost</th>
<th>Price</th>
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<tbody>
<tr>
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<td>Legal/ professional fees</td>
<td>Rent/Lease</td>
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<td>Loan Payments</td>
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<tr>
<td>Utilities</td>
<td>Repair/maintenance</td>
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</tbody>
</table>

| Dues/subscriptions/fees |

VII. Management and Organization

How will your business be organized? Will it be a sole proprietorship, corporation, or partnership? Each structure has advantages and disadvantages depending on your personal and business criteria. Managing a business requires more than just the desire to be your own boss. It demands dedication, persistence, the ability to make decisions and
the ability to manage both employees and finances. Your management plan, along with your marketing and financial management plans, sets the foundation for and facilitates the success of your business.

Like plants and equipment, people are resources—they are the most valuable asset a business has. You will soon discover that employees and staff will play an important role in the total operation of your business. Consequently, it's imperative that you know what skills you possess and those you lack since you will have to hire personnel to supply the skills that you lack. Additionally, it is imperative that you know how to manage and treat your employees. Make them a part of the team. Keep them informed of, and get their feedback regarding, changes. Employees oftentimes have excellent ideas that can lead to new market areas, innovations to existing products or services or new product lines or services which can improve your overall competitiveness.

Your management plan should answer questions such as:

- How does your background/business experience help you in this business?
- What are your weaknesses and how can you compensate for them?
- Who will be on the management team?
- What are their strengths/weaknesses?
- What are their duties?
- Are these duties clearly defined?
- If a franchise, what type of assistance can you expect from the franchisor?
- Will this assistance be ongoing?
- What are your current personnel needs?
- What are your plans for hiring and training personnel?
- What salaries, benefits, vacations, holidays will you offer? If a franchise, are these issues covered in the management package the franchisor will provide?
- What benefits, if any, can you afford at this point?
- Do you have an operating plan or schedule for upcoming work for one to two years?
- Have you considered your insurance needs?

**VIII. Summary (write now, but list as second item)**

Once the business plan has been completed, it is important that it be reviewed and updated at regular intervals. Keep in mind that the plan is a working tool—use it to help make wise business decisions and evaluate the successes or failures you have.
Community Walk-About Log

Group Members: ___________________________ Teacher: _______________________
______________________________ Date: _______________________
______________________________ School: _______________________

**Student Instructions:** Use this space to write notes about problems that need solving you may identify while walking around the neighborhood around your school. Try to identify missing businesses or services as well.
Community Walk-About Log

**Student Instructions:** Use this space to record the answers to the questions you ask during your interview with a local business owner. Also use this space to record notes about your visit to the store (How many customers were in the store? Did it seem to be a busy?) Create your own questions in the space provided below.

**Business Owner’s Name:** ________________________________

**Name of Business:** ________________________________

1. Why did you choose to start this business?

2. What made you choose this location for your business?

3. Has this location been successful for your business?

4. What need or solution does your business add to the community?

5. What problems need to be solved or what businesses do you see needed in the community?

6.

7.

8.

9.

10.
Community Walk-About Map

Group Members: ___________________________ Teacher: _________________________

___________________________ Date: _________________________

___________________________ School: _________________________

Student Instructions: Use this space to draw a map of the streets you walk while on your Community Walk-About. Be sure to record businesses and public services (such as parking lots) that you see.
Community Walk-About Activity Worksheet

Name: ______________________________    Date: _________________________

Step 1: As a class, discuss the problems that you saw during your Community Walk-About. Record those problems in this space.

Step 2: In your group, brainstorm business ideas that solve one of the problems encountered on your Walk-About. Record those ideas in this space.
Step 3: In your group, pick your favorite business idea from step 2 and create a business. Describe the product or service, the problem it solves, its target consumer, and how the business will make a profit. Record these answers in this space. Be prepared to share your answers to the class.

Problem:

Business Name:

Description of Product or Service:

Target Consumer:

How will this business make a profit?:

Economics

Entrepreneur Interview Guidelines

Introduction: Students enrolled in the Economics course are required to conduct an interview with a local entrepreneur in order to develop their understanding of entrepreneurship. Furthermore, students will use the information to create a promotional/informational one-page newsletter. Students should follow the guidelines below.

Setting up the interview: Call or contact the person in advance.

1. Business Owner: __________________________
2. Business Name: __________________________
3. Explain the nature of the project and why you are calling. Use this space to prepare a description of the project you will share with the business owner.

   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

4. Obtain general information about the business (location, products/services provided, phone numbers, hours, etc.)

   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

5. Set up a time at the business for an interview.
   Date: ______________
   Time: ______________

6. Inform them that you will bring a release form they may sign so that we may use the information.
7. Inform them they will receive a copy of the finished newsletter for their personal use.
8. Be sure to thank them before you hang up.

What to bring to the interview?
   Bring a pen and notebook to take notes, you will not remember everything.
   Bring a digital camera to take pictures of the business owner and their business.
   Bring the release form to be signed by the business owner.
   Bring the sample newsletter to show them what it may look like.

Interview Preparation. The most important part of the project is the preparation prior to the interview.
Visit the business and/or ask as many questions about the business to other people prior to the interview so that you may form a series of questions to guide the interview.
Create a series of questions that will elicit a story of the history and workings of the business. Use the questions below as a guide then create several of your own.

Sample Questions:
What type of business do you own? (Get many details!)
What type of products/service do you provide?
What made you want to develop your own business?
How did you go about starting your business? (through family, from scratch, etc.)
What is the history of your business?

The Interview.
Be prepared!
Be Polite!
Let them tell their story!

Ask if you may contact them again if you have further questions.

Say THANK YOU!
Market Assessment

One of the first steps in examining your business idea is to do some research to get to know more about your market. Presumably you already know that a market exists for your product. If you have an idea for a business but you’re not sure whether a market exists or is big enough to support your business, you are getting ahead of yourself. If that description applies to you, you’ll need to take a step back and look at finding the right small business for you.

For those who believe that a market exists, but who want to know more about the size and shape of the market in order to forecast their chances for success, research is the best place to start. Researching your market to know more about your customers and competitors is a critical step for small business owners. If Proctor & Gamble puts out a product that doesn’t sell, they move on to the next idea. If you put out a product that doesn’t sell, you’re out of business.

When you conduct research, you’ll want to find out the following:
1. Who are your likely customers? (age, income level, etc.)

2. Will who they are affect where you need to be? (For example, if students are your customers, you may need to be near schools.)

3. What is the size of the market you will be selling in? (How many customers are available to sell to?)

4. How much will your customers able to afford? (How much will they pay?)
Competitors:
There are three levels of competitors:
A. 1\textsuperscript{st} level – Those companies that sell products/services directly related to yours and are located in the close vicinity.
B. 2\textsuperscript{nd} Level – Those companies that sell products/services directly related to yours but located in the surrounding area.
C. 3\textsuperscript{rd} Level – Non-direct competitors who will compete with you for similar customer base. (Ex. If you run a movie rental store, you not only compete against other movie rental stores but against other companies offering entertainment like movie theatres, nightclubs, etc.)

List and describe your competitors.

1. 1\textsuperscript{st} Level:

2. 2\textsuperscript{nd} Level:

3. 3\textsuperscript{rd} Level:

What percentage of the marketplace will be yours?
### STUDENT LEARNING LOG

<table>
<thead>
<tr>
<th>Project:</th>
<th>Student:</th>
<th>Date:</th>
</tr>
</thead>
</table>

I had the following goals:

I accomplished the following:

My Next Steps are:

My most important concerns/problems/questions are:

I learned:
# STUDENT PLANNING BRIEF

<table>
<thead>
<tr>
<th>Project:</th>
<th>Student/s:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The overall challenges that defines this project is:

I/We intend to investigate:

I/we will need to complete the following activities:

<table>
<thead>
<tr>
<th>What will I/we do?</th>
<th>How will I/We do it?</th>
<th>Date: Due</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

At the end of the project, I/we will demonstrate learning by:

<table>
<thead>
<tr>
<th>What?</th>
<th>How?</th>
<th>Who and Where?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source</td>
<td>Notes</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>---------------</td>
<td></td>
</tr>
<tr>
<td>Record Complete Citation</td>
<td>Describe what you learned</td>
<td></td>
</tr>
<tr>
<td>What will the audience learn from my presentation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What part am I responsible for?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My plan to make a successful presentation:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I need the following technology/equipment for my presentation:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I need the following visual for my presentation:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STUDENT PRESENTATION BRIEF**

Project:  
Student/s:  
Date:
The Music Café

Alex Birmingham
Nicole Rivera
Katey Thomas

Mission Statement
Our goal is to provide our customers with high-quality, low-priced food and drinks while offering them a blackboard menu.

Business Profile

- **Type of Business**
  - The Music Café offers not only a good, but a service as well. Our menu has a wide variety of food, and we have a full bar. We also have open mic nights to entertain our customers and give artists a chance to perform.

- **Legal Structure**
  - The Music Café is a Limited Liability Company (LLC). I chose this status to protect my personal assets and give the company some added tax benefits.

Qualifications

- We are qualified to run this business because:
  1. We all have worked with food.
  2. We have all worked in the customer service industry.
  3. We all have Master’s Degrees in Business and have knowledge in the music industry.

Market Analysis

<table>
<thead>
<tr>
<th>Industry Name</th>
<th>Business Type</th>
<th>Industry Size</th>
<th>Total Population</th>
<th>Population of Moorpark, CA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$5,510,000,000</td>
<td>Total Population</td>
<td>Population of Moorpark, CA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Industry Size</th>
<th>Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5,510,000,000</td>
<td>34,421</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Target Market</th>
<th>Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students at Moorpark Community College, as well as adults, children, and families in Moorpark.</td>
<td>Target Market: 25,000 Potential Market: 14,254</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Potential Market</th>
<th>Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most college students, residents in the college side area of Moorpark.</td>
<td>Target Market: 25,000 Potential Market: 14,254</td>
</tr>
</tbody>
</table>

Target Market Segment

- **Demographics**
  - Our company can fit for anyone whether its families, single adults, children with friends, and striving artists.

- **Geographics**
  - Moorpark, CA

- **Psychographics**
  - Desires good, reasonably priced food, would like to listen to live music, or enjoy the full bar with television screens.

- **Buying Patterns**
  - People who either occasionally go out to eat or go out many times each week.
Competitive Advantage

Factors
- Price
- Quality of Product/Service
- Location
- Reputation/Brand
- Unique Factors/Knowledge

The Music Cafe
- Easy to find
- Wide variety, reasonable prices
- New to market
- Offers entertainment every night

Redball’s Rock & Roll Pizza
- Easy to find
- Limited menu, reasonably priced
- Not very established
- Has open mic night a few nights a week

Chop Shop
- Easy to find
- Limited menu
- Well-established, good reputation
- Only plays a certain genre of music

Marketing Mix

People
- Moorgate, CA. Off the Collins exit on the 101.

Product
- We have a wide variety of food, a full bar, and different entertainment every night. From open mic to karaoke to magician’s night.

Place
- $4-$10 meals, the music is free and we offer discounts to friends and family of performers and student deals.

Price
- Moorgate, CA. Off the Collins exit on the 101.

Promotional Mix

Promotional Expense
- Advertising: Brochure, cards, postage, Website development
- Publicity: Press releases, postage
- Personal Selling: Posting deals and promotions on social media
- Sales Promotion: Student discounts and free drinks for the friends and family of performers
- Other: Customers referring other customers receive 10% off 3 meal plans

Total Monthly Promotional Expense: $305

Cost of Materials/Labor

Materials
- Material Description: Cost/Total Quantity
- Cost per Unit
- Food, drinks, and maintenance: For one meal $4
- Total Material Cost per Unit $4

Labor
- Labor Cost per Hour: Time (in-Hours) to Make One Unit Labor Cost per Unit
- $9: 20 $180.25
- $9: 20 $180.25
- Total Labor Cost per Unit $180.25

COSS (per Unit) $6.25

Average Monthly Fixed Expenses

Fixed Expense
- Insurance $817
- Salaries of Employees $8490
- Advertising $105
- Interest $
- Depreciation $817
- Utilities (Gas, Electric, Telephone) $100
- Rent $1800
- Other Fixed Expenses $100
- Total Average Monthly Fixed Expenses $2689

* Numbers are rounded to the nearest dollar throughout.
Business Responsibility & Philanthropy

- **Business Responsibility**
  - Use natural, organic, locally grown ingredients
  - Use "green" practices
  - Choose vendors who are environmentally and socially responsible

- **Philanthropy**
  - Provide jobs for people in high school without experience
  - Give striving artists a chance to perform in front of an audience
  - Contribute 1% of yearly net profit to local food bank after three years of operation

**Business & Personal Goals**

<table>
<thead>
<tr>
<th>Business</th>
<th>Personal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build a strong customer base to ensure returning customers</td>
<td>Become more knowledgeable on owning a business</td>
</tr>
<tr>
<td>Strengthen relationship with local grocers and farmers to reduce costs and offer better produce</td>
<td>Establish a good business relationship with our employees</td>
</tr>
<tr>
<td>Buy the space instead of renting</td>
<td>Invest in the future business could be franchised in other cities</td>
</tr>
<tr>
<td>Establish a relationship with the community and local college.</td>
<td></td>
</tr>
</tbody>
</table>

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![The Music Cafe](image_url)

*Good Food, Good Music*
2016 Ventura County Impact II Grant

District: Pleasant Valley School District
School: La Mariposa Elementary
Participant(s): Karen Davis, Tiffany Armas, Angela Jaquez and Kathy Wadley

Lesson Plan Title: Let's S'more About Animals
Lesson Plan Grade Levels: Pre-K-3
Lesson Plan Subject Areas: Language Arts/Reading; Mathematics (Amgen Category); Music; Science (Amgen Category); Theater; Visual Arts

This thematic eight-week unit is based on animal characteristics, traits, habitats and adaptations. Each week the class will focus on one of the six habitats through reading, writing, math, art, visual arts and technology. The unit culminates with a "hike" to the park for a day of camping centers and crafts, s'mores and a sing-a-long around the campfire.
Let’s Learn S’more About Animals

STEAM (Science, Technology, Engineering, Art, Math) inspired us to build this subject-integrated and project-based animal unit. The project allowed us to spark students’ imagination and helped students become creative through hands-on STEM projects. Our eight-week integrated science unit permitted us to weave curricular disciplines developing creative thinking, critical thinking and design skills all the while teaching first grade Common Core Standards. This type of learning process leads to an atmosphere of inquiry, imagination, problem solving, creativity, invention and collaboration. Each week the children study animals from six different habitats using guided reading books, read-alouds, technology, writing, math and self-selected books as well as visual and fine arts and building. The final portion of this project will be a Camping Day at a local park.

The kick-off for this exciting unit is a visit from Wildlife Experience who bring live animals from our region, for an hour long assembly. As the children experience these live animals up close, they are introduced to the characteristics and traits of the animals, their habitats and how they adapt to their environment. A second visit from Wildlife Experience will bring animals from the forest, one of the six habitats that we will immerse ourselves into during this unit.

Woven throughout this unit is a musical play, Anansi the Spider, based on an African folk tale. All students, including those with special needs, learn all songs, dances and speaking parts. Students paint t-shirts to represent their character to wear in the performances for other classrooms and parents. The joyful singing can be heard as the children work and play during the day.

Language Arts instruction has made a shift to include not only fiction text, but non-fiction instruction as well. Students are immersed into the world of animals through teacher read-alouds of fiction and non-fiction texts, guided reading groups, the computer program Pebble Go and interactive lessons that we have created for our SMART boards. SMART lessons are broken into the six different habitats; forest, desert, grassland, rainforest, arctic and ocean/freshwater. Each week these interactive lessons are linked to Discovery Ed videos which reinforce vocabulary and facts with graphics. These NGSS specific lessons link prior knowledge with new learning while giving immediate feedback for correctness of interactive matching and sorting.

In small guided reading groups, children have the opportunity to apply new knowledge while reading nonfiction leveled text with teacher support. Children will follow with relating this knowledge to comprehension questions to ensure an understanding of the new information. Written answers to the comprehension questions allow teachers to check for understanding.

Daily 5 centers incorporate the animal and camping theme through the use of word work studies: ABC order, homophones, long vowels and compound words. Guided writing lessons include narratives and opinion writing with the given theme. The Dear Deer lesson practices using homophones to write a letter to their construction paper deer. Another day, the children will make a paper skunk and then write about something that “stinks.” Yet another day, the children will write a list of how to make s’mores. Reading self-selected animal themed books which are at their reading level is done in small tents set up in the classroom. District rubrics are used to assess children’s writing.

Each week the whole class will focus on one habitat. After whole group, small group and individual research, the students will design a construction paper animal from the studied habitat. Learned facts will be written in journal fashion and attached to the animal. Teacher observation and district rubrics are used to assess learning.

Animals are integrated into math as well. Weekly lessons integrate the animal and camping theme through problem solving, graphing, fractions, place value and algebra. The learned vocabulary and information are integrated into these math standards. Answers to the questions and observation allow teachers to reinforce these skills as necessary.

Pebble Go is a computer based program which allows the students to research a wide variety of animals in each habitat. Children are provided a web to record their key findings for future reference. After exploring a wide variety of animals and habitats, the students will use this information to later complete a group habitat report. Students will be broken into groups representing the six habitats. The children will each choose an animal from their chosen habitat to research. Each student in each group will write a page that includes the classification, habitat, adaptations and two interesting facts. These pages will be turned into a group book which includes a cover and title page. Students will memorize their
research to develop an i-movie using a green screen background. The i-movie will be shared with parents via a restricted invitation to YouTube.

Incorporating the Arts and Engineering part of STEAM finds us learning old-time campfire songs that will be sung around the “campfire” at our exciting Camping Day. Joan Miro, a Spanish painter and sculptor, is studied in depth. Students take their newfound knowledge of Miro’s sculpting, animals and their habitats and build a totem pole. Each child will be given a covered cereal box which represents one of the habitats. The children are provided construction paper, pipe cleaners and other bits of “junk.” They will then turn their box into their chosen animal. These animals are used to build six totem poles with the theme of each habitat. Totem poles are displayed at Open House.

Our grand finale is our Camping Day. We design cloth backpacks in which to carry our lunches for our “hike” to the local park. We sing our campfire songs as we hurry on our way. At the park, our parents are waiting with tents and camping themed craft stations. We culminate the day with s’mores and a sing-a-long around the “campfire.”

STEAM allows us to delve deeply and joyfully into our subject through different disciplines and learning modalities. It allows all students to acquire and internalize this new knowledge in a creative, collaborative and imaginative way.
Let's Learn S'more About Animals
### 2016 Ventura County Impact II Grant

<table>
<thead>
<tr>
<th>District:</th>
<th>Santa Paula Unified School District</th>
</tr>
</thead>
<tbody>
<tr>
<td>School:</td>
<td>Isbell Middle School</td>
</tr>
<tr>
<td>Participant(s):</td>
<td>Jennifer Dobbie</td>
</tr>
</tbody>
</table>

| Lesson Plan Title:       | There's an App for That! Apps and Time Travel |
| Lesson Plan Grade Levels: | 6-8                                   |
| Lesson Plan Subject Areas: | History/Social Sciences; Language Arts/Reading |

There's an App for That! Apps and Time Travel takes students on a ride through history by imagining time travel is possible and creating apps that will help them survive if dropped into ancient times. High level thinking and inquiry is the focus of this project!
There’s an App for That!

Apps and Time Travel

Often as educators we find ourselves competing against the latest technological “gadgets.” And as the complexity, and in all honesty, the helpfulness and excitement of these gadgets increase, educators find themselves feeling out of touch, or technologically illiterate. In order to combat these feelings and remain relevant, I research, embrace, and incorporate the latest “gadgets” into my curriculum wherever possible. This not only prevents me from becoming out of touch, but it also gives my students the necessary skills and experience to compete in the 21st century job market. My latest “gadget” project involves designing apps for time travel through history; a project every tech-savvy kid can get interested in!

I decided to apply this project in my sixth grade history class, (which consists of 90% second language learners and quite a few mainstreamed special education students) during our study of ancient Egypt. For the assignment, students were told that time travel was now possible and they needed to develop apps, (since they worked for an app development company) for people who were traveling back in time to use on time travel tablets. These apps need to help the time travelers assimilate into the culture successfully, in order to not draw attention to themselves for fear of causing changes to the future. I told them that as we studied Ancient Egypt, they were to become experts, Egyptologists, so that they would know what the most important information was that the time travelers would need AND what apps would be most useful. [Figure 1]

Students were required to develop eight apps, each with an app icon, and a description of the app’s capabilities with three “screen shots” of the app in action -similar to how Google Play and Apple do their app summaries. [Figure 2] They were given some suggested categories, such as religion, language, daily life, etc., and told they could do a maximum of two apps for each category. I did allow them to do a game category because after all, they are eleven years old and games are an important part of a well balanced life. 😊

Students were then required to make a tablet with the icons for their apps. [Figure 3] This is what they would use to orally present each of their apps to the class.

