

# MAPPING A STUDY SITE

BIO  
KEY

Introductory Survey  
Observation  
Mapping



## OVERVIEW

Using a mapping technique, the youngsters become oriented to the major features of an outdoor site.

## BACKGROUND



Before conducting a specific investigation at an outdoor site, it is a good idea to become familiar with the site as a whole. Mapping a site is one way to “get the lay of the land” or identify the major features of a site. The mapping strategy employed in this activity involves adding physical and biological features to a simple outline map of an area. This activity can serve as a general introduction to investigating any outdoor site.

Many maps use symbols to identify different features, because symbols take up less space and keep a map from looking cluttered. On maps with symbols, a map key or legend is included to identify the symbols.

### CHALLENGE: MAP THE MAJOR FEATURES OF AN OUTDOOR SITE.

## MATERIALS



### For each team of two to four:

- 1 map key on a large index card\* (5" × 8")
- 1 set of marking pens\* or crayons\* or 1 bag of construction paper\* or contact paper\* symbols (See the “Preparation” section.)
- 1 section of the outline map (See the “Preparation” section.)
- 1 pencil
- glue stick or clear tape\* (needed only for sticking construction paper symbols to maps)

### For the group:

- 1 compass\*
- 1 data board or large drawing pad\*
- 1 black marking pen\*
- flagging\*

\* Available from Delta Education.

## PREPARATION



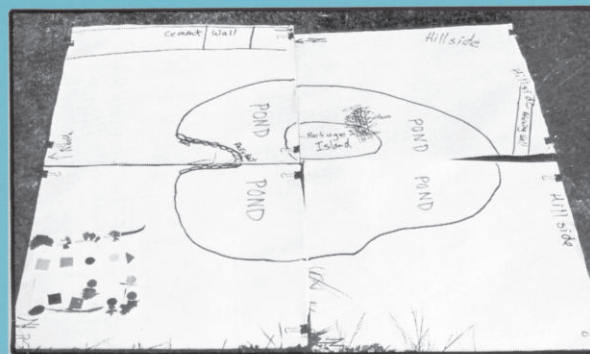
**Group Size.** This activity is suitable for any size group.

**Site.** Choose an outdoor site that contains a variety of plants and physical features and that provides each team with an area 10 to 20 meters square to map. Use the flagging to mark off the sections of the area.

### Materials

**1. Outline Map.** You will need 4 to 10 team map sections, depending on the size of your group. For each team, tape or staple a piece of white paper (butcher paper or large sketch pad paper) onto a piece of thick cardboard or some other backing material. Use sheets of paper the same size as the backing. A good size is 60 cm × 80 cm.

With the aid of a compass, face towards the north and lay all of the map sections together so their left and right edges run north-south. (This is the way most map and chart margins are oriented.) Treating



the combined sections as one large drawing surface, draw a large outline map, including some of the physical features (e.g. streams, roads, and buildings) to define the boundaries for the site. Each team's section should include at least one feature that can be used for orientation purposes. See the example.

**2. Recording Method** Your group can draw or color in features on their

maps with crayons or marking pens, or use paper symbols to represent features on their maps. At least eight different colors of crayons, markers or paper symbols are needed; more colors are better. If you use paper symbols, each team will need 20 to 30 symbols of each color.

PAPER SYMBOLS		DRAWN SYMBOLS
	OAK TREES	
	CONIFERS	
	BUSHES	
	GRASS OR LAWN	
	DEAD TREES OR LOGS	
	WEED BEDS	
	ROCKS	
	BARE DIRT	

**3. Map Key.** To save time, prepare a map key before meeting the youngsters. See the examples. The drawn or paper symbols can be keyed by shape and color. For plants, you can tape leaves on the key and identify each type of plant with a different symbol or color. Prepare one map key on an index card for each team. If you prefer, you can let the group help you make the master key as part of the activity, but make sure all of the teams use identical keys.

## ACTION

1. Tell the group that one of the first steps in any outdoor investigation is to

become familiar with the study area. Explain that one way to do this is to make a map of the area.

2. Lay out all the map sections so that the entire study area is illustrated. Make sure the top of the map points north (use the compass). Point out the compass orientation of the map: the top is north, the bottom is south, the left side is west, and the right side is east. Ask the youngsters to match the features you have mapped with the actual features in the study site.

3. Divide the group into teams of two to four. (The number of map sections will determine the number of kids in each team.)

4. Explain that each team will get a section of the map on which to add landmarks such as trees and hills; buildings, picnic tables or other man-made structures; bushes, grassy areas, rocky areas, and so on. Give each team a map key, and go over the recording technique with the group (either drawing symbols with crayons or markers, or sticking on paper symbols). Mention that a precise scale for the map is not necessary; the youngsters should simply place or draw symbols on the map approximately where features are located in the study site. (Features that are not included on the key can be drawn onto the map sections and labeled. The group may want to add symbols for one or more features to their map keys before they start mapping.)

5. Give each team a map section and a set of recording materials. To begin, suggest that each team draw an arrow indicating "north" near the top of their map section. The arrows should be parallel to the left and right edges of the map section.

6. Point out the flagging boundaries you set up, and suggest that the teams first explore the areas covered by their map sections by walking through them to become familiar with boundaries and

major features. Then suggest that they find a vantage point from which they can see and record the site features onto their maps. Remind the teams to orient their maps before starting to map features. Mention that, when finished, all of the map sections will be recombined to make a large overview map of the entire study site.

7. Give the teams about half an hour to complete their maps. As the teams work, circulate among them and lend assistance when it is needed.

8. Call the teams together and put all of the map sections together. Spend a few minutes comparing the features in the different sections. Encourage the naming of certain landmarks and write them on the map, for example: Willow Glen, Look-Out Rock, Magpie Field.

## MAPPING THOUGHTS



1. What colors prevail on the overall maps? What do those colors represent?

2. Which section contains the greatest number of different colors and which section the least? What might explain the differences in these two sections?

3. In which section is human influence most evident? In which section is it least evident?

4. In what ways do you think people may have affected the biological features of the activity site?

## BRANCHING OUT



1. Suggest individual mapping projects. The youngsters could map their homes (including the yard), school grounds, or a local park. They will have to make their own map keys.

2. Visit a library and look over different types of maps and coastal charts.

3. Add the locations of the windiest, driest, wettest, and warmest spots to the group map. (See the OBIS activity *Terrestrial Hi-Lo Hunt*.)

