

ENVIRONMENTAL PATCH

Study Guide For Environmental Camp Experience And Research



Statement of Purpose: The Environmental Patch is an area of commitment for the continuing health of planet Earth. Your purpose is to work to maintain and improve the quality of **natural resources** within our environment for the long term benefit of all who live here. (This outline will be used to formulate information while exploring an Environmental Camp.)

THIS SHEET IS A REQUIREMENT AND MUST BE TURNED IN WITH YOUR PROJECT!

1. What were you interested in learning at the Environmental Camp?
(PURPOSE)

2. What did you do? Describe the experience that you had at the Environmental Camp. (PROCEDURE)

3. If you were to do this again, how would you do it? Describe what you

observed, materials used, and sequence of events. How would you describe what you did to a friend? (MATERIALS)

4. What did you learn from this experience? (RESULTS)

5. What conclusions can you draw from this that will impact our natural resources in the future? (CONCLUSIONS)

HOW WILL I DISPLAY MY PROJECT?

Display should include some of the following:

- artifacts
- photographs
- illustrations
- maps/graphs
- tools
- brochures/pamphlets
- equipment/specimens

You will need to create a display and describe/explain your experience in order to earn an Environmental Patch.

Environmental Studies Program
Science Enrichment and Extensions

ENVIRONMENTAL

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1. Environmental Camp Experience

Students will be able to choose an area of interest for expanding their knowledge after attending an Environmental Camp (i.e. Deep Portage, Wolf Ridge, etc.) . Students will be able to earn an Environmental Patch by completing the work sheet titled Study Guide For Environmental Camp Experience And Research and developing a display to be presented during the PATCH SCIENCE DAY held at school.

2. Changing Land Values

Students will be able to describe some of the changes in land use in their community. Conduct a survey to determine the different ways the community uses space (land). This information could be gathered by analysis of community maps, interviews of local officials, and even some walking surveys. How much land

is devoted to parks, roads, buildings, human-made lakes, parking lots, and other uses? Discuss these changes from different points of view. How would you feel if you were a merchant? A lumberperson? A small child? What are some of the effects of these land-use changes on plants and animals?

3. What's In Soil

Measure one square foot area of ground. Examine carefully all of the soil in this area to a depth of three inches. Identify and describe the living (worms, roots, insects) and nonliving (rocks, dead vegetation, moisture) components of the soil. Discuss the role each component of the soil plays in plant growth. List the trees that grow in the areas in which each of the kinds of soil was gathered. Are the trees and other vegetation the same kind? Describe possible implications of soil conditions and types for wildlife.

4. Fertilizers

Describe some effects of animal, chemical, and /or mineral concentrations on plant growth. Plant seeds in containers using a variety of specified amounts of fertilizer in each container. Label the containers with the amount of fertilizer used. Water and care for the plantings in each container over a period of time, using equal amounts of water to keep the soil moist but not saturated. Show the results through charts or graphs. What was the best fertilizer to provide nutrients for the plants?

5. Did You See That Dogwood Bark?

Differentiate between species of trees through descriptions of bark characteristics. What is its color? How does it feel? How does it look? Does it have an odor? Is the bark thick or thin? Do the cracks in the bark on the tree run up and down or run sideways? Make rubbings of various textures of the bark of trees. What similarities can be observed between the barks of different trees? How does the bark of a tree differ during stages of growth.

6. Rainfall And The Forest

Rainfall is one of the factors which naturally limit the extent of the forest and other major vegetative types. Obtain a map of the state or region which indicates the land area covered by forest and other major vegetative types. Complete a display that indicates how rainfall levels correspond with the different types of vegetative areas. Whether various types of forests, grasslands, or vegetation occur only in areas with rainfall levels that are within a certain range. How much

rain different types of trees and other vegetation seem to need. How important the forest in your region are as watersheds. How important forests are to your community's watershed. Other living and nonliving things need rainfall, explain why rainfall is important to each.

7. Everybody Needs A Home

Humans and other animals, including pets, farm animals, and wildlife have some of the same basic needs. Every animal needs a home. The home is not just a "house" like people live in. Home, for many animals is a much bigger place and it's outdoors. An animal's habitat includes food, water, shelter and space. Because animals need the food, water, shelter and space to be available in a way that is suitable to the animals' needs, we say that these things must be available in a suitable arrangement. What is happening to the suitable arrangements for animals to live in? What impact has construction had on the habitat of animals? Research and discuss what's happening to animal habitats and their outdoors.

8. What Did Your Lunch Cost Wildlife?

Trace some foods back to their source, including the impact on wildlife and the environment along the way to the consumer. Recommend , with explanations, some food habits that could benefit wildlife and the environment. Diagram environmental impacts and apply this knowledge you gained by making changes in some of your consumer choices.

9. In The Dumps

Decomposition is the process by which materials break down. Air, water, sunlight and other natural forces wear away inorganic or nonliving materials such as rocks and metals. Living organisms break down organic materials, or materials that come from living things, such as food waste, wood and carcasses. Materials that other living creatures can break down are termed biodegradable. What is happening in our dumps and landfills? How much of the trash is biodegradable? Why is it beneficial to recycle? Develop your own dump by filling a container half full with soil. Place a piece of each trash item on the top of the soil. Cover the items by filling the container with more soil. Over a period of time, uncover the items and observe what happening to them. Are they biodegradable? Show your findings.

10. Plant Personification

Students will be able to portray their feelings about the forest environment through creative dramatics. Students will need to use both large and small muscle activity to move like the emotions trees might feel when there is a :

- gentle breeze
- violent windstorm
- gentle rain
- hard rainstorm with thunder and lightning
- snowstorm
- forest fire
- squirrel running up their trunks
- bird nesting in their branches
- person climbing them
- person carving on their bark
- person planting them
- person harvesting them

Develop a chart/graph with cause and effects relating to the above movements. What would happen if all the trees were harvested? If all the trees were involved in a forest fire? If people continue to carve into their bark? What would happen to the future of the trees?

11. Create Your Own

Feel free to create your own project about our natural resources and the environment. Help us protect and save our planet earth.