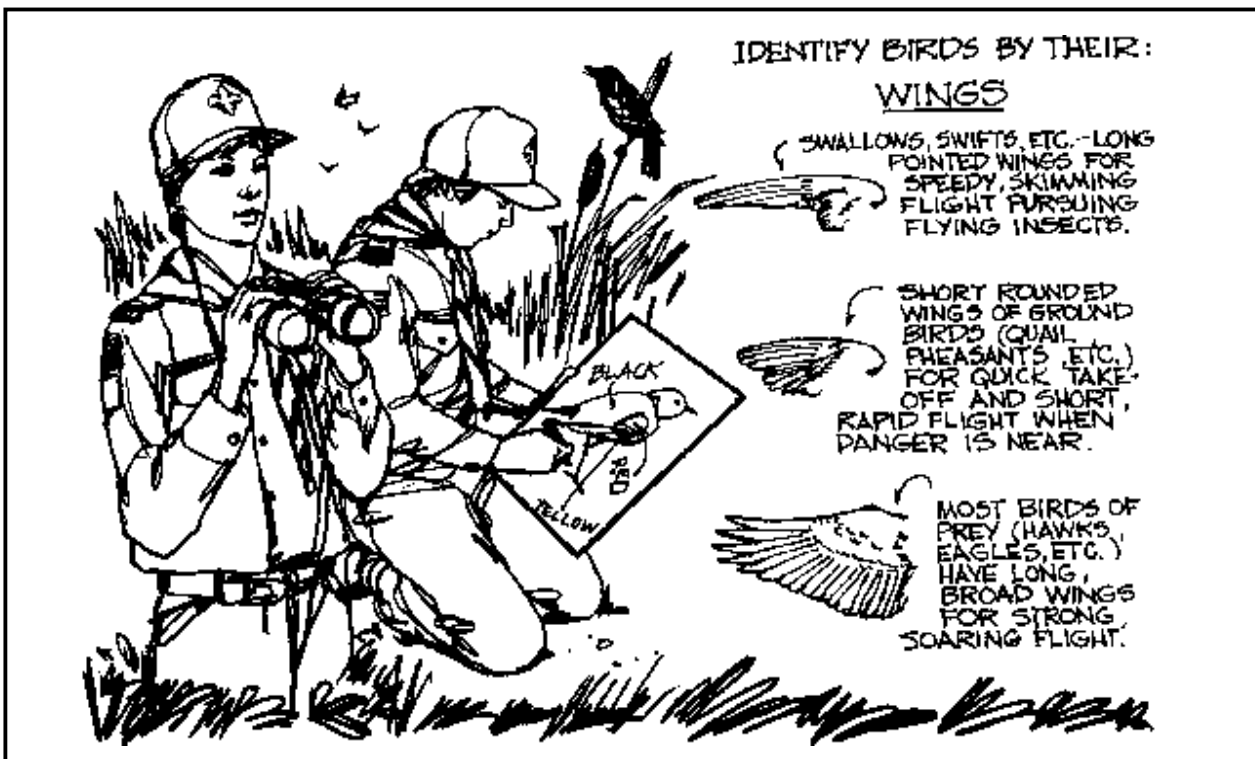


ENVIRONMENT



Your Scouts are growing up at a time when environmental issues are high on the nation's list of priorities. During the past 20 years, there has been a growing understanding of the interdependence of all living things and how both natural and manmade pollution affect life.

In this program feature we want aim to explain the "web of life" and show Scouts how they can do their part to help preserve it. Troop meeting activities will cover some of the strands of the web of life. In the process, Scouts will learn more about wildlife, trees, plants, rocks, and soil. Patrols can do some ecology projects that will enhance their understanding of the web.

The big event will be an exploration trek for some field study. The purpose will not be identification of wildlife and plants-although there is bound to be some of that-but rather to learn about food chains, how oxygen and water are cycled through the ecosystem, and how pollution affects them.

The destination for the exploration trek might be almost anywhere-a wooded area, grassland, lake or seashore, desert, or even a city park. Your council's Scout camp may be a good choice, especially if it has a good nature trail that shows some of the relationships between animals, plants, and soils.