From the moment I presented this project to the students, they were hooked. Immediately, students began asking questions about different categories and were very anxious to get started. Not surprising, many girls asked about fashion apps, and since we had already done some study of the differences between the life of a merchant and the life of a farmer, they knew that the clothing would be different and thus an important part of fitting in for time travelers. Boys asked about apps pertaining to building the pyramids and if they could do an app on various aspects of mummification. It felt so good to see my underachievers and underperformers get so excited about learning. As the unit progressed, students would suddenly write notes down or whisper to a classmate about the information being perfect for an app they wanted to do. Many students came before school at 7:00 am to work on their apps. Some of them became very secretive about their apps, wanting to have one that was special, one that time travelers would all want to buy. It became apparent that this project was not only keeping them engaged but also forcing them to really think through the information they were learning and apply it in a completely different way than they had ever thought about, a kind of real life application of ancient times. This activity also put them in control of what they learned and what interested them.

This was tremendously empowering to the students, especially my low performing and special education main streamed students.

In the end, I was thrilled about with the results. Students watched the presentations and chose one app from each person that they thought was unique, helpful, and/or creative. We then shared the results and declared the winners. From this we were able to discuss marketability, innovation and the challenge that technology developers face. Quite a few students remarked on how they were now very interested in a job involving technology development.
This was a very easy project to assess learning. Students were given a rubric in the beginning that guided their work, [Figure 4] as well as a rubric for writing their informational speech presenting their work. For this I used the SBAC (Smarter Balanced) rubric. I was really looking for an understanding of the ancient Egyptians through the topics, variety, and complexity of information the app would provide the time travelers. I instructed the students to make sure they asked themselves, "How would this help me if I was dropped in a city I had never been to?"

Since completing the project, I have decided to use it on a larger scale for all units on ancient civilizations in the coming school year. [Figure 5] I also have modified the project to use with language arts for next year as we read various novels… a kind of app guide to reading novels, with guides to characters, setting, theme, etc. Ideally I would love the students to be able to use actual technology to create these, but unfortunately my school does not have this type of technology for students to use.

I envision this project being used for all content areas in all grade levels, with differentiation for grade levels. For example, a math tablet with math for daily living or “how to” apps, a science tablet with apps focusing on various cycles or charts that are used, an art tablet with apps about anything from technique to appreciation. Really the possibilities are endless. When students are excited and have a personal connection to what they are learning, they retain more information and produce quality work. This project does exactly that.

The following common core state standards (CCSS) were covered:

**RH 6.1, 6.2, 6.5, 6.7, 6.9**

**RI 6.7, 6.8**

**W 6.2a-d**

**SL 6.2, 6.3, 6.4, 6.5, 6.6**

**L 6.2a-b, 6.6**
App Descriptions

App Name: _______________________
App Category: ___________________

Description of what app does:
___________________________________________________________________________________________________________________________________________
___________________________________________________________________________________________________________________________________________
___________________________________________________________________________________________________________________________________________

Screen Shots:

[Figure 2]
Rubric for Presentations:

(Replace the words “The writer” with “The presenter”)

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organization</strong></td>
<td>The writer effectively and consistently focuses on a clearly identified purpose and topic throughout</td>
<td>The writer adequately focuses on an identified purpose and topic</td>
<td>The writer somewhat focuses on an identified purpose and topic</td>
<td>The writer seldom focuses on purpose and topic, and response may be very brief, confusing or ambiguous</td>
</tr>
<tr>
<td></td>
<td>effectively considers the audience’s knowledge of the topic</td>
<td>adequately considers the audience’s knowledge of the topic</td>
<td>shows some consideration of the audience’s knowledge of the topic</td>
<td>does not consider the audience’s knowledge of the topic</td>
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<td></td>
<td>The writer uses a clear and effective organizational structure that effectively and logically presents ideas, concepts and information, using strategies such as definition, classification, comparison/contrast, cause/effect includes formatting (e.g. headings), graphics (e.g. charts and tables), and multimedia when useful to aiding comprehension effectively and consistently uses a variety of transition words, phrases and clauses, along with varied syntax, to: o effectively clarify relationships among ideas and concepts provides an effective introduction provides a powerful conclusion that follows from and effectively supports the information or explanation presented</td>
<td>The writer uses an evident organizational structure that adequately presents ideas, concepts and information, using strategies such as definition, classification, comparison/contrast, cause/effect includes formatting (e.g. headings), graphics (e.g. charts and tables), and multimedia when useful to aiding comprehension adequately uses appropriate transition words, phrases and clauses, along with some variation in syntax, to: o adequately clarify the relationships among ideas and concepts provides an adequate introduction provides a conclusion that follows from and adequately supports the information or explanation presented</td>
<td>The writer uses an inconsistent organizational structure that partially presents ideas, concepts and information with some evident flaws uses some formatting, graphics and multimedia when useful to aiding comprehension inconsistently uses basic transition words, phrases or clauses with little variety and simple syntax to: o partially clarify the relationships among ideas and concepts provides a limited introduction provides a conclusion that partially supports the information or explanation presented</td>
<td>The writer uses little or no discernible organizational structure to present ideas, concepts and information uses little or no formatting, graphics or multimedia uses few or no transition words, phrases or clauses (limited language structures) with frequent extraneous ideas that may intrude provides a minimal or no introduction does not provide a conclusion that adequately supports the information or explanation presented</td>
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<tr>
<td><strong>Language and Vocabulary</strong></td>
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<td>supplies thorough and convincing support/evidence with many relevant:</td>
<td>supplies significant and relevant support/evidence with sufficient relevant:</td>
<td>supplies some relevant support/evidence:</td>
<td>provides little or no relevant support/evidence:</td>
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<td>o facts</td>
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<td>o concrete details</td>
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<td>o quotations or other information</td>
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<td>o strong examples</td>
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<tr>
<td>effectively uses a variety of elaborative techniques</td>
<td>adequately uses some elaborative techniques</td>
<td>uses weak or uneven elaborative techniques</td>
<td>uses little or no elaborative techniques</td>
<td></td>
</tr>
<tr>
<td>effectively uses evidence from sources that is smoothly integrated, comprehensive and concrete</td>
<td>adequately uses some evidence from sources that is integrated, though citations may be general or imprecise</td>
<td>uses evidence from sources that is weakly integrated, and citations, if present, are uneven</td>
<td>uses little or no evidence from sources or evidence that is erroneous or irrelevant</td>
<td></td>
</tr>
<tr>
<td>clearly and effectively expresses ideas, using precise words, phrases and clauses to elaborate the information/explanation</td>
<td>adequately expresses ideas, employing a mix of precise with more general words, phrases and clauses to convey the information/explanation</td>
<td>unevenly expresses ideas, using simplistic words, phrases and clauses to support the information/explanation</td>
<td>expresses vague, unclear or confusing ideas, rarely using words, phrases and clauses that support the information/explanation</td>
<td></td>
</tr>
<tr>
<td>uses academic and domain-specific vocabulary that is clearly appropriate for the audience and purpose</td>
<td>uses domain-specific vocabulary that is generally appropriate for the audience and purpose</td>
<td>uses domain-specific vocabulary that may at times be inappropriate for the audience and purpose</td>
<td>uses limited language or domain-specific vocabulary</td>
<td></td>
</tr>
<tr>
<td>effectively establishes and maintains a formal style</td>
<td>adequately establishes and maintains a formal style</td>
<td>partially establishes a formal style</td>
<td>rarely establishes a formal style</td>
<td></td>
</tr>
<tr>
<td>Time Travel Tablet and App Rubric</td>
<td>25 pts.</td>
<td>20 pts.</td>
<td>15 pts.</td>
<td>0-5 pts.</td>
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<tr>
<td><strong>App Descriptions</strong></td>
<td>25 pts.</td>
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<tr>
<td>Descriptions are complete, easy to understand, relate to the content and are useful for time travel</td>
<td>Descriptions are complete, somewhat easy to understand, relate to the content and may be useful for time travel</td>
<td>Descriptions are mostly complete, may be understood with further description, relate to the content and may be useful for time travel</td>
<td>Descriptions are incomplete, difficult to understand and/or many are not relevant to content.</td>
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<tr>
<td><strong>App Screen Shots</strong></td>
<td>25 pts.</td>
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<td></td>
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<tr>
<td>Screen shots clearly show what the apps are capable of and are relevant to content.</td>
<td>Screen shots show what the apps are capable of and content is mostly relevant.</td>
<td>Screen shots show what apps do but not relevant to content and/or some information is confusing.</td>
<td>Screen shots do not show what the apps do, is not relevant to content, and/or is confusing.</td>
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<tr>
<td><strong>App Icons (Tablet)</strong></td>
<td>25 pts.</td>
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<td></td>
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<tr>
<td>App icons are creative and relate to what the apps are used for or their names/categories.</td>
<td>Almost all app icons are creative and relate to what the apps are used for or their names/categories.</td>
<td>Some app icons are creative and relate to what the apps are used for or their names/categories.</td>
<td>App icons are not related to what the apps are used for or their names/categories.</td>
<td></td>
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<tr>
<td><strong>Neatness and Effort</strong></td>
<td>25 pts.</td>
<td></td>
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<tr>
<td>Obvious attention to detail is made. There are no stray eraser ghosts, or crossed out items.</td>
<td>Attention has been made to detail, but a few eraser ghosts exist and/or items are crossed out.</td>
<td>Work is messy and obviously done last minute. Little or no attention to details.</td>
<td>Work is illegible, done last minute, messy.</td>
<td></td>
</tr>
</tbody>
</table>
Time Travel Tablet and Apps
Ancient Egypt

Directions
Welcome to Egyptian Time Travel! Recent advancements in technology have made time travel possible! This exciting new opportunity means that time travelers need apps to successfully travel to and experience their destinations in every way possible, they need some apps. It is your job to create these apps for time travel to ancient Egypt. With your extensive knowledge of ancient Egypt, you must think of the many apps that will make travel easier.

Planning
You must do 8 apps. Each app will need an icon, a description of what it does, and 3 screen shots. Each app icon and screen shot will be neatly and carefully colored. Use this sheet below for planning your apps. Have fun and be creative!

Suggested categories:

- Daily life
  Ideas:

- Geography
  Ideas:

- Religion
  Ideas:

- Trade/Shopping
  Ideas:

- Games
  Ideas:

- Travel
  Ideas:

- Language
  Ideas:
This cooperative, hands on project involves researching Chumash culture, native plants and animals, and their interconnectivity. In teams students created: digital presentations, art activities, artifacts, and games for their fellow students to partake. They rehearsed, revised and prepared so that their presentations were seamless. Students from other classes visited the live museum in coordinated stations. All students were highly engaged, and learned both as docents and participants!
Curriculum Innovation and Creativity: This brainchild curriculum stemmed from attending many museums as a child and as a teacher. I asked myself, “How can I make learning about the Chumash innovative and unique? How can I take this to the next level and have complete student engagement with a concrete culminating project?” The answer was having students create their very own Chumash Interactive Museum, which is non textbook driven, highly interactive and extremely new and different.

Embedded best practices and supporting educational materials: Since the advent of Common Core, I have chosen and created my own educational materials to enhance student learning. In this unit, there was a purposeful balance of fiction and non-fiction literature. To prime the pump, students read and did narrative writing and literature extension activities with the novel Badger Claws of Ojai by Matt Boardman. They also read the Chumash legend The Rainbow Bridge, collectively creating a classroom mural of a Chumash village and its environs. Non-fiction materials were initially selected using the Santa Barbara Museum of Natural History teacher book and their comprehensive website. I then printed and bound an assortment of non-fiction articles, teaching students to annotate, highlight, write commentary and ask higher level questions regarding the text. The students worked in teams to read some of the articles on their own, gleaned the most important items of the article, and created their own assessments for their fellow classmates, building on using leveled sentences frames from Bloom’s taxonomy of thinking.

Students researched specific topics related to their area of study, learning how to navigate a search engine and refined their searches to include the words “for kids” as well as cited and saved all digital documentation on a sharing platform called Google docs. I brought in Chumash music for the children to listen to and write poetry, and paid for out of pocket authentic realia for children to feel, analyze, observe, and write about in small groups. These items included: rabbit hides, deer hooves, abalone shells, olivella shells, feathers, sage, and more. I purposely and meaningfully addressed the visual, auditory, reading/writing, and kinesthetic learners by choosing best practice techniques. Listening to music, having a tactile experience with authentic artifacts, painting a mural, reading a variety of literature, working in teams greatly contributed to student learning.

Supporting the State Standards:
The Chumash Interactive Museum was very much a cross curricular project. The project enabled students to achieve third grade Language arts standards in both Reading Literature and Reading Informational Text, respectively RL 3.1, 3.2, 3.3 and RI 3.4, 3.5, and 3.6. Literacy and Text Types Standards 3.7, 3.8 and 3.9 are achieved as students conducted research projects on their subject area, and used print and digital sources to cite evidence. In addition, the project also encompassed Social Studies Standards 3.2.1, 3.2.2, 3.2.3, and 3.2.4 which related to learning the identities and ways of life of local Native Americas in our region. This project used many of the new Common Core Science Standards relating to life sciences and helped develop an understanding of types of organisms and about the nature of their environments, 3-LS2, 3-LS3, and 3-LS4. Visual Arts third grade standards were also part of the
students’ experience as the students made interactive displays using mixed media and designed color schematics for their display boards, integrating 3.2.2, 3.2.4, and 3.2.5.

**Lessons/Activities:** The foundation of any quality project and presentation involves substantial research and preparation. Students chose if they wanted to study tool making (hunting), gathering, or animals relating to the Chumash culture. This became their area of specialization, and consequently they read and annotated non-fiction articles relating to their respective selection.

Once students had a stronger knowledge base of their subject area, they were given specific tasks to complete that were germane to their area of focus. These tasks included: 1.) a display board introducing and explaining their topic, 2.) an oral presentation, which could also include digital technology and 3.) an artifact, and 4.) an interactive activity for fellow students to do. This truly opened up the doors for children to thrive using multiple learning styles, and made the unit completely student centered.

Then came the flurry of excitement and activity! The classroom was abuzz with students working in collaborative groups, each having individual roles but mutual responsibility. They were completely engrossed in their tasks and learned extended research skills, organized larger tasks into smaller checklists, and created presentations using notecards, audiodevices, GoogleDocs, GoogleSlides, and Prezis.

The Chumash Interactive museum was open ended enough that all students demonstrated their area of emphasis in their own unique way. Therefore, different ability levels of students, from ELL to special needs to GATE showcased their best efforts.

The children rehearsed, revised and prepared so that their presentations were seamless. The culminating activity occurred when 3 classes of other students visited our museum in coordinated stations. With the ring of a bell, the guests moved in a counterclockwise position to each docent station. The project united the class as a team that created something to be proud of, and provided a powerful, authentic way for their fellow third grade classmates to learn as well!

**Assessment:**

Assessment differentiation included word banks and sentence frames for resource students, and Costas Level of Questioning hierarchy mapping to meet the needs of ELL and GATE students. Research papers, narrative essays and presentations were assessed using rubrics for student self-reflection and teacher assessment.

**Positively affecting student learning and achievement:** The Chumash Interactive Museum enabled students to learn using a variety of modalities and working to their strengths. Key features of the Common Core standards were addressed by having the students strengthen their interpersonal, research and presentation skills and directly applied those skills to an authentic peer group. This project provided a
forum for students to learn for a purpose, and their acquired skills will translate to other projects and activities within the school year and beyond!
Student Learning Objectives for Chumash Interactive Museum

Informational Research:

1. "I can annotate and write higher level commentary on a variety of literary sources."

2. "I can classify and categorize my information and create unique assessments as learning tools for fellow students."

3. "I can conduct short research reports on a specific topic."

4. "I can enfold various details and facts and cite sources to support my research."

5. "I can evaluate different types of informational text and determine its relevance to my topic."

Technology:

6. "I can create a presentation that teaches my audience by researching, writing and selecting words, phrases, and pictures."

Speaking:

7. "I can give an oral presentation incorporating non-fiction research and act as a teacher to others."
# Chumash Interactive Museum Presentation Rubric

Use this chart for evaluation:

<table>
<thead>
<tr>
<th>3</th>
<th>I met this goal and completed it proficiently</th>
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<tbody>
<tr>
<td>2</td>
<td>I made some progress towards this goal with support</td>
</tr>
<tr>
<td>1</td>
<td>I made little progress towards this goal and need further support</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Objective</th>
<th>Student Evaluation</th>
<th>Teacher Evaluation</th>
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</thead>
<tbody>
<tr>
<td>I had <strong>notecards</strong> or written notes prepared which I practiced had prepared on the due date</td>
<td></td>
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<tr>
<td>I created a <strong>poster board</strong> that had a title, border, key facts essential to my project, and was prepared on the due date</td>
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<tr>
<td>I <strong>spoke loudly and clearly</strong> (enunciated) so that my audience was engaged and able to hear me</td>
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<tr>
<td>My <strong>artifact</strong> was created and displayed</td>
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<tr>
<td>I had prepared interactive game/demonstration/art piece/ or other <strong>creative hands on component</strong> as part of my presentation</td>
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<tr>
<td>I <strong>took turns</strong> with my team partner and <strong>shared the responsibility</strong> of presenting information and the hands on activity</td>
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<tr>
<td>I was <strong>respectful, positive, and focused</strong> during the museum activity</td>
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</tbody>
</table>

Overall I feel ____________________________ about my work.

Some ways I could improve upon my project include:
1.
2.
3.

Some things I would definitely want to use in another project include:

1.
2.
Using Today's Meet for Feedback and Student Reflections

It was so cool that we got to be the teachers and teach other kids! by Jackson

I liked using the computer to do research. I really liked my Google slides presentation. by Lauren

Me gusta los estudiantes en mi clase. by Ashley

I never knew that much about sea otters and now I know lots! by Sesiah

I love doing art and liked that I could make my own sculptures to create fire. by Anthony

This is the first time I was able to teach. Thanks Mrs. Geib! by Ryan

Even though I was scared, having to do the projects in small groups made it much easier. by Allison

I can’t believe we did it! That was awesome! by Ashlyn

Can we do this again????!!! by Kayden

I had so much fun learning and making something I never knew before. by Sydney

It was a lot of work but it was worth it. by Joshua
State and National Standards Addressed in Chumash Interactive Museum

COMMON CORE ENGLISH LANGUAGE ARTS STANDARDS GRADE 3

Key Ideas and Details:
CCSS.ELA-LITERACY.RL.3.1
Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

CCSS.ELA-LITERACY.RL.3.2
Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.

CCSS.ELA-LITERACY.RL.3.3
Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.

Craft and Structure:
CCSS.ELA-LITERACY.RI.3.4
Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.

CCSS.ELA-LITERACY.RI.3.5
Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.

CCSS.ELA-LITERACY.RI.3.6
Distinguish their own point of view from that of the author of a text.

Integration of Knowledge and Ideas:
CCSS.ELA-LITERACY.RL.3.7
Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

CCSS.ELA-LITERACY.RI.3.8
Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence).

CCSS.ELA-LITERACY.RI.3.9
Compare and contrast the most important points and key details presented in two texts on the same topic.
SOCIAL STUDIES STATE STANDARDS GRADE 3

3.2 Students describe the American Indian nations in their local region long ago and in the recent past.

1. Describe national identities, religious beliefs, customs, and various folklore traditions.
2. Discuss the ways in which physical geography, including climate, influenced how the local Indian nations adapted to their natural environment (e.g., how they obtained food, clothing, tools).
3. Describe the economy and systems of government, particularly those with tribal constitutions, and their relationship to federal and state governments.
4. Discuss the interaction of new settlers with the already established Indians of the region.

NGSS- NEXT GENERATION SCIENCE STANDARDS GRADE 3

3-LS2 Ecosystems: Interactions, Energy, and Dynamics: Being part of a group helps animals obtain food, defend themselves, and cope with changes. Groups may serve different functions and vary dramatically in size.

3-LS3 Heredity: Inheritance and Variation of Traits: Use evidence to support the explanation that traits can be influenced by the environment. The environment also affects the traits that an organism develops.

3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

VISUAL ARTS STATE STANDARDS GRADE 3
Skills, Processes, Materials, and Tools
Communication and Expression Through Original Works of Art

- 2.2 Mix and apply tempera paints to create tints, shades, and neutral colors.
- 2.4 Create a work of art emphasizing value changes.
- 2.5 Create an imaginative clay sculpture based on an organic form.
**Chumash Interactive Museum Activities:**

Each station had 2-3 students who worked in teams to provide a unique and authentic presentation to their peers. Blue painter’s tape was put on the ground to separate each station, and the classroom was set up in a large circle with the presenters behind their station. The guests moved in a counterclockwise position, and knew when to move to the next station when they heard the chimes (played by the teacher). There were 12 rotations in all.

