



Outdoor Biology Instructional Strategies

ENVIROLOPES

OVERVIEW

Many people enjoy a walk in the woods, along the shore, or in other outdoor places. An awareness of the variety found in nature can enhance the aesthetic appreciation and value of such walks. The color of fall leaves, the fragrance, shape, and color of spring flowers, the textures and patterns of trees, ferns, and mosses are only a few examples of the variety found in the out-of-doors.

Envirolopes works well in almost any outdoor setting and in a variety of different ways: along a trail, around a science center, at a camp, or on a family outing. Teams of two or three receive a challenge such as: “Find at least five different shades of green.” The participants collect samples small enough to fit in envelopes, and then display and discuss their discoveries.

This activity encourages the participants to develop the ability of making observations and sharing them with others. In addition, the activity emphasizes the variety of colors, forms, textures, and organisms present at any outdoor site. *Envirolopes* works well with mixed-age groups of participants.

MATERIALS

For each team of two:

1 letter-sized envelope with one challenge on it. Possible challenges include:

- Find the ten most unusual-shaped leaves.
- Find at least five different textures.
- Find examples of at least five different odors or smells.
- Find at least five different kinds of seeds.
- Find at least five objects, each one of a different color.
- Find at least five different kinds of evidence that animals are around (such as a leaf with bites taken out of it).
- Find at least five different kinds of evidence that people are around (trash, for example).
- Find at least five different kinds of rocks.
- Find at least five objects with different shades of brown.
- Find at least five objects with different shades of green.

For Seashore sites include:

- Find at least five different kinds of shells.
- Find at least five different colors on one shell.

For the group:

1 copy of “Envirolope Challenges” card

1 data board (see Tool Box 1)

A felt pen

Glue or tape (for adhering challenges to envelopes)

PREPARATION**Site:**

Select a site where collecting small samples of leaves, rocks, and twigs or shells is not a problem. Obtain permission if necessary.

Envirolopes:

Make a copy of the “Envirolope Challenges” card. Select the challenges that are appropriate for your site and group. Cut the challenges apart and adhere one to each of the envelopes.

Alternatives to collecting:

If regulations or a fragile habitat preclude collecting, some alternative approaches you can take for identifying discoveries include:

1. **Flagging:** Use a different color of cloth or yarn for each team. With this method, the group will have to walk around the site to discuss the choices.
2. **Photograms:** See *Habitat Sun Prints* (Set I). Compare and discuss the prints.
3. **Crayon Rubbings:** See *Gaming in the Outdoors* (Set II). Compare and discuss the rubbings.
4. **Photography:** Compare and discuss the evidence later.

ACTION

1. Select a discussion area and point out the boundaries of the site to the group. Show your participants an example of an envirolope challenge and encourage them to discuss how the challenge might be met.
2. Divide the group into teams of two. Explain that each team will receive an envelope with a challenge on it. The teams will have twenty minutes to search for small samples. Make a rule that each team’s samples must fit in the envelope.
3. Save one envirolope for yourself, and distribute the others to the group. Circulate among the teams as they search, encouraging them to investigate further. Listen to any unusual reports and offer encouragement or assistance when necessary.

4. Call everyone back together after twenty minutes, and ask each of the teams to display their collections. Ask the teams to circulate, observing and informally discussing each other's evidence.
5. Select one or more collections that appear particularly interesting, and ask the teams to report to the group on what they collected and what their collections show. Ask the other teams to check their collections for items that could be added to the collection being shared. Continue this process for as long as the participants find it interesting.

WHAT DO YOU THINK?

1. What objects appeared in more than one collection?
2. How does the evidence of other animals compare with the evidence of people? Did you find more evidence of animals or of people? What types of evidence do animals leave? What types of evidence do people leave?
3. Which collections contained the most items? Why?
4. Which was the most difficult challenge to meet?
5. Which item, because of its variety of properties, could be included in the largest number of individual team collections?

Keep discussions short. If, however, a discussion appears to wander from biology to art or some other form of creative expression, don't feel that you have to guide the discussion back "on course." Such interest is the key to developing environmental awareness, appreciation, and understanding.

FOLLOW UP

1. Repeat the activity at a different site or at a different time of year.
2. Ask interested individuals to make up new challenges for another hunt.
3. Make a collage with the samples collected.

WHAT TO DO NEXT

Pigment Puzzles

Variation Game

Who Goes There?

Plant Patterns

Sensory Hi-Lo Hunt

ENVIROLOPE CHALLENGES CARD

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Find at least five different textures.

Find examples of at least five different odors or smells.

Find at least five different kinds of seeds.

Find at least five objects, each one of a different color.

Find at least five different kinds of evidence that animals are around (such as a leaf with bites taken out of it).

Find at least five different kinds of evidence that people are around (trash, for example).

Find at least five different kinds of rocks.

Find at least five objects with different shades of green.

Find at least five different kinds of shells.

Find at least five different colors on one shell.