



Using Dr. Seuss's *The Lorax* to help students discover Sustainability

Overview

In this activity, students read Dr. Seuss's *The Lorax* and answer questions that will promote the discovery of sustainability as a concept. This activity is an adaptation of the lesson titled *The Lorax and Sustainable Development* developed by Dr. John Ramsey at the University of Houston for Texas Parks and Wildlife (<http://www.tpwd.state.tx.us/learning/resources/activities/lorax.phtml>).

Courses

Earth and Environmental Science; Biology; Civics and Economics

Alignment to the North Carolina Standard Course of Study

This activity can be used to integrate the *Science in Personal and Social Perspectives* strand into the curriculum.

Earth and Environmental Science

- Objective 2.06: Investigate and analyze the importance and impact of the economic development of earth's finite rock, mineral, soil, fossil fuel and other natural resources to society and our daily lives:
 - Conservation/Stewardship.
 - Environmental impact.
 - Challenge of rehabilitation of disturbed lands.
- Objective 2.07: Analyze the sources and impacts of society's use of energy.
- Objective 4.04: Evaluate water resources:
 - Causes of natural and manmade contamination.

Biology

- Objective 5.01: Investigate and analyze the interrelationships among organisms, populations, communities, and ecosystems.
- Objective 5.03: Assess human population and its impact on local ecosystems and global environments:
 - Climate change.
 - Resource use.
 - Sustainable practices/stewardship.

Civics and Economics

- Objective 9.04: Assess how current events impact decisions made by consumers, producers, and government policy makers.
- Objective 9.08: Analyze the influence of environmental factors, economic conditions, and policy decisions on individual economic activities.

Essential Questions

- How can economic development impact the environment?
- What are the three components of sustainability?
- What is sustainable development?
- Whose responsibility is it to protect the environment?

Materials

- Copy of *The Lorax*, one book per group
- Copy of student worksheet, one per student (attached)
- *Three parts of Sustainability: Two Interpretations* figure (attached)

Duration

35-45 minutes

Procedure

1. Divide students into pairs or small groups and instruct them to read the book aloud together. Alternatively, you may show the movie to the entire class and then provide each group with a copy of the book to use while completing the worksheet. The movie can be viewed for free by going to:
<http://video.google.com/videoplay?docid=6650219631867189375>
2. Instruct students to complete the accompanying worksheet upon completion of reading the book (or watching the movie) by referring to the text and the pictures in the story.
3. Once students have completed the worksheet, guide them into a discussion that will enable them to discover a definition of sustainability by verbalizing how the economy, society, and the environment are connected.
 - a. In the story, how did the thneed industry affect the physical environment?
 - b. How did these environmental conditions affect local plants and animals?
 - c. How did thneed production affect Once-lers and people (employees, neighbors, etc.)
 - d. Based on your observations from this story, was this method of manufacturing thneeds sustainable?
 - e. How would you define the phrase “sustainable development?”
4. Conclude this discussion by offering a definition of sustainability and describing its three components (environment, economy, society).
5. Conclude this activity by discussing one or more of the following questions:
 - a. How could the Once-ler have manufactured thneeds in a more sustainable manner?
 - b. Whose responsibility is it to protect the environment and ensure sustainable practices?
 - c. What federal, state, and local agencies exist to protect the environment?

Culminating Activities

- Ask students to draw a diagram showing the flow of material(s) and energy used to produce a thneed.
- Ask students to pick a character from the book and write a speech advocating for or against environmental regulations in the Land of the Truffula Trees.
- Inform students that they are to imagine they are members of NC’s Environmental Management Commission (EMC) and must determine how they would address the environmental concerns in the Land of the Truffula Trees (see also *Examining Responsibility and the Environment with The Lorax*).
- Ask students to assess the sustainability of another product or service.
- Ask students to locate a news article that describes how the environment is being impacted by economic development in NC.

Differentiation

Students with Special Needs

- Place students in mixed ability partners or small groups for activity completion.
- Show the movie instead of asking students to read the book. The movie can be viewed for free by going to:
<http://video.google.com/videoplay?docid=6650219631867189375>
- Give students additional time to read and complete the worksheet.
- Discuss the book as a class in lieu of asking students to complete the worksheet.