1. Hunters- Bow and Arrow Demonstration- how accurately can you hit the target (students went outside for this station)

2. Chumash Games- skill versus chance

3. How to Make Fire- 3 different ways- learn the basics of making fire!

4. Tomol Experts- build a tomol and see if it floats!

5. Grind Away- using mortar and pestles

6. Horticulturists- acorn, oak, sage, and yucca samples and direct draw lesson

7. Basket Weaving- using newspaper strips students made different shaped baskets

8. Animal Experts (4 groups)- word search, place the animal in the right food chain order, math word problems using animal facts, and “Who Would Win” narrative scenarios
Name: ________________________________

Date: ________________________________

**Animals**

It is your responsibility to study animals that were important to the Chumash. Therefore, you are in charge of the following tasks:

1. Select, design and create a **mask** of one animal that was important to the Chumash: coyote, raccoon, deer, grizzly bear, rabbit, swordfish, sea otter, dolphin

2. You will prepare a speech explaining your animal:

   Your speech of your animal will include:
   - lifespan
   - habitat
   - diet
   - adaptations
   - location in the world
   - predator/prey relationship

3. Create a food chain of your animal in any way you choose-( index cards, wire sculpture, yarn, 3d animals, interactive PowerPoint)
   - draw/print out picture of the animal
   - have the sun, plants (producers), herbivores (consumers), and carnivores (secondary consumers), bacteria/decomposers
   - place arrows going from one organism to the next

4. Finally, you must have an activity for your fellow students to do! It can be a direct draw lesson, a demonstration, a game, a word search- use your creativity!
Gatherers

It is your responsibility to find edible flora (plants you can eat) for you and your fellow Chumash to keep them from starving. Therefore, you are in charge of the following tasks:

1. Research 3 edible/medicinal plants used by the Chumash: Coast Live Oak tree/acorns, Tule, Chia sage, Indian hemp, Manzanita, Pinyon pine, Southern California Black Walnut, Willow, Yucca and make a brochure that will be photocopied for fellow students to take with them and read.

2. When you are done with these tasks, you will make 1 display board explaining how baskets were important to the Chumash:
   - Uses
   - Colors
   - Designs
   - How did they hold water?

3. You will have a speech prepared about these plants and Chumash baskets for your fellow schoolmates.

Your presentation must include:

- Introduction- say your name and what you will be talking about
- About Chumash medicinal plants
- About Chumash baskets and their uses
- Conclusion and thank you for listening

4. Finally you need an activity for your fellow schoolmates!

You will need to research online, learn yourself, and teach others how to weave baskets. The teacher will supply all materials, you will just need to figure out how to make the baskets! (Hint: newspaper and yarn are good places to begin.)
Toolmakers/Hunters

It is your responsibility to hunt fresh game for you and your fellow Chumash, and keep them from freezing. Therefore, you will select one of the tasks from either 1 or 2 or 3. Items 4, 5, and 6 are required.

1. Learn three ways to make a fire and be able to demonstrate and explain them. Use pages 32-33 and pages 40-41 of Badger Claws of Ojai to get research. OR

2. Design and create 1 of the tools that were important: the bow and arrow, the spear thrower, the net bag, and fish hook. OR

3. Make a 3-D creation of the most important tool for hunting: the tomol, or plank canoe. Design the canoe first and then you will be given materials to create it. You can also learn how to do an origami boat to teach to the class.

4. When you are done with these tasks, you will have a story board explaining how to create these items: fire, tools, canoe. These “How To” story boards will include the following:
   - Materials
   - How made
   - How used by the Chumash

5. Finally you will prepare a speech explaining your fire demonstration, your tools, and your canoe.
   You will use notecards and practice speaking loudly and clearly and looking at your audience.
   - Introduce yourself and team members
   - Explanation with detail
   - Conclusion and thank you for listening

6. You must have an activity for your schoolmates to do when they visit your station. You may have a mini 3D fire and create your own spindle board, you may have a tomol floating contest, you may have the students have a contest on how to use your tool.

Have fun with this project!
Goals for Tuesday, Nov. 24th  Room 8 Chumash Museum

Monday is the last day to fine tune and set up the classroom
Please have these items ready by Monday:

1. **Poster/brochure- completed** by all teams
2. **Artifact-** tool, mask, basket, bag, etc. depending on group
3. **Speech/Presentation-** each student should have notecards/written speech that they practice.
   Each student’s speech should be about
   1- 2 minutes long.  —PLEASE PRACTICE THIS WEEKEND
4. **Optional-** digital presentations using Google/Prezi
5. **Activity-** each group should have an activity for their fellow visiting students to do while they are
   at their station.  Ideas include:  a maze, interactive food web, demonstration, interactive quiz. All
   materials should be prepared.
## Supplemental Materials: Photographs of Chumash Interactive Museum Day

<table>
<thead>
<tr>
<th>Photograph</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Photograph" /></td>
<td>Thumbs up from our basket weavers!</td>
</tr>
<tr>
<td><img src="image2" alt="Photograph" /></td>
<td>Fire presentation</td>
</tr>
<tr>
<td>The tool makers show their bow and arrow, spears and Chumash recreational games using a hoop and stick.</td>
<td></td>
</tr>
<tr>
<td>Explaining the uses of fire</td>
<td></td>
</tr>
</tbody>
</table>
Demonstrating how to use a board and spindle to make fire.

Gatherers teaching a direct draw of oak leaves and acorns to other students.
The red tailed hawk group is ready to share!

Explaining tomols and grinding using mortars and pestles.
Altogether it was an incredibly rewarding, highly engaging, learning experience for the entire 3rd grade team! This is a project that will definitely stay as part of my social studies repertoire since it is so rich with learning and fun for the kids! They ran the show!
2016 Ventura County Impact II Grant

District: Ventura Charter School
School: Ventura Charter School of Arts and Global Education
Participant(s): Kimberly Hansmeier

Lesson Plan Title: The Power of Publishing
Lesson Plan Grade Levels: 1-10
Lesson Plan Subject Areas: Dance; Foreign Language; History/Social Sciences; Language Arts/Reading; Music; Theater; Visual Arts

"Publishing is the process of production and dissemination of literature, music or information. The activity of making information available to the general public." Our "Power of Publishing" project lets students discover the history of publishing and experience its power through both traditional and technologically advanced publishing and its dynamic process. Each student publishes a work of poetry, fiction, and nonfiction with peers, their community and through the entry of a writing contest.
“Publishing is the process of production and dissemination of literature, music, or information—the activity of making information available to the general public.”- Wikipedia

Summary- Taking the simple act of publishing and turning it into a meaningful, educational, empowering experience is the focus of this project. In our "Power of Publishing" project, students discover the history of publishing and experience the connections you can create through both traditional and technologically advanced publishing. Each student publishes a work of poetry, fiction, and nonfiction with peers, their community, and through the entry of a writing contest.

Guiding Questions:

*What's involved in the process of publishing?

*Why is publishing an effective tool for connection, community building, and learning?

*How can I enter and publish a piece of writing in a contest?

Innovation- While the act of publishing is nothing new, the innovative ways in which the current generation can publish is more diverse and technology focused than ever before. Throughout this project, students are required to work both independently and in a think tank of teams using all technology at hand ranging from smart phones to i pads, laptops, video creating apps and QR code creating apps. Students take part in peer evaluation and reviews about their writing via live google doc chats and edit sessions in our workshop environment. These are all critical skills for the 21st century learner to engage in. As a seventh and eighth grade teacher, I also incorporate the use of online Edmodo groups to post assignments, links, and information and this is an interactive “turn in” location for published writing. Practice with educational websites such as Edmodo is relevant for their future as some local high schools use Edmodo daily. This project can be adapted to incorporate as much or as little technology that is available to a class.

Lessons & Activities-
Stage 1- “Publishing Process” first starts with dividing students in teams and providing some random costume prop boxes with a few simple materials such as hats and material. They are instructed to research the history of publishing. Depending on the grade level this could simply involve defining the word or it could require investigating the detailed stages involved in the specific process of publishing. There are many correct answers! Students work in teams to research and create skits to be performed in front of class, sharing their findings. This intro activity could take up one class session or many with the end message being, “We will publish!”. Second, the stage must be set for a productive, supportive, writer's workshop environment in which everyone (YES, EVEN THE TEACHER) shows up prepared to write over the next month or two with the end goal of publishing. As a class, generate a student driven list of “Writing to Publish” norms and routines everyone is willing to follow during this project. Third, a list of
“Non Negotiables” (NN’s) is agreed upon and publicly posted in regards to what is required in terms of creating a quality piece of writing, ready to be published.

Stage 2—“Writing to Publish” is the nuts and bolts of this project. The order of the lessons can be easily adapted to appropriate grade levels and rearranged to take place in any order. Again, we reflect back to our “Guiding Questions”, “Writing to Publish” norms/routines, and “NN’s” throughout our writing to keep us on target. This is the longest stage in which students learn about and experiment writing published pieces in the three genres of poetry, fiction, and nonfiction letter essays about their reading of choice.

Stage 3—“Publish Party!” is a celebratory series of four culminating events that nicely wraps up this project based learning with a few forms of publishing. One, a student created wall of “Published Reads Via QR Code” takes over a billboard. Students publish their nonfiction letter essays via a QR code. Some students also include related art work, "nutritional facts" about their reading, movies, movie trailers, or skills about their reading and nonfiction writing, all accessible by one click on the QR code. We held a viewing party in our library to watch them all on handheld phones and i pads. Two, a guest author’s are invited into the class to share their writing and publishing advice. Third, the class collectively submits their poetry and fiction to a writing contest. Each spring, the city of Ventura offers a worldwide writing contest, “Art Tales”, to three varying age groups. Fourth, students collectively polish, illustrate, and bind their poetry in books to be gifted to their local senior citizen center. Students also utilize a Spanish translator app to create bilingual editions. Students walked to our local senior center on a field trip and practiced their presentation skills by reciting their poetry aloud during their community lunch.

Assessment- As students have researched, publishing and editing is a multi-layered process involving a team of helpers and the utilization of resources. Throughout this project, for every published piece of writing, students must complete their own "NN" check off sheet and get at least two other students and one adult to fill out a "Peer Edit/Evaluation Rubric" which can be altered for multiple grade use. This reinforces the team, workshop, supportive atmosphere that gives them valuable, collaborative, group work experience.

Student Learning and Achievement- Student quotes upon reflection of their learning at end of this project:

“I can’t believe this is the first poem I’ve written that I’m proud of.”

“I think my historical fiction could actually win this contest. It was VERY hard for me to write under 500 words!”

"My peer editor says this is one of the best poems they've ever read," an English Language Learner says with a big smile.
"I feel like a professional, published, writer."

State Standards Addressed Grades 7&8 or 6th-12th:

Writing Standards 3-7 & 9-10

Reading Standards for Literature 1-6 & 10

Speaking & Listening 1, 4-6

Language Standards 1-6

Reading Standards for Literacy in History/Social Studies 3

Theatre 2.0 Creative Expression

Visual Arts 2.0 Creative Expression
Name:

“POWER OF PUBLISHING” PROJECT

My Guiding Questions:

*What’s involved in the process of publishing?

*Why is publishing an effective tool for connection, community building, and learning?

*How can I enter and publish a piece of writing in a contest?

My Targets:

1. I will research, read about, record notes, and act out the history of publishing with my team.
2. I will publish at least 3 poems (1 for our anthology book), 1 nonfiction letter essay with a connected QR code to a video, art piece or “nutritional facts” about my daily reading to be displayed, and 1 fiction story to the writing contest.
3. Be an active participant/listener in presentations, sharing, and celebrations.

Our “Writing to Publish Norm & Routines” we established for our Writer’s Workshop:

*Be kind, respectful, willing to share writing, take risks, give feedback

*READ and WRITE A LOT!

*Contribute to my team work

*Complete the requirements

*Use my time wisely

*Check Edmodo regularly

*PUBLISH!
THE POWER OF PUBLISHING

Team Names-

Targets:

1. Research the definition, history of, and process of PUBLISHING.

2. Use any technology or History books at hand for researching.

3. All team members must record their findings and sources on a single Google doc to be turned in on Edmodo by assigned due date.

4. A live skit must be created involving all team members. This performance will paint a clear picture of the history and process of publishing. It must be at least 6 minutes long and everyone needs to be ready to perform by the due date.

5. Keep this paper as a resource in your Writer’s Workshop binder.
Acting out history of publishing.
Letter Essays
HOW TO PUSH TO AT LEAST 2 FULL PAGES

REQUIREMENTS
- Letter format, name, date, opening, closing
- Name author, title, and page you are on
- 14, arial, single space, at least 2 full pages
- Rate it 1-10, explain WHY
- Include a significant passage or quote, page number, and explain WHY you chose it.
- Do write what you think and how you feel about this book and explain WHY. Don’t write a book report.
- More of your ideas, suggestions, and examples are below.

WHEN RATING YOUR BOOK...
- Explain why in great detail.
  - I rated my book a ___ because I think ___.
  - I think, feel, agree, disagree, hate, love, am annoyed by, etc. ___.
  - I didn’t rate my book higher/lower because ___.
  - Compare your rating to the rating of a past book.
  - I rated this first book in the series a ___ compared to book number ___ in this series.
  - Compare books in the same genre, different genres, or by the same or different author.

COMPARE BOOKS
- Compare books, characters, or settings.
- Compare the book to your life.
- Insert yourself into the book.
- If I were ___ I would do ___ differently by ___ etc.)
- My favorite part was ___ and my least favorite part was ___.
- Compare the movie to the book.
- What would happen if you brought a character to life?
- What would you do if you were the character?
- What would you change about the book and why?

ASK QUESTIONS
- Ask the author questions.
  - I wonder why the author made the decision to ___.
  - I think, agree or disagree with ___.
  - What would you change in the book?

PREDICTIONS
- Discuss what you predict or want to happen if this book were to continue.
- What would the next book in the series be like?
- Predict what a prequel to this book would entail.
DON'T WRITE A BOOK REPORT! INSTEAD...
- Add in feelings, opinions, thoughts
- Break your wall of words into paragraphs or parts
- Directly insert "I statements" and opinion such as:
  I hated this character because_______
  Tell us how you feel about character
  When this happened, I thought_______
  I related to this scene/character/setting/book because_______
  I didn't like it when the author_______
  If I were the author I would've_______
  I want to ask the question_______
  I do/don't relate to this character because_______
  I think
  I wonder
  I love
  I believe
  I appreciate
  I hate, dislike
  I enjoy, appreciate, relate to, connect to
  I give a thumbs down to
  I really don't fancy_______
  I hope
  I enjoy
  I wish
  I commence
  I was surprised
  I was shocked
  I agree/disagree
  I cried when
  I didn't/did expect
  I felt displeased
  I felt angry when
  It made me realize
DONT USE THE WORD LIKE!!!

DIVE WRITE (RIGHT) IN! WRITE WHAT YOU THINK, NOT A BOOK REPORT!
My example of diving in right now about my reading:

Dear Class,

In Margaret Mitchell’s Gone With The Wind, I’m just over 200 pages into this extremely long book that so far I rate a 9 out of 10. I wonder what my life would be like if I were to insert myself into the South in the 1930’s. It’s so interesting to read about all of the varying classes of people and the racism that existed amongst the black and whites and the rich and the poor. I forgot that so much racism existed even amongst the blacks themselves in terms of the extremely poor blacks compared to the “upper class” blacks who held roles and jobs with wealthy families often on plantations.

To be continued...
FREE VERSE POETRY LESSON

Objective:
Students will be about to identify poetry as free verse.
Students will be able to write a free verse poem.

Opening: Wouldn’t it be nice if there weren’t any rules when you were writing poetry? You are finally in luck! We are going to be exploring the world of Free Verse Poetry today and it’s a world with few rules which may be scary or exciting or both.

Direct Instruction:

Explain that:

- Free verse poetry is free from the normal rules of poetry.
- The poet may choose to include some rhyming words but the poem does not have to rhyme. A free verse poem may be just a sentence that is artistically laid out on the page or it can be pages of words.
- Some forms of free verse separate, or split, phrases and words between lines.
- Punctuation may be absent or it may be used to place greater emphasis on specific words.
- The main object of free verse is to use colorful words, punctuation, and word placement to convey meaning to the reader.

Read through a couple different examples of Free Verse poetry.

NOW IT’S YOUR TURN!

*You will write 3 different poems.
*You will share them with your writing team.
*You will revise each one at least 3 times.
*You will choose one to publish in our class anthology of free verse poetry.
NONFICTION WRITING PIECE FOR WRITING CONTEST

Art Tales is an annual contest open to the world! To become a stronger writer you must read a lot, write a lot, and be open to publishing and submitting a lot of your writing to the world. Make sure to complete the following guidelines. You must also log onto the contest website (www.cityofventura.net/ArtTales) for very specific details and to have any of your questions answered.

* Fiction stories must be based on one of the paintings provided on the website.

* 500 words or less ONLY

* Use the correct font size and type of font required. You must READ the guidelines on the website to know which ones to use ☞.

* The deadline is ________________.

* You must also submit a waiver to take part. Again, read the guidelines on website.

* You must complete and submit the MAIN CHARACTER QUESTIONAIRE & OUTLINE to me before you start writing.

GOOD LUCK! HAPPY WRITING!
Art Tales
A Writing Contest
Inspired by Art

The City of Ventura in partnership with E.P. Foster Library is hosting a free contest open to all writers worldwide.

Submit a short story or poem inspired by one of the Municipal Art Collection works of art currently on loan to E.P. Foster Library, 651 E. Main Street.

Entry Deadline: April 4, 2016
Prizes will be awarded in three age divisions.

Teachers and Writers:
for entry guidelines and lesson plans go to www.cityofventura.net/ArtTales
1. What's your name?

2. How old are you?

3. What's the problem you're facing?

4. What's your family background?

5. Where do you live?

6. What do you like to do?

7. What's different about you?

8. What do you care about? What do you want?

9. What do you fear?

10. What are your dreams?

11. Who are the important people in your life?

12. What are the important things in your life?

13. How will you change through confronting your problem? Possibilities:

14. What will you understand about yourself and your world at the end of the story? Possibilities:
**Name:**

**NON NEGOTIABLES (NN’s)** These are the NN’s we agreed upon as a class- I will check off each bullet point and attach this to my final, edited, “ready to publish” paper.

<table>
<thead>
<tr>
<th>7th &amp; 8th Grade</th>
<th>I can...</th>
</tr>
</thead>
</table>
| **Capitalization** | • capitalize the first word of each sentence  
                     • capitalize the word I  
                     • capitalize names and other proper nouns  
                     • lowercase all letters that are supposed to be lowercase |
| **Punctuation** | • end each sentence with a period, question mark, or exclamation point.  
                     • use commas appropriately  
                     • use apostrophes appropriately  
                     • use quotation marks with dialogue and citing literature |
| **NN Spelling Words** | • correctly spell “Word Wall” words or any terms present on paper, terms relevant to subject matter  
                       • spell common homophones (are/our, to/too, their/there/they’re, etc...) |
| **Neatness/Craftsmanship** | Turn in...  
                             • writing formatted correctly with margins  
                             • red margin line on left side of lined paper with wide margin on top  
                             • title centered on top line if on lined paper  
                             • name and date in top right  
                             • indented paragraphs  
                             • staple paper in upper left corner  
                             • best work, must be legible and easy to read  
                             • proper size and font of typed writing specified by teacher  
                             • edited papers, spell checked, rubric/s completed if required |
Name:

RUBRIC FOR PUBLISHED WRITING

<table>
<thead>
<tr>
<th>I checked off my NN's for each piece of writing.</th>
<th>4-Yes! Complete!</th>
<th>3-Almost</th>
<th>2-Barely</th>
<th>1-Not really</th>
</tr>
</thead>
<tbody>
<tr>
<td>At least 4 others edited my writing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I followed the requirements for each piece of writing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I completed all of my assignments.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Enjoyable? Fun to read? Makes sense?

Near end?

Character development:

N.N.5.3

Progress:

For each □, 25 points total possible. Write at least 1 sentence explanation. Give 1-5 points in each box. 5 = best.

