

Problem-Based Learning Unit Template

Topic

Living Systems, Life Processes and Resources

Goals/Objectives

The student will investigate and understand

- basic plant and life processes.
- that behavioral and physical adaptations allow animals to respond to life needs.
- that plants and animals undergo a series of orderly changes in their life cycles.
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- that plants have life needs and functional parts and can be classified according to certain characteristics.
- how plants and animals in an ecosystem interact with one another and the nonliving environment.
- relationships among organisms in aquatic and terrestrial food chains.
- that environments support diversity of plants and animals that share limited resources.
- that living things are part of a system.
- important Virginia natural resources.
- that natural events and human influences can affect the survival of species.
- That plants produce oxygen and food, are a source of useful products and provide benefits in nature.
- that natural resources are limited.
- that materials can be reused, recycled, and conserved.

The students will:

- use effective oral communication skills in a variety of settings.
- Use effective communication skills in groups activities.
- expand vocabulary and comprehension when reading by

using word-reference materials and vocabulary from other content areas.

- read and demonstrate comprehension of nonfiction texts.
- demonstrate comprehension of information from a variety of print and electronic resources.
- write cohesively for a variety of purposes.
- write a short report, letters and simple explanations.
- use available technology for reading and writing.
- demonstrate comprehension of information resources to research a topic.

The students will:

- demonstrate skills for historical and geographical analysis and responsible citizenship.
- Recognize the importance of government in the community and Virginia.

The student will:

- estimate and measure length, liquid volume, and temperature.
- collect, organize, display, and interpret data a variety of graphs.
- construct graphs to represent data from observations, surveys, measurements, or experiments.
- investigate and describe the concept of probability as chance and list possible results of a given situation.

Theme

Human Interaction with the Environment

Scenario

Nature areas have been developed throughout the state to educate the public about nature and for recreation.

At Pocahontas Elementary School, the Outdoor Classroom was developed as an educational tool to learn about the forest ecosystem. It is to be used by POCES students and the community.

Over the years, these are some problems we have seen:

- Stepping stones broken
- Shed destroyed
- Litter in pond and garden areas

- **Tree identification signs taken**
- **Signs taken out of the ground**
- **Compost bin broken**
- **Benches destroyed**
- **Items thrown into the pond**
- **Pond barrier destroyed**
- **Garden plants pulled up**

How can we best educate people to take care of our outdoor classroom and other nature areas?

Culminating Activity

Possible (as suggested by the students):

- **Published field guide (primary goal)**
- **Web page**
- **Letter writing campaign to local newspaper**
- **User guides available in outdoor classroom**
- **Restoration plan**

Problem Question

How can we best educate people to take care of our outdoor classroom and other nature areas?

Student Role

Our students will become stewards of the outdoor classroom, champions of nature, and public spokespersons for environmental awareness.