



WHAT IS OBIS?

Start with a group of young people in the out-of-doors and a biological concept or process as the basic ingredients. Add a large measure of fun; stir in the discovery approach; season with a simulation, a game, a craft, or an interesting investigation; vary the recipe often; mix thoroughly; and you have one of the 100 activities that have been developed by the Outdoor Biology Instructional Strategies (OBIS) Project.

OBIS provides community-sponsored youth organizations and schools with learning activities for use at common outdoor sites such as lawns, local parks, city lots, neighborhood streams and ponds, and the seashore. Although the activities are intended primarily for ten- to fifteen-year-old

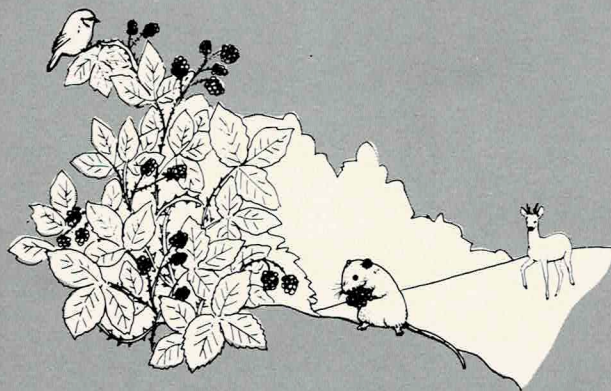
youngsters, both younger and older people (including family groups) have enjoyed OBIS activities. Their easy-to-follow format, simple preparation and equipment, and short duration (usually one hour) make OBIS activities suitable for both the experienced outdoor-education leader and the first-timer with no previous experience in biology. With some training, older youngsters can lead the activities for small groups of younger children. The activities may be used independently or sequenced to create a program to suit your needs. Scouts, Park and Recreation Departments, religious groups, service groups, nature centers, day and resident camps, and schools are a few of the groups that have used OBIS activities in their outdoor-education programs. OBIS activities help youngsters and adults to better understand and appreciate the ecological relationships in their local environment.

WHY OBIS?

Why teach outdoor biology? What does it do for children? Children grow and learn by exploring their environment, starting in the home. The exploration continues when the children move outdoors. OBIS activities turn the outdoors into a laboratory where children can gain a better understanding of the biological world through their own experiences.

Our understanding of the complicated world we live in depends to some extent on our understanding of the biological world—its interactions and its interrelationships. Our lives depend on other organisms just as we affect their lives. By learning more about the biological world around them, children can better relate to this complicated world.

Another reason to teach outdoor biology is that our relationship with our environment must improve. For too long we have considered ourselves independent of nature. We take what we want and change what does not suit our purposes. As we prosper, medicine and technology increase our chances of survival. The growing population of humanity uses an ever-increasing amount of the earth's resources. Until quite recently, we remained uninformed or indifferent to the effects of our increasing demands upon plants, animals, minerals, soil, air, and water. We have just begun to realize that we have reached a point where we can no longer ignore the ecosystem of which we are a part.



If we are to make intelligent decisions on factors that influence our environment, we must understand basic biological relationships. The awareness and understanding that grow with each OBIS experience will create a base that youngsters can use in the future to make informed decisions on environmental issues. OBIS is designed to provide knowledge of outdoor biology and to form positive attitudes toward science. These are the long-term goals of OBIS.

How does OBIS promote biological understanding? OBIS encourages discovery by the student. We operate under the assumption that exploration and experience are the best means of learning. Through discovery, discussions, and follow-through activities, youngsters learn about biology in these activities.

USING THE OBIS FOLIOS

Each OBIS folio can provide an enjoyable and interesting outdoor experience. You may use a module of selected activities for a particular area or purpose, use the entire program as a course of instruction, select individual activities to suit your specific needs, or develop your own module from individual activities.

Planning for the Activities

Each activity contains an "Overview," which describes basically what the children will be doing. Any biological background that you will need in order to conduct the activity is provided for you in the folio. To preserve the discovery aspect of the activities, *do not read the "Background" sections to the students!* Such considerations as the time required, minimum or maximum number of participants, and any necessary preparation are spelled out in each folio in the "Preparation" section. Generally, activities last an hour and can accommodate a variety of group sizes.

The activities are not tightly structured, so it helps to be flexible. Feel free to depart from the activity plan. Let children's questions lead you on interesting sidetrips. Encourage children to investigate on their own.

What is provided in each folio?

Bio-Key: a key that identifies the method of approach, techniques, and basic concepts emphasized in the activity, e.g. Game/Simulation, Controlled Experiment, Adaptation.

Overview: description of what the children do in the activity.

Background: biological and other information that you need in order to conduct the activities.

Challenge: the basic task set out for the children.

