

Dedicated to Reducing Pesticides

Unit 5 Section 3 Lesson 1: Of Loraxes and Wumps

Focus Areas: Environmental Science, Language Arts Focus Skills: comparing/contrasting, understanding cause and effect, determining problems and solutions, developing literary analysis

Objectives

- To recognize that man's activities impact the natural environment
- To recognize the theme of a fictional piece
- To understand how fiction reflects truth

Essential Questions

- How can technology impact our planet Earth?
- How do the authors of stories make people aware of real life problems?
- How can we reduce pollution?

Essential Understandings

- Technology, designed to make our lives more comfortable, can impact the natural environment in a negative way.
- Authors often write stories that illustrate real problems.
- We share our environment with other living things both plant and animal, and depend on them to live. Therefore, we need to take care not to damage our natural environment.

Background

This is a mini unit designed to call attention to the problem of pollution. In a series of four lessons, participants will examine two pieces of children's literature in order to better understand the impact human activity can have on the natural environment. They will develop a





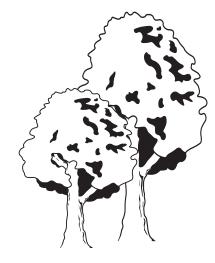


personal plan to reduce some form of pollution. Furthermore, they will conduct a scientific observation to determine the degree of air pollution in and around their building.

Summaries of the Stories

The Lorax by Dr. Seuss deals with the dual problems of pollution and environmental damage. Children age six and older, as well as adults, will find much to ponder in its story of capitalist greed gone amok. The Lorax is a creature that once lived in a beautiful paradise, populated by animals and trees. When Mr. Once-Ler comes along and starts cutting down trees to make the profitable (but useless) Thneeds, the Lorax voices concern. Mr. Once-Ler ignores the Lorax's warnings, and lives to regret it. Eventually, paradise becomes a barren wasteland. All the trees are cut down; the factory has closed; the animals, birds, and fish have fled; and the air is polluted. Even the Lorax is gone. The fate of the Lorax is put in the hands of a young child at the end, when the chastened Mr. Once-Ler gives him the last tree seed, with the admonition, "Unless someone like you cares a whole awful lot, nothing will change."

The Wump World by Bill Pete tells the story of a species, Wumps. The Wump planet is very green, serene, and peaceful. One day, many spaceships carrying thousands and thousands of "aliens" invade it. These aliens are called Pollutians. The Wumps are so scared that they retreat into hiding. They have no idea what the Pollutians are doing to their planet. The Pollutians had so destroyed their own planet that they had to find a new place to live. They found the Wump planet and proceeded to destroy that one as well. When the Pollutians find another planet to destroy and they leave, the Wumps are able to come out of hiding. They do not recognize their planet anymore. In the midst of all the concrete and pollution, the Wumps find one patch of grass and vegetation and they know that slowly, life will return to normal. *The Wump World* is an excellent example of how humans pollute the environment.





Pollution Facts

- Some sources of air pollution are: smog from traffic, cigarette smoke, products that emit chemical fumes, factories, machinery, airplanes, etc.
- Sometimes factories release heated water into rivers. This kills creatures that are not used to the warmer environment.
- Air pollution can cause diseases and harm crops.
- Industrialization threatens Earth's natural habitat.



Vocabulary

consumer	a person who uses products or services
ecosystem	the plants, animals, and natural resources that occupy a particular area
endangered	a group of living organisms whose numbers have been drastically reduced
environment	the conditions in which a plant or animal lives
extinct	a species of plants or animals that no longer exist
industrialization	the use of machines to develop products from natural resources
natural resource	materials that exist in nature such as water, trees, and gold
non-renewable resource	a resource that is available in a limited quantity (gold)



pollutant	solids, liquids, or gases that foul the natural environment
renewable resource	a resource that can be recreated (trees)
technology	industrial science. The use of science to achieve practical goals.
theme	the underlying message or "big idea" in a story
Logistics	Time: four 40-minute sessions Group Size: 5 to 30 Space: an area for comfortable seating and working; access to areas outside the room



Materials

Handout 1 "Discussing *The Lorax*" * Handout 2 "Discussing *The Wump World*" * Handout 3 "Compare and Contrast *The Lorax* and *The Wump World*" * *The Lorax* by Dr. Seuss * *The Wump World* by Bill Peet *

* single copy provided



Preparation

- Prepare multiple copies of Handout 1, "Discussing *The Lorax*," Handout 2, "Discussing *The Wump World*," and Handout 3, "Compare and Contrast *The Lorax* and *The Wump World*."
- 2. Obtain the books from the kit.



