Post-Assessment Activity

Subject Areas:

Science

Language Arts

Visual Arts

Skills:

Discussion, thinking (application, analysis, synthesis, and evaluation)

Materials:

- Diagram of shoe life cycle
- Diagram of shoe life cycle located in Resource Guide (pg 69)

Key Vocabulary:

sustainable, sustainability, natural law, Earth system conditions

FOCUS

To assess what students know about sustainably managing the components of a product life cycle by comparing this activity with the results of the pre-assessment.

CONCEPT

Like living things, manufactured products have a life cycle; and they impact Earth system conditions. Companies can take responsibility for managing product life cycles sustainably so that resources are not depleted or permanently damaged. Consumers can take actions as individuals or as a group to practice sustainability and to influence manufacturers to produce goods in environmentally sustainable ways.

LEARNING OBJECTIVE

Students create an enhanced schema for "sustainable" product life cycle, i.e., a systematic attempt at using resources in ways that will neither deplete nor permanently damage them, in ways that are compatible with natural laws, and so that there is no limited negative impact on Earth system conditions.

PREP TIME: 2 MIN.

Use the remaining half of the pre-assessment activity sheets. (Alternatively, make a chalkboard drawing or an overhead transparency and have students reproduce it themselves on drawing paper.)

CLASS TIME: 20-25 MIN.

Procedure

1. Review the concept of product life cycle, the science of nature principles, and Earth system conditions.
2. Call attention to the diagram of the product life cycle.
3. Remind students about the diagrams they created when they began this unit. Have them do the activity again – this time reflecting unit activities and the concepts of Earth systems and sustainability. What can businesses do to manage product life cycles sustainably? What can consumers do to practice sustainability and influence manufacturers to produce goods in environmentally sustainable ways?

Evaluation/Wrap-Up

Students share information on diagrams with class. Compare "before" and "after." What is different? How is it different? Why did they make the changes they did? Collect and file in student portfolios.

Students' diagrams will likely be "enriched" and should indicate increased understanding of the following concepts:

- approaches to sustainable manufacturing that acknowledge natural law and impact of manufacturing on Earth system conditions
- source reduction, multiple uses of energy, pollution prevention, resource conservation, and ways to close the loop
- how consumers can act on behalf of sustainable manufacturing

background

This activity allows students to reassess what they know about product life cycle and integrate what they've learned about sustainability. By comparing earlier and later drawings, teachers can assess whether learning has taken place, and gauge its depth.

Jerome Bettis:

"Cleaning up the environment is a big job that requires strategy and momentum."