



# A Cultural Fire

## CONTENT Addressed:

Social Studies

## ARTS Addressed

Music

## Pacing

(1) 30-45 minute session

## 21st Century Skills

- Critical Thinking
- Creative thinking
- Communication

## Materials List

- Ladysmith Black Mambazo DVD
- We Didn't Start the Fire track
- Audio/DVD player
- Computer, LCD projector, internet
- Paper/pencils
- DVD recorder.

## Assessment: Video Documentary

Have students create a video documentary, similar to the Ladysmith DVD, about their songwriting process and the significance of their music to the culture of today. Give them a list of items they must address in their segments and grade based on clarity, depth and following directions.

## Lesson Sequence

**Step 1:** Students watch the DVD Ladysmith Black Mambazo "On Tip Toe". Discuss how this traditional Zulu music was influenced by the politics of apartheid in South Africa.

**Step 2:** Then have students listen to "We Didn't Start the Fire" by Billy Joel. Explain that this was written as a broad history lesson in the culture of America from the 40's to the 80's. Is there anything in the music that sounds like traveling through time?

**Step 3:** Give students the lyrics to the Billy Joel song. In small groups, have them research assigned segments of the piece to find out more about the history of that section. Report back to the class.

**Step 4:** Ask students to interpret the meaning of the word "Fire". Does it have a dual meaning? If so, what is it? How would this song be a political statement based on what they now know from their research.

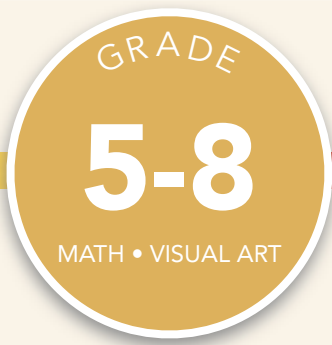
**Step 5:** Have students come back together and create a wordle of topics from the last year that have affected American culture.

**Step 6:** Using the wordle, have each small group write a stanza of lyrics that would address these items of cultural significance in a song.

**Step 7:** Combine the stanzas into an updated "We Didn't Start the Fire" song.

## EXTENSION

Create a music video of their updated version to show music and culture's collide.



# Grid Compositions

## CONTENT Addressed:

Math

## ARTS Addressed

Art

## Pacing

(1) 30-45 minute session

## 21st Century Skills

- Creative thinking
- Communication
- Collaborating

## Materials List

- Rulers
- Digital cameras or cell phones.
- At least one computer with basic photo editing software
- Printer
- Graphing paper
- Pencils
- Colored Pencils or Markers
- Large, plain white construction paper
- A variety of exemplar digital portraits

## Assessment: Math and Art

Students will draw their portrait using the grid system. Using graph paper, students will replicate the grid overlay on their photograph onto the graph paper. Then, students will color and shade each block as it is shown on their photograph. Students will then assess their art for accuracy and precision.

## Lesson Sequence

**Step 1:** All students will complete a grid with equal blocks in each segment. Students will be able to describe the relationship of each area of the grid to the whole piece using number relationships (ie: There are 8 blocks in quadrant one. The whole grid contains 24 blocks. Therefore, quadrant one is one third of the whole grid).

**Step 2:** Students will examine photographs of various portraits and overlay grids on top of each photograph by using rulers to measure and draw the grid lines. They can begin with large grids, separating the portraits into 9ths and gradually add more grids until the grid contains 1 inch blocks. Students can examine how the value and hue of the colors vary within each block, as well as where the focal point of the photograph is in relationship to the grid.

**Step 3:** Students will each take a photograph of a peer in their class, choosing a focal point within the face to base their composition upon.

**Step 4:** Students will upload their images to the computer, edit them with basic photo editing software to adjust contrast and sharpness and to crop the image and then print the image.

**Step 5:** Students will make overlay a new grid on top of their own image using the same steps as in the engagement piece. Students will then compare and contrast what their intended focal point was to what appears within the grid.

## TEACHER NOTES



# Jay-Z's Fife and Drum

## CONTENT Addressed:

Social Studies

## ARTS Addressed

Music

## Pacing

(1) 30-45 minute sessions

## 21st Century Skills

- Collaborating
- Creative thinking
- Social Skills

## Materials List

- CD player
- Various fife and drum music from the Civil War (Gettysburg Soundtrack is great!)
- Recording of Jay Z's Empire State of Mind
- Civil War era costumes
- Drums

## Assessment: Dramatic Battle

Have students recreate the march to an important battle from the Civil War using their new rap. Include costumes, and instruments and do the march throughout the school. Have them use their acting skills to stay in character. Have students from around the school ask them what they are doing and why they are using music. Assess student knowledge and connections between the two musical genres.

## Lesson Sequence

**Step 1:** Students listen to fife and drum music from the 1800's. Discuss with students the practical reasons for this music during the Civil War: to speed up the time it took to travel by keeping a beat, as a way to uplift the soldier's spirits and because other instruments were too heavy. Explain this music was often performed by boys as young as 8 and up to 18.