Name of Peer Paper:

Your Name:

Peer Edit (Kerri) \( \sqrt{IN} \)

Total Points: \( \frac{1}{25} \)
WALL OF QR CODES CONNECTED TO WRITING & ART OR VIDEO BASED ON CHOICE READING
Warriors: The Blazing Star
WITH WHOLE ADVENTURE AND ACTION

ERIN HUNTER
Nutrition Facts
Serving Size 1 Page (15g)
Serving Per Book

Amount Per Serving

Pages 273
Book # 4

% Daily Value*

Total Fat 9g
Saturated Fat 5g
Trans Fat 4g
Cholesterol 35mg
Sodium 180mg
Total Carbohydrate 32g
Dietary Fiber 19g
Sugars 39g
Protein 23g

Quality 100%  Fiction 89%
Action 99.9%  Suspense 89%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

INGREDIENTS: ADVENTURE, MYSTERY, CUFFNANGERS, SENSE, ACTION, COOL CHARACTERS, DEVELOPING CHARACTERS, LOVE, HATE, CHARACTERS THAT FEEL REAL, GOOD SENSE OF TIME.
INK & PAINT
PAINTING
ON BOOK "TEX"
A trip to
Share Published
Poetry!

https://mail.google.com/_ses/mail-static/_js/k=gmail.main.en.pL5Z7WCG4JQ.O/m=m_i,... 3/10/2016
Music

Music is my expression
It's like a special secret language
But not everybody understands it
Every song has a meaning
And every instrument has a part

Whenever I learn new songs
I find new ways to express myself
Through love and joy
Playing my secret language
With all of my heart

Music is my inspiration
It guides me through life
And shows me where to go
It never leaves my side
Surrounding me like the air around us

Nobody understands my special connection
My secret language

Why I love it so much
How special it is to me

It's a part of me
Something essential in my life
I can't live without it
I need music
And music needs me

Ventura Charter School
4th/8th Grade
Happy reading!
Dios es bueno

Nunca perder la fe en la vida
nunca hay un momento en hojas Dios son lado
todo lo que tienes que hacer es confiar en él y todas las cosas malas se
deslizará

nunca perder la esperanza en Dios y más encima en sí mismo
porque Dios ha bendecido todos
acon una mágica duende que

este pequeño individuo le protegerá en los momentos de angustia
que va a dar lugar a donde debe ir
coz que sabe el mejor

y cuando usted se encuentra completamente perdido

y sin saber

apenas sonrisa mi amigo

y una nueva puerta se abrirá para que

Dios no es ~ Newsboys muertos

Experiencing

with Spanish

translation app.
GUEST AUTHOR -

Her inspiration, tips, guidance, help, thoughts on publishing.

https://mail.google.com//_scs/mail-static/_js/k=gmail.main.en.TSDyobBGGnE.O/m=m_i.... 3/10/2016
Writing work with an author.
How I got better at writing

1.) Read a lot. Read a lot of different genres.
2.) I tried to write every day.
3.) I started hanging out with other people who had the same interest.
4.) I joined a critique group.
5.) I read books, articles and went to classes and conferences on writing.
6.) I started thinking about myself as a writer, not someone faking it.
7.) I started submitting my work and get feedback - contests and critiques.
8.) I started hanging out with the people who were already authors (where I wanted to be).
9.) I started looking for inspiration everywhere I went and in everyone I met.
10.) I try to help others. Teach what I have learned. Give back.
Where to find creative inspiration:

1.) Travel to different places (Italy, San Fran)
2.) Observe people (keep a book of odd mannerisms etc)
3.) Go on walks
4.) Take a bath – water
5.) Go to art galleries
6.) Watch movies
7.) Use what happened to you in the past (or others)
8.) Listen in on conversations
9.) Live in the moment (observe everything)
10.) Talk it out with a friend (brainstorm)
How I got better at writing

1.) Read a lot. Read a lot of different genres.
2.) I tried to write every day
3.) I started hanging out with other people who had the same interest
4.) I joined a critique group
5.) I read books, articles and went to classes and conferences on writing
6.) I started thinking about myself as a writer - not someone faking it.
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8.) I started to hang out with the people who were already authors (where I wanted to be)
9.) I started looking for inspiration everywhere I went and in everyone I met.
10.) I try to help others. Teach what I have learned. Give back.
Toni’s Tips to writing better fiction

1.) To write better dialogue limit your dialogue tags to “He said” or “he replied.”
2.) Change up the length of your sentences.
3.) Use very few adverbs – ly words.
4.) Make sure your main character has changed from the beginning of your story to the end.
5.) Read your writing out loud to see if you have a good flow.
6.) Make your characters deep, complicated.
7.) Find new ways to describe things. Show they way you/ your character sees the world that is different from anyone else.
8.) Don’t use a lot of explanation marks! Show instead of tell.
9.) In a good story your reader should know what your character wants early on. The reader will root for her.
10.) Conflict for narrative tension. Put your character up a tree and throw stones at him, then see how he gets himself down.
11.) Don’t be afraid to write horribly. You can always edit it out... just write.
12.) Writing is rewriting. Writing the first draft is only 25% of the work.
13.) Don’t use long or fancy words to make you sound starter.
14.)
2016 Ventura County Impact II Grant

District: Ventura Unified School District
School: Buena High School
Participant(s): Joel Levin, Kevin Downey

Lesson Plan Title: Making Records in the Digital Age: Recording and Sharing Student Voices
Lesson Plan Grade Levels: 9-12
Lesson Plan Subject Areas: Music

This project will allow students to document their artistry and literally share their voices with the world. Our school’s Choir Program provides students with a forum to develop their singing and performing skills; using available recording technology at our site, we hope to produce and release a full-length CD of original student performances. This grant will provide students with the opportunity to record their voices and share their work with friends, family, and the community at large.
Making Records in the Digital Age: Recording and Sharing Student Voices

Curriculum:

This project will allow students to document their artistry and literally share their voices with the world. Our school’s Choir Program provides students with a forum to develop their singing and performing skills; using available recording technology at our site, we hope to produce and release a full-length CD of original student performances. Just as visual arts courses allow students to create lasting documentation of their artistic growth, this grant will provide students with the opportunity to record their voices and share their work with friends, family, and the community at large.

Contrary to popular belief, producing and releasing a professional recording does not simply mean clicking a few buttons and stepping up to a microphone: the process is actually a multifaceted experience that requires developing skills, fine-tuning technique, utilizing available technology, and responsibly following copyright laws. After rehearsing songs in Choir class, students will learn how to use the technological tools at their disposal to record their voices in a polished and professional manner; in the process, students will learn about copyright, legal compensation of artists for their work, and the responsibility of practicing good “digital citizenship.” After completing their recordings, students will take home a final product (in CD format) that documents the Choir class’s work; student work will also be available for streaming via Spotify and other online music services.

State Standards:

In addition to the real-world, authentic experience of showcasing original artwork, this recording project will explicitly help support the following Music/Performing Arts standards:

- **2.0: Creative Expression (Creating, Performing, and Participating in Music)**
  - 2.1: Sing a repertoire of vocal literature representing various genres, styles, and cultures with expression, technical accuracy, tone quality, vowel shape, and articulation—written and memorized, by oneself and in ensembles.
  - 2.3: Sing in small ensembles, with one performer for each part.
  - 2.7: Compose and arrange music for various combinations of voice and acoustic and digital/electronic instruments, using appropriate ranges and traditional and nontraditional sound sources.

- **5.0: Connections, Relationships, Applications**
  - 5.3: Identify and explain the various factors involved in pursuing careers in music.

Lessons or Activities Used:

In our school’s Choir Program, which has recently been resurrected from a decade-long hiatus, students hone their singing skills and techniques under the mentorship of the Choir Director. The Choir students currently put on two live performances/recitals each year, and the class even recorded a “rough around the edges” CD for their winter concert a few months ago. Using their current knowledge and skills, students will receive basic training on how to operate recording equipment; afterwards, they will spend time (individually and in small groups) recording
vocals and instruments using our school’s recording equipment. Once the recordings have been completed, students will engage in a curricular unit of study that addresses the “business” side of music, including information about copyright laws, digital citizenship, digital piracy, and compensation of artists for their work. Finally, students will design the physical final CD product and send their work off to be manufactured.

Though the Choir Director will handle most of the curriculum and training for students in the Choir class, he will be partnering up with several other teachers on our campus: the site’s Teacher Librarian will play an active role by helping with the recording process and providing instruction/classroom activities, the school’s Digital Photography and Visual Arts teachers will help with the “artwork” portion of the project, and members of the school’s Band/Orchestra Program may contribute instrumental music to the project. For the portion of the unit dealing with digital citizenship, the Teacher Librarian (who received formal training/instruction about copyright laws and digital citizenship in his Librarian Services credential program) will lead the students in an examination of artist compensation and the importance of using the “proper channels” to buy and sell music. This teacher will also help with the actual recording of student performances, as well as guide the class through the process of digital distribution and the manufacturing of the physical CDs. As the class works on assembling album artwork for the CD, the Choir director will enlist the help of our school’s Digital Photography and Visual Arts teachers; as previously mentioned, the participating students may wish to utilize their peers in the Band/Orchestra program to contribute instrumental music for these recordings. Ideally, this will allow other students not enrolled in the Choir class to contribute their talents to the project.

**Assessment of Success:**

Much like a standard business, the success of this project can be quantized and assessed through sales of the Choir class’s CDs, as well as the streaming of the songs through digital retailers like Spotify. Ideally, if the recording project is successful enough, we hope that selling self-recorded CDs of student work will become a self-sustaining endeavor: if we are able to sell a sufficient number of CDs at our annual concerts, we can use those funds to finance CDs for the following year. From a financial standpoint, the Choir program could reap monetary income from performance and recording royalties mechanically distributed from sales on iTunes, Spotify, and other digital distributors. However, these financial benefits are small in comparison to the spiritual and artistic fulfillment that students would receive from creating their own original recordings.

**Student Learning and Achievement:**

As stated above, this project will support the “Creative Expression” standards (2.0-2.5) of the Visual and Performing Arts Content Standards for California Public Schools. As students perform individually, with small groups, and with larger ensembles, they will have the opportunity to preview what a career in the recording industry might look like – for performers and for audio engineers. Beyond addressing these state standards, however, this project will benefit students by promoting a culture of artistic success and enrichment on our campus. The pride that these students will feel with the completion of their recording projects cannot be measured, quantized, or affixed with a price tag; they will undoubtedly, though, benefit artistically from their project.
Band members swing by Buena High

Group plans April concert to aid schools

By Anna Kallas
Special to The Star

When two members of Big Bad Voodoo Daddy heard the Buena High School choir perform their song “Sleep Tight” on Thursday in Ventura, they were overcome.

“It brought tears to my eyes. It was beautiful and emotional,” said Scotty Morris, lead singer and songwriter for the nine-member swing band that formed in Ventura and got so popular it played in a Super Bowl halftime show in 1999. “When my daughter was 2 years old, we got very busy. I was missing her because I was never home, so I wrote that song so she could hear her daddy’s voice.”

Morris and Andy Rowley, who plays baritone saxophone and sings, visited Buena on Thursday to meet some of the students who benefited from the band’s 2013 concert that raised $50,000 for Ventura Unified School District’s arts and music programs.

“We got started in this town,” Rowley said. “The band was hatched here. And we wanted to support the kids in the community and the school district. Some schools used it for instruments and sheet music, and there was a kiln and other things.”

In addition to the musical performance by the newly reestablished Buena choir, which is back at the school after an absence of more than five years and is led by teacher Kevin Downey, the members of Big Bad Voodoo Daddy fielded questions from the students. They also took a peek at the school’s small recording studio, which was built using money from the benefit concert.

Sabrena Rodriguez of the Ventura Education Partnership said the 2013 benefit was the band’s idea.

“We were approached by the band,” she said. “They wanted to do a concert. So we worked to partner with the city. It’s a great way to raise awareness of what’s going on in our schools and community.”

Big Bad Voodoo Daddy is planning another community concert. This one is set for April 2 in downtown Ventura and will be a celebration of the city’s 150th anniversary. It, too, will benefit schools.

The band also will be part of an instrument donation event from noon to 3:30 p.m. March 19 at Ventura’s Kimball Park. Those who donate musical instruments can get general admission tickets to the April 2 concert and meet the band beforehand.

During Thursday’s question-and-answer session with the students, the band members explained how they got their start.

“We started a swing band when Nirvana was the popular band,” Morris said. “We just got to do what you love.”

“These are my people. I know them, and it gives me anxiety,” Morris and Rowley agreed that after almost 23 years of performing together, they rarely do.

Except when they play for the hometown audience. “I get nervous when I play here,” Rowley said.

“Everyone around the world knows Malibu and Santa Barbara, but they’ve never heard of Ventura,” he said.

“We’re like the overlooked middle child. It keeps us humble. And instead of going around the world partying, we like to go to museums and parks — very Ventura types of things.”

When asked whether they still get stage fright, both Morris and Rowley agreed that after almost 23 years of performing together, they rarely do.

Learn more for information about the instrument donation event, visit http://www.venturaeducationpartnership.org. For information about tickets to the Big Bad Voodoo Daddy concert, click on “Events” on that site.
Big Bad Voodoo Daddy band members visited local high school

On Feb. 4, Big Bad Voodoo Daddy band members visited Buena High School to meet choir and music students and to tour the campus recording studio which was funded by the band's April 2013 local benefit concert presented by Ventura Education Partnership (VEP) and the City of Ventura.

The April 2013 benefit concert, a sold-out event, raised nearly $50,000 in grant funding for Ventura Unified School's arts and music programs. Grant funds allowed Buena High School to build a mini-recording studio, which is used by music students, the choir program and other students who wish to record songs and make music. Several other VUSD schools received grant funds for art and music projects including new musical instruments, a kiln, microphones, drafting tables, and in-classroom artist programs.

On April 2, in downtown Ventura, Big Bad Voodoo Daddy will perform a benefit concert in celebration of the City of Ventura's 150th anniversary and again as a fundraiser for art and music programs – choir, jazz, theater, marching band, orchestra, visual and performing arts – for Ventura Unified's 17,000 elementary, middle and high school students.

Big Bad Voodoo Daddy formed in Ventura in 1989. (Band info: www.bbvd.com)

Tickets for the April 2, 2016 benefit concert are now available online at www.venturaeducation-partnership.org/BBVDbenefit.
The GMO Mission Impossible Project challenges students in a language arts and history project to present how a modern-day genetically modified food could have saved a historical civilization. Teams of students collaborate to research an historical civilization, including its geography, natural resources, and regional food, and then ultimately present a meal including that region’s foods and a modern-day GMO that would address a problem (drought, etc.) and potentially "save" that civilization!
GMO Mission Impossible Project

SUMMARY:
The GMO Mission Impossible Project challenges students in a cross-curricular language arts/history project to present how a modern-day genetically modified food could have saved a historical civilization. Thus, teams of students collaborate to research an historical civilization, including its history, geography, climate, natural resources, and regional food, and then ultimately create a meal including that region’s foods and a modern-day GMO that would address a problem that civilization experienced (drought, overpopulation, starvation, etc.). Each team’s research and arguments, including a meal idea, are presented at a school-wide GMO Food Fair, in which student teams proudly display their solutions through taste testing of their meal and technology and art pieces.

PROJECT GOAL:
Students work in teams to accomplish an impossible mission—to use a modern-day GMO to save an ancient civilization! Each team is first given a mission—a civilization and problem, such as “Roman Empire and Overpopulation” or “Mayan Empire and Drought.” Teams then research their civilization, come up with a modern-day GMO to address that civilization’s problem, and create a meal utilizing the modern-day GMO and at least 3 regional foods (based on the "Chopped" TV show). Using technology and art, students present their meal idea and argument at a cross-class Food Fair.

EDUCATIONAL OUTCOME:
While mastering their skills in research, writing, citing evidence, hands-on activities, technology and art integration, and oral presentations, students also learn to examine their own food and health, while also thinking about how to help others globally. Students put themselves in the “shoes” of these historical people who suffered from issues, such as starvation, drought, disease, and famine, and collaborate together to solve these issues by examining each region’s geography, climate, natural resources, and regional foods. By introducing a modern-day GMO, students think critically about how to address these global issues, and ultimately are challenged to integrate past and present to solve problems that still occur in our world today.

PROJECT DESCRIPTION:
Students are challenged with this guiding question across the 7th grade curriculum: How do genetically modified foods impact the quality of life? Students begin in Science learning about genetics and experiment using gel electrophoresis to detect if foods have been genetically modified. Students in P.E. track what they eat and examine GMOs in their diets. In Language Arts, students use Visible Thinking Strategies to analyze and discuss images. Students then research the benefits and concerns of GMOs and complete argumentative writing using textual evidence. During a debate,
students discuss how GMOs can be beneficial and detrimental, citing evidence, statistics, and providing counterarguments. In World Geography, students are challenged with the "Mission Impossible" Project to collaborate together to present a meal using a modern-day GMO and regional foods of a civilization studied this year, explaining how the GMO meal will “save” the civilization from a problem. Students first work in teams to research a region’s history, main problem, geography, climate, natural resources, and regional foods. Then, students use their research to choose a GMO food that would be able to be grown in that region’s geography and climate, and that would address the region’s overall problem. Finally, student teams create a meal idea utilizing this GMO and the regional foods and present their research (region’s problem and geography) and argument (GMO food and meal to address this problem) using technology, art, and taste testing. Their final presentations are displayed at a cross-class GMO Mission Impossible Food Fair.

CROSS-CURRICULAR COLLABORATION:
The 7th grade team of teachers collaborates on the GMO Mission Impossible Project centered on Project Based Learning. While the Language Arts and History teachers implement the core of the project and guide students in their fair day displays, the other subject area teachers (science, math, music, P.E., etc.) also give lessons to their classes connected to genetically modified foods correlated to their subject area. The five history teachers collaborate on the GMO Food Fair, during which students enjoy proudly displaying their meal ideas and projects—utilizing real “taste tests” and technology and art pieces to display their arguments for how each GMO will help solve a civilization’s problem—to other classes, teachers, administrators, classified staff, district staff, and parents who are all invited to attend.

RANGE OF BENEFITS:
This standards-based project allows students to integrate language arts and history and express themselves creatively through hands-on activities. Students are able to perfect their skills in research, note taking, citing evidence, argument writing, collaborative discussion, and oral presentations (Language Arts standards – Reading Informational Text 7.1; Argument Writing 7.1; Speaking 7.1, 7.4, 7.5). They are also challenged to think critically by connecting past to present and to invent new ideas based on the past (how specific GMOs can help the future). Finally, they are able to examine and learn from history by addressing problems each civilization experienced (World Geography standards 7.1-7.11). This project enables students without Art class to be artistically creative in presenting their posters, meals, and technology pieces at the Food Fair. By imagining how to help solve historical civilizations’ problems, students may be able to help address current global issues.

ASSESSMENT:
Students are assessed on their overall presentation at the GMO Food Fair, which includes their argument backed up by citations from credible resources, how they integrate art and technology to display their argument, and overall, how they eloquently present their argument to visitors at the fair. Success is evident as students confidently teach and stimulate the excitement for learning to others who visit the fair. Throughout this process, they are also able to think critically and are inspired to act globally to help address current problems in our world. All students may be inspired to think about possible future career paths in engineering, humanitarianism, biotechnology, food preparation, and more! All students at the school are invited to participate on fair day, whether presenting or viewing projects. It provides a time for students and adults together to celebrate learning and success!

Photos from 2015 GMO Mission Impossible Food Fair are included as a separate PDF attachment.
2016 Ventura County Impact II Grant

District: Oxnard Elementary School District
School: R.J. Frank Academy of Marine Science and Engineering
Participant(s): Debbie Maulhardt, Ernie Rodriques and Dave DeLos Santos

Lesson Plan Title: If You Have Knowledge, Let Others Light Their Candles in It
Lesson Plan Grade Levels: 7
Lesson Plan Subject Areas: History/Social Sciences

No student's knowledge can go beyond their own experience, so why not create more learning experiences? That's what a team of 7th grade Social Studies teachers did by exchanging their classes' interactive media projects. The spectrum of diverse products, perspectives, and content allowed ALL students an opportunity to get different points of view on their civilization, resulting in an even more in-depth understanding of the Meso-American and Andean civilization. It was a powerful experience!
“If You Have Knowledge Let Others Light Their Candles in It”

New technologies have multiplied and diversified the ways in which students can learn each other. Our team of teachers tapped into this idea by integrating technology into our culminating projects for the Meso-Americas. To maximize enrichment and insight, we paired up our students, so they could share their projects and course of study. This extended thinking activity provided a rich exchange between all types of students with different abilities. The spectrum of diverse products, perspectives, and content allowed all students an opportunity to get different points of view on these civilizations, resulting in an even more in-depth understanding of the historical content. Furthermore, students got a reasonable understanding of the various technology used to create the interactive projects, thus increasing their technological abilities.

“Everyone You Meet, Will Know Something You Don’t Know”

One of my team teachers had just finished the unit of instruction on the Meso-Americas and Andean Civilizations, and he wanted his students to create an Adobe Voice Production, as a culminating project. So we created an untraditional learning experience that teamed our classes together in partners, so as to have my students teach his students, the Adobe Voice App. During three days of classwork and homework, our students learned from each other. His students had the historical knowledge of dates and events for a timeline, my students had the computer skills and research skills to make the information for the timelines come to life in an Adobe Voice Timeline. This practical exchange of "knowhow" was very empowering for the teams of students. My student did the tutorial with their partners, teaching the basics of the program. My students taught their partners how to navigate the app. Then they taught them how to navigate the Internet to access primary source illustrations from museums based on the key terms from the timelines. My students read the historical events with their partners and they helped them add details by using the Dictionary App to define words. Next they practiced their expression and accurate pronunciation, as they recorded the audio for the timeline. The teams critiqued the illustrations and added the appropriate ones to the production. The first draft productions were done and the teams peer-edited the shows, giving critical advice and the final drafts were published. This creation of the Adobe Voice Presentations was a fun-filled conclusion to my team teachers' unit of study and his students had an in-depth synthesis of the history learned.

“If You Want To Know Something, Teach It”

After this fun and educational event, my students had gained a basic understanding of the Meso American civilizations, thus serving as the introduction to our unit on State Standard 7.7, The Meso-American and Andean civilization. Using the strategy of, “Jig sawing,” students organized themselves into interest groups. Choosing what civilization they wanted to make an in-depth report on; The Maya, Inca, or Aztec. At Risk Students, were put into my strategic group, where they could get direct scaffolding from me to increase their depth of knowledge. These expert groups were given five days to cooperatively read the textbook chapter, complete the workbook pages, and create an online Study Stack, for the vocabulary. They researched the Internet and watched appropriate documentaries on their civilization. The groups paced themselves and assigned their nightly homework. They were given individual grades on these assignments.