Activity



Challenge: Analyze, compare, and contrast two environmental stories. (*Display for group viewing.*)

Introduction

- 1. Print the word **Pollution** on a surface that everyone can see.
- 2. Brainstorm the sources of pollution and write them underneath the word **Pollution**.
- 3. Explain that these are the **causes** and **pollution** is the **effect**.
- Examine the causes listed, and invite the children to take a step back in order to determine what/who caused the problem/effect (pollution).
- 5. Ask how people can be made aware of the pollution problem. Record the responses.
- 6. Discuss the possibility that make-believe stories (fiction) can teach us things about problems in our real world.

Involvement

SESSION 1 Analysis of The Lorax (40 minutes)

- 1. Invite the children to listen to *The Lorax* and try to discover the message that Dr. Seuss is giving us.
- 2. Distribute Handout 1, "Discussing *The Lorax*," to guide the participants' viewing.
- 3. Read The Lorax.
- 4. Discuss the book using Handout 1.

SESSION 2 Analysis of The Wump World (40 minutes)

1. Invite the children to listen to *The Wump World* and try to discover the message that Bill Peet is giving us.



- 2. Distribute Handout 2, "Discussing *The Wump World*" to guide the participants' listening.
- 3. Read *The Wump World* and Handout 2.
- 4. Pause in the reading to discuss parts of the story using Handout 2.

SESSION 3 Compare and Contrast the Stories (40 minutes)

- 1. Divide the group into partners.
- 2. Distribute Handout 3, "Compare and Contrast *The Lorax* and *The Wump World*."
- 3. Allow time for completion of comparison and contrast.
- 4. Discuss results.

Follow Up

SESSION 4

Additional Focus Area: Science Additional Focus Skills: applying the scientific method

Additional Time: 40 minutes, plus 10 minutes per day for 5 days to check experiment



Materials

Handout 4 "Directions" * Handout 5 "Lab Report" * 5 labels colored markers five jar lids several gift boxes, at least 9" x 12" (coat with Vaseline® so particulate matter sticks better) magnifying glasses Assessment for a Lab Report *

*single copy included



Background

Particulate matter is made up of tiny particles in the atmosphere that can be solid or liquid (except for water or ice) and is produced by a wide variety of natural and man made sources. Particulate matter includes dust, dirt, soot, smoke, and tiny particles of pollutants that have attracted an amount of water so small that it does not fall to the ground as rain. Major sources of particulate pollution are factories, power plants, refuse incinerators, motor vehicles, construction activity, fires, and natural windblown dust.



Vocabulary

particulate matter

tiny particles of pollutants, either solid or liquid, which exist in the air

To_{Do:}

Preparation

- 1. Collect materials.
- 2. Make copies of Handout 4, "Directions" and Handout 5, "Lab Report."

Activity

Challenge: Analyze, compare, and contrast two environmental stories. (*Display for group viewing.*)

Introduction

- Tell the group they are going to conduct an experiment to determine the air quality in their school or other indoor environment.
- 2. Introduce the **Vocabulary** and have participants give examples.
- 3. Divide the group into teams of four.



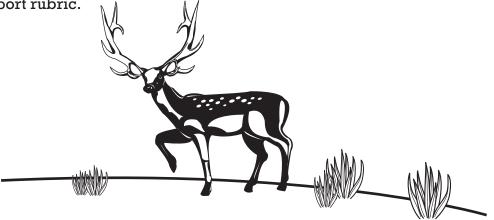
- Distribute Handout 4, "Directions" and Handout 5, "Lab Report" (one per team) and read through together to clarify task assignment.
- 5. Distribute materials to each team.

Involvement

- 1. Each team prepares their labels according to the directions given in Handout 4.
- Have the teams select a site to conduct the experiment. (playground, area where the busses and cars arrive/depart, a room, cafeteria, office, etc.)
- 3. Using Handout 5, "Lab Report," have each team make their observations over the next five days.
- 4. Results are recorded each day.
- 5. On the fifth day, each team evaluates the degree of pollution based on the data they have collected.
- 6. Each team reports its conclusion to the group. These are recorded on black/white board or chart paper.
- 7. Sites are rated from least to most polluted areas in the environment.
- 8. Have children complete Handout 5.

Assessment

Collect the lab reports and evaluate using the Assessment for a Lab Report rubric.



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