

DISCOVERYSCOPES™

ACTIVITY:

DiscoveryScopes™ are hand-held, wide field microscopes. Students have the opportunity to take a close-up look at natural objects with the use of DiscoveryScopes™. A collection of specimens is provided in the kit, and students may explore the nearby desert to find additional objects. They may sketch their discoveries.

LOCATION:

Cooper ESC staff will assign the location for the activity. Students should be reminded to stay on the trails.

EQUIPMENT AVAILABLE:

8 DiscoveryScopes™
10 boxes of objects to be studied
Owl feathers
Clipboards



EQUIPMENT BROUGHT FROM SCHOOL:

Drawing paper, cut to fit on a clipboard
Pencils
Large envelope to contain students' sketches for transport back to school

ASSIGNMENT FOR GROUP LEADERS A FEW WEEKS PRIOR TO TRIP:

The leader reads all the material about the center.

DIRECTIONS FOR GROUP LEADERS ON TRIP DAY:

Check the contents of the "DiscoveryScope™ " activity box. Gather enough clipboards for the group. Take the materials to the activity area.

If time allows, take a walk along the trail before the first group arrives to familiarize yourself with the area. This will give you an opportunity to find some interesting features you may point out to students if they are having difficulty in choosing things to observe through the lenses.

CAUTION:

The DiscoveryScopes™ are costly precision instruments. Though they are of sturdy construction, they can be damaged with rough use, therefore, caution the children to use these with care. It is a special privilege to be able to use these mini-microscopes. Upon

collection of materials at the completion of each center rotation, be sure that you have collected all DiscoveryScopes™ and the box of specimens from each child.

THE LESSON:

1. Explain to the students that we often do not take time to really look at our surroundings. We are only partly aware of what is around us. This center will give us a chance to examine our world more closely. We will have time to sit down and observe a leaf, an insect, a flower, a rock, cactus needles, seeds, or other small parts of nature that we may never notice.

2. If you have eight or fewer children in the center, each child receives a DiscoveryScope™. If there are more than eight, they will share.

3. Tell the children that they have time to explore with their lenses and discover a world we seldom see. First they may observe the specimens in the kit. These include such things as feathers, seeds, piece of shed snake skin, minerals, insects, etc. After they have taken time to examine these, suggest that they look around the nearby desert for other examples of the small–insects hidden beneath leaves, seeds, flowers.

EMPHASIZE: Instruct students not to injure any animals or plants as they investigate. Mention that the plant and animal material in the specimen boxes were found as displayed. We did not destroy any life.

4. Allow the group to make their discoveries for at least 20 minutes, and if they are engrossed in their observations allow more time. When you feel they are ready for another activity, call the students together. Ask them to share their experiences. What new things did they see?

5. Give each child a sheet of paper, a clipboard, and a pencil. Instruct the group to think about the objects they found the most interesting and ask them to look at that object again with the DiscoveryScope™ and make a careful sketch of what they see as they look through the lens. If there is time remaining, the children may wish to share their drawings with the group.

6. About 5 minutes before the end of the activity period, instruct the students to write their names on their papers and a note of what the sketch is about. Collect the sketches and place them in the envelope to be given to the teacher later.

7. Collect the DiscoveryScopes™, boxes of specimens, pencils and clipboards. Be sure all items are in your possession before releasing the students from your group.

CLEANUP:

Check to see that all materials (DiscoveryScope™, specimens, pencils) are returned. Give the children's sketches to the teacher so that he/she may take them back to school. After the last group, return the kits and clipboards to the table in Biznaga cabin.