SCOUTING OUTCOMES

This month's patrol and troop activities should give your Scouts

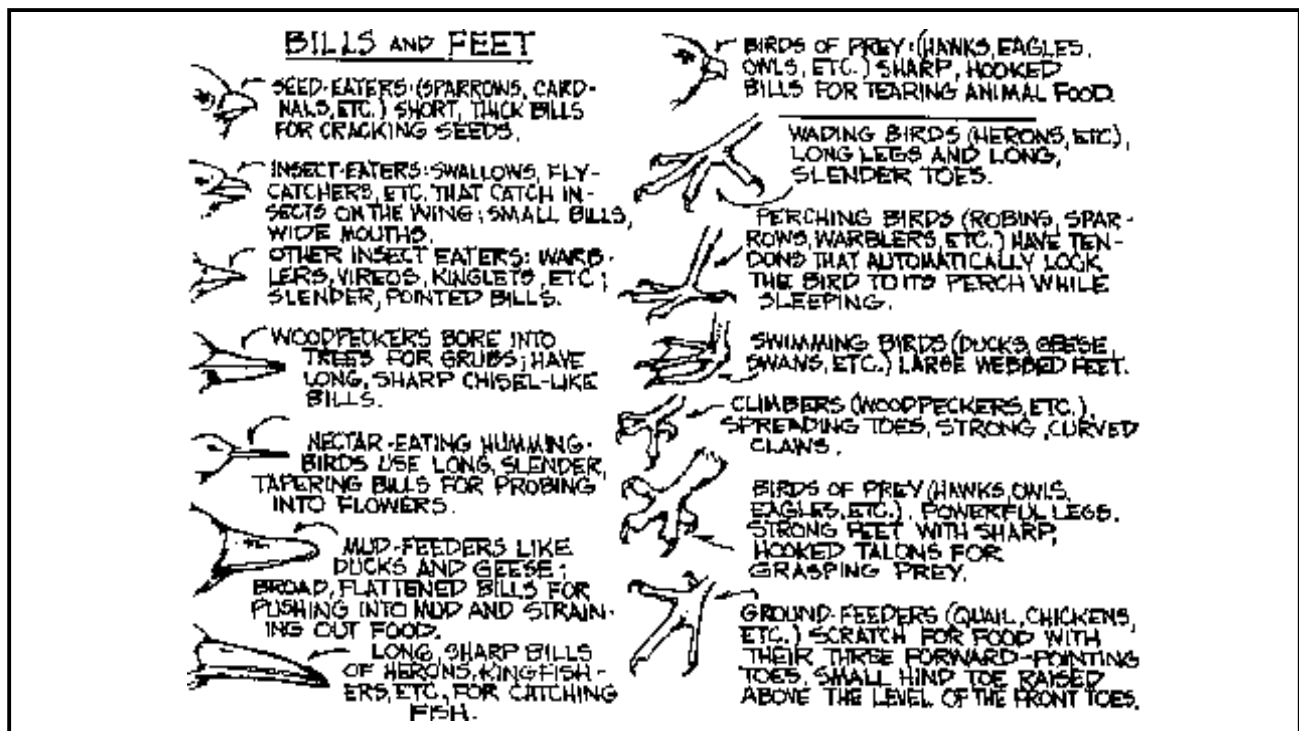
- A sense of communion with nature and God
- A greater understanding of ecology and humankind's place in the natural world
- Increased self-confidence
- The determination to leave as few traces as possible of their outdoor adventures

ADVANCEMENT OPPORTUNITIES

By month's end, all Scouts should have met many of their basic nature/environment requirements through First Class. Depending on the campout activities, they may also complete all or part of the following rank requirements:

Tenderfoot

- Outdoor-cooking, camping, hiking, nature
- Citizenship-flag ceremonies, Good Turn
- Patrol/troop participation-patrol identification
- Personal development-Scout Oath and Law



Second Class

- Outdoor-cooking, camping, hiking, nature
- Citizenship-flag ceremonies, Good Turn, first aid
- Patrol/troop participation-leadership
- Personal development-Scout Oath and Law

First Class

- Outdoor-cooking, camping, hiking, nature
- Citizenship-flag ceremonies, Good Turn, first aid
- Patrol/troop participation-leadership
- Personal development-Scout Oath and Law

Merit Badges. Older Scouts can concentrate on the Camping and Environmental Science merit badges this month. Depending on activities during the campout, they may also complete requirements in Cooking, Hiking, Backpacking, Wilderness Survival, Insect Study, Reptile and Amphibian Study, Soil and Water Conservation, Mammal Study, and other nature-related merit badges.

PAR.ENT/GUARDLzIN PARTICIPATION

The patrol leaders' council may involve parents in the program feature this month by

