

## ENVIRONMENT

### Objectives

- Students will map their community to determine a need for a recycling program.
- Students will be encouraged to become responsible for the environmental impact of their choices.
- Students will examine how they can take responsibility for lessening their impact on the environment through recycling.
- Students will take their new knowledge and use it to educate others in their school, family, and community.

### Essential Questions for Students

- How do individual choices to recycle affect our community?
- What personal responsibility do individuals have to recycle?
- What responsibility do individuals have to advocate for recycling?

### Outcomes

- Students will realize their ability to impact the environment.
- Students will develop oral and written presentation skills, such as engaging in collaborative discussions, writing informative texts, and supporting claims.
- Students will develop their ability to conduct research.

### Common Core State Standards

#### *English Language Standards, Writing, Grade 6*

- Text Types and Purposes: CCSS.ELA-Literacy.W.6.1 – Write arguments to support claims with clear reasons and relevant evidence.
- Text Types and Purposes: CCSS.ELA-Literacy.W.6.2 – Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

#### *English Language Standards, Speaking & Listening, Grade 6*

- Comprehension and Collaboration: CCSS.ELA-Literacy.SL.6.1 – Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others ideas and expressing their own clearly.

#### *Literacy in History/Social Studies, Science, & Technical Subjects, Writing, Grades 6-8*

- Production and Distribution of Writing: CCSS.ELA-Literacy.WHST.6-8.5 – 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.
- Production and Distribution of Writing: CCSS.ELA-Literacy.WHST.6-8.6 – Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.
- Research to Build and Present Knowledge: CCSS.ELA-Literacy.WHST.6-8.7 – Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.

### Community Connections

- Order educational materials from a local recycling facility. Be sure to invite them to send a speaker to the school.
- Visit a local recycling facility.
- Visit a local green business (a restaurant that uses local foods, a business that uses recycled materials or solar power, etc.).



- Check with local libraries to see if student work can be displayed for the community.

### Materials

- Large piece of paper for Know, Want to Know, Predict, Learned (KWPL) chart
- Materials from recycling facility or website
- Materials on landfills and biodegradability
- Materials for publishing stories
- Materials for building displays

### Vocabulary Terms

- **Biodegradable** – Capable of being decomposed naturally (by living biological agents such as bacteria).
- **Environment** – The circumstances or conditions that surround someone or something; surroundings. The totality of circumstances surrounding an organism or group of organisms: especially the combination of external physical conditions that affect and influence growth, development, and survival.
- **Landfill** – A landfill, also known as a dump or rubbish dump, is a site for the disposal of waste materials by burial and is the oldest form of waste treatment. Historically, landfills have been the most common method of organized waste disposal and remain so in many places around the world.
- **Recycle** – To extract and reuse materials from garbage or waste.
- **Sustainability** – The capacity to last or endure. For humans, it is the potential for long-term maintenance of well-being, which in turn depends on the well-being of the natural world and the responsible use of natural resources. Sustainable agriculture, for example, provides what we need to live now without jeopardizing the potential for people to meet their needs in the future.

### Lessons

Students will consider the life cycle of everyday objects and advocate recycling.

#### Building Knowledge (approximately one to two class periods)

- As a whole group, have students begin a KWPL chart answering the question “What happens to items that are thrown in the trash?”
- Have students read a book(s) on trash/recycling
- Review materials from local recycling facility or pre-selected website
- Review materials on landfills and the meaning of

#### Building Compassion (approximately one to two class periods)

- Have students bring in an object they use every day (nail polish, cell phone, plastic bag) and develop a story using this object as the main “character.” Student writing should trace the life cycle of this object from creation to being recycled or placed in a landfill.
- Writing ideas include:
  - Creating picture books to read to younger students.
  - Drawing a cartoon with captions.
  - Creating the story in PowerPoint.
  - Writing a play.

#### Taking Action (approximately two to four class periods)

- Students will create educational materials for the community regarding recycling.
- Using the stories that they developed in the Building Compassion lesson, students should create informational displays or brochures regarding recycling.



- Displays/brochures should include information on how to recycle the item (if possible), how long the item will stay in a landfill, the environmental impact of putting the item in a landfill, and solutions. Solutions can include alternatives to purchasing the product and/or alternative disposal methods.
- Complete the KWPL chart.
- Your Roots & Shoots project should end on a day when your students present their displays at an event with other students, parents, teachers, your school principal, and members of the community. Consider inviting local media to attend the presentation.

### Extension Activities

- Visit green businesses in your community and talk to the business owners about their decision to be environmentally friendly, as well as the effect that decision has had on their business.
- Create a list of environmentally friendly options to the product.
- Have a storyteller come to work with students on oral storytelling.

### Journal Questions

- How could the object you used as the main character of your story be manufactured in a way that would make the object more environmentally friendly? Write a letter to the manufacturer attempting to persuade the company to change how it makes this object.
- How do you think your object would feel to be in a landfill forever? How do you think your object would feel being recycled into something new? Why would your object feel this way?

### Additional Taking Action Activities

- Organize a “Going Green” contest for the school. Have classes submit ideas on how to make the school more environmentally friendly. Find ways to implement the top three ideas.
- Start a school garden to help provide organic vegetables for student lunches or snacks. Pizza and salsa gardens (cultivating herbs and other ingredients for those dishes) are both fun to grow and grow well in containers.
- Host a “Worm Composting Night” at school. Have fun working together to build composting bins for families to use at home. Families can bring their own supplies or locate a donor for the supplies. This could also be used as a school fundraising activity.
- Research a common food item from the school’s lunch menu and find out what it takes to get this item to the table. Discover how many miles it has to travel before it comes to your school, how long it takes to get to school, what chemicals are used in the process, and how much fossil fuel is used to grow it and transport it. Can you figure out what the food’s carbon footprint is? Once you have all the answers, find a way for your school lunch to make less of an environmental impact.
- Conduct a “water use audit” for your school and the school grounds. Look at where water is being wasted and what products or chemicals are being put into the water on a regular basis. Investigate ways your school can be less wasteful and more water-wise.
- Write your local representatives regarding environmental issues that are affecting you and your community.

### Accommodations/Modifications

- As a whole class, research the life cycle (from creation to disposal) of one trash item and ways to recycle that item.
- Allow numerous ways for students to present their findings.

### Family Connection

- Send an informative letter or email outlining your project to students’ families.
- Have students develop “recycling pledges” for family members to sign.