AIG

- Use the *Three parts of Sustainability: Two Interpretations* figure to prompt a discussion about which visual provides a better model of sustainability.
- Instruct students to investigate a local natural resource that is being utilized to make a particular product and determine the sustainability of this industry, especially in light of climate change.

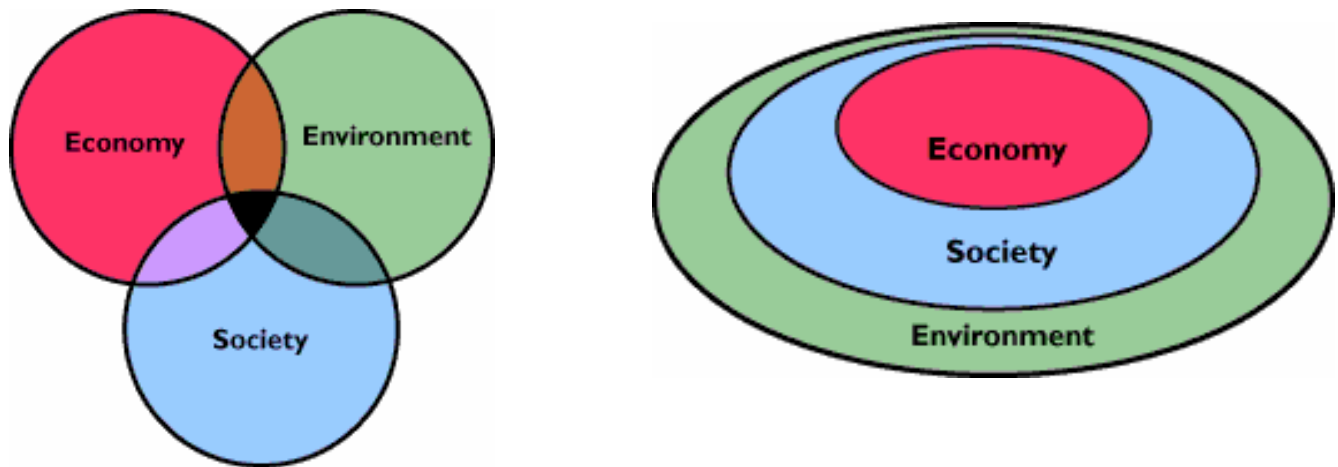
Sustainability Resources

- EPA’s Sustainability Home Page
<http://www.epa.gov/sustainability/index.htm>
- Energy Information Administration
<http://www.eia.doe.gov/kids/energyfacts/saving/recycling/solidwaste/sourcereduction.html>
- Report of the World Commission on Environment and Development: Our Common Future

<http://www.un-documents.net/wced-ocf.htm>

- Sustainable Measures
<http://www.sustainablemeasures.com>

Three parts of sustainability: *Two Interpretations*



From: <http://www.sustainablemeasures.com>

Student Worksheet to accompany *The Lorax*

Name: _____

1. Name the natural resource the Once-ler identified:

2. Name and describe the Once-ler's product:

3. Identify the various parts and their uses in the manufacture of thneeds by completing the table below:

	Used in the manufacture of Thneeds?	If so, describe how this part was used during the manufacturing of thneeds.	Positive Effects of Use	Negative Effects of Use
Raw materials				
Product design				
Labor (workers)				
Assembly line				
Energy				
Shipping, transportation				
Communication				
Profits/ losses				

4. Observe how the thneed factory changed over time; describe how the factory changed as the business grew.

5. What technology did the Once-ler invent to increase the production of thneeds?

6. How did the thneed industry affect the physical environment (water, air, soil etc.)?

7. How did the production of thneeds affect the local plants and animals?
 - a. truffula trees

 - b. Bar-ba-loots

 - c. Humming fish

 - d. Swomee swans

8. Byproducts are materials or chemicals remaining after the production of a product.
 - a. Name two byproducts that resulted from making thneeds.

 - b. Were the byproducts that resulted from the making of thneeds harmful or helpful to the environment?

 - c. Were any animals affected by the byproducts of thneed production? If so, how were they affected?

9. Look at page one and describe the environment that exists many years after thneed production has ended. Why hasn't the environment returned to a pre-thneed state?

10. What lesson(s) do you think the Once-ler learned?