**Step 2:** Look at the words that were later added to these songs: many had political and moral opinions.

**Step 3:** Then, have students listen to Jay Z's Empire State of Mind. Listen for the same qualities: beat, uplift spirits, historical context clues to today. What is similar and what is different?

**Step 4:** Have students create new words that describe elements of the causes of the Civil War, important people during the time period, and a sequence of events from the War set to Jay Z's rap "Empire State of Mind".

**Step 5:** Perform the new rap together as a class!

**Extension:** Create a movie of their march and then have students watch their performance. Did the music help them stay in step? Did it force them to slow down? How did the music effect their experience of the march?

## TEACHER NOTES



# Patchwork Flag

## CONTENT Addressed:

History

## ARTS Addressed

Music & Art

## Pacing

(1) 30-45 minute session

## 21st Century Skills

- Critical Thinking
- Creative thinking
- Informational Literacy

## Materials List

- By the Dawn's Early Light book
- Star-Spangled Banner recording/ CD player
- Sentence Strips
- Large paper scissors, glue, pencils
- computer, internet, screen and LCD projector

## Assessment: Flag Mosaic

Students will cut their "puzzle of America" images into small pieces and place them into a flag mosaic. Create the template of an American flag on a large piece of paper. Have students cut their images into small pieces that they can then assemble into a new "American Flag" and when it's finished, sing the Star-Spangled Banner"

## Lesson Sequence

**Step 1:** Students will read the story "By the Dawn's Early Light" by Steven Kroll to learn about the history of the Star-Spangled Banner.

**Step 2:** Play a recording of the Star-Spangled Banner and have the students sing along if they know it.

**Step 3:** Look at the words to the Star-Spangled Banner and discuss each line as it relates back to the book they just read.

**Step 4:** Using pre-made sentence strips with the words to the song already on them, give each student a sentence strip and have them get themselves in order from the beginning of the song to the end.

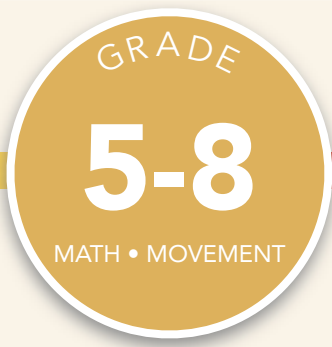
**Step 5:** Then, have students cut up the sentence strips into pieces and try to put them back together again like a puzzle.

**Step 6:** Create a list of the qualities of America: freedom, passion, creativity, etc. Explain that America is like a puzzle too - each piece fits together to create a large picture. In art, this is called a mosaic. Show some examples of mosaics.

**Step 7:** Have students look through magazines to find images that represent the Qualities of America on their list. Cut out the images that work for each quality.

**Step 8:** Put the images together as if it was a puzzle of America.

## TEACHER NOTES



# Stacking Statistics

## CONTENT Addressed:

Math

## ARTS Addressed

Movement

## Pacing

(1) 30-45 minute session

## 21st Century Skills

- Critical Thinking
- Informational Literacy
- Productivity

## Materials List

- Stacking cups
- Stopwatches
- Timing mat
- Chart paper or blackboard or overhead
- Calculators

## Assessment

Stem and Leaf Plots will be evaluated for accuracy.

## Lesson Sequence

**Step 1:** This lesson will be a review of the concepts of mean, median, mode, range, so no pre-assessment will be given today.

**Step 2:** Teachers will demonstrate several cup-stacking strategies and levels – (3-cup stack, 6-cup stack, 10-cup stack.)

**Step 3:** Students will work in pairs and will do a 6-cup stack 3 times. Partners will record times using a stopwatch. All data will be added to two classroom charts. One chart will be classroom-wide, with all data put on one chart. A second chart will have each students' name and will have a space for all 3 times.

**Step 4:** Discussion will then take place about how to organize the classroom data. At first we will look at the chart with each child's name and see if a pattern of improvement is seen with each successive practice.

**Step 5:** Discussion will then be guided by teachers to a stem and leaf plot using the classroom-wide data, which will be modeled for students. Students will then create a stem and leaf plot using the same data, and teachers will demonstrate how to find the mode, median, outlier, mean, and range of the data.

**Step 6:** End of lesson discussion will review double bar graphs and stem and leaf plots and will then move on to the next lesson's data organization which will be line plots. The same data may be used for that lesson.

**Extension:** Use the graphs to make a projection for successive future attempts to teach prediction.

## TEACHER NOTES



# The General's Interview

## CONTENT Addressed:

Social Studies

## ARTS Addressed

Drama

## Pacing

(1) 30-45 minute session

## 21st Century Skills

- Creative thinking
- Collaborating
- Social Skills

## Materials List

- Computer, LCD projector, Internet
- Photos from the American Civil War
- News articles on current world events/ civil wars
- News articles from 1865
- Paper, pencils

## Assessment: General Interviews

Have students create a town hall interview. One student is General Grant and the other is General Lee. There can be interviewers, townspeople, as many as you need. Have students interview the Generals on the surrender and what this means for America. Print the interviews into a class newspaper on the event.

