

## Waste in Specific Environments

### GRADES 2-5

**OVERVIEW:** Students will consider daily choices with regard to reducing, reusing, recycling, and composting (Rot) in a specific environment for a specified period of time. Students will generate ideas for alternative, environmentally informed, choices to their daily actions. Students will determine how their actions can impact others and implement a plan to educate and inform other community members.

### **DURATION:**

15 minutes daily for 1 week, and 30 – 45 minutes for the final project.

This lesson may be used as a daily activity for a longer period of time.

Variable: "Let's Compost" booklet may be assigned during class time or for homework

### **VOCABULARY:**

Reduce

Reuse

Recycle

Rot

Compost

Environment

Daily waste

### **MATERIALS:**

"Let's Compost" activity books

(Order from Clark County Solid Waste at 360-397-6118 X 4830)

Paper for sentence strips

### **PROCEDURE:**

Prepare a bulletin board with five columns (See "Teacher Planning Page and Samples" in this lesson). Label each of the first four columns "reduced," "reused," "recycled," and "rotted." Place large colored circles in the fifth column for the "object" of the day. Place one colored circle for each day of the activity in your lesson plan.

Each day select an object commonly thrown away, or wasted, in the classroom or another specific school environment such as the cafeteria or front office (ie: go look in the actual garbage in a specific area).

Each day pair students and give them 5 minutes to brainstorm and write sentence strips to be posted under the 4 headings. The sentence strip should explain how the given item could be Reduced, Reused, Recycled or Composted (Rotted).

Each day post and discuss the ideas.



Continue this exercise for one week or more.

**Final Project:** Use the ideas generated in the preceding days to create posters with slogans and mottos to remind fellow students or community members to avoid waste by reducing, reusing, recycling and rotting. Display the posters in halls and classrooms or at a community partner.

See "Poster Criteria" for this project.

**ASSESSMENT:**

Use the **Poster Grading Rubric** to assess the final project. Students may use the rubric for self-assessment.

**EXTENSIONS:**

Perform a "waste audit." Contact Clark County Solid Waste to help coordinate this activity. After consulting with an SOS Education Team member at Clark County Solid Waste, alert the custodian to set aside garbage (do not send it to the dumpster) for your audit. Clark County will provide a containment pool and gloves for students.

The bags of garbage will be sorted into categories such as "paper," "food," plastics," and "Styrofoam." Then students will determine which items could have been recycled or rotted had they been placed in the proper sorting bin. Students will then calculate the percentage of waste that could have been reduced and report their findings to the school during the end of day announcements or by creating posters to be displayed in the cafeteria to remind students how their daily actions impact the environment.

A follow up audit may be scheduled to compare the results after "re-educating" students about the school's recycling programs.

***Clark County Solid Waste will provide a reward, such as a pizza party, as a thank you to any school in the county that conducts 2 audits resulting in reduced waste!***



**Teacher Planning Page Sample**

**4 R's EVERYDAY – A CHOICE BOARD**

Reduced	Reused	Recycled	Rotted	
Bring a reusable bottle from home and fill	Refill the water bottle	Put all water bottles in the proper recycling bin	X	Water Bottle
Use the back of the paper to reduce the number of pages used	Use the back of the paper as scratch paper	Put the paper in the recycle bin	Shred the paper and use it to bed a worm bin	Notebook paper
Use 1 paper towel instead of 27	Set clean paper towels out to dry and use under paint projects	X (end of "life cycle")	Put in the SOS compost bin	Paper Towels
X	X	X	Put in the SOS compost bin	Apple Core



**Teacher Planning Page**  
**4 R's EVERYDAY – A CHOICE BOARD**

Reduced	Reused	Recycled	Rotted	(object of the day circles)

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Reduced	Reused	Recycled	Rotted	(object of the day circles)



## Poster Criteria

### Each poster will include the following criteria:

- A title stating a clear message about REDUCE, REUSE, RECYCLE or COMPOST (ROT).
- A picture showing how the item is REDUCED, REUSED, RECYCLED or COMPOSTED (ROT).
- The poster should be attention getting and informative.
- All areas of the page should be filled.
- The text and images should create overall balance.
- Use best quality workmanship and make sure the poster is complete.