“Knowledge Is Knowing A Tomato Is A Fruit, Wisdom is Not Putting It In A Fruit Salad” Next came the time for students to take this basic knowledge to the next level by synthesizing it into an interactive book that other students in the class, could use as a course of study. Each member of the group chose to make one multimedia production, based on what they had learned. They chose from the many Applications and online resources we had already learned in my class. Their choices were an Adobe Voice Presentation, an I-Movie trailer, a Pic Collage, a Google Doc. Presentation, a Prezi Presentation, an interactive map online using National Geographic Map-Maker. All these websites and Apps were free and accessible from any smart phone, or I-pad, thus easily accessible. The students had three days to publish their product for me to grade individually. I was available to answer questions and troubleshoot, but my directive was, "I will not correct your work, I will only grade it" So they engaged in peer-editing to find corrections. They used student-experts on their particular civilization, as well as, peer-experts on the technology they were using. The exception to this rule was for my At Risk Group, who needed a lot of teacher editing. The final products were given individual grades, based on the rubrics we had established for each product. Then the teams of students went through the writing process, using peer-editors and making their short answers from the workbook questions into final draft paragraphs. The groups created QR codes for all their multimedia projects they had created as well as, the appropriate documentaries they had discovered. Next the students created a Study Stack comprehension test based on all the works in their multi-media book

“Knowledge is of No Use Unless You Can Put it Into Practice”

Finally, these books were used as a practical courses of study with my classes and another team teacher’s classes, who were just finishing up the unit too. In a three day workshop, our students paired up to study the course work books. Projects were watched, read, studied, and each student's comprehension was tested and graded. This peer-instruction, was an efficient use of time that served not only to enrich, but instruct. My colleague's classes’
interactive projects were dramatic productions on The Aztecs, using the Touchscreen App, which involved green screen technology. My students not only learned about The Meso-Americas, they learned about that new technology and... The candle was lit once again!
2016 Ventura County Impact II Grant

District: Oxnard Elementary School District
School: R.J. Frank Academy of Marine Science and Technology
Participant(s): Debbie Maulhardt

Lesson Plan Title: "Knowledge is Having the Right Answers, Intelligence is asking the Right Questions"
Lesson Plan Grade Levels: 7
Lesson Plan Subject Areas: History/Social Sciences

Through an in depth study of the sub-Saharan civilizations of Ghana, Mali and Songhai, in Medieval Africa, 7th graders worked in "expert" groups to produce a, "state of the art," report on one of the civilizations. Their report was a unique combination of paper and paperless, products. The works published in the report, represented the best of the groups' individual efforts. Ultimately, these reports were exchanged among students, studied and the groups' online tests were taken and passed.
Focusing on the Content Standard 7.4 on the sub-Saharan civilizations of Ghana, Mali, and Songhai, in Medieval Africa, my 7th grade students worked in cooperative groups to produce a, "state of the art," report, which focused on the Ghana, Mali, or Songhai Empires. Their report was a unique combination of paper, and paperless, products. The works published in the report, represented the BEST of the groups individual efforts, as determined by the students themselves. This multimedia report integrated Medieval World History with language arts, graphic arts, visual arts and technology.

I began the unit by making sure students had a secure foundation of Basic Knowledge through whole group instruction on the unit. We used the text book and workbook pages with pencil paper activities. Everybody learned generally about the sub-Saharan African civilizations’ geography, social structure and oral-language traditions. Once the students understood this basic knowledge they divided themselves into expert groups of four, based on which civilization they wanted to study in depth; Ghana, Mali or Songhai. “At Risk Students,” whose grades did not reflect a basic understanding of the civilization, thus far, were put into my strategic group, where they could get direct scaffolding to increase their depth of knowledge. It was in these expert groups, that students read the textbook, completed workbook, searched for documentaries, took Cornell notes, and completed outlines to get a basic knowledge of their particular civilization.

Next came the time for them to publish a group report, this involved Strategic Thinking Skills. They took the short comprehension questions from the workbook and peer-edited them, going through the writing process and ultimately created in depth essays. Cooperatively, students synthesized the timeline from the book. They researched museums online and got primary works of art to illustrate the events. They surveyed their notes and found other important dates and events to connect to their timeline. Finally, they had a detailed script to design a multi-media timeline using the free application, Adobe Voice. Students also took their basic knowledge from the outlines to a high level of thinking, by identifying key terms and people in them and finding primary works of art to illustrate these terms. Ultimately, these key words from the outlines became scripts to design an I-Movie Trailer. The museum artworks became the pictures that gave a simple summary of African civilization. All students created the products represented in their report and were given an individual grade on it. But, only the Best products of each group were published.

The group’s selection of the individual works to publish involved their Extended Thinking Skills. Students sorted through and analyzed each other’s work products. Then they chose which ONE to publish in the report. For the online presentations, they created QR codes using the free KAYWA website. They watched the documentaries each member had found on their topic and they concluded which ONE was the most appropriate. Then they made a QR code for it to publish. After reading and viewing their own report, they designed questions and answers formulating an online test using the Study Stack website. They came up with questions and answers for each product in their book.

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Synthesis of the Unit was achieved by having students from all my classes share their knowledge, by exchanging the reports. The interactive reports were studied, and the students’ comprehension was tested, through each report’s Study Stack test. This was a very fun exchange of ideas and it was very manageable, as the Study Stack grades the tests electronically, so the students simply showed me their grades on their I-Pads as they finished the tests, and I recorded them in the grade book. Students were given three class periods to study the many reports from four different classes. This exchange provided a rich interaction between all types of students with different abilities. The spectrum of diverse products, perspectives, and content allowed ALL Students an opportunity to get different points of view on their civilization, resulting in an even more in-depth understanding. Furthermore they got a reasonable understanding of the other two civilizations that they had not previously studied. The students' comprehension was measured by the grades they scored on the Study Stack test for each report, and they were given an average of these grades. This unit was a very efficient use of class time because we were able to get through a whole unit of study in four weeks. The students really enjoyed this unit, as can be seen by the anecdotes they wrote about the experience. (See the paragraphs written by the authors of the reports, contained in the work samples) This unit is very practical. All the websites and applications used in this unit are free. All my students have I-Pads, but everything we used was accessible by a smart phone, computer or I-Pad, or Electronic Notebook, which most students have hiding in their backpacks. Teachers simply need to let students access these tools that they have and teach them how to use them as educational tools.
2016 Ventura County Impact II Grant

District: Los Angeles Archdiocese
School: St. Paschal Baylon School
Participant(s): Julie Roland and Cathie Kourounis

Lesson Plan Title: Math + Reading = Art
Lesson Plan Grade Levels: 1-8
Lesson Plan Subject Areas: Language Arts/Reading; Mathematics (Amgen Category); Visual Arts

Math + Reading = Art

“Reading isn’t just for literature class anymore!” Many students think that reading in math only applies to dreaded word problems. However, teachers are constantly reiterating the need to read thoroughly for understanding. Even reading the directions is viewed as too time consuming by the student. How can a teacher at any grade level relay the concept that math is a translation of words to numbers and symbols? Why not write a book!
The Dynamic Earth Pyramid

Planet Earth has a story to tell and one of the most interesting parts of that story involves earthquakes and volcanoes. The Dynamic Earth Pyramid is an open-ended project that allows students an opportunity to become immersed in the story as they learn about a variety of earthquakes and volcanic eruptions.

The project is the culminating activity of a study of earthquakes and volcanoes. It gives students an opportunity to synthesize all that they have learned, research an earth event that they want to know more about, and present it in a way that allows them to share their knowledge with others. This project addresses California State Science Standards 1d, 1e, 1f, 1g, 2d, 3c, and 4c as well as MS-ESS3-2 in the Next Generation Science Standards (NGSS). In addition, this unit integrates Common Core standards 6-8.2, 6-8.4, and 6-8.7 relating to literacy in science and technical subjects.

During our study of earthquakes and volcanoes, students have built up their background knowledge through a variety of activities. For example, an activity called Shake and Quake, gives students an opportunity to learn about normal faults, reverse faults, and strike slip faults. Not only do they develop an understanding of the type of movement along these faults, but also they are able to explain the forces involved and the type of movement that occurs as a result of those forces. The new standards (NGSS) emphasize modeling as an important scientific skill and this is incorporated in this activity as the students diagram the faults and label the forces.

Volcanic Mechanic is one of the activities that help students develop background relating to volcanoes. Students create a volcanic diagram with foldable flaps. The students describe volcanic structures and their functions. In addition, students draw, label, and describe the three basic types of volcanic cones and explain the forces involved in a volcanic eruption.

Students also use their laptops during class to explore the United States Geological Survey (USGS) website. This activity begins as a teacher directed activity in order to familiarized the students with the mechanics of how to navigate their way through the site. Then students are given time to explore the website on their own. Generally, the teacher provides a few questions for students to answer in order to provide some direction to their exploration. This website, which shows information about earthquakes and volcanoes in real time, shows the students how relevant and “real world” the topic is.

Now students are ready to begin the Dynamic Earth Pyramid Project. Students are give tag board templates and begin by cutting out three triangles for the sides of their pyramids and a square for the bottom. They also make a hanging flap in any shape that they desire. Students choose to do the project on earthquakes or volcanoes. Each of the sides of the pyramid has a
model/ labeled diagram and explanation of one type of earthquake fault or one type of volcanic cone.

The students research their information for the hanging flap using a variety of on line sources, including the USGS website. They look for the most interesting earthquake or volcanic eruption they can find and write a dynamic description in their own words that is designed to inform and entertain their classmates with the amazing, but true facts relating to their earth event.

On the day that students put the pieces of their pyramid together, there is much excitement in the classroom as students share their stories about their eruption or earthquake. Each student is now an expert on the earth event that they researched, and they learn a great deal from other students as they share their information. It is also interesting to see all of the different and creative ways the students chose to present the information on their pyramids.

This project engages students as they try to find just the right earth event to share and then excitedly tell their classmates what they have found. In addition, it incorporates, language arts skills, art, and technology. It is more engaging than a traditional textbook activity and more student centered because it gives students lots of leeway to decide what areas they want to research and how they want to present what they have found.

The project addresses multiple ability levels and learning styles. Stronger students can describe more complex earth events and require little or no assistance and they run with the assignment. This frees up the teacher to circulate around the classroom and help weaker students. In reality, students are so excited with the topic, that they are eager participants in the learning process.

The project, which is easily scalable so that it can be used with either older or younger students in various grade levels, is also quite easy to assess using a detailed rubric. Most students, however, far exceed the standards set down in the rubric and show a strong mastery of the content as well as an excellent retention of what they have learned.

Students proudly display their Dynamic Earth Pyramids, which look wonderful when they are hung around the classroom. Students are proud of their work and are pleased to point their project out to any and all visitors to our classroom. Most importantly, students are now dynamic earth experts.
Dynamic Earth Pyramid

Purpose: To illustrate and explain three examples of dynamic change to our planet through major geological events.

Materials: • tag board pyramid cutouts (3 sides /1 bottom) • colored pencils • gallon size plastic bag • flash drive • hanging flap (about 3”x5”)

Procedure:
1. Cut around the outside edges of the 3 pyramid sides and the pyramid bottom.
2. Decide if your pyramid will focus on earthquakes OR on volcanoes.
3. If you plan to do earthquakes, please continue with the following directions.
   If you plan to do volcanoes, use the directions on the back of this paper.

Earthquakes

4. Your three panels will have information on the following topics (one topic per panel):
   • Normal fault       • Reverse fault       • Strike-slip fault
5. On EACH SIDE of your pyramid you will add information as follows:
   • Title (on backing paper)
   • Colorful, detailed, labeled illustration (not a computer graphic) (on backing paper)
   • Two sentence description or explanation of the illustration in your own everyday language. (on backing paper)
   • Be sure to include at least 3 labels on each diagram.
   • Include arrows that show the direction of the tension, compression, or shearing forces and the direction of the hanging or foot walls.
6. On the HANGING FLAP of your pyramid, you will write one paragraph in your own every day language about any major earthquake. On the other side, you will attach an illustration (a computer graphic is OK). Make sure your paragraph includes the following information about your earthquake:
   • Location       • Epicenter       • Describe the aftermath
   • Date           • Type of fault       • TITLE
   • Magnitude      •                  • Works cited
7. Add your name and period to the bottom side of the pyramid.
8. Use the gallon bag to store your pieces while you work on the project and to turn the project in for grading. We will assemble the project together during class so that it does not get squished in your backpack.

Observations:
• Take pride in your work… neatness counts.
• Make sure you explain each dynamic geological feature in your own everyday language.
• Have fun and learn lots!

Conclusion:
• Your dynamic earth pyramid is due on: __________________
**Dynamic Earth Pyramid**

**Purpose:** To illustrate and explain three examples of dynamic change to our planet through major geological events.

**Materials:**
- tag board pyramid cutouts (3 sides /1 bottom)
- colored pencils
- gallon size plastic bag
- flash drive
- hanging flap (about 3”x5”)

**Procedure:**
1. Cut around the outside edges of the 3 pyramid sides and the pyramid bottom.
2. Decide if your pyramid will focus on earthquakes **OR** on volcanoes.
3. If you plan to do volcanoes, please continue with the following directions. If you plan to do earthquakes, use the directions on the back of this paper.

**Volcanoes**

4. Your three panels will have information on the following topics (one topic per panel):
   - Shield cone
   - Cinder cone
   - Composite cone

5. On **EACH SIDE** of your pyramid you will add information as follows:
   - **Title** (on backing paper)
   - Colorful, detailed, labeled **illustration** (not a computer graphic) (on backing paper)
   - Two sentence **description or explanation** of the illustration in your own everyday language. (on backing paper)
   - Be sure to include **at least 3 labels** on each diagram.

6. On the **HANGING FLAP** of your pyramid, you will write one paragraph in your own every day language about any major volcanic eruption. On the other side, you will attach an illustration (a computer graphic is OK). Make sure your paragraph includes the following information about your eruption:
   - Location
   - Date
   - Indicators prior to eruption
   - Current classification (active, dormant, or extinct)
   - Type of cone
   - Describe the aftermath
   - Works cited
   - TITLE

7. Add your **name and period** to the **bottom** side of the pyramid.

8. Use the **gallon bag** to store your pieces while you work on the project and to turn the project in for grading. We will **assemble** the project **together during class** so that it does not get squished in your backpack.

**Observations:**

a. Take pride in your work… neatness counts.

b. Make sure you explain each dynamic geological feature in **your own everyday language**.

c. Have fun and learn lots!

**Conclusion:**

- Your dynamic earth pyramid is **due on:** ________________
Earthquakes

Normal fault
  ______(1) Title
  ______(3) Illustration (3 labels and arrows)
  ______(5) Description/Explanation (includes stress type and movement of hanging/foot walls)

Reverse fault
  ______(1) Title
  ______(3) Illustration (3 labels and arrows)
  ______(5) Description/Explanation (includes stress type and movement of hanging/foot walls)

Strike-Slip fault
  ______(1) Title
  ______(3) Illustration (3 labels and arrows)
  ______(5) Description/Explanation (includes stress type and movement of hanging/foot walls)

Hanging Flap
  ______ (1) Illustration
  ______ (1) Location
  ______ (1) Date
  ______ (2) Magnitude
  ______ (1) Epicenter
  ______ (3) Type of fault
  ______ (3) Describe the aftermath
  ______ (1) Works cited
  ______(40) TOTAL

Volcanoes

Shield Cone
  ______(1) Title
  ______(3) Illustration (3 labels)
  ______(5) Description/Explanation (includes type of eruption and how formed)

Cinder Cone
  ______(1) Title
  ______(3) Illustration (3 labels)
  ______(5) Description/Explanation (includes type of eruption and how formed)

Composite Cone
  ______(1) Title
  ______(3) Illustration (3 labels)
  ______(5) Description/Explanation (includes type of eruption and how formed)

Hanging Flap
  ______ (1) Illustration
  ______ (1) Location
  ______ (1) Date
  ______ (2) Indicators prior to eruption
  ______ (2) Current classification (active, dormant, or extinct)
  ______ (2) Type of cone
  ______ (3) Describe the aftermath
  ______ (1) Works cited
  ______(40) TOTAL
Stress is

Describe tension:

Describe compression:

Describe shearing:
Normal Fault

- What type of stress causes a normal fault?
- In a normal fault what happens to the hanging wall?
- In a normal fault what happens to the foot wall?
- Describe a normal fault:

Reverse Fault

- What type of stress causes a reverse fault?
- In a reverse fault what happens to the hanging wall?
- In a reverse fault what happens to the foot wall?
- Describe a reverse fault:

Strike-Slip Fault

- What type of stress causes a strike-slip fault?
- In a strike-slip fault what happens to the hanging wall?
- In a strike-slip fault what happens to the foot wall?
- Describe a strike-slip fault:

Draw and label a normal fault.
Either above or below your illustration include the name of the type of stress with arrows that show the direction of the type of force that moves this fault. Include arrows on the walls of the hanging wall and footwall.

Draw and label a reverse fault.
Either above or below your illustration include the name of the type of stress with arrows that show the direction of the type of force that moves this fault. Include arrows on the walls of the hanging wall and footwall.

Draw and label a strike-slip fault.
Either above or below your illustration include the name of the type of stress with arrows that show the direction of the type of force that moves this fault.
Volcanic Mechanic  

Name__________________________

Period________________________

Purpose: To demonstrate an understanding of volcanic structures and their functions, the three types of volcanic cones, and the cause of volcanic eruptions.

Materials:  
- Volcanic Mechanic backing sheet
- Volcanic Mechanic flaps
- tape or glue stick
- colored pencils

Procedure:
1. Cut out your Volcanic Mechanic flaps. Fold each in half so that the bottom half fits neatly in one of the squares on the backing sheet and the top folds over it like in a lift the flap book.
2. Eight of the flaps will be used to label and describe structures of the volcano.
   - **Outside the flap:** Put the name of the structure.
   - **Inside the flap:** Tell, in your own everyday language, what the structure is and describe its function (what it does).
   - Tape or glue each structure card in the appropriate box (the one that points to the structure you have described).
   - The structures you will do are:
     - Cone
     - Laccolith
     - Pipe
     - Crater
     - Magma
     - Sill
     - Dike
     - chamber
     - Vent
3. Three of the flaps at the top will be used to show and describe types of volcanic cones.
   - **Outside the flap:** Put the name of the type of cone and an illustration of the cone.
   - **Inside the flap:** Tell, in your own everyday language, how this kind of cone forms and what types of materials it is made from.
   - Tape or glue each volcanic cone card onto one of the boxes at the top of the page.
   - The structures you will do are:
     - Shield cones
     - Cinder cones
     - Composite cones
4. The fourth top flap will be used to show and explain how a volcano erupts.
   - **Outside the flap:** You choose an illustration that you think shows something about the cause of an eruption. Include the picture and your title: “Cause of Eruptions”.
   - **Inside the flap:** Describe the forces behind a volcanic eruption. (Hint: your answer should tell something about expanding gasses under pressure.)
   - Tape or glue the eruption card in the remaining box at the top of the page.

Observations:
  a. Write neatly.
  b. Do not use too much glue or tape.
  c. Have fun and learn lots!

Conclusion:
Your project is due on: ____________________________
Volcanic Mechanic

Can you put it together and make it work?

Name _______________________
Period ______________________

Diagram of volcanic mechanics with arrows indicating flow and direction of activity.
### 2016 Ventura County Impact II Grant

<table>
<thead>
<tr>
<th>District:</th>
<th>Las Virgenes Unified School District</th>
</tr>
</thead>
<tbody>
<tr>
<td>School:</td>
<td>Las Colinas Middle School</td>
</tr>
<tr>
<td>Participant(s):</td>
<td>Beth McGrath</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Lesson Plan Title:</th>
<th>Dynamic Earth Pyramid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson Plan Grade Levels:</td>
<td>6</td>
</tr>
<tr>
<td>Lesson Plan Subject Areas:</td>
<td>Language Arts/Reading; Science (Amgen Category); Visual Arts</td>
</tr>
</tbody>
</table>

Planet Earth has a story to tell and one of the most interesting parts of that story involves earthquakes and volcanoes. The Dynamic Earth Pyramid is an open-ended project that allows students an opportunity to become immersed in the story as they learn about a variety of earthquakes and volcanic eruptions.
Reading + Math = Art

“Reading isn’t just for literature class anymore!” Many students think that reading in math only applies to dreaded word problems. However, math teachers are constantly reiterating the need to read thoroughly for understanding. The struggle is most students do not see the connection between reading and “doing” math. Even reading directions can be viewed as too time consuming by some students. So the dilemma! How can a teacher relay, at any grade level, the concept that math is a translation of words to numbers and symbols? Why not write a book!

This seventh grade lesson, which can be adapted to any grade level, is modeled after the book, Mathematickles by Betsy Franco and illustrated by Steven Salerno. Creating word equations using mathematical symbols, students begin to correlate specific words with certain operations. One example that depicts a subtraction operation could be written as, Sun - Sunscreen = Sunburn. In addition to utilizing operation signs correctly, the students soon realize that other mathematic procedures could play a role such as grouping symbols, order of operations, different types of graphs, inequalities, geometry formulas, and matrices. For example, Size of Sun > Size of Earth.

To stimulate interest and address different modalities, each word equation is illustrated by the student. There is also a technological element. Students must scan their original art work and import to a graphic layout program on the computer. The student must then overlay the text and symbols over the illustration. The computer graphic elements such as font, color, size of the illustration are left to the discretion of the student. The student pages are then electronically compiled and a hard copy is published.