## Lesson Sequence

**Step 1:** Students read several archived newspapers on the current world unrest (Ghadaffi, Egypt, Afghanistan, Iraq) to gain understanding of current world events. Discuss the Civil Wars that are currently going on in the world. What does Civil War mean? How is this different than a war between countries? Create a Venn Diagram comparing Civil War to War among countries.

**Step 2:** Then show students some pictures from the American Civil War. Narrate the pictures as you show them to create a personal history for each person (either real or imagined). Bring in pieces of what caused the Civil War into each narrative story. Example: "My name was Billy and my father owns a textile mill in Massachusetts, though now we produce boots for the North."

**Step 3:** Then, have students look at each picture, notice things about each person, background, or setting in the picture and create a narrative for what the people were thinking as the picture was being taken. Have students write these down.

**Step 4:** Have students conduct research on the causes of the American Civil War and the similarities and differences between that and the Civil Wars of today.

**Step 5:** Show students the picture of Lee and Grant at Appomattox Courthouse and repeat step 3 for only one of the men.

**Step 6:** Students get into pairs with one who wrote down what Lee was thinking and one who wrote down what Grant was thinking. Students then can compare their commentary. Finally, the teacher discusses what was really going on in the photograph and compares that to students' answers.

## TEACHER NOTES



# Puzzling through Math

## CONTENT Standard:

**CCSS.MATH.CONTENT.6.EE.A.2**

## ARTS Standard

**DA:Cr1.1.6b**

## Pacing

**(1) 30-45 minute session**

## 21st Century Skills

- Critical Thinking
- Collaborating
- Informational Literacy

## Materials List

- open space
- a series of math expression word problems
- color cards for each student in a set of colors (ie: red, yellow, blue, green)
- pencils, paper,
- digital writing devices (optional)
- [dance element posters](#)
- [puzzle cube strategy reference](#)

## Assessment: Dance-a-Problem

Have students create their own word problem using a dance sequence of movements. When they present their sequenced expression, the rest of the students in the class must solve the equation and present their answers as a related dance movement (ie: if zig zag lines were used in the expression, zig zag lines should also be used in the solution)

## Lesson Sequence

**Step 1:** Provide students with a word problem that uses expressions with letters as substitutes for numbers. Give them 5 minutes to work through the problem on their own using whatever device works best for them.

**Step 2:** Allow students to turn and talk to their peers about their solutions for 3 minutes. They can use this opportunity to compare solutions or for help in solving the expression if they struggled on their own. No teacher assistance may be provided.

**Step 3:** As a class, share out the solutions for the expression, as well as the methods used to solve for them. For each solution, ask students to think about a way each step could be shown through a movement. Then, string together the movements to create a movement solution sequence. Explore a variety of uses of line, shape and space in their movements.

**Step 4:** Engage students in the Puzzle Cube Strategy. Provide each group with a new math expression using letters as substitutes for numbers. Each group is also presented with a type of dance element, such as line, shape, space or energy. They must solve the expression and present their solution using only the element they have been assigned in a step-by-step sequence.

**Step 5:** Mix up the puzzle groups by having someone from each original group in each new group. For instance, new groups would consist of someone who explored line, someone who explore shape, etc. Each new group will need to solve a new expression, but this time each person can only use their original dance element. Thus, the performance of the solution will include steps expressed by a variety of dance elements.

## TEACHER NOTES



# Masking Mirrors

## CONTENT Standard:

**Historical Thinking Standard  
#3**

## ARTS Standard

**VA:Cr1.2.8**

## Pacing

**(1) 30-45 minute  
session**

## 21st Century Skills

- Critical Thinking
- Creative thinking
- Informational Literacy

## Materials List

- Websites linked in the lesson
- Acrylic paint, markers, paper, paintbrushes and pencils
- mask forms, glue, water and newspaper.
- chart paper or chart board.
- computer, projector, speakers

## Assessment: Connective Rubric

Create a rubric that assesses the students' use of historical context and culture to create a mask which displays an element of significance to their own ancestry. Include the following categories in your rubric: use of symmetry, use of artistic choice in line, texture and color, and demonstration of historical significance through a written statement.

## Lesson Sequence

**Step 1:** Provide students with a variety of examples of masks from cultures around the world. Ask students to chart similarities and differences in techniques used in the masks, as well as construction (paint, paper mache, paper, clay, etc).

**Step 2:** Ask students about the use of masks in our own culture - when do we see them and for what purpose? Engage in a discussion about the historical significance of masks using [this infographic](#). At the end of October, we see many masks (Halloween), and other cultures celebrate this day as well. [Explore Dia de los Muertos celebrations](#) and compare/contrast with our own Halloween traditions. [Use this site for reference](#). Why are masks a significant part of these celebrations (mirrors of life and death, symmetry between both sides, honoring and memorializing our ancestors, transformation, etc).

**Step 3:** Ask students to think about an element or symbol that has two sides. For example, water can be both cleansing and destructive. Students can research elements and symbols that have historical significance to their own ancestry.