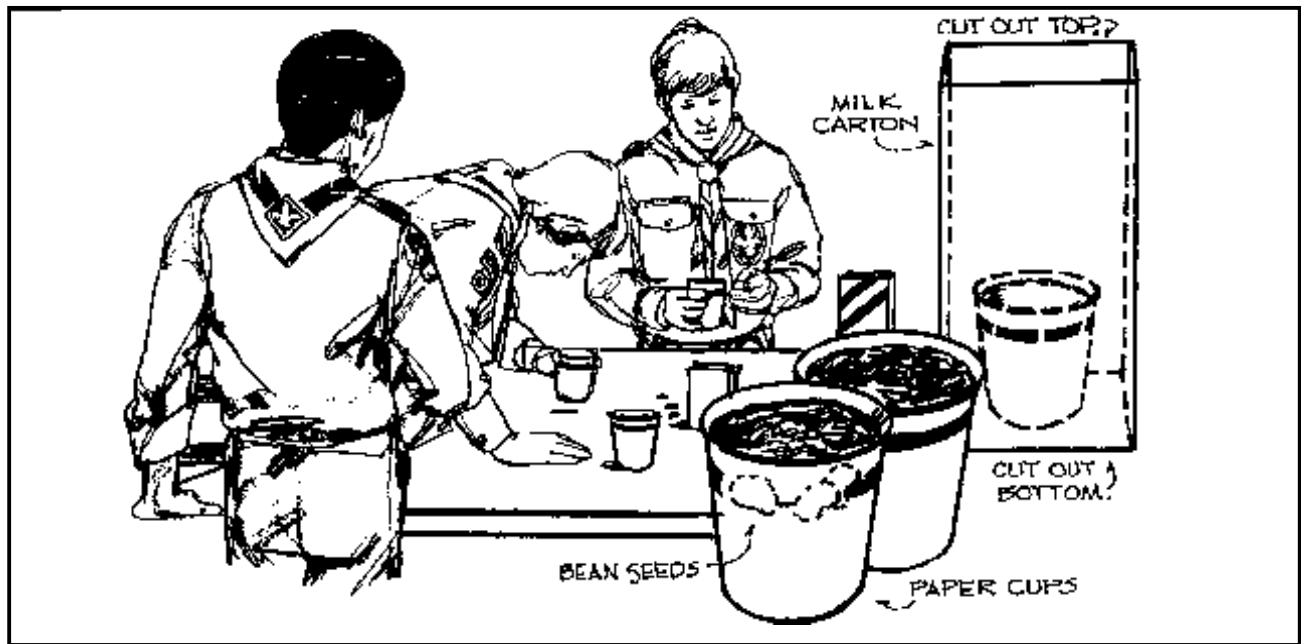
- Asking qualified people to help with troop meeting instruction
- Inviting parents to come along on the exploration trek

- Asking parents to provide transportation, if necessary, for the trek

PATROL LEADERS' COUNCIL

The patrol leaders' council should meet during the early part of the previous month to plan troop activities for this program feature. If you don't complete all items on the following agenda, continue planning at patrol leaders' council meetings after each troop meeting.

- Decide on the site for the exploration trek. Any large natural environment will do, but if you have a choice, select an area of at least 10 acres so that a Scout working on requirements 2 and 3 of the Environmental Science merit badge will have room to explore. If the area has several types of ecosystems (woods, grasslands, pond, etc.), so much the better.
- Arrange to secure permissions, if necessary.
- Decide whether the trek will be a one-day event or a campout.
- Plan activities for the trek. Allow at least three hours of free time so that Scouts working on nature skills and other merit badges can make explorations. See the other ideas on these pages.
- Consider inviting an Environmental Science merit badge counselor or counselors for other naturerelated badges to help with instruction at troop meetings and on the trek.
- Plan details of troop meeting activities. Review the principles of Leave No Trace.



FEATURE EVENT

Exploration Trek

The purpose of the exploration trek is to put your "nature detectives" on the trail of the natural environment. Ask Scouts to find out as much as they can about how the climate, geology, and soils in your area influence plant and animal life, and how the flora and fauna are interdependent.

This is the perfect opportunity for Scouts working on the Environmental Science merit badge to do some required fieldwork. Their aim should be not only to identify what kind of plants and animals are in the area, but also why they are there.

What the Scouts find will depend not only on the terrain but also on the time of year. Allow at least three hours for this exploration during your outing.

The following are examples of questions your nature detectives might try to answer.

- Is the soil here sandy, clay, or a rich loam? What kinds of plants grow here? What does that tell you about the nutrient needs of trees and shrubs?
- A patch of bark on this tree looks a bit shredded, and some twigs appear to have been nipped off. What does that tell you about the animals in the area? (It might mean that deer or porcupines have been feeding; the height of the chewed areas could be a clue as to which animal. If it's an evergreen tree in a northern state, it might have been a bear.)
- Check under a rotting log. What do you find? (Probably beetles and perhaps salamanders or other small animals.) What are the animals doing

there? What will the log look like a year from now? Why?