This lesson runs for several weeks and is done concurrently with the regular math curriculum. The students are shown several of the word equations from the original book, Mathematickles, and share insights in a whole group setting as to the correlation between the words and mathematics. Students are then asked to meet in small groups to brainstorm how different operations could be depicted and, depending on the grade level, how a variety of mathematical processes could be represented. Once the students are familiar with the objective of the lesson, they work independently. Each student begins by making a rough draft of three illustrated word equations. Peer editing is utilized as a way to confirm that the intended use of a mathematical symbols or operation signs is correct. Once the rough drafts are approved for content by the math teacher, the art teacher and computer teacher supervise the final product. There are three to four math classes throughout the process that the art teacher attends for approximately 15-20 minutes to monitor progress. The computer teacher assists students in scanning their illustrations and formatting the final copy of the book.
This lesson can be adapted to any grade level and is directly related to the Common Core Content Standard, *Operations and Algebraic Thinking*, in kindergarten through fifth grade and *Expressions and Equations*, in sixth grade through Algebra 1. The process also demonstrates many of the Common Core Mathematical Practices, such as *Model with Mathematics* and *Use Appropriate Tools Strategically*. However, the specific Common Core Standards that are addressed will be dependent on the process depicted in the word equation. Specific standards can be assigned by the teacher prior to the lesson in a rubric or a more general approach can be taken in which the students’ imagination and creativity drives the lesson. The following Visual and Performing Arts: Visual Arts Content Standards are addressed: Creative Expression: Skills, Processes, Materials, and Tools (2.1 - 2.1) and Aesthetic Valuing: Make Informed Judgments (4.3 – 4.5). Writing Standards for Literacy in Technical Subjects are also incorporated: Production and Distribution of Writing (5, 6).

**Reading + Math = Art** is a project that requires students to think logically, but creatively at the same time. This lesson not only can be adapted to a variety of grade levels, it is a lesson that is appropriate for a range of mental aptitudes. Through differentiated instruction, word equations can be modified to meet the needs of all students, both low and high achieving; thus, allowing for everyone to feel successful, leaving a legacy in print. What better way to learn math than by reading, drawing, and coloring!
Reading + Math = Art
Grading Rubric

Name: ___________________________ Date: ________

<table>
<thead>
<tr>
<th>Math / Text Content</th>
<th>0 = No Evidence</th>
<th>1 = Some Evidence</th>
<th>2 = Clear Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three or more equations</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Three or more illustrations</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Variety of operation signs</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Appropriate use of symbols (&gt;, π...)</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>At least one higher order process</td>
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<tr>
<td>Logical reasoning</td>
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<tr>
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<td>Correct spelling</td>
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<td>Illustrations completed on time</td>
<td>0</td>
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<td>Proportions, if appropriate, are correct</td>
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<tr>
<td>Perspective, if appropriate, is correct</td>
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<td>2</td>
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<tr>
<td>Selected medium has been used</td>
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<td>2</td>
</tr>
<tr>
<td>Suitable layout of page</td>
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<tr>
<th>Technology</th>
<th>0 = No Evidence</th>
<th>1 = Some Evidence</th>
<th>2 = Clear Evidence</th>
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</thead>
<tbody>
<tr>
<td>Illustrations scanned</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Overlay text complete</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Timely completion</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Total possible points 32 points
Birthday

Late + Train = Need To Find Another Ride!

Delaney Miner

ice puddle + snow boot = creakgroanCRACK!

Diana Suarez
2016 Ventura County Impact II Grant

District: Ventura Unified School District
School: Mound Elementary School
Participant(s): Steve Rowley

Lesson Plan Title: Healthy Farming = Healthy World
Lesson Plan Grade Levels: 5
Lesson Plan Subject Areas: Language Arts/Reading; Mathematics (Amgen Category); Science (Amgen Category); Visual Arts

Students discover the benefits of aquaponic farming while researching and exploring various farming practices. The engineering process begins with students 3D printing and testing various net pot designs that will utilize a student designed fair test. Students will chart, photograph and digitally track data as they notice differences between two farming practices. After deciding which practice is more desirable, students will defend their decision to parents, stakeholders and principal.
Healthy Farming = Healthy World

“The soil is the great connector of lives, the source and destination of all. It is the healer and restorer and resurrector, by which disease passes into health, age into youth, death into life. Without proper care for it we can have no community, because without proper care for it we can have no life.”
— Wendell Berry, The Unsettling of America: Culture and Agriculture

The heart of farming practices is where our Science and Engineering unit begins. Students today often grow up with little respect or knowledge about where their food comes from, much less how it grows. Few know there are many ways to grow seeds and not all of them involve soil and traditional farming practices! Throughout this unit, students learn not only the pros and cons of different farming practices, but the explore and develop understandings of the culture and reasoning behind that farming practice. They are then work as a class team to discover which farming practice might work best in Ventura County’s climate and ecosystem, and taking into consideration our current drought, will explore the farming practices of hydroponics and aquaponics. Through a student designed “fair test” and 3D printing project, students discover not only that aquaponics and hydroponics are sustainable, water conserving types of farming but that these farming practices also help the economy, ecosystem and environment. Students will explore the how farming practices not only grow our food but how farmers should show respect for our earth and consider their impact on the environment. Students will relate how healthy farming practices in turn grow healthy environments and in turn grow healthier bodies. This innovate and motivating NGSS, STEM and CCSS driven science and engineering unit focuses on discovering, experiencing and defending the “best” farming practices to keep Ventura’s economy, ecosystems and environment healthy and thriving!

Students begin by researching different farming practices on different continents around the world. taking note of climate, weather and why that farming practice might be used. Most students will discover that there is probably more than one farming practice that is commonly used in each continent. After collaborating on a class Google Slide presentation, students will share their findings with the class. These findings will help to create a class chart naming many of the most common farming practices around the world.

After compiling a list of the most common farming practices, student groups will create digital presentations explaining a single farming practice including that practice’s effect on the landscape, environment and ecosystems. After a class debate where student groups defend their practice, students will use a Google Form to vote on the which they think is the best farming practice for Ventura County.

A teacher led discussion about organic versus sustainable farming practices, the concepts behind hydroponic farming will be presented. The benefits and concerns will be compared with the class chosen practice will be brainstormed and researched. Further discussion will be continued on aquaponic farming. Sustainable versus organic versus “ponic” farming will be explored and researched comparing equity, sustainability as well as the nutritional value of produce grown by these different farming practices. The class will be given the challenge of designing a “ponic” farm. Student groups will then be given the charged to determine and define the criteria necessary for ‘ponic’ farming. The discovery that net pots are a necessary component for ‘ponic’ farming will be uncovered. The teacher will pose the class question, “What design of net pot will yield the most crops?”

The engineering process will be utilized to have student groups figure out the class STEM challenge of designing the net pot that will yield the largest, healthiest harvest. After prototyping, student teams will print their final version and design a “fair test” to determine if hydroponic or aquaponic farming will create the greatest crop. Both digital science journals, including graphing, measuring, water testing and photos, as well as hand written field journals will be used to track data on groups’ fair tests. After determining the best practice for their design of net pot, student groups will create a digital presentation for an audience of stakeholders, parents and principal. Groups will present not only which “ponic” farming practice had the highest yield, but also which net pot design supported that growth the most effectively. The audience will then determine which net pot was the most successful.

As a final step, students will have the opportunity to meet aquaponic farmers through a Google Hangout. Students groups will also present the strengths and weaknesses of their hydroponic net pot in a digital Socratic format through a google hangout with a hydroponic farmer. Students will be taken on a virtual tour of the farm and the winning engineering group will have the opportunity to go over criteria and present their final design to the farmers. Professional feedback will be taken into account, and students will print a final model of their net pot.

Scientific notebooks and digital journals as well as responses to questions and readings in Google Classroom will all be used as formative assessments throughout the unit. Writing will be assessed using the SBAC rubrics for writing and the Engineering Practices will be assessed based on the NGSS evidence statements.Final presentations will be assessed using a digital presentation rubric. Although it could be a stand alone unit and it is easily adapted to various elementary grade levels, specifically following the NGSS standards in 3rd. This unit is meant to be taught at the same time as the FOSS Life Science Unit for 5th grade. This rich understanding of Scientific Content through the Foss curriculum deepens the understanding of the concepts and ideas presented throughout this unit. However, scientific content necessary for the basic understanding of the unit is addressed throughout the unit.

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Healthy Farming = Healthy World

This is a science and engineering driven unit focusing on discovering, experiencing and defending the “best” farming practices! Students begin by researching different farming practices on different continents around the world. Compiling a list of the most common farming practices, students will create digital presentations explaining a single farming practice including that practice’s effect on the landscape, environment and ecosystems. Sustainable versus organic farming will be explored as well as the nutritional value of produce grown by different farming practices. Students will be lead to think about hydroponic and aquaponic farming. Student teams will design a fair test to test the differences in the two farming practices. Along with designing the test, student teams will explore the engineering process by designing hydroponic seed baskets. As students discover which “ponic” farming practice is more efficient, they will create a digital presentation to present to parents, principal and stakeholders. Students groups will also present the strengths and weaknesses of their hydroponic basket in a digital Socratic format through a google hangout with a hydroponic farmer.

NGSS Performance Expectation:

<table>
<thead>
<tr>
<th>DCI</th>
<th>Natural Phenomenon</th>
<th>Driving Question</th>
<th>Practices</th>
<th>Cross Cutting Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS1.C</td>
<td>Organization for Matter and Energy Flow in Organisms</td>
<td>Farming practices are both ancient and diverse and food grows. Plants can sprout in cracks on the sidewalk as well as in rocky paths. From what we see, it appears that seeds can grow just about anywhere to produce food.</td>
<td>Given that we are in the middle of a drought and that as a country, we are concerned about the environment, what is the best way (friendly to the environment, uses the least amount of water, and is economically sound) to grow food in our area?</td>
<td>Engaging in an argument from evidence: Engaging in argument from evidence in 3-5 builds on K-2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s). Support an argument with evidence, data, or a model. (5-LS1-1)</td>
</tr>
<tr>
<td>NGSS Standards Taught or Learned Through Discovery</td>
<td>Identified Learning Target</td>
<td>Evidence of Success in Achieving Learning Target (Assessments)</td>
<td></td>
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<tr>
<td>--------------------------------------------------</td>
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<tr>
<td>5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.</td>
<td>Aquaponic and Hydroponic farming systems will be explored and observed to provide evidence that plants do not need to soil in order to grow.</td>
<td>Students will create an opinion piece collaborating on google docs to give evidence learned from their aquaponic and hydroponic experiment that plants get the materials they need for growth chiefly from air and water.</td>
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<tr>
<td>3-5-ETS1-1 Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</td>
<td>Hydroponic and Aquaponic systems need a certain size, strength and structure in order to work. Knowing the criteria before designing is essential to success. So identifying the criteria and constraints is necessary before designing structures.</td>
<td>Students will identify the criteria necessary for hydroponic/aquaponic baskets to be successful in teams. Teams will collaborate on a google document giving evidence from research to support their criteria.</td>
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<tr>
<td>3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</td>
<td>The correct design structure of a hydroponic basket is essential for seeds to grow. Testing prototypes helps engineers to learn strengths and weaknesses of a design and allows for a better final product. The engineering process helps students to learn from the strengths and weaknesses and involves evaluation and redesign.</td>
<td>Based on student created criteria, students will design, test and 3D print hydroponic baskets to compare hydroponic and aquaponic farming. Prototypes will be tested and modified, making notice of the strengths and weaknesses of a design, until a “final” product is produced.</td>
<td></td>
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<tr>
<td>3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</td>
<td>Develop and keep data on a “fair test” between hydroponic and aquaponic farming systems. Identify which system worked the best. As a class, use evidence from these fair tests to determine which design of basket was the most effective.</td>
<td>Using the basket they designed, students will hold all variables constant as they test whether hydroponic or aquaponic systems and plant growth. Using data from the whole class, students will determine which basket design may have positively influenced plant growth.</td>
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</table>
## STEM Projects

Design and 3D print prototypes of a aquaponic/hydroponic seed basket. Class question: What design of net pot will yield the most crops?

### 1. Desired Results

**Enduring Elements (Big Ideas)**

- Seeds do not need to be planted in the ground to flourish
- All farming practices have an affect on the earth
- It is our job as humans, to use farming practices that have the least impact on our environment

**Essential Questions (Driving Questions)**

- Will plants grow without soil?
- What is the difference between sustainable and organic?
- If plants are being grown without soil, where do they get their nutrients from?
- Which type of farming grows is the “best?” (Uses the least amount of water, is friendly to the environment, and is economically sound?)

### 2. Prior Knowledge and Assessments

<table>
<thead>
<tr>
<th>Prior Knowledge</th>
<th>Throughout/At the End of the Unit</th>
</tr>
</thead>
</table>
| The energy released [from] food was once energy from the sun that was captured by plants in the chemical process that forms plant matter (from air and water). (5-PS3-1) | **Formative Assessment:**  
  - *science journal* entries  
  - and line of learning reflections  
  - digital notebooks  
  - *Google Classroom* responses  
  - exit tickets  

| | Summative Assessment:  
  | see rubrics and evidence statements above  
  | *Presentation Rubric*  
  | - includes self evaluation |
| Food provides animals with the materials they need for body repair and growth and the energy they need to maintain body warmth and for motion. (secondary to 5-PS3-1) |
### Reference to CCSS Standards (Cross Curricular Connections)

**LA/Literacy -**
- RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (5-LS1-1)
- RI.5.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (5-LS1-1)
- W.5.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information. (5-LS1-1)

**Mathematics -**
- MP.2 Reason abstractly and quantitatively. (5-LS1-1)
- MP.4 Model with mathematics. (5-LS1-1)
- MP.5 Use appropriate tools strategically. (5-LS1-1)
- 5.MD.A.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems. (5-LS1-1)

### Suggested Activities:
- **Warm up:** bring in produce to make two different salads.
  - Salad 1: Bright green lettuce, healthy looking vegetables
  - Salad 2: Limp pale lettuce, old, sick dried up vegetables
    - Use VTS strategies to look critically at why the two salads are different.
    - Infer and draw conclusions as to why these salads look the way they do.
    - Discuss that produce are plants
    - Create a KWL chart about what plants need to grow
- **Assign student collaborative groups a continent to explore.** As they research, have them record in a shared google slide show the types of farming practices their continents use to grow food.
- **Share as a class the types of farming practices found**
  - Create a class chart of farming practices
- **Have student groups choose one of the farming practices to explore in depth.**
  - Each group should create a digital presentation on their farming practice including:
    - what that practice is
    - how it is used
    - why it is used
    - if it causes damage to the environment
    - any other interesting facts about the practice
    - if the students think this practice would be appropriate for Ventura:
      - why or why not?
  - Have students present farming practice presentations to the class
  - Talk about farming in Ventura and what issues farmers here need to consider
    - drought
  - Use a google form to have students vote on the best farming practice for Ventura county
- **Have students read articles on sustainable versus organic farming.**
  - Write an opinion piece on which is more desirable: sustainable or organic
- Sustainable Farming: environmental health, economic proficiency, social and economic equity
- Drought is a huge concern in Ventura
  - How is drought defined
  - How has it affected our farmers
    - read and respond in Google Classroom
- Brainstorm Farming possibilities during the drought
- Organic vs. hydroponic vs. aquaponic: does this affect the nutritional value of the foods we eat?
  - Student groups will research all three farming practices and compare nutritional values
- Introduce ponic farming
  - what is it
  - who uses it
  - have students research the pros and cons of this type of farming
- Present an engineering challenge
  - students will be comparing hydroponics and aquaponics
    - take student ideas as to how to compare the two
    - remind students about a fair test
      - 2 fish tanks
      - 2 filters
      - goldfish in one tank
      - seeds
  - Students need to design the best net pot basket on a 3D printer
    - engineering process
    - must be the same for both tanks
    - how will you make them float?
  - Work in teams to design, print prototypes, look or strengths and weaknesses
  - Blog and respond to blogs in Google Classroom
  - Set up the fair test
    - use Slides in Google Classroom to keep an digital journal using pictures and typed descriptions of the fair test
      - include growth charts and data graphs
  - Students write an opinion piece including data from their science slide journals to give data for their opinions; choose which type of farming is better
    - create a digital presentation convincing the principal and parents which farming practice is better
    - Present presentations at a "parent night."
      - let parents vote
  - As a class, compare basket designs and which design created the most desirable plant growth.
    - use this data to choose a final design to print as the "best basket!"
  - Finish with a virtual field trip or a google hangout with an aquaponic or hydroponic farm.
    - students should write questions based on what they learned and what they are curious about
    - students of the "winning" design should present their basket design to the aquaponic farmer for review
Extension Activities:

- 5 grade project
  - Throughout the year, 5th grade students will work in a school aquaponic garden. (Science for the aquaponic garden will be taught during this unit.)
    - Students will be responsible for water testing
    - Students will chart growth and document losses
    - Students will be responsible for feeding fish and maintaining tank
    - Excess produce will be sold at a "mini farmer’s market."
  - Second semester: students will become docents for the hydroponic farm during school tours
    - Students will write scripts and practice appropriate dialogue
      - During a school Science Night, students will take parent and stakeholders on tours of the hydroponic farm, explaining the process of aquaponics, the farming process and the yield totals for the year.
      - During school of choice, students will act as docents for incoming families

4. Resources

Trade Books:
- Wild Wings literary connections

Websites/Technology:
- Google Classroom
- GAFE
- iMovie
- PuppetEdu
- [http://asi.ucdavis.edu/programs/sarep/about/what-is-sustainable-agriculture](http://asi.ucdavis.edu/programs/sarep/about/what-is-sustainable-agriculture)

Videos/DVDs
- As appropriate by the teacher

Discovery Education:
- Virtual Field Trip: Life on a Farm

Field Trips
- Virtual Field Trip: Google Hangout with a local aquaponic farm

VTS:
- "Salad" VTS activity as well as throughout other lessons as appropriate
Farming Practices In Africa

1. What is done?

What is done in Africa for farming is the farming of coffee beans, sourghum, and watermelon.
2. What is the climate?
The climate is humid and dry.

3. What is the weather where that practice is?
The weather where the practice is sunny and warm.

4. Find a picture
2016 Ventura County Impact II Grant

<table>
<thead>
<tr>
<th>District:</th>
<th>Ventura Charter School</th>
</tr>
</thead>
<tbody>
<tr>
<td>School:</td>
<td>Ventura Charter School of Arts and Global Education</td>
</tr>
<tr>
<td>Participant(s):</td>
<td>Allan Viscarra</td>
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</table>

| Lesson Plan Title:                      | Do You Hear What I Hear?: An Investigation of Sound and Vibration |
| Lesson Plan Grade Levels:               | 1-2 |
| Lesson Plan Subject Areas:              | Science (Amgen Category) |

In this project, 1st & 2nd grade students plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. Students collaborate in small 'crews' of scientists and use thinking routines to discover and document the observable relationship between sound and vibration. Finally, students apply their understanding of sound and vibration to research and build functional audio speakers made from common household materials.
Do You Hear What I Hear?: An Investigation of Sound and Vibration

Sound surrounds us everywhere, all the time, but what causes sound? In this project, students discover truths about sound and use what they learn to build functional speakers. 1st & 2nd grade students plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate (NGSS 1-PS4-1). Learning is directed by the guiding question; How is sound made and how does it travel from one place to another? Students collaborate in small ‘crews’ of scientists and use thinking routines to discover and document the observable relationship between sound and vibration. Finally, students apply their understanding of sound and vibration to research and build functional speakers made from common household materials.

Pre-Assessment: Individually, students write and draw what they already know about how sound is made and how sound travels from one place to another. Crews record their understanding of sound and vibration on a graphic organizer consisting of three concentric rectangles. In the outermost rectangle, crews record what they understand about how sound is made and how sound travels from one place to another.

Next, ‘Crew Norms’ are established to set students up for successful collaboration throughout the entire project:
1. Push yourself to be a learner all day long.
2. Ask questions.
3. Take care of each other.
4. Take risks.
5. Be inclusive and collaborative.
6. Make time for reflection.
7. Express gratitude.
8. Persevere through discomfort.

Learning Target 1: I can explain how vibrating materials make sound.
- Students create a Straw Kazoo, a simple musical instrument. They play the instrument and feel vibration on their lips and fingers. They hear sound and discover changes in pitch when the straw is cut to a shorter length.
- Students pluck a ruler with their fingers as it hangs at different lengths from the edge of a table. Students observe a change in pitch and vibration as the length of the ruler is changed.
- Students observe that vibrating materials make sound. They illustrate their observations, discuss, and write what they see, think, and wonder.
Learning Target 2: I can explain how sound makes materials vibrate.

- Students make a drum from a balloon stretched over the end of a tin can. They place grains of rice on the head. Students tap the drum with a chopstick. Students place the drum on top a stereo. They observe the rice “dance” on the head of the drum when the drum vibrates.
- Students position a small mirror face up on top of a stereo. Turn off the lights and direct a laser pointer at the mirror. As music plays, watch the laser reflect off of the mirror and “dance” on the ceiling.
- Students observe that sound makes materials vibrate. They illustrate their observations, discuss, and write what they see, think, and wonder.

Formative Assessment: Crews return to the graphic organizer to record their learning inside the middle rectangle of the organizer. Their understanding of sound and vibration is deepened and becomes more refined with each investigation.

Learning Target 3: I can explain how sound travels through solids.