**Step 4:** Using their chosen symbol or element, create a sketch of a mask that would communicate their message of "two sides of the same element". Then, [follow the directions found here](#) for creating a paper mache mask.

**Step 5:** Students will create an artist's statement that describes the significance of their mask, the element they chose, the medium (markers, acrylics, etc) they used and how it is connected to this historical culture of their own ancestry. They will then present their mask and it's story to the class.

## TEACHER NOTES





# Museum of the Arts

## CONTENT Standard:

CCSS.ELA- Literacy.RL.7.2

## ARTS Standard

Visual Art: Anchor Standard  
7

## Pacing

(1) 30-45 minute  
session

## 21st Century Skills

- Critical Thinking
- Creative thinking
- Collaborating

## Materials List

- Paper, pencils, watercolors, clay, paint, brushes
- Access to a variety of music and instruments
- Computer, speakers, internet access
- Video: [Behind the Scenes](#)
- [The Road Not Taken](#) poem

## Assessment: Synthesis of Key Concepts

Design a rubric that measures the ability of students to synthesize details into an overarching thought. Apply the rubric to both the poetry synthesis activity and the museum presentations.

## Lesson Sequence

**Step 1:** Lead a class discussion is how students make decisions when they are faced with a choice between two options. What do they place value in? What does not weigh into their decision?

**Step 2:** Group read the poem “The Road Not Taken” by Robert Frost. Then divide students into four small groups. Have each small group take a stanza and synthesize what the stanza means to them into one sentence.

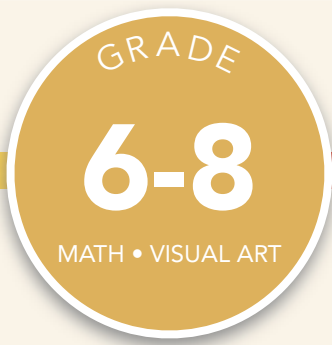
**Step 3:** As a large group, look at all of the summarized stanzas and decide on the overall essential understanding from the poem. Bring the conversation back to their beginning thoughts about making choices.

**Step 4:** View the video [Behind the Scenes](#) that explains how museum curators make choices about what to include in their collections. How do they make their choices? Do they “take the road less traveled” or do they use pieces that are more well known? Why?

**Step 5:** Ask students to think about a choice they made that represented forging their own path. They must then create a way to present this choice using either visual art, drama, music or dance. Presentations should be no more than 30 seconds.

**Step 6:** Create a class museum of the arts that centers around the theme of choosing the road less traveled. Each exhibit is a student presentation of their choice conveyed through their art form. Ask students to ask a curators of their own museum by pairing similar or divergent choices together, creating “wings” of the museum based upon art form, or other options they feel are appropriate. Invite other classes/schools to view and engage with the museum.

## TEACHER NOTES



# Proportionate People

## CONTENT Standard:

**CCSS.MATH.CONTENT.7.RP.A.2**

## ARTS Standard

**Visual Art: Anchor Standard 7**

## Pacing

**(1) 30-45 minute session**

## 21st Century Skills

- Critical Thinking
- Creative thinking
- Communication
- Productivity

## Materials List

- Pencils, Markers, Colored Pencils
- Grid paper
- Tape
- Photos of historic landmarks from around the world
- Images of men, women and children

## Assessment: Rubric

Assess students based on this criteria:

- Accuracy of proportionate relationship equations
- An artist sentence reflects an understanding of the effect of proportion on viewer perception
- Students use the equations and artist statement to manipulate their skills to create a new piece.

## Lesson Sequence

**Step 1:** View image of famous landmarks (The Eiffel Tower, Taj Mahal, etc). Ask: how large or small are these landmarks? Then, show the same landmark with a person beside it. Are these people proportionate in the image to the landmark?

**Step 2:** Provide the height measurements of each landmark and the height measurements for an average male, female and child. Ask students to represent the proportional relationship of the landmark to a man, woman and child by an equation.

**Step 3:** Provide each student with an image of one of the landmarks and a piece of grid paper. Ask students to represent the proportional relationship they calculated in the engagement by measure the landmarks based on the amount of blocks on the grid it consumes and then shading in these blocks.

**Step 4:** Using a different color, shade in the amount of blocks that an average male, female and child would consume on the grid based on their earlier equation.

**Step 5:** Discus how you can change the proportional relationship between objects based on how the image was captured. How does this change in proportional relationship effect reality.

**Step 6:** Overlay the original landmark image with a piece of grid paper and using the Stippling technique, transfer the landmark onto the grid paper. Do this same process with a piece of a man, woman or child.

**Step 7:** Have students create a stipple composite image that combines the landmark and either the man, woman or child into a skewed proportional relationship compared to the original. Once complete, students can calculate the new proportional relationship between the individual and the landmark.