Materials: a list of all the materials that you will need to conduct the activity. (See the "Basic Equipment, Aids, and Guides" section later in this folio.)

Preparation: describes time and site requirements, optimal group size, and any necessary preparation of materials.



Action: the suggested step-by-step activity procedure.

What Do You Think? This section contains questions for discussion that enlarge upon the children's experience and bring out the biological significance of the activity.

Branching Out: follow-through activities that expand on or reinforce the activity.

Action Cards

Some of the folios contain activity cards (most often called "Action Cards"), which must be duplicated in order to provide sufficient copies for the youngsters. These may be duplicated on any copying machine and the master sheet saved for future activities. We suggest you do the copying before the activity period and, in the case of summer camps or wilderness situations, before leaving the office machine behind.

Some sheets of activity cards contain more than one card. Cut the copies apart and give one card to each participant, or in some cases a set to each team. For some activities, we provide blank Action Cards, allowing you to create special challenges suited to your particular environment.

BASIC EQUIPMENT, AIDS, GUIDES

Materials

OBIS equipment is generally simple, already around the house, or easy to acquire. You may wish to

gather your own or purchase the equipment from Delta Education. Items that can be purchased from Delta Education are marked with an asterisk in the "Materials" section of each folio. Any cards (such as Action, Equipment, or Technique Cards) are also marked with an asterisk, but these cards are *provided* in the module by Delta. It is up to you, however, to duplicate these cards for use with your children. All materials not marked with an asterisk must be provided by you.

Gathering materials and making equipment can be an interesting experience for your group before conducting an activity. When possible, let your group assist you with the gathering of materials. Often the youngsters can bring items such as empty milk cartons, plastic bags, egg cartons, juice cans and the like from home.

Data Board

Many OBIS activities call for the use of a data board. This board serves as a portable chalkboard, record board, map, and all-purpose data organizer. The data board relieves youngsters of the burden of pencils and notebooks. Important terms can be viewed easily by all group members, and field observations are conveniently displayed in one place for group consideration. A piece of thick cardboard, masonite, or fiberboard about 80 cm x 60 cm, with large pieces of paper (butcher or shelf paper) attached makes a good data board. You may also use a large sketch pad or small chalkboard for the same purpose.

Equipment and Technique Cards

Also included in some activities are Equipment and Technique Cards. These cards explain how to make simple pieces of equipment used in the activities and describe various biological study techniques used.

Lawn Guides and Pond Guides

These guides are designed for quick, easy identification of some of the most commonly encountered lawn and pond organisms. Only those organisms readily observed by the unaided eye or by means of a simple magnifying lens have been included.

The guides are included in those modules that require guides (i.e. modules that include freshwater activities and/or terrestrial activities dealing with lawn or field organisms). The guides may also be purchased separately from Delta Education.

To use the guides, simply flip through the pages looking for a drawing that corresponds to the organism you wish to identify. Because the drawings are black and white and do not move, explain to your group that the organisms they find may not exactly match the guide's drawings. The investigator should look for the drawing that most closely resembles the organism.

SITE SELECTION

Make sure your selected site is large enough for everyone to investigate without interference, but small enough to allow easy supervision of the group. Site boundaries should be clearly marked and the participants kept within the boundaries.

Avoid aquatic sites with obvious hazards such as steep banks, slide areas, or strong and fast-moving currents. Look for a site with gently sloping banks for easy water access and unobstructed vision for easy supervision.

Secure permission to use a site in advance if such permission is required. Familiarize yourself with any rules or procedures that apply to the use of the site. Some sites, particularly public nature areas, are protected by strict rules regarding interference with living organisms. Make sure the youngsters understand and follow the rules.

SAFETY

The safety of your group is a prime consideration. In order to assure safety, OBIS designs equipment and procedures to be as safe as possible. In addition, OBIS recommends that leaders organize a Buddy Safety System when participants explore an aquatic or other potentially hazardous site. It is always a good idea to bring a first-aid kit when working with a group of youngsters.

Buddy Safety System

The Buddy Safety System is designed to insure that no participant will ever be far from assistance should it be needed. Group members choose a "buddy" they would like to work with. For an odd-numbered group, organize one team of three buddies. When the youngsters are paired off, tell them that each individual is responsible at all times for the whereabouts and safety of his or her buddy. A participant should never leave her buddy unless her own safety is threatened. In the event of an accident to one buddy, the other should render assistance and call for help.

CONSERVATION—TAKE 'EM BACK ALIVE!

Your youngsters should understand that no organism should be permanently removed from its habitat. OBIS users collect organisms temporarily for observation and investigation, but all should be returned to the place where they were found. (Leaf samples are an occasional exception.) The overall impact of your group on an activity site should be minimal. Setting some rules of procedure will promote respect for the activity-site environment.



OBIS

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