- Why is this patch of ground eroding? Water runoff? Wind? Overgrazing by animals? What could be done to stop the erosion?
- You are on a sandy lake beach. Are you likely to spot squirrels, chipmunks, or woodchucks here? Why or why not? If not, what types of animals will you find?
- Under a big rock you find an ant colony. What are the ants doing? (Most are probably carrying aphids or other insects for food.) What does it tell you about the needs of ants for food and shelter?
- If you sit quietly for a long time in a field and watch for wildlife, you are likely to see quite a few birds and small mammals such as woodchucks and rabbits. Why don't you also see a lot of large birds and mammals like foxes or coyotes? What does this tell you about the relative numbers of small creatures and larger predators?
- Here is a boulder with a crack in it. Lichens are growing in the crack. What will the boulder look like in 50 years? Why? What may have happened?
- Here is a small hole in the ground. What is it? (Probably a burrow.) What kind of animal lives there? (If the hole is small and there is another hole nearby with a mound of dirt alongside, it's probably a woodchuck. If the hole is larger, it could be the home of a red fox. If you are on the Great Plains and the burrow looks like a miniature volcano, it's probably a prairie dog.)

The exploration trek also gives older Scouts who have already earned the Environmental Science merit badge a chance to work on nature-related projects for other merit badges. Find out their interests in advance so that you can bring a supply of binoculars, insectcollecting nets, geologist's tools, etc., as needed.

The patrol leaders' council will want to plan other activities in addition to the exploration. For some idea see the Nature program feature.

Ecology Projects

Patrols may want to conduct their own experiments in ecology. Here are some ideas.

HOW DO PLANTS APPEAR ON BARE SOIL?

Fill a bo or wide-mouth jar with commercial potting soil. Put it outdoors on a roof, fire escape, or windowsill. Keep th soil moist. Within a few weeks, small plants will be growing in the soil (which originally contained no seeds). Where did the seeds come from?

Many plant seeds are airborne and are carried for miles by the wind.

TESTING AIR POLLUTION. If you live in the city, set out a simple pollution testing device. Use the adhesive side of a bumper sticker or coat a piece of paper with petroleum jelly. Place it on a tree, rooftop, or fire escape, sticky side up. Over the next two or three weeks, check the tester with a magnifying glass to see how many pollutant particles there are.

TESTING WATER POLLUTION. If you live in a rural area and there is a lake or stream nearby, take a small sample of the water in a large jar and let it stand for a couple of weeks. As the water evaporates, silt and othe solid matter will settle to the bottom, showing whether or not the body of water is gradually silting.

WHAT DO PLANTS NEED? Fill three paper cups with potting soil. Plant three or four bean seeds about 1/@ inc deep in each pot. Moisten the soil. Place one cup where it will get direct sunlight each day and keep the soil moist but not soggy. Place the second cup in direct sunlight, but give it no further water. Cut the top and bottom from a milk carton and put it over the third cup. Keep the soil moist. After two or three weeks, examine the three plants. Which one is growing best? Which one is the worst? Why?

Leave No Trace Awareness

In recent years, outdoorsmen have begun to realize that if our wilderness is to remain unspoiled and beautiful for the next generation, they must learn to leave as little impact as possible on it. So, many backcountry

hikers now take pride in their ability to pass through an area leaving very little effect on the environment. This practice is called Leave No Trace.

Most Scout hiking and camping is done in council camps, state parks, and other heavily used sites that are not true wilderness areas. However, it's a good idea to teach the Scouts, particularly the older Scouts, the purpose and principles of Leave No Trace. For one thing, it will reinforce the idea of good conservation. For another, the Scouts will be prepared to hike and camp in true wilderness areas.

As a practical matter, a whole troop cannot do this kind of trekking. It should only be done by small groups of experienced outdoorsmen. The types of activities that are suitable for normal Scout camping are not suitable in wilderness areas because they destroy much vegetation and often create a lot of noise.

Essentially, the idea of Leave No Trace is to blend in with the environment so that hikers passing your camp would scarcely realize you are there. Here are some tips for low-impact camping:

- Have no more than 12 in the party or the number prescribed by the land management agency.
- Use tents made of material that blends with the environment. Do not ditch tents.
- Pack food in burnable or pack-out containers; take and use trash bags.
- While hiking, stay on trails and do not cut across switchbacks. Select hard ground for cross-country travel; do not use muddy trails if you have a choice.
- Select campsites away from delicate plants, and camp no more than three days in one spot. Camp only one day if the site has not been used. Camp out of sight of trails, streams, and lakes.
- For fires, use lightweight backpacking stoves. However, in a heavily used area, you can use an old fire circle, burning only small downed wood. Or dig a low-impact fire pit, as shown in the *Fieldbook*.
- Wash yourself, clothes, and cooking gear 200 feet (70 to 80 strides) from streams and lakes. Strain dishwater and wash water and pour it into a hole. Save the turf and recover the hole.
- Dig latrines 6 to 8 inches deep, at least 220 feet from camp and water. Save the turf and recover the hole.
- Pack out all nonburnable trash.
- Avoid noisy games and activities.
- Avoid trampling vegetation.

Consider having the troop earn the Leave No Trace Awareness Award. Get the application, No. 21-105, from your local council service center.