## TEACHER NOTES



# Sound Mapping

## CONTENT Standard:

ETS2.B

## ARTS Standard

MU:Cn11.0.7 D

## Pacing

(1) 30-45 minute session

## 21st Century Skills

- Critical Thinking
- Communication
- Informational Literacy

## Materials List

- [How to Make a Sound Map Website](#)
- Garageband/Audacity
- Computers and Recording Devices
- Paper and pencils

## Assessment: Create a Sound Map Loop

Using Garageband or Audacity, have students create a set of loops that identify each area on the sound map. Overlay the original sounds with the loops to create an original composition. The influences of each "region" should be identifiable.

## Lesson Sequence

**Step 1:** Explore "How to Make a Sound Map" website. What is the purpose of the maps? How are they created? What similarities and differences do you see?

**Step 2:** In small groups, explore the sounds in different areas of the school building. Take a small recording device and record a 30 second clip of that area.

**Step 3:** As a class, listen to each sound clip. Try to guess where in the school that clip was from. Discuss why and how those sounds influence each area.

**Step 4:** In small groups, create individual sound maps of their assigned areas, based on the work from the How to Make a Sound Map website.

**Essential Question:** How do sounds influence a region or culture?

**Key Vocabulary:** Sound mapping, Acoustic environment, Composition, Technology

## TEACHER NOTES



# Tell-Tale Theatre

## CONTENT Standard:

CCSS.ELA- LITERACY.RL.8.6

## ARTS Standard

TH:Cr2.1.8

## Pacing

(1) 30-45 minute session

## 21st Century Skills

- Critical Thinking
- Creative thinking
- Collaborating

## Materials List

- Copies of The Tell Tale Heart from Edgar Allen Poe
- Supporting lesson on Point of View
- Storyboard worksheets
- paper and pencils
- various materials for set design, makeup, costumes, and lighting as available.

## Assessment: Performance

Have students perform their work in front of the class. Their presentation should include the use of technical design (including set design, makeup, lighting, staging, etc) that helps to communicate their point of view. Students will be assessed with a shared rubric between the ELA and Theater Standards.

## Lesson Sequence

**Step 1:** Discuss and list students' top ten choices for scariest stories they have seen or heard in the past. What elements contribute to making a story or scene scary? Are certain elements weighted more than others?

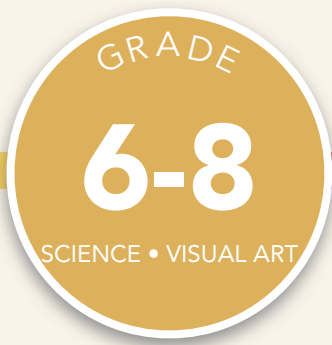
**Step 2:** Improvise a scary story together as a group. Sitting in a large circle, the first person starts with setting up the story. Each person in the group adds another detail to the story, but the story must have a clear beginning, middle and end so that by the time the last person adds their detail, the story has come full circle. Once completed, have students list the main characters from the story they created. Do the same activity this time, but go around the group from last the first and tell the story from the point of view of a different character.

**Step 3:** Read the "Tell Tale Heart" together as a group. Have students analyze the work from the point of view of the narrator, and then again from the point of view of the Old Man. How are they the same? How are they different?

**Step 4:** Split the class into three groups. The first group must create a dramatic representation of the story that emphasizes the point of view of the narrator. The second group must create a dramatic representation of the story that emphasizes the point of view of the old man. The third group must create a dramatic representation of the story that emphasizes the point of view of the heart itself.

**Step 5:** Students must create a storyboard outlining the technical design of their production, and practice their overall performance as a group.

## TEACHER NOTES



# Textured Fireworks

**CONTENT Addressed:**  
**Science**

**ARTS Addressed**  
**Visual Art**

**Pacing** (1) 30-45 minute session

- 21st Century Skills**
- Critical Thinking
  - Creative thinking
  - Informational Literacy

- Materials List**
- salt
  - white construction paper
  - watercolor paint
  - water and brushes
  - journal and pencil
  - Music for Royal Fireworks: Overture, Handel
  - MP3/CD player
  - Smithsonian article

**Assessment: Create a painted fireworks live display**

Have students listen to a selection from Royal Fireworks by Handel. In groups of 3-4, students can sketch out when there should be a painted firework reaction occur to enhance the music. Students should also decide what color and shape would be most appropriate. Then, have students create their artwork "live" to the music using the steps from the activity above. Students will need to understanding the timing of the chemical reaction, as well as interpret how the art will enhance the music.

## Lesson Sequence

**Step 1:** Discuss experiences students have had with fireworks displays. Include unique displays they have seen, where they viewed the displays, and what questions they have about displays. Sample questions might include: What makes the colors? How do they create the designs? How do they time everything to the music?

**Step 2:** Read the Smithsonian article 5 Things You Didn't Know about the Science of Fireworks. Ask students to think-pair-share with a neighbor about the article and if it answered any of the questions brought up during the class discussion.

**Step 3:** Discuss the chemical reaction that takes place when the charge is ignited to transfer energy from the main fuel to the colorant chemicals.

