

## **Bat and Moth Game**

From *Sharing Nature with Children* by Joseph Cornell

- Grade Level: 2 - 8
- Subject Areas: Science, Environmental Education
- Duration: 15 minutes
- Setting: Inside or Outside
- Key Terms: Echolocation
- Objective: Students will learn about echolocation by using sound to locate.
- Method: Students will simulate a bat trying to catch moths in a game similar to Marco Polo.
- Materials: Blindfolds

### **Background**

Bats can see as well as other animals, but vision isn't enough. Many bats have a special ability called echolocation that helps them navigate in total darkness. Echolocation is a way of "seeing" with sound. Bats use sound as a kind of flashlight in the dark. They send out high-frequency sound waves, which bounce off all objects in their path and echo back to them. Based on the time it takes for the echoes to return, bats can tell how far away an object is. And, based on the returning sounds, bats can tell the size and shape of an object. Some bats can detect objects as fine as a single human hair. Although this activity doesn't use echoes for location, which is very difficult for the human ear, students will practice using sound.

### **Procedure**

Choose one student to be a bat. Have all other students form a circle joining hands. These students will be the bat's habitat.

Blindfold the bat then choose another student to be a moth.

The bat will call out "bat" and the moth will then answer "moth." The bat will try to zero in on the moth simulating echolocation by repeating "bat." The moth has to answer in turn. If the bat runs into someone in the circle, the student will say "habitat." Once the bat tags the moth, the moth becomes a bat and the bat becomes part of the habitat.

If either the bat or moth leave their habitat (go out of the circle), they die and become part of the habitat. Replace them with another bat and moth.

Blindfold the bat and then choose another moth. Depending on the size of your group, you can add more than one moth.