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**Poster Grading Rubric**

<b>CATEGORY</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
<b>Preproduction Plan</b>	The poster planning page is complete.	The poster planning page is mainly complete.	The poster planning page is incomplete in 3 or more sections.	The poster planning page is incomplete and will not provide the information needed to complete an informed poster.
<b>Required Elements</b>	The poster includes all required elements as well as additional information. Information is accurate and comes mainly from the research planning page.	All required elements are included on the poster. Information is accurate and comes mainly from the research planning page.	All but 1 of the required elements are included on the poster. Information is accurate and comes mainly from the research planning page.	Several required elements were missing. Some information is inaccurate or comes from a source other than the research planning page.
<b>Text Elements</b>	All items of importance on the poster are clearly labeled and can be read from at least 3 ft. away. Text is appropriate in length for the target audience. Background and color enhance the readability of text.	Almost all items of importance on the poster are clearly labeled with labels that can be read from at least 3 ft. away. Text is appropriate in length for the target audience.	Many items of importance on the poster are clearly labeled with labels that can be read from at least 3 ft. away.	Labels are too small to view OR no important items were labeled.
<b>Graphics - Relevance</b>	All graphics are related to the topic and make it easier to understand.	All graphics are related to the topic and most make it easier to understand.	All graphics relate to the topic	Graphics do not relate to the topic.
<b>Technical &amp; Composition</b>	The poster is attractive in terms of design, layout and neatness. The background is considered as well as objects drawn. The objects are complete and color has been added.	The poster is attractive in terms of design, layout and neatness. The objects are complete and color has been added.	The poster is acceptably attractive though it may be a bit messy. The objects are complete but only partial color has been added.	The poster is distractingly messy or very poorly designed. The background and objects separate, shapes float and are unrelated. Color is not used.
<b>Writing Mechanics</b>	The text is written with no errors in grammar, capitalization, punctuation, and spelling.	The text is clearly written with little or no editing required for grammar, capitalization, punctuation, and spelling.	Spelling, capitalization, punctuation, and grammar errors distract or impair readability (3 or more errors).	Errors in spelling, capitalization, punctuation, usage and grammar distract or impair readability (more than 5 errors)



## EALR CONNECTIONS

### **SCIENCE**

1. **SYSTEMS:** The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.
  - 1.1. Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects, and how characteristics are used to categorize living things.
  - 1.2. Structures: Understand how components, structures, organizations, and interconnections describe systems.
  - 1.3. Changes: Understand how interactions within and among systems cause changes in matter and energy.
3. **APPLICATION:** The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.
  - 3.1. Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

### **SOCIAL STUDIES:**

#### **CIVICS**

4. The student understands the rights and responsibilities of citizenship and the principles of democratic civic involvement.
  - 4.1 understand individual rights and their accompanying responsibilities
  - 4.3 explain how citizen participation influences public policy

#### **GEOGRAPHY**

2. The student understands the complex physical and human characteristics of places and regions.
  - 2.2 describe the patterns humans make on places and regions
3. The student observes and analyzes the interaction between people, the environment, and culture.
  - 3.1 identify and examine people's interaction with and impact on the environment
  - 3.2 analyze how the environment and environmental changes affect people

#### **HISTORY**

3. The student understands the origin and impact of ideas and technological developments on history and social change.
  - 3.1 explain the origin and impact of an idea on society
  - 3.3 understand how ideas and technological developments influence people, resources, and culture

### **READING** (*"Let's Compost"*)

- 1: The student understands and uses different skills and strategies to read.
  - 1.1 Use word recognition skills and strategies to read and comprehend text.
  - 1.2 Use vocabulary (word meaning) strategies to comprehend text.
  - 1.3 Build vocabulary through wide reading.
  - 1.4 Apply word recognition skills and strategies to read fluently.



2: The student understands the meaning of what is read.

2.1 Demonstrate evidence of reading comprehension.

2.2 Understand and apply knowledge of text components to comprehend text.

2.3 Expand comprehension by analyzing, interpreting, and synthesizing information and ideas in literary and informational text

3: The student reads different materials for a variety of purposes.