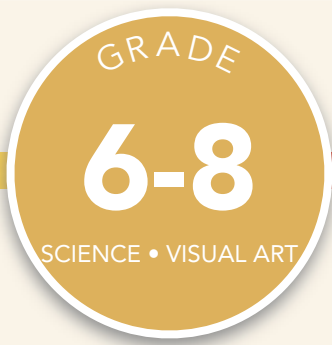
**Step 4:** Give each student a plain piece of black construction paper, 3 colors of watercolor paint, a straw and some salt.

**Step 5:** Ask students to paint a fireworks design of shapes on their paper.

**Step 6:** Have students add salt strategically to each firework and to write their observations of the reaction with the paint on a separate piece of paper.

**Step 7:** Each student can share their fireworks painting. As a class, discuss what observations students made on the chemical reaction of salt and watercolor paint. Ask students to describe the transfer of energy that occurred once the salt was added. Did the color explode or implode?

## TEACHER NOTES



# Aboriginal Watershed

## CONTENT Standard:

ESS2.C

## ARTS Standard

VA:Cr2.3.7a

## Pacing

(2-3) 30-45  
minute sessions

## 21st Century Skills

- Critical Thinking
- Creative thinking
- Informational Literacy

## Materials List

- Riverside Construction Paper- Black
- Pencils
- Modeling Dough - multi colored
- Tempera paint
- Paintbrushes
- Tracing Paper
- Scissors
- Tacky Glue

## Assessment: Class Discussion and Exit Ticket

Ask questions about the project on an exit ticket. Then discuss as a class on ah-ha's and questions.

1. What does the watershed map tell us?
2. How does our own map tell this story?
3. How is Aboriginal art both useful and creative?
4. What do you predict will happen in our watershed over the next few months?

## Lesson Sequence

**Step 1:** View a variety of Aboriginal Paintings. Many of these paintings document the path of water in dry Australia.

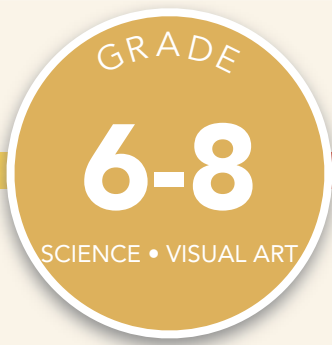
**Step 2:** Then, view your own local watershed and look at the map of real-time streamflow in your area. What do you notice? What patterns emerge?

**Step 3:** Print off the map of your state and have students trace it on their tracing paper. Trace the circles and label each with the colors on the page. Place the tracing paper on a piece of black construction paper. Outline the state on the black paper.

**Step 4:** Using colored modeling dough, roll small balls to represent each retrieval area. Glue each of these onto the black paper on the state as represented on the tracing paper.

**Step 5:** Use white paint and a q-tip or small paintbrush to add white dots as an outline for the state. Continue to fill in the areas of the state between each water data point with painted dots.

## TEACHER NOTES



# Coloring Sound

## CONTENT Standard:

MS-LS1-8.

## ARTS Standard

VA:Re8.1.8

## Pacing

(1) 30-45 minute session

## 21st Century Skills

- Critical Thinking
- Creative thinking
- Communication

## Materials List

- [Melissa McCracken's website](#)
- Blank paper, watercolor, acrylic and tempera paint, markers, colored pencils
- Projection system, speakers and Internet
- [Interactive Brain Map](#)
- [Piano Guys' piece](#)

## Assessment: Self-Reflection

As students view each other's work, they should answer the following questions:

What do I notice about this piece?  
What emotion or reaction do I have to what I'm seeing? How does this work reflect the systems that process sensory information in the brain?

## Lesson Sequence

**Step 1:** Ask students to view pre-selected images from artist [Melissa McCracken's website](#). Have students analyze and describe the images based on color, line, and medium.

**Step 2:** Play the [video of Melissa](#) creating her artwork and explaining the process of synesthesia. Go back and ask students to look at the previously viewed images again, this time while playing the music that is identified next to the piece. What stands out to them now that they know her process?

**Step 3:** Explore the [interactive brain map](#) and have students answer the following questions: how many lobes are in the brain and what are their names and functions? Which part of the brain governs your senses? How do the lobes work as a system to process information? How is this showcased in cases of synesthesia?

**Step 4:** Using the piece "[Hello/Lacrimosa](#)" from the Piano Guys, have students create a random list of images that comes to mind as they listen to the piece. Listen to the piece again and label where each image appears during the piece (beginning, middle or end). Then, have students select a color or shape that would depict that image. For example, "red and rectangle" for a wagon.

**Step 5:** Students create a work of art based on the musical piece that mapped out. It should contain colors, shapes, textures and lines that lead the viewer through the piece of music and connects the whole piece into one visual experience.

**Step 6:** Students present their work by showing their piece and identifying only the list of images that came to mind when originally listening to the piece. Students will peer-assess each other's work.