- Students create Stereo Hangers and listen as vibration and sound travel to their ears through different solids. Tie a piece of string to each end of a wire coat hanger. Loop the string around your index fingers. Swing the hanger so that it taps other objects. What do you hear? Put your fingers (with the strings attached) in your ears. Tap the hanger again. Now what do you hear?
- Students listen as the vibrations from a tuning fork travel through different solids in the classroom. Tap a tuning fork against the table to make it ring. Place your ear flat against the table and listen. What do you hear? Touch the table with the vibrating tuning fork. Now what do you hear?
- Students observe that sound travels through solids. They illustrate their observations, discuss, and write what they see, think, and wonder.

Next, crews apply their learning to collaboratively address a secondary guiding question: How can we use what we know about sound to build a high-quality speaker?

Learning Target 4: I can write and draw what I think I know about how speakers work.

- Students discuss where speakers are usually found, what speakers usually look like, and how they think sound is produced when a speaker is working.

Learning Target 5: I can discover more about speakers by taking one apart.

- With adult assistance, students 'dissect' old or discarded speakers. Students discuss what they see and make connections between the anatomy of the speaker and observations from previous investigations about how sound is made.
Learning Target 6: I can research different ways to make a speaker.
  • Students use iPads to watch a collection of video tutorials and use a ‘Speakers Tutorial Rubric’ to evaluate the instructional quality of each tutorial.
  • Students make a case for the tutorial that they think is most valuable and choose the tutorial that they will use to guide their build.

Learning Target 7: I can collaboratively build a functional speaker.
  • Students build speakers made from paper plates, magnets, wires, and other common materials. They apply their understanding that vibration must occur for sound to be made and that sound travels differently through different types of solids.

Post-Assessment: Individually, students demonstrate their learning by completing a post-assessment in which they write and draw the evidence that shows how sound is made, and how sound travels from one place to another. Crews also synthesize their learning into one statement that explains how sound is made and how it travels from one place to another. They write this statement in the innermost rectangle of the graphic organizer.

In this project, students experience a compelling, effective, and innovative approach to learning about sound. Through their investigations, students provide evidence that vibrating materials can make sound, sound can make materials vibrate, and sound travels through solids and through the air in waves. Finally, their learning is applied to the construction of functional speakers that others can enjoy.
Do You Hear What I Hear?: An Investigation of Sound and Vibration
Supporting Document

**Standard:** (NGSS 1-PS4-1) Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.

**Pre-Assessment**

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
</table>

**Sound Pre-Assessment**

1. **How are sounds made?** Draw, label, and write what you know.

2. **How does sound travel from one place to another?** Draw, label, and write what you know.
Crew Norms
1. Push yourself to be a learner all day long.
2. Ask questions.
3. Take care of each other.
4. Take risks.
5. Be inclusive and collaborative.
6. Make time for reflection.
7. Express gratitude.
8. Persevere through discomfort.

1. Crew Norms and Teamwork
2. Work on See, Think, Wonder (about 10-15 min)
   - Colorful illustration with labels
   - Writing about sound and vibrations in each section
3. Reflect: What do we now know about how sound is made?
   - What do we now know about how sound travels from one place to another?
4. Crew Posters: Write new things that you now understand about how sound is made and how sound travels from one place to another.
5. Sound video investigations
6. One statement or one sentence that explains sound.
7. Teamwork Rubric
Learning Target 1: I can explain how vibrating materials make sound.
Learning Target 2: I can explain how sound makes materials vibrate.
Learning Target 3: I can explain how sound travels through solids.
Learning Target 4: I can write and draw what I think I know about how speakers work.

Learning Target 5: I can discover more about speakers by taking one apart.
Learning Target 6: I can research different ways to make a speaker.

VIDEO TUTORIAL RUBRIC

VIDEO TUTORIAL # _____

Circle the boxes to evaluate the video tutorial. A good tutorial should have ALL thumbs up.

<table>
<thead>
<tr>
<th></th>
<th>👍</th>
<th>👎</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials</td>
<td>• tells you what you need</td>
<td>• does not tell you what you need</td>
</tr>
<tr>
<td>Instructions</td>
<td>• the steps are clearly explained</td>
<td>• the steps are not clearly explained</td>
</tr>
<tr>
<td></td>
<td>• easy to follow along</td>
<td>• not very easy to follow along</td>
</tr>
<tr>
<td>Visasuals</td>
<td>• you can clearly see how to perform each step</td>
<td>• you cannot clearly see how to perform each step</td>
</tr>
</tbody>
</table>
Journal Entry: Day 5

Learning Target: I can list each step explained in our Video Tutorial.

We have chosen to use the instructions from Video Tutorial # ____.

Watch the video tutorial again as many times as you need to. Write down each step and draw a quick sketch if you need to.

VIDEO TUTORIAL #1
Raaarin' Paper Plate Speaker by Grant Thompson

VIDEO TUTORIAL #2
How to Make a Homemade Speaker by Technologycrazy

VIDEO TUTORIAL #3
How to Make a Speaker by BeardedScienceGuy
Learning Target 7: I can collaboratively build a functional speaker.
Post-Assessment

Name __________________________
Date __________________________

Sound Post-Assessment

1. How are sounds made? Draw, label, and write what you know.

2. How does sound travel from one place to another? Draw, label, and write what you know.

Teamwork Rubric

Teamwork Rubric
(for grades K-2)

I do my work for the team on time.

1. still learning  2. sometimes  3. almost always

I help my team.

1. still learning  2. sometimes  3. almost always

I listen to the ideas of my teammates.

1. still learning  2. sometimes  3. almost always

I share my ideas with my team.

1. still learning  2. sometimes  3. almost always

I treat my teammates with respect.

1. still learning  2. sometimes  3. almost always
2016 Ventura County Impact II Grant

District: Oxnard Union High School District  
School: Pacifica High School  
Participant(s): Jocelyn White and Diane Winter-Walorinta

Lesson Plan Title: Teaching Chemistry Through the Story of the Penny  
Lesson Plan Grade Levels: 9-12  
Lesson Plan Subject Areas: Mathematics (Amgen Category); Science (Amgen Category)

In recent years, science teachers throughout California have been transitioning from very discrete and specific content standards to the more thematic and contextual Next Generation Science Standards. As such, we have had to modify our unit plans to reflect core scientific ideas and cross-cutting concepts as well as integrate Common Core reading and math expectations. This unit was developed as a result of these new curriculum goals. Instead of presenting facts and having the students do labs
In recent years, science teachers throughout California have been transitioning from discrete and specific content standards to the more thematic and contextual Next Generation Science Standards. Instead of presenting facts and having the students do labs in various units being studied that were not explicitly or even thematically connected, we decided to integrate the science around a familiar and ubiquitous idea: the penny. The core unit ideas include: The Alchemist’s Penny, The History of a Penny’s Design, Material Engineering involved in Designing a Penny, and Extracting Zinc from Pennies.
In recent years, science teachers throughout California have been transitioning from very discrete and specific content standards to the more thematic and contextual Next Generation Science Standards. As such, we have had to modify our unit plans to reflect core scientific ideas and cross-cutting concepts as well as integrate Common Core reading and math expectations. This unit was developed as a result of these new curriculum goals. Instead of presenting facts and having the students do labs in various units being studied that were not explicitly or even thematically connected, we decided to integrate the science around a familiar and ubiquitous idea: the penny.

**An Alchemist’s Penny:**

This unit begins with an introduction to the History of Chemistry. We study how the modern practice of chemistry evolved from the practice of alchemy (the main goal of which was to turn cheaper metals into gold) in medieval Europe and in the Middle East.

We incorporated history and reading skills by showing video clips about the 17th century scientist Henning Brand who isolated phosphorus from urine and read an article about Archimedes and his gold crown. In their first lab, “The Gold Penny,” students follow a tradition that goes back to the earliest days of chemistry, and become fully engaged as they carry out a chemical process to first coat a penny with zinc (which looks like silver) and then melt the coating to make brass (which looks like gold). In an effort to address multiple learning styles and to reach our English language learners we incorporated a strategy in which students read the procedure and create a picture flow chart to help visualize the steps of the lab.
The student’s absolutely loved this lab. It is a great way, early in the school year, to get students excited about science, to start utilizing many lab techniques and equipment, and to get the students to start thinking as scientists. Many ask to keep their pennies so that they can fool their friends into thinking that they have made a gold penny, as alchemists did in history.
History of the Penny’s Composition:

The goal of the next lessons in the unit was to have the students investigate the physical and chemical properties that would be considered by material engineers when designing a penny. Through online research, reading short articles, video clips and class discussion, students explored factors such as the availability of the metal, price of the metal, physical hardness, and chemical reactivity that are considered when designing a penny.

The class then discussed the history of the penny and its chemical composition. Through research students learn that the original penny was copper. Then in 1943, during World War II, because copper metal was in such short supply the American Government decided to make pennies zinc-plated steel pennies, known as “white cents.” Unfortunately, these pennies quickly corroded due to the chemical reactivity of zinc and only lasted one year in circulation. Furthermore in the 1980’s, the US government changed the composition again, due to the cost of copper, and increased the amount of zinc in the core of the penny.

In the hands-on component of this unit, students then used the water-displacement method to find the density of pre and post-1982 pennies and then compared these data to the densities of pure copper and pure zinc. We incorporated math skills by having students share class data, calculate the mean, and then calculate their percent error. Based on their qualitative and quantitative evidence, they were then asked to hypothesize the relative quantities of Zinc and Copper in pre and post-1982 pennies. Lastly, they were asked to make an evidence-based claim as to why it was necessary to modify the composition of the U.S. penny based on the physical, chemical, and economic factors (student example is attached). Although we conducted this lab with high school students, these measurement-based activities could easily be incorporated into an elementary school curriculum due to the simplicity of the lab equipment and math concepts.

Investigating Properties of Metals and Non-Metals to Design a Penny:

To enrich their knowledge of properties of metals used to design the penny, students carried out a lab investigation exploring the chemical and physical properties of metals and non-metals. This lab provided the background knowledge that material engineers use in designing currency. Students investigated properties such as appearance, conductivity, crushing, reactivity with copper chloride, and reactivity with an acid. These data provided students with evidence to support their claims made at the end of the unit on what materials are best to use to make a penny.
### Data Table

<table>
<thead>
<tr>
<th>Element</th>
<th>Appearance</th>
<th>Conductivity</th>
<th>Result of Crushing</th>
<th>Reaction with HCl</th>
<th>Reaction with CuCl₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal</td>
<td>Must/Sparkly</td>
<td>Yes (M)</td>
<td>NO (m)</td>
<td>– (m)</td>
<td>Red (m)</td>
</tr>
<tr>
<td>Nonmetal</td>
<td>Black/Dull</td>
<td>(yes)</td>
<td>Yes Brittle (m)</td>
<td>– (m)</td>
<td>– (m)</td>
</tr>
<tr>
<td>Metal</td>
<td>Shiny Silver</td>
<td>Yes (High)</td>
<td>Malleable (m)</td>
<td>– (m)</td>
<td>Red ppt (m)</td>
</tr>
<tr>
<td>Metal</td>
<td>Silver Dust (high)</td>
<td>Yes (Med)</td>
<td>Brittle (m)</td>
<td>– (m)</td>
<td>– (m)</td>
</tr>
<tr>
<td>Nonmetal</td>
<td>Brown/Gray</td>
<td>NO (m)</td>
<td>Tricks (m)</td>
<td>– (m)</td>
<td>– (m)</td>
</tr>
<tr>
<td>Metal</td>
<td>White/Gray</td>
<td>NO (m)</td>
<td>Breaks (m)</td>
<td>Bubbles (m)</td>
<td>Black ppt (m)</td>
</tr>
<tr>
<td>Metal</td>
<td>Dark Gray</td>
<td>Yes (m)</td>
<td>Bonds (m)</td>
<td>Bubbles (m)</td>
<td>Red Bubbles (m)</td>
</tr>
<tr>
<td>Metal</td>
<td><em>Mg</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Extracting Zinc from Pennies:**

The last stage of our unit asked students to investigate metal resources and uses. Copper provided students with a case study of a vital chemical resource. Students learned about the Earth’s mineral resources and how some are purified to obtain pure metals, like zinc and copper. They then collected and shared information about the worldwide production of metals, where resources are found in the earth’s layers, uses and demands for various metals, ore deposits and how metals are extracted from them, and the subsequent environmental impact of the mining and processing.

To simulate a mining extraction process, students performed a lab to extract zinc from the core of the penny but leave the copper shell intact by reacting the penny with hydrochloric acid. Students were amazed when they came in the next day to find their pennies floating on the solution. They then filtered the copper shell and by gravimetric analysis, calculated the exact chemical composition of the penny. They then use the internet to research the current market prices of copper and zinc and do a cost analysis of a penny’s design. Students have not only seen chemistry in action, but are exposed to real-life issues such as the value and cost of production. As a final wrap-up of the unit, students are asked to write a persuasive essay, to argue whether they think the U.S. should continue minting the penny. In their argument, student must use data and evidence from the entire unit regarding material engineering design and economic factors.
**Standards Covered:**

NGSS – Physical science standards
- HS-PS1-1. Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms
- HS-PS1-7. Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction

NGSS – Engineering Design standards
- MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking not account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

Common Core Reading standards
- RST-11-12.3 - Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
- RST-11-12.8 - Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.

Common Core Writing standards
- WHST 11-12.1 - Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
- WHST 11-12.2 - Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
- WHST 11-12.7 - Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
- WHST 12.9 - Draw evidence from literary or informational texts to support analysis, reflection, and research.

Common Core Standards Mathematics Standards
- **MP.2** Reason abstractly and quantitatively. (MS-ETS1-1),(MS-ETS1-2),(MS-ETS1-3),(MS-ETS1-4)
  - **7.EE.3** Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. (MS-ETS1-1),(MS-ETS1-2),(MS-ETS1-3)
Historical Interpretation

- 2. Students recognize the complexity of historical causes and effects, including the limitations on determining cause and effect.

**Cross curricular:**

**English/Language Arts:**
Students read and interpret information-based text, follow written instructions, and make evidence-based arguments.

**Mathematics:**
Students measure, calculate mean, percent error, and determine how to use their data to calculate the true value of a modern penny.

**Social Studies:**
Students learn science in the contexts of various historical times such as medieval Europe, and WWII.
### Assessment Rubrics:

#### SCIENCE CER (Claim-Evidence-Reasoning) Rubric

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Claim</strong></td>
<td>The purpose/hypothesis is not mentioned or is unconnected to the lab. The student does not identify the purpose of the lab. The lab was not understood.</td>
<td>The purpose/hypothesis is not mentioned or is unconnected to the lab. The student does not understand the purpose of the lab.</td>
<td>The purpose/hypothesis is not mentioned or is unconnected to the lab. The student does not understand the purpose of the lab.</td>
</tr>
<tr>
<td><strong>Evidence</strong></td>
<td>The data and/or examples used to support the claim are not sufficient to prove the relationship between the evidence. The evidence may be...</td>
<td>The data and/or examples used to support the claim are not sufficient to prove the relationship between the evidence. The evidence may be...</td>
<td>The data and/or examples used to support the claim are not sufficient to prove the relationship between the evidence. The evidence may be...</td>
</tr>
<tr>
<td><strong>Reasoning</strong></td>
<td>The conclusion is not adequately explained or the connection between the results and the concept/claim is not clear. The conclusion is...</td>
<td>The conclusion is not adequately explained or the connection between the results and the concept/claim is not clear. The conclusion is...</td>
<td>The conclusion is not adequately explained or the connection between the results and the concept/claim is not clear. The conclusion is...</td>
</tr>
</tbody>
</table>

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**Note:**

- **1** indicates the lowest level of performance.
- **4** indicates the highest level of performance.

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# Persuasive Essay Rubric

<table>
<thead>
<tr>
<th>Category</th>
<th>4 - Above Standards</th>
<th>3 - Meets Standard</th>
<th>2 - Approaching Standard</th>
<th>1 - Below Standard</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus or Thesis Statement</td>
<td>The thesis statement names the topic of the essay and outlines the main points to be discussed.</td>
<td>The thesis statement names the topic of the essay.</td>
<td>The thesis statement outlines some or all of the main points to be discussed but does not name the topic.</td>
<td>The thesis statement does not name the topic AND does not preview what will be discussed.</td>
<td></td>
</tr>
<tr>
<td>Support for Position</td>
<td>Includes 3 or more pieces of evidence that support the position statement. The writer anticipates the reader's concerns, biases or arguments and has provided at least 1 counter-argument.</td>
<td>Includes 3 or more pieces of evidence (facts, statistics, examples, real-life experiences) that support the position statement.</td>
<td>Includes 2 pieces of evidence (facts, statistics, examples, real-life experiences) that support the position statement.</td>
<td>Includes 1 or fewer pieces of evidence (facts, statistics, examples, real-life experiences).</td>
<td></td>
</tr>
<tr>
<td>Transitions</td>
<td>A variety of thoughtful transitions are used. They clearly show how ideas are connected.</td>
<td>Transitions show how ideas are connected, but there is little variety.</td>
<td>Some transitions work well, but some connections between ideas are fuzzy.</td>
<td>The transitions between ideas are unclear OR nonexistent.</td>
<td></td>
</tr>
<tr>
<td>Closing paragraph</td>
<td>The conclusion is strong and leaves the reader solidly understanding the writer's position. Effective restatement of the position statement begins the closing paragraph.</td>
<td>The conclusion is recognizable. The author's position is restated within the first two sentences of the closing paragraph.</td>
<td>The author's position is restated within the closing paragraph, but not near the beginning.</td>
<td>There is no conclusion - the paper just ends.</td>
<td></td>
</tr>
<tr>
<td>Grammar &amp; Spelling</td>
<td>Author makes no errors in grammar or spelling that distract the reader from the content.</td>
<td>Author makes 1-2 errors in grammar or spelling that distract the reader from the content.</td>
<td>Author makes 3-4 errors in grammar or spelling that distract the reader from the content.</td>
<td>Author makes more than 4 errors in grammar or spelling that distract the reader from the content.</td>
<td></td>
</tr>
</tbody>
</table>
Lab - Designing the Penny

5. The accepted value for the density of pre-1982 pennies is 8.8 g/mL. Calculate the percent error using the class data for the density of the pre-1982 pennies.

\[
\% \text{ error} = \frac{|8.8 - 9.72|}{8.8} \times 100\%
\]

6. The accepted value for the density of post-1982 pennies is 7.2 g/mL. Calculate the percent error using the class data for the density of the post-1982 pennies.

\[
\% \text{ error} = \frac{|8.8 - 6.72|}{8.8} \times 100\%
\]

7. Hypothesis what a pre-1982 and post 1982 penny would look like if you cut it in half by drawing a cross section of a pre and post 1982 penny showing its relative ratio of copper to zinc from your estimation from above.

<table>
<thead>
<tr>
<th>Pre-1982 penny cross-section</th>
<th>Post-1982 penny cross-section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc</td>
<td>Zinc</td>
</tr>
</tbody>
</table>

Post Lab Consideration

1. What are 3 things that material engineers need to consider when choosing a metal for a coin?
   1. Cost of the metals needed in making the coins
   2. Availability of the metals
   3. The physical and chemical properties of the metals that may limit its use

2. What metal were pennies made of before 1982? Why did we need to change how we made them? Copper. Because they cost more to make than what they were worth.

3. How did the penny get reconstructed in 1982?
   They made the core out of zinc, then coated the whole of it with copper.
4. Complete the following table to summarize why it was necessary to change the composition of the U.S. penny in 1982. (Use the reading in the introduction to help you)

<table>
<thead>
<tr>
<th>Composition of the Penny</th>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>All copper</td>
<td>- Harder and more dense than zinc</td>
<td>- Too expensive to be used as the primary metal</td>
</tr>
<tr>
<td>All Zinc</td>
<td>Readily available and is cheaper</td>
<td>- More chemically reactive</td>
</tr>
<tr>
<td>Blend of Zinc and Copper</td>
<td>Most durable than the first two</td>
<td>- If the zinc comes out, the Penny will easily corrode</td>
</tr>
</tbody>
</table>

Part b: Apply your knowledge of existing currency, as well as what you have learned about properties of materials, to answer the following questions.

1. For a suitable coin:
   a. What physical properties must the material have?
      - Mass
      - Density
      - Hardness
      - Magnetism
      - Solidity
   b. What other physical properties are desirable?
      - Malleability
      - Durability
      - Conductivity
      - Ductility
   c. What chemical properties are required of the material?
      - Low Reactivity
      - Combustibility
   d. What other chemical properties are desirable?
      - Low reactivity is a must
      - Non-reactivity is most desirable
## 2016 Ventura County Impact II Grant

<table>
<thead>
<tr>
<th>District:</th>
<th>Conejo Valley Unified School District</th>
</tr>
</thead>
<tbody>
<tr>
<td>School:</td>
<td>Colina Middle School</td>
</tr>
<tr>
<td>Participant(s):</td>
<td>Kari White and Christa Lamb</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lesson Plan Title:</th>
<th>Bugging Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson Plan Grade Levels:</td>
<td>6-12</td>
</tr>
<tr>
<td>Lesson Plan Subject Areas:</td>
<td>Language Arts/Reading; Science (Amgen Category)</td>
</tr>
</tbody>
</table>

Designed to increase student awareness in a student centered, inquiry led format, Bugging Out, a science-based unit, encourages students to evaluate and draw conclusions about the treatment of invasive species.
**The Lesson Plan Narrative:**

Engaging topical video clips, creative website profiles, various nonfiction and fiction documents, collaborative research projects, artistic representations, and debates are all part of *Bugging Out*, an engaging, standards based, three-week unit for grades six and up. Designed to increase awareness in a student centered, inquiry led format, this science-based unit encourages students to evaluate and draw conclusions about the treatment of invasive species.

