

How Bats Slurp at Night classroom activities

For use with “How Bats Slurp at Night,” *Highlights*, December 2012, pages 34-35

Classroom discussion questions:

Animals and their habitat

What time of day are bats active?

How do they find their way in the dark? *see activity 1 on the next page*

Are bats really blind? (no, echolocation is an extra sense that allows them to “see” in the dark, but they can see just fine with their eyes, as well)

Look at the photo of the bat. Why are its ears so large?



Myotis myotis. Photo credit: Manuel Werner, used under Creative Commons License

What did the bats used in Stefan Greif’s (SHTE-fan GRYF) study eat? (insects)

How many insects do you think one small bat can catch in a night? (one little brown bat, a common North American species, can eat up to 1,000 insects per HOUR)

What do other bats eat? (nectar, pollen, other types of insects, even fish)

Why do we need bats? (pollination of plants, insect control—bats greatly reduce the

number of mosquitoes that want to feed on us)

Scientific process

What was Stefan Greif's hypothesis?

How did he test his hypothesis?

Why do you think he used metal, wood, and plastic in his experiment?

Did his results support his hypothesis, or did he have to come up with a new hypothesis?

What did he learn about how bats find water?

Can you think of other smooth, flat surfaces that might trick bats into trying to drink?
(e.g., car roofs, a slip-n-slide)

Activity 1

Objective: To demonstrate how echolocation works.

Materials: blindfolds or masks to cover the eyes, this activity is best done in the gymnasium or other large room that lacks furniture and has large expanses of walls

Procedure:

1. Ask for a group of volunteers. Their goal will be to find their way into a corner of the room using only their voice to navigate.
2. Place each volunteer 5-6 feet away from a wall and blindfold them.
3. Gently turn the volunteers to disorient them. Leave them facing different directions (i.e., not all at the wall).
4. Tell volunteers they must keep their hands in their pockets or at their sides at all times. They cannot feel their way to their goal location.
5. They should say "Hey!" and listen for the sound to bounce back to them. If they do not hear an echo, they should turn and try again, until they determine that they are close to a wall. They should not actually touch the wall.
6. Using this echolocation, they need to navigate into a corner without touching it.
7. First one to reach the corner can win a prize of the teacher's choosing.
8. Select a new group of volunteers and repeat.
9. Discuss what it's like to navigate by sound. What challenges does it present? Can students ever see themselves in a situation in which they might need to use their new-found sense?