## TEACHER NOTES



# Holiday Village

## CONTENT Addressed:

Social Studies: Culture

## ARTS Addressed

Visual Art

## Pacing

(1) 30-45 minute session

## 21st Century Skills

- Critical Thinking
- Tech Literacy
- Informational Literacy

## Materials List

- Internet/Computer Projector
- Computer Lab/student devices
- Cardboard, recycled materials
- Art supplies: paint, mod podge, paint brushes

## Assessment: Checklist

1. Included specific buildings from the community, and highlighted customs/traditions in their village.
2. Designed a cohesive village using various tools and materials.
3. The constructed village can stand on its own, shows precision and use of imagination.

## Lesson Sequence

**Step 1:** Start by viewing the video of the [Toronto Christmas Market](#) and explore how the village is constructed, the activities, the history and the artisans that are featured.

**Step 2:** Explain that holiday villages have a rich and varied Tradition in many cultures. Many have cultural foci, such as Bavarian, Italian, and English. Others are focused around culinary, music, or visual arts traditions. Some are year round markets, while others are constructed just for the holiday season.

**Step 3:** Have students research various Holiday Villages around the world and create a list of unique items/themes found in these villages, as well as commonalities. Some places to start include: Leavenworth, WA, Bryant Park Winter Village and Lake Mohawk Weihnachtsmarkt.

**Step 3:** In the early 20th century, [Putz houses](#) (miniature cardboard villages) became popular. These used the holiday villages in real life as inspiration to create smaller models that could be included in homes.

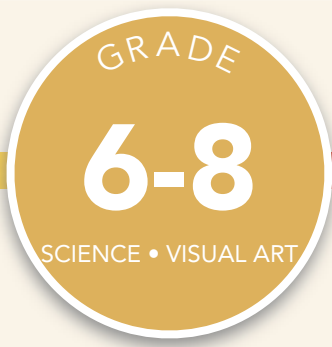
**Step 4:** Ask students to think about their own town and to sketch out a design for their own holiday village using their downtown area as a model.

**Step 5:** The winter village must contain specific buildings from their community and be centered around a specific theme, similar to the one's researched earlier. Students can design culinary menus, decide on arts vendor, and performance listings.

**Step 6:** Provide students with a selection of cardboard, attachments, and recycled materials, as well as various art supplies (paint, mod podge, paint brushes, etc). Students can then create their own Putz winter villages based upon their design.

## TEACHER NOTES





# Hologram Art

## CONTENT Standard:

MS-PS4-1.

## ARTS Standard

VA:Cr2.3.7a.

## Pacing

(1) 30-45 minute session

## 21st Century Skills

- Critical Thinking
- Creative thinking
- Collaborating

## Materials List

- Peppergram Projector
- Phone/Tablet
- Hologram Youtube examples
- Computers
- Mindtrekkers Lesson
- Hologram Reference Image
- Create Hologram Tutorial
- Movie editing software
- Hologram artist exhibition

## Assessment: Peer Review

As students share their holograms, classmates should look for the use of the law of reflection in the work, as well as how their work engages the viewing audience.

## Lesson Sequence

**Step 1:** Ask students if they know what a hologram is. Engage in a discussion about what a hologram looks like, what it could be used for, and how it works. Using the Peppergram Projector, a phone and a Youtube hologram video example, turn off the lights and show students a few holograms. If available, you can have more than one projector station available in the room.

**Step 2:** Have students practice their observation skills by walking around the hologram, looking at it from a variety of angles and documenting their findings in a sketchbook or journal.

**Step 3:** Based on their original hypotheses and their observational findings, review what students now know about holograms.

**Step 4:** Use the MindTrekkers lesson to understand how holograms work using the law of reflection.

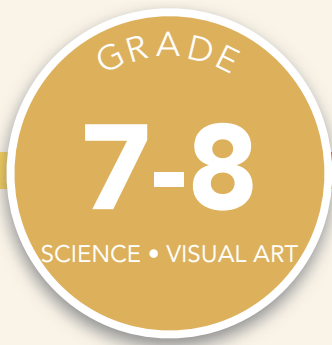
**Step 5:** View the Hologram Artist exhibition site and explore how artists are using this medium in their work and how it evolves the viewing experience.

**Step 6:** Group students into pairs or small groups of 3-4. Provide each group with the Hologram reference image. Explain that they will be creating their own hologram images to use with the Peppergram projectors.

**Step 7:** Ask them to notice the quadrants in the reference image. How would they apply the law of reflection using this image?

**Step 8:** Create a digital hologram using the hologram tutorial website. Consider how they would like their audience to interact with their art when it is completed.

## TEACHER NOTES



# Decoding Da Vinci

## CONTENT Standard:

NGSS MS- ETS1-4

## ARTS Standard

VA:Re.7.1.8a

## Pacing

(1) 30-45 minute session

## 21st Century Skills

- Critical Thinking
- Creative thinking
- Informational Literacy

## Materials List

- Scratch website
- DaVinci Sketches
- Visual Journaling background
- pencils, pens
- journals
- digital cameras/ phones
- computers
- printers

## Assessment: Coding Your Invention

Ask students to upload either the sketch of their item or the digital photograph of their chosen object. Then, using [scratch.mit.edu](http://scratch.mit.edu), program their object to function as they intend in their new iteration of this found object. IE: a pen shows a hollogram of its writing. Code the pen to do this through Scratch. Grade based upon a teacher-created rubric using both the Science and the Arts standards.