**Guiding Questions**

What is the impact of an invasive species?
What can each individual do to prevent damage?
Who is working to stop the damage?

**The Unit**

**Stage 1**

In order to instill a desire to dig into the challenge of the high level documents in this unit, the unit introduces students to the subject matter through a variety of humorous and educational videos. After engaging the students, they tackle “Attack of the Invasive Species” published by the United States Department of Agriculture (https://www.aphis.usda.gov/publications/plant_health/content/printable_version/fs_attack_of_the_invasive_species.pdf) by way of group jigsaw. Each jigsaw group presents its findings through the use of graphic organizers and chart paper. After the presentations, the class analyzes the information through different perspectives using the thinking routine, Circle of Viewpoint. How would a pest, exterminator, and homeowner view this data?

The unit continues to draw students in through researching the threat, spread and possible solutions of their selected pests. Students exchange research and with their new pest and with glogster create a web-based profile similar to match.com that demonstrates the characteristics of this species. Once students understand the dilemma presented by invasive species, the next step requires students to look at how the government addresses the issues by reading and jigsawing “Executive Order 13112.” Students interact with the document through close reading activities, ultimately writing a group summary detailing the steps to prevent the spread of invasive species.

**Stage 2**

Now that students have fully developed an understanding of invasive species, they are challenged to investigate and analyze how the media, including literature, portrays invasive species. Do they instigate positive action or just incite fear? Are invasive species portrayed accurately? Students watch various excerpts like *The Happening, Little Shop of Horrors, The Fly, The Birds* and analyze the impact through a word sort activity. Next students read the short story “Three Skeleton Key” focusing on the portrayal of invasive species and how the characterization helps develop the plot. While reading the story, students will also discuss tone and atmosphere and how that contributes to suspense and then compare and contrast that tone with the rats portrayed in *Ratatouille* and the painting, *Pied Piper*. Lastly, students will defend the accuracy of the insects’ portrayal using the Tug of War strategy.

**Stage 3**

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The next stage in the unit allows students to synthesize the material on invasive species and respond in a written format. Students read and evaluate three different non-fiction articles about invasive species like “Not afraid to get feet wet? Volunteers needed to wrangle crayfish,” “Vampire bat debate: To kill or not to kill,” and “When One Man’s Game Is Also a Marauding Pest” and create graphic organizers and t-charts to help them weigh the arguments. As part of the assessment process, students will use google docs to prepare a written argument supported with evidence from the documents on whether to ban a specific invasive species.

To culminate the unit, the students take part in a debate on the following issue: The United States, in order to promote the health and welfare of its citizens, should approve the release of genetically modified insects. The class is divided into three different groups. There is a proposition team, opposition team and a neutral party. The proposition presents arguments in favor of the issue, the opposition presents arguments against. Both the proposition and opposition research the topic and present three different speeches and a poster to support their side. The first speaker for each side introduces the position and provides reasoning. The second speakers refute opponent’s points and provide evidence to support their side and the final speaker is the rebuttalist that refutes all points and weighs the debate. The neutral party is challenged with judging the debate, and concludes by writing a paragraph defending their judgement.

Stage 4 Extensions

There are a variety of extension activities that can be applied to the unit based on student achievement. The movie, *Bug’s Life*, provides a variety of connections. The students analyze the various characters and classify them as native or invasive and consider their characterization in the movie.

Another activity would be to have the students write a graphic story with an invasive species as the protagonist.

Achievement and Assessment

The unit promotes self-expression and the use of higher order thinking skills while students analyze and interpret a variety of documents including newspaper articles, short stories, videos, pamphlets and executive orders. The unit also addresses individual needs and considers a variety of learners by accessing creative thinking in addition to objective analysis and the adaptation to multiple modalities. We measure student success via tests, small and large group discussion, completed projects and essays.

All told, the unit is instructional, relevant, student-centered, and one we will continue to use. The unit contains a variety of best practices that can subsequently be used in other units. *Bugging Out* helps students develop a better understanding of their environment and the affect they can have on change. We feel an overwhelming need to do this unit since our students are at an age where they are discovering who they are- their values, and where they can start having a voice in the protection of their community and environment.

Connections to Curriculum

In addition to Common Core Reading Standards for Literature and Informational Text, the unit also includes the following standards:
Writing Standards 1a-e, 3 a-e & 4-9
Speaking and Listening Standards 1-6
Language Standards 1-6
Additional California Reading Standards for Science Grades 6-8 1-4
Executive Order 13112

On Feb 3, 1999, Executive Order 13112 was signed establishing the National Invasive Species Council. The Executive Order requires that a Council of Departments dealing with invasive species be created. Currently there are 13 Departments and Agencies on the Council.

Executive Order 13112 of February 3, 1999 - Invasive Species

Section 3. Invasive Species Council.

(a) An Invasive Species Council (Council) is hereby established whose members shall include the Secretary of State, the Secretary of the Treasury, the Secretary of Defense, the Secretary of the Interior, the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Transportation, and the Administrator of the Environmental Protection Agency. The Council shall be Co-Chaired by the Secretary of the Interior, the Secretary of Agriculture, and the Secretary of Commerce. The Council may invite additional Federal agency representatives to be members, including representatives from subcabinet bureaus or offices with significant responsibilities concerning invasive species, and may prescribe special procedures for their participation. The Secretary of the Interior shall, with concurrence of the Co-Chairs, appoint an Executive Director of the Council and shall provide the staff and administrative support for the Council. (b) The Secretary of the Interior shall establish an advisory committee under the Federal Advisory Committee Act, 5 U.S.C. App., to provide information and advice for consideration by the Council, and shall, after consultation with other members of the Council, appoint members of the advisory committee representing stakeholders. Among other things, the advisory committee shall recommend plans and actions at local, tribal, State, regional, and ecosystem-based levels to achieve the goals and objectives of the Management Plan in section 5 of this order. The advisory committee shall act in cooperation with stakeholders and existing organizations addressing invasive species. The Department of the Interior shall provide the administrative and financial support for the advisory committee.
Executive Order 13112

On Feb 3, 1999, Executive Order 13112 was signed establishing the National Invasive Species Council. The Executive Order requires that a Council of Departments dealing with invasive species be created. Currently there are 13 Departments and Agencies on the Council.

Executive Order 13112 of February 3, 1999 - Invasive Species
Federal Register.gov.
Federal Register: Feb 8, 1999 (Volume 64, Number 25)

Section 4. Duties of the Invasive Species Council.

The Invasive Species Council shall provide national leadership regarding invasive species, and shall:

(a) oversee the implementation of this order and see that the Federal agency activities concerning invasive species are coordinated, complementary, cost-efficient, and effective, relying to the extent feasible and appropriate on existing organizations addressing invasive species, such as the Aquatic Nuisance Species Task Force, the Federal Interagency Committee for the Management of Noxious and Exotic Weeds, and the Committee on Environment and Natural Resources;

(b) encourage planning and action at local, tribal, State, regional, and ecosystem-based levels to achieve the goals and objectives of the Management Plan in section 5 of this order, in cooperation with stakeholders and existing organizations addressing invasive species;

(c) develop recommendations for international cooperation in addressing invasive species;

(d) develop, in consultation with the Council on Environmental Quality, guidance to Federal agencies pursuant to the National Environmental Policy Act on prevention and control of invasive species, including the procurement, use, and maintenance of native species as they affect invasive species;

(e) facilitate development of a coordinated network among Federal agencies to document, evaluate, and monitor impacts from invasive species on the economy, the environment, and human health;

(f) facilitate establishment of a coordinated, up-to-date information-sharing system that utilizes, to the greatest extent practicable, the Internet; this system shall facilitate access to and exchange of information concerning invasive species, including, but not limited to, information on distribution and abundance of invasive species; life histories of such species and invasive characteristics; economic, environmental, and human health impacts; management techniques, and laws and programs for management, research, and public education; and

(g) prepare and issue a national Invasive Species Management Plan as set forth in section 5 of this order.
Section 5. Invasive Species Management Plan.

(a) Within 18 months after issuance of this order, the Council shall prepare and issue the first edition of a National Invasive Species Management Plan (Management Plan), which shall detail and recommend performance-oriented goals and objectives and specific measures of success for Federal agency efforts concerning invasive species. The Management Plan shall recommend specific objectives and measures for carrying out each of the Federal agency duties established in section 2(a) of this order and shall set forth steps to be taken by the Council to carry out the duties assigned to it under section 4 of this order. The Management Plan shall be developed through a public process and in consultation with Federal agencies and stakeholders.

(b) The first edition of the Management Plan shall include a review of existing and prospective approaches and authorities for preventing the introduction and spread of invasive species, including those for identifying pathways by which invasive species are introduced and for minimizing the risk of introductions via those pathways, and shall identify research needs and recommend measures to minimize the risk that introductions will occur. Such recommended measures shall provide for a science-based process to evaluate risks associated with introduction and spread of invasive species and a coordinated and systematic risk-based process to identify, monitor, and interdict pathways that may be involved in the introduction of invasive species. If recommended measures are not authorized by current law, the Council shall develop and recommend to the President through its Co-Chairs legislative proposals for necessary changes in authority.

(c) The Council shall update the Management Plan biennially and shall concurrently evaluate and report on success in achieving the goals and objectives set forth in the Management Plan. The Management Plan shall identify the personnel, other resources, and additional levels of coordination needed to achieve the Management Plan's identified goals and objectives, and the Council shall provide each edition of the Management Plan and each report on it to the Office of Management and Budget. Within 18 months after measures have been recommended by the Council in any edition of the Management Plan, each Federal agency whose action is required to implement such measures shall either take the action recommended or shall provide the Council with an explanation of why the action is not feasible. The Council shall assess the effectiveness of this order no less than once each 5 years after the order is issued and shall report to the Office of Management and Budget on whether the order should be revised.
Section 6. Judicial Review and Administration.

(a) This order is intended only to improve the internal management of the executive branch and is not intended to create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or any other person.

(b) Executive Order 11987 of May 24, 1977, is hereby revoked.

(c) The requirements of this order do not affect the obligations of Federal agencies under 16 U.S.C. 4713 with respect to ballast water programs.

(d) The requirements of section 2(a)(3) of this order shall not apply to any action of the Department of State or Department of Defense if the Secretary of State or the Secretary of Defense finds that exemption from such requirements is necessary for foreign policy or national security reasons.

WILLIAM J. CLINTON
THE WHITE HOUSE,
February 3, 1999.
Summary Frame with Sentence Starters
(Modified from original by Kate Kinsella)

Directions: Complete the sentence starters below to write a summary of "Executive Order 13112." Use the verbs and transition words at the bottom for help.

In the Federal Laws and Regulations ______________________________ signed by ______________________________

(title of document) Name individual who signed including the date

verb Main idea

Department/the law ______________________________ Transition word

First supporting idea
The law ______________________________ Second supporting detail

verb the group-agency _______ that _______

Transition word

Third supporting detail

_________________________, the Council/law/document _______ as _______

Final transition

verb noun Final supporting or concluding idea


### Helpful Verbs for Summaries

<table>
<thead>
<tr>
<th>acknowledges</th>
<th>describes</th>
<th>suggests</th>
</tr>
</thead>
<tbody>
<tr>
<td>advises</td>
<td>discusses</td>
<td>presents</td>
</tr>
<tr>
<td>asserts</td>
<td>explains</td>
<td>recommends</td>
</tr>
<tr>
<td>assigns</td>
<td>explores</td>
<td>critiques</td>
</tr>
<tr>
<td>categorizes</td>
<td>identifies</td>
<td>defines</td>
</tr>
<tr>
<td>cautions</td>
<td>instructs</td>
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<tr>
<td>compares</td>
<td>investigates</td>
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<tr>
<td>contrasts</td>
<td>illustrates</td>
<td></td>
</tr>
</tbody>
</table>

### Transition Words

<table>
<thead>
<tr>
<th>First</th>
<th>last</th>
<th>another</th>
</tr>
</thead>
<tbody>
<tr>
<td>Next</td>
<td>to begin</td>
<td>along with</td>
</tr>
<tr>
<td>Then</td>
<td>at the same time</td>
<td>for instance</td>
</tr>
<tr>
<td>Finally</td>
<td>however</td>
<td>still</td>
</tr>
<tr>
<td>First of all</td>
<td>moreover</td>
<td>of course</td>
</tr>
<tr>
<td>Besides</td>
<td>furthermore</td>
<td>even so</td>
</tr>
<tr>
<td>In addition</td>
<td>as long as</td>
<td>indeed</td>
</tr>
<tr>
<td>For example</td>
<td>since</td>
<td>therefore</td>
</tr>
</tbody>
</table>
Argument Essay Rubric

1=serious problems 2=developing competence 3=minimal competence 4=clear competence

Thesis sentence/hook: grabs reader’s attention with fact, or question 1 2 3 4
Thesis: well defined, presents specific issue, writer’s point of view and reasons 1 2 3 4

Reasons: clearly described and distinctly different 1 2 3 4
Evidence: persuasive evidence that supports each reason or opinion and reflects a
Consistent point of view 1 2 3 4
Commentary: reflects appropriately on evidence and supports consistent point
of view 1 2 3 4
Reader Concerns: reasonable reader concerns are addressed 1 2 3 4
Counterarguments: two counterarguments offered to address concerns 1 2 3 4
Transitions: effective transitional words and phrases, parallel structure, and repetition
Create coherence throughout the essay 1 2 3 4
Conclusion: clearly and freshly restates opinion, concisely summarizes reasons, and/or
Includes a call to action 1 2 3 4

Writing Conventions
Standard English spelling, punctuation, and capitalization are used appropriately 1 2 3 4
Standard English grammar and sentence structure (with emphasis on varied sentence
Beginnings) are used appropriately 1 2 3 4
Article title is in quotations, magazine or newspaper title is underlined, author and
Title are capitalized and direct quotes are in quotations 1 2 3 4

Format
Final draft is in ink, written on one side of the page, organized in paragraphs with the
Proper indentation and name is on the paper 1 2 3 4
CONCEPT of DEFINITION MAP

[ Schwartz & Raphael, 1985 ]

CATEGORIES(ies) to which it belongs

TERM

Tone

PROPERTIES/CHARACTERISTICS

Definition:

Attitude Words: amused, loving, threatening, formal, disgruntled, serious, gloomy, irritated, surprised, detached, sinister, lively

"Three Skeleton Key" by George S. Toudouze

WHAT ARE SOME EXAMPLES?
Compare and Contrast Chart Graphic Organizer

Item #1 "Three Skeleton Key"  Item #2 "Pied Piper or Rata-tuille"

How are they alike?

How are they different?

- evidence:
- evidence:
- evidence:
- evidence:
Insect Connect.com Profile

Directions: Create your profile for Insect Connect. Research your insect and include as much information as you can to increase your chance for a connection!

Species Name:_________________________ Nickname:_________________________

Upload Image Here:

Hometown/ Where did you originate?:_________________________

Travels? Where have you traveled in the United States? Where in the world?

Your habits/footprints? (signs and symptoms) How do we know you have been here?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
What are your interests? What attracts you?


What are your dislikes?


Anything else we should know to help you find your match?


Friends/Social Group (student Names)


Invasive species. The vernacular man would think invasive species as horrible creatures that selfishly eat your tomatoes in your garden. This is a myth, and in reality, we benefit off of these "invasive" species. Invasive species should not be banned by states, for they benefit society and native wildlife and help native species by doing native species' jobs.

To begin with, invasive species benefit society and native wildlife. For instance, according to an article by Chris Kroll on the LA Times titled "Vampire bat debate," to kill or not to kill the invasive species of vampire bats could hold the key to a problem we want to solve, like AIDS or cancer. This means that invasive species like vampire bats can help our scientists and researchers find cures for diseases that infect and kill millions of people worldwide. Furthermore, these "invasive" species can help our native wildlife. According to the article I used before called "Vampire bat debate," to kill or not to kill also states that vampire bats play an important role in pollination and insect control p.82. As of now, bees, the main world-wide pollinators are suffering and without natural pollinators, the human race is literally placed in jeopardy! Additionally, invasive species like the vampire bat can reduce and control overpopulated native species. In many parts of the world, overpopulated species such as mosquitoes or army ants are a nuisance to native wildlife, as they spread disease and destroy natural foliage. Without these invasive species, we would be overwhelmed and there would be very little solution that are unconventional to halt the spread of overpopulated species. In conclusion, invasive species help wildlife and society alike by fulfilling day-to-day needs.
In addition, invasive species help native species by doing native species' jobs. For example, in an article by Erica Goode on New York Times titled: "When One Man's Game Is Also a Marauding Pest" the feral swine has been rampaging all over states in the US. However, humans rely on native species for food and daily supplement to life, and also rely on native species for inspiration. Invasive species also inspire our citizens, as the feral swine "provide plot lines for reality TV shows like 'Hog Hunters'." Inexplicably, invasive species are supporting our entertainment industry in a unique way. These invasive species are being fed on our tables, lights to our TV screens, and now we should beat them? Outrageous! Furthermore, invasive species can provide food and nutrients. From the same article, it states that a ranch owner said that "wild boar were cheaper for hunters than the deer and bison he stocks and made up 80-85% of his business." While invasive species are making Hollywood shine, they boost farming businesses and also bring the meat we eat on our tables. To conclude, invasive species are extra help to society and life, and we cannot recharge our daily meals without them!

Skeptics may say that invasive species pervade our own native species, but in reality, they only help control overpopulated native species and even other invasive species. For example, the vampire bat in Panama helps regulate insect populations. Other naturalizers may say that invasive species cause billions of dollars to our government, but in return, they also help our society and give even more money, day-to-day help various industries such as our agricultural economy.
Because of the foreign introduction of invasive species to other countries, not just the US, they have benefited life altogether. They help sustain life overall, and without them we would be a very different and strange society today. We would be a society in jeopardy, only because invasive species are absent to benefit society and be support our native wildlife.
In-Class Writing

Invasive species pose a great threat to our environment, and are costing ourselves, as well as other animals and plants, greatly. We have no control over these non-native organisms, therefore the only way we can benefit ourselves is by banning them. Invasive species must be eradicated because of the potential threat to humans and other organisms and the harm they do to the environment and agriculture.

To begin, invasive species pose a significant threat to humans and other organisms. For instance, feral swine and vampire bats both carry forms of rabies, a potentially deadly disease. Also, vampire bats are known to attack hundreds of livestock at a time drinking up their blood and possibly leading to the death of some animals. If invasive species aren’t eradicated, they will continue spreading disease and wounding or killing animals or humans, and we cannot simply allow this to continue. Additionally, the once eradicated giant African snail is known to eat the plaster and stucco of houses, damage property, and possibly harming occupants. To continue, zebra mussels, a species introduced into our rivers, eat tiny plankton-like creatures, but the sheer volume of their diet stuns native species, who also have their oxygen stolen by the mussels. While we may not realize it, invasive species are attacking native species’ habitat right now, and we must do something to protect against them. Invasive species’ threat to all organisms constitu the banning of their kind from the United States.

Moreover, invasive species pose a threat to agriculture and the environment. Every year, feral swine cause $1.5 billion in damage and this includes destruction of livestock, field, and wetlands. Additionally, grains are coming under a threat from an insect called the Khapra beetle, with foods such as pasta becoming more scarce. When we introduce these species, we cause ourselves to pay the price for the food and other resources that they destroy. For example, invasive plant species crowd out native plants, causing some animals to lose a valuable food source or sufficient shelter. In addition, with the destruction of crops, we must turn to other nations to provide us with food, causing us to cough up even more money. Because of our reluctance to ban these creatures, we have caused ourselves significant financial detriment now and in the future. The overwhelming cost we pay to make up for our agricultural losses must be removed.

Some may say that invasive species are good for hunting, such as feral swine, but why should we put hunting over health? We cannot risk the loss of agriculture over the profit of hunting businesses. Lives are more important than money.
We cannot allow these species to terrorize us any longer. Our only option is to eradicate these detrimental pests from the US. The time for action is now.
Invasive Species Essay

Invasive species cause a problem in modern day society and for this reason should be banned from states that have received damage and injury from them. For instance, the feral swine have done approximately 1.5 billion dollars amounting in agricultural damage alone. Also, feral swine collide with cars, attack humans, and spread diseases such as rabies which injure people. Because of this spread of feral swine, more and more damage is being done, and more people are being injured. Additionally, vampire bats travel in swarms and suck the blood of livestock along with humans. Humans such as a San Antonio man who was camping with his friend. Both of them were bitten by vampire bats although it was unlikely bats would be so far north. These vampire bats can pass rabies to people and livestock. In addition, the Los Angeles Times says that they travel in swarms so that they can attack more. According to the Los Angeles Times Francisco Oliva had his head be dived bombarded by a swarm of vampire bats. Because of these bats, people get rabies and their head gets their blood slumped and we cannot let this horrible thing happen. We need to act. In conclusion, invasive species are a large problem that we need to ban.
Students work to create their Pest Profile and then participate in a “speed dating” activity to interview and find their perfect match.