3.1 Read to learn new information

3.4 Read for literary/narrative experience in a variety of genres

### **WRITING**

2. The student writes in a variety of forms for different audiences and purposes.

2.1 Adapts writing for a variety of audiences.

2.2 Writes for different purposes.

4. The student analyzes and evaluates the effectiveness of written work.

4.1 Analyzes and evaluates others' and own writing.

### **COMMUNICATION**

1. The student uses listening and observation skills and strategies to gain understanding.

1.1 Uses listening and observation skills and strategies to focus attention and interpret information.

1.2 Understands, analyzes, synthesizes, or evaluates information from a variety of sources.

2. The student uses communication skills and strategies to interact/work effectively with others.

3. The student uses communication skills and strategies to present ideas and one's self in a variety of situations.

3.1. Uses knowledge of topic/theme, audience, and purpose to plan presentations.

3.2. Uses media and other resources to support presentations.

3.3. Uses effective delivery.

The student analyzes and evaluates the effectiveness of communication.

4.1. Assesses effectiveness of one's own and others' communication.

### **MATH**

2.1 investigate situations

2.2 formulate questions and define the problem

2.3 construct solutions

4. The student communicates knowledge and understanding in both everyday and mathematical language.

4.1 gather information

4.2 organize and interpret information

4.3 represent and share information

### **HEALTH & FITNESS**

3. The student analyzes and evaluates the impact of real-life influences on health.

3.1 understand how environmental factors affect one's health

3.4 understand how emotions influence decision making



**ARTS:**

2. The student demonstrates thinking skills using artistic processes.

2.1 Apply a creative process in the arts:

2.2 Apply a performance process in the arts:

· Present work for others

· Reflect and evaluate

3. The student communicates through the arts.

3.2 Use the arts to communicate for a specific purpose



**OSPI ENVIRONMENTAL/ SUSTAINABILITY GUIDELINES:**

*These Environmental Education Guidelines for Washington Schools clarify the interdisciplinary nature of any study of the environment and show directly how it advances the fundamentals of student learning. Throughout the basic subject areas, there are innumerable opportunities to introduce students to matters and context related to the environment while at the same time meeting the essential academic learning requirements.<sup>1</sup>*

**EE Goal I. The student will develop knowledge about the components of the environment and understand their interactions within natural systems.**

Objective A: The student will analyze the interrelationships of living and nonliving components within ecosystems.

Objective B: The student will investigate how, over time, populations of organisms are influenced by limiting factors within ecosystems.

Objective C: The student will evaluate interactions occurring between humans and the environment.

Objective D: The student will examine the implications of resource conservation.

**EE Goal II. The student will understand how social and natural systems are fundamental in supporting our lives, economy, and emotional well-being.**

Objective A: The student will explain the relationship between health and the environment.

Objective B: The student will investigate the relationship between a viable economy and responsible use of natural resources.

Objective C: The student will explore the relationship between nature and creativity.

Objective D: The student will examine the role that cultural values plays in how people relate to the environment.

Objective B: The student will understand how ideas and technology can influence the natural and built environment.

**EE Goal III. The student will recognize how individual decisions and actions impact the environment.**

Objective A: The student will investigate how individuals can shape and influence cultural interactions with the environment.

Objective B: The student will analyze how personal decisions and actions alter the outcomes of environmental topics.

**EE Goal IV. The student will develop and utilize the knowledge and skills necessary for cooperative action to maintain or enhance the environment.**

Objective A: The student will evaluate the usefulness of effective communication and participation in resolution of environmental topics.

Objective B: The student will evaluate historical and contemporary interactions between governments (local, state, and national) and interest groups in environmental policymaking.

Objective C: The student will investigate how involvement in political and legal processes is paramount to resolving environmental topics.

Objective D: The student will actively participate in seeking sound scientific information and participate in developing and applying this information for solving environmental problems.

<sup>1</sup> *Environmental Education Guidelines for Washington Schools, July 2000, pg. i*