## Lesson Sequence

**Step 1:** Ask students to find an ordinary object in the classroom environment, photograph it and sketch it in a visual journal. Pre-assess their ability to accurately depict the Object with proper proportion, detail and structure.

**Step 2:** Ask students to compare their sketch to the object. Think about ways this object could be more functional or used in a different way. Ask students to write down their ideas using question statements such as “what would happen if...” and “if I changed \_\_\_\_\_, then \_\_\_\_\_ ?”

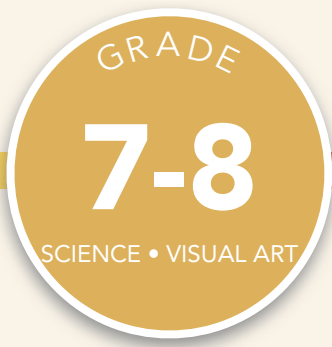
**Step 3:** Ask students to view examples of daVinci’s sketchbooks. Engage in discussions about how daVinci used art as an avenue to understand and experiment with scientific principles through his sketchbooks.

**Step 4:** Compare daVinci’s observations and questions with their own. What is the same? What is different? Focus on his sketches on Flying Machines. What questions are being explored? How did daVinci use traditional mathematical practices to challenge convention and create something new?

**Step 5:** Look at the sketches of their own objects and their explorative questions. Challenge students to create a new invention using their original object as inspiration. Use the current structures and form as a framework for their new inventions. Students can work in teams or alone.

**Step 6:** Students will share their uncommon “common objects” inventions with the class. Explore how to create these as a prototype using the online programming tool from [scratch.mit.edu](http://scratch.mit.edu)

## TEACHER NOTES



# Layering Changes

## CONTENT Standard:

MS-ESS2-3.

## ARTS Standard

VA:Cr2.3.7a

## Pacing

(1) 40-60 minute session

## 21st Century Skills

- Critical Thinking
- Collaborating
- Productivity

## Materials List

- 25-30 cardboard squares
- Variety of texture materials (yarn, noodles, bubble wrap, rubber bands, foam pieces, ribbon, etc)
- Glue or double sided tape
- Brayer rollers
- Colored ink
- White printmaking paper

## Assessment: Artist Reflection Written Statement

Respond to the following questions in paragraph form:

1. Why was printmaking a good method of demonstrating geological layers?
2. What do rock layers and printmaking have in common?

## Lesson Sequence

**Step 1:** Explore the 4 main layers and their individual characteristics.

**Step 2:** Using the Claim/Identify/Question strategy, examine a piece of printmaking.

**Step 3:** Explore the process of printmaking and examples of different textured prints.

**Step 4:** Direct instruction of texture

**Step 5:** Select textures that would best describe/indicate each layer of the earth.

**Step 6:** In small groups, create texture plates for each of the earth's layers and a whole-group print that includes layers from each of the texture plates. Create plates using texture materials and cardboard squares.

**Step 7:** Trade the final print with another group. Analyze the other group's print to identify each layer presented.

## TEACHER NOTES



# Founders Drama

## CONTENT Standard:

RL.9-10.1, RL. 9-10.3, SL. 9-10.1a, SL. 9-10.1c

## ARTS Standard

TH:Re8.1.1.b

## Pacing

(1) 30-45 minute session

## 21st Century Skills

- Creative thinking
- Communication
- Social Skills

## Materials List

- Computers
- Journals
- Pens/Paper/Pencils
- John Adams' Speech
- Classroom setup as a Continental Congress would be.
- Period dress (if you choose)

## Assessment: A Journal Through Time

Many of the founding fathers kept journals to document the history of the time. Ask students to write in their own journals as if they are still in character about whether or not to sign the Declaration and what John Adams' speech may have done to influence their decision.

## Lesson Sequence

**Step 1:** Start by assigning each student in the class a historical figure from the Continental Congress to "become". Explain that they will be researching this person and their backgrounds in great detail. The teacher will be John Adams.

**Step 2:** Using guided internet search and informational texts from the library, facilitate student research of their assigned characters. Have them focus on the following items: family, religious beliefs, time that they lived, what they ate, any special talents they had, and where they stood on the issue of Independence as of July 1st, 1776.

**Step 3:** The teacher should also memorize the arguments as outlined in John Adams' speech to the gathering on July 1st when he swayed many of them to declare independence.

**Step 4:** Students should then develop arguments for their position on independence and be prepared to speak in front of the class congress.

**Step 5:** Set up a class congress and allow each student to speak for their position for up to 5 minutes. Encourage other students to ask questions and refute other students' speeches when giving their own.

**Step 6:** After the class has finished their own debate on the merits of declaring independence, based on true-life accounts of their characters, the teacher will stand up as John Adams and give a speech trying to persuade the other characters to sign a Declaration of Independence, using the actual speech as a basis for this 5-minute argument.

## TEACHER NOTES