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Oklahoma State Department of Education

Recycling is Elementary: A Study in Change and Conservation

AREA OF SERVICE	Environment and Education
COMMUNITY NEED	Conservation
TYPE OF SERVICE	Direct
SUBJECT AREA/LEVEL	Science/Pre-K - 3
CONCEPT	Change

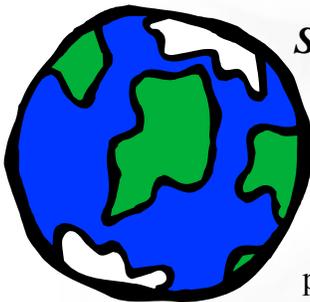


SERVICE-LEARNING PROJECT SUMMARY

This elementary school project uses student learning from a study of recycling to solve a community problem or need for resource management and conservation. Participating students will create bird feeders and distribute grocery bags within the community.

LEARNING STANDARDS

Oklahoma Priority Academic Student Skills



Science

Standard 3: Earth Science - The student will investigate and observe the basic concepts of Earth regarding simple conservation methods.

Language Arts

Standard 2: Writing/Grammar/Usage – The student will demonstrate appropriate practices in writing by applying standard English conventions.

Recycling is Elementary Implementation Outline

1. Teacher will “change” objects for student observation.
2. Teacher will guide students to reflect on the transformation demonstrated in step #1.

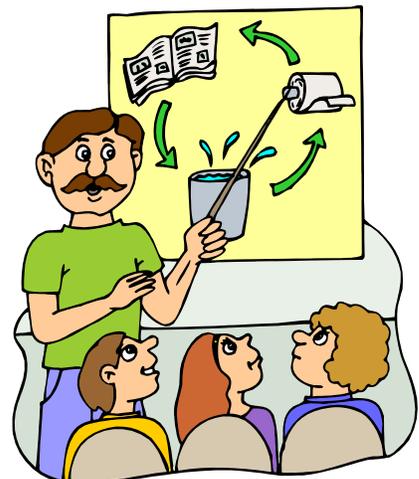
3. **Teacher will guide students to identify secondary uses for everyday objects.**
4. **Teacher will present information related to the concept of transformation through lecture, visuals, literary works, and activities. Topics will include conservation and littering.**
5. **Under teacher direction, students will practice and demonstrate their new learning and understanding of topics outlined in #4.**
6. **Students will identify a need in their community and design service project(s) that utilize the knowledge and skills developed in #4 and #5.**
7. **Students will refine their service project(s), identify any local, state, or national laws, agencies, or policies that relate to the identified community need and their proposed service, and articulate the civic and public meaning of their proposed service.**
8. **Students will implement the service project and share their accomplishments with the community.**

TEACHER'S GUIDE

Recycling is Elementary

Teacher's Note

Using the concept of “transformation” the teacher will engage students in an active unit of study around the science topic of “conservation” to solve a student-identified community problem. Teachers may collaborate with others to broaden student understanding of the concept including changing a word problem into symbolic form, word contractions, and voting as a method of change.



1. Teacher will “change” objects for student observation.

Activity: Prior to class, locate several transformer toys. In front of the class, ask for student volunteers to demonstrate how each toy transforms into a different object.

2. Teacher will guide students to analyze the changes in objects.

Activity 1: Discuss as a class each toy’s transformation. Ask students to identify the toy that they preferred and explain their choice. Explain to the students that even though the shape of the toy changed, the actual toy did not.

Activity 2: Ask students to identify other objects in life that can change shape.

3. Teacher will guide students to identify secondary uses for everyday objects.

Activity: The teacher will display several everyday objects e.g. a paper bag, a plastic bag, a water bottle, a milk jug, toothbrush, and a shoe box. The teacher will ask the class to identify each object and how it is used. Then, the teacher will ask the students to imagine other uses of these objects.



4. Teacher will present information related to the concept of change through lecture, visuals, literary works, and activities. Topics will include conservation and littering.

Activity 1: The teacher will read and discuss “The Wartville Wizard” by Don Madden to the class. Ask students to describe the behaviors of the characters in the story.

Activity 2: The teacher will bring clean “trash” from home that has the recycle symbol on it. The teacher will draw the recycle symbol on the board without any explanation. Each student will select one piece of trash and locate the symbol on the packaging. The class will discuss what they think that symbol means. The teacher will explain the symbol and define terminology related to conservation. Students will use potatoes to make a recycle stamp to be used in future activities.

Activity 3: The teacher will describe simple conservation measures used to protect the environment. Laws related to conservation and littering will be discussed.

5. Under teacher direction, students will practice and demonstrate their new learning and understanding of topics outlined in #4.

Activity: Students will create an ABC book of everyday objects. Each student will be assigned a letter of the alphabet. The students will practice writing their letters. Each student will create one page for the ABC book that contains the letter and three pictures of objects, which start with that letter (e.g. B is for bottle). Students will draw or locate pictures of objects in magazines and glue them onto their pages. If the object can be recycled, the students will use their potato stamps to mark the object. Completed pages will be bound and read to the class. The book will be kept in the room for students to use.

6. Students will identify a need in their community and design service project(s) that utilize the knowledge and skills developed in #4 and #5.

Activity 1: Students may identify a need in their community related to conservation to design a service project that utilizes their knowledge and skills of recycling and recyclable materials. For assistance in designing a service or action project refer to the resources listed at the end of this unit.

Activity 2: Students will collect empty milk jugs or other recycled containers and make bird feeders.

Activity 3: Students will collect paper grocery bags and decorate with recycle symbol or the recycle slogan, “Reduce, Reuse, Recycle.”



7. Students will refine their service project(s), identify any local, state, or national laws, agencies, or policies that relate to the identified community need and their proposed service, and articulate the civic and public meaning of their proposed service.

Activity 1: Students will analyze and refine their project design and develop a rubric for assessing the personal and community impact of their service.

Activity 2: Students will explore the deeper civic and public meanings of their service and synthesize any formal or informal government structures or laws related to the causes or effects of the community need addressed in their project. The class will discuss their understanding of the concept of change related to their personal responsibility to conserve.

Activity 3: Students will identify ways that they can recycle and conserve in daily life.

8. Students will implement their service project and share their accomplishments with the community.

Activity 1: Students will implement their project(s).

Activity 2: Students will analyze their service experience.



INTERNET and OTHER RESOURCES

Conservation

www.epa.gov

www.opala.org/recycling_businesses/mandatory_recycling.html

Recycling for Children

http://www.scire.com/recycle/bmes_recycles/

<http://recycling.stanford.edu/facstaff/kids.html>

<http://www.dnr.state.wi.us/org/caer/ce/eeek/earth/recycle/>

Recycling Survey

<http://www.dnr.state.wi.us/org/caer/ce/eeek/earth/recycle/recyquiz.htm>

Environmental Kids Club

<http://www.epa.gov/kids/garbage.htm>

Books

“The Wartville Wizard” by Don Madden