

ArtReach Curricular Connections and Extensions (with State Standards)

Art and the Environment

Social Studies, History, Geography

Social Studies Standard 1: History

Goal 1.1: Build an understanding of the cultural and social development of the United States.

Social Studies Standard 2: Geography

Goal 2.4: Analyze the human and physical characteristics of different places and regions.

- Have students make a geographical/geological timeline. The timeline can include notable glacial movements, tectonic plate shifts, and volcanic eruptions.
- Have students learn about the restoration or revitalization of an area or town in Idaho. For example, Indian Creek in Caldwell, Idaho was recently restored as a natural habitat to help revitalize the downtown area. Students can choose an area or town in Idaho that has undergone a similar process and find historical photographs that show the place as it looked before, and then provide more recent photographs that show how the area looks now.
- Make a list of different kinds of mass-transportation in the United States. Ask students to look for unique details about 19th century trains, trolley cars, busses, cars, and subways, as well as how each system has affected the environment. Students can consider the following questions: What is the most commonly used form of transportation today? What type of transportation do students and people in the community commonly use? How does this compare with transportation of the 19th century?

Language Arts

CCRA.R.1: Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

CCRA.W.3: Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

CCR.W.7: Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.

- Have students write a short fictional story about an environmental statistic, like wildfires or rising temperatures. The story can include a prediction of what might happen with a particular phenomenon in the next fifty years.

- Have students research an environmental issue and write about their findings. Have students extend their written research with an oral report or a visual presentation made with recycled materials.
- Ask students to research waste management and/or recycling efforts in their town/city and write a nonfiction news article using their findings. As a class, create a newsletter that contains the articles students created.
- Read a story with an environmental message, such as *The Lorax* by Dr. Seuss. Discuss the message and compare and contrast it to environmental issues from current events.
- Watch popular movies such as “The Day After Tomorrow,” “Wall-E,” or “FernGully: The Last Rainforest” as a class and discuss the environmental issues they address and whether their interpretation of the topic or consequence of an environmental phenomenon are realistic or not. Ask students to consider whether the events in the movies are happening now or if they could happen in the future and write an essay response that addresses these questions.
- Have students write a descriptive story about a habitat or environment. Ask them to write about a particular habitat or environment by describing the climate, vegetation, plants, and wildlife. Then, introduce a person into the story and describe how that person might impact the environment they have created.

Math

Measurement and Data

- Have students predict future statistics about consumption of products or transportation use based on current facts. For example, have students predict the number of cars per person in ten years based on facts they find about vehicle ownership 5 years ago and 10 years ago.
- Ask students to calculate the price of public transit versus the price of personal transportation over a six month period. How much money do you spend traveling on the subway for six months opposed to driving a car for six months? Consider variables such as the price of gas. After students have collected the data, they can make a bar chart that displays this information. For data regarding national transportation, visit the following website:
http://www.bts.gov/publications/national_transportation_statistics/#chapter_4
- Discuss the economic aspects of waste management. Discuss the most and least economical ways to dispose of waste. Have students create a line graph of both of these means of disposal to make a prediction of the prices for the next ten years.

Science and Physics

ESS: Earth and Human Activity

LS: Ecosystems

- Discuss the possible effects of climate change in our region (and in the world) as a class. Students can address the following questions: How would a change in our climate affect the biodiversity of our region, including wildlife and plant life? How would a change in our climate affect people living in our region?

- Have students compare and contrast different sources of energy. Examples can include wind, solar, nuclear, geothermal, hydrogen, fossil fuels and other sources of energy. Ask students to explain how different sources of energy work or are produced. Discuss the pros and cons of using each type of energy.
- Have students keep track of how much water they use in a weeklong period of time. Students can track their usage by counting the number of times they wash their hands in a day or the amount of time they leave the water on when they brush their teeth or take a shower. Have students share their data with the class and create a class graph of individual water use.
- Discuss recycling with your class. Have students make a list of materials that can be recycled and those that cannot be recycled. Start a recycling program in your school if you don't have one already. Find the nearest recycling center to get more information such as where the recycled materials go after you drop them off at the recycling center. For more ideas, visit the Environmental Protection Agency's website: <http://www.epa.gov/recyclecity/>

Technology

ICT Standard 1: Empowered Learner

ICT Standard 3: Knowledge Constructor

- Ask students to list new technology such as computers, cell phones and iPods that have been developed for purposes of entertainment or convenience. Students can consider the affect this has had on the environment and research and respond to the following questions: Is there more waste now than there was in the 1900s or 1800s? Why or why not?
- Have students discuss wind energy and create a model of a wind farm that illustrates the methods used to produce energy from wind on a smaller scale. Finished models can be displayed in the classroom with an explanation of how technology is used to harness energy from the wind.
- Take a class field trip to visit a wastewater facility or waste disposal site. Have students prepare questions to ask or research about how new technology is used in these processes while they are on the visit.

Arts

VA:Cr2.1 Organize and develop artistic ideas and work.

Enduring Understandings: Artists and designers experiment with forms, structures, materials, media, and art-making approaches. People create and interact with objects, places, and design that define, shape, enhance, and empower their lives.

VA:Cn10.1: Synthesize and relate knowledge and personal experiences to make art.

Enduring Understanding: Through art-making, people make meaning by investigating and developing awareness of perceptions, knowledge, and experiences.

- Divide students into groups and have them perform skits about environmental topics.
- Have students make handmade paper by recycling old newspaper and other paper sources. For step-by-step instructions and materials, visit the following website:

http://www.eduref.org/cgi-bin/printlessons.cgi/Virtual/Lessons/Science/Environmental_Education/ENV0020.html

- Have students record sounds they hear in their environment that are both natural and manmade such as water running in a river, tree leaves rustling in the wind, cars passing on a busy street, people talking or birds chirping. Students can use the digital recordings to create a song or other musical piece that reflects their environment.
- Have students create musical instruments by reusing objects or recyclable materials. For example, students can use metal container lids to create finger cymbals, or cardboard tubes to build maracas and kazoos.