



Teacher's Notes: Microbats

Learning Objectives:

- The students will be able to write or trace key ideas of the text.
- The students will be able to identify key characteristics of microbats.
- The students will be able to identify bridges and caves.
- The students will be able to do image searches on key ideas of the text.
- The students will be able to explain what microbats eat and when they sleep.

Activities

1. Talk about how bats, dolphins and other animals use echolocation to locate objects with these science activities. Echolocation activities are perfect for a [nocturnal animal theme](#) too.



Bats emit high-pitched sounds that bounce off objects and return to them, helping them gather information, like the size and location of the object. Use this experiment to demonstrate echolocation. On a table or large desk tape down two cardboard paper towel tubes at angles so that they face each other, but aren't touching. About twelve inches away tape an aluminum pie plate on its side. For the experiment one child whispers into one of the tubes and the other child listens at the end of the other tube. The sound will bounce off the pie plate and travel back through the other tube so that the other child can hear it.

Play a game about echolocation to help children understand how it works. Designate one child to be the bat and four to be insects. Blindfold the "bat" and have him stand with the other children forming a circle around him. The child who is blindfolded then blows a whistle or squeaks a toy and four "insects" shake a rattle or maraca back at him. The "bat" repeats the squeak and the "insects" rattle back until the bat locates one of the insects.

2. Students do image searches. Have students use main idea cards. Have the students save pictures of their favorite ones. Those are then inserted onto a Word document or a PowerPoint. Students write a sentence about microbats.
3. Have students look through magazines or google images. Have students cut out pictures insects or create a powerpoint using the images of insects that they found.

General Tips: The goal is to build background knowledge while leading an engaging discussion on any and all information that can be talked about on a given page. The items that you choose to bring up or focus on can be modified for the students you are working with. For example, if you have a student who can point to something in the picture, answer yes/no questions be sure to incorporate a lot more of that as you go through the book. On the same token, be sure to ask a lot of comprehension questions and critical thinking questions at the level appropriate for students. There is something for everyone.

Page 1: There are many different types of bats. Some are big. Some are small.

Point: bats, ears, nose, eyes, wings

Yes/No: Are there different types of bats?

Opinions/Experiences: Have you ever seen a bat?

Page 2: Bats fly. Bats are not birds. Bats are flying mammals. Mammals feed their babies milk. Bats feed their babies milk.

Point: bat, ears, eyes, nose, baby bat

Yes/No: Are bats birds? Are bats mammals? Do bats fly?

WH Questions: What are bats?

Opinion/Experiences: What other animals feed their babies milk?

Peer to Peer Interaction: After you read Page 2, ask students, “What are bats?” The answer is the main idea card “flying mammals.” Students will find the main idea card and read it to their partner. Teacher will prompt them to ask their partner some of the questions talked about above.

Page 3: Bats are nocturnal. Nocturnal means that they sleep during the day and stay awake all night. During the night is when they fly. They also eat at night. Have the students view the following video song about nocturnal animals. <https://www.youtube.com/watch?v=SFG7etbx15o>

Point: moon, bats, tree

Yes/No: Are bats nocturnal? Do bats sleep during the day? Do bats stay awake all night? Are you nocturnal?

WH Questions: What are animals that stay up during the night called?

Opinion/Experiences: Do you sleep during the day or at night? What do you do at night?

Peer to Peer Interaction: After you read Page 3, ask students, “What are animals that stay up all night called?” The answer is the main idea card “nocturnal.” Students will find the main idea card and read it to their partner. Teacher will prompt them to talk to their partner about the first family.

Page 4: Microbats eat insects. Insects are bugs that fly around. Mosquitoes are insects. Flies are insects. Beetles are insects. Bees are insects.

Point: insects, fly, beetle

Yes/No: Can bats eat a lot of insects in one hour? Do you eat insects? Do bats like to eat bugs?

Questions: How many insects can a bat eat in one hour? What do microbats eat?

Sharing Opinion/Experiences: Where are there a lot of insects? Do you see more in the day or night?

Peer to Peer Interaction: Have students find the “insect” main idea card and talk to each other about insects.

Page 5: Bats do not see very well. They cannot see the insects that they want to eat. They make a sound that is so high pitched that people cannot hear it. Whenever the sound hits an insect, the sound echoes back to the bat. When the bat hears the echo, he knows that an insect is there. Have students view the following video of a bat finding an insect. https://www.youtube.com/watch?v=MgRh_Q_xwys

Point: bat, insects

Yes/No: Do bats see well? Do bats find insects using their eyes? Do bats find insects by listening to an echo?

WH Questions: What do bats listen for when trying to find an insect?

Sharing Opinion/Experiences: Have the students make an echo.

Peer to Peer Interaction: Have students find the “echo” main idea card and talk to each other about the questions above.

Page 6: Bats go home to go to bed in the morning. That is because they sleep in the day. They start to get tired in the morning. It’s bedtime for them. We are awake in the day. That is when bats sleep.

Point: Bats flying home, wings

Yes/No: Are bats awake during the day? Do bats sleep during the day?

WH Questions: What do bats do during the day? Why do bats fly home in the morning?

Sharing Opinion/Experiences: Do you sleep during the day? What do you like to do during the daytime?

Peer to Peer Interaction: Have students find the “day” main idea card and talk to each other about the questions above.

Page 7: Microbats sleep in caves. That is a safe place for them to sleep. They hang upside down on the cave ceiling.

Point: Cave, cave entrance, bat

Yes/No: Are there rocks in caves? Do bats like caves? Do you want to sleep in a cave?

WH Questions: Where do bats sleep? How do they sleep? When do they sleep?

Opinion/Experiences: What would it be like to sleep in a cave?

Peer to Peer Interaction: After you read Page 7, ask students to find their “cave” card. Have them ask questions about where bats sleep.

Page 8: Microbats sleep under bridges. Have the students view the following video of bats under a bridge in Austin, Texas. <https://www.youtube.com/watch?v=YwWGvf38TVM>

Point: bridge, under the bridge, buildings, bats, water

Yes/No: Do bats sleep under a bridge? Do people watch them fly out from under the bridge?

WH Questions: Why do you think people like to watch the bats?

Opinion/Experiences: What is something you like to watch?

Peer to Peer Interaction: After you read Page 8, ask students, “Where do bats like to sleep?” The answer is the main idea card “bridges.” Students will find the main idea card and read it to their partner. Teacher will prompt them to ask their partner some of the questions talked about above.

Page 9: Bats sleep in the day, and they wake up at night. During the night they are awake. They love to fly around at night. They look for insects to eat. That is what they like to eat.

Point: Bridge, people, bats in sky, bat in cave, wings

Yes/No: Do bats like to wake up at night? Do they sleep at night? Do they fly around at night? Do they eat insects?

WH Questions: What are some of the insects that you think a bat might eat?

Opinion/Experiences: What insects have you seen? What insects bite?

Peer to Peer Interaction: After you read Page 8, ask students, “When to bats wake up?” Teacher will prompt them to ask their partner some of the questions talked about above.

