

Lesson Plan: Bats of the Chihuahuan Desert

K-4th



Lesson Summary

For thousands of years many people have considered bats to be mysterious creatures. There are many misconceptions about bats that contribute to the stories and fear that surround them. In this lesson, students will learn about the biology of bats, their habitats, and the truth about some of the most common misconceptions.

Learning Objectives

Students will learn to:

- Recognize common misconceptions that result in a fear of bats.
- Understand what distinguishes a bat and the differences between bats and humans as well as bats and birds.
- Learn how bats use their senses, especially smell and hearing.

Background Information/Historical Context (For staff/teachers)

For thousands of years many people have considered bats to be mysterious creatures. There are many misconceptions about bats that contribute to the stories and fear that surround them. Please see the resource file for background information on bat biology, habitats, adaptations, and their misconceptions.

Preparing the Lesson

- Read the background information.
 - See Resource File 1 – All About Bats!
- Print or download example photos
 - See Resource File 3 – Related Images
- Print or download the vocabulary page.
 - See Resource File 2 – Related Vocabulary
- Obtain a copy of *Stellaluna*, by Jannell Cannon.
- Gather the materials needed for the hands-on activities you choose to use in your classroom.
 - Activity: *Stellaluna*
 - Activity: How Do Bats Fly?
 - Activity: Echolocation
 - Activity: Family Sense
 - Resource File 7 – Additional Online Activities

Materials Needed

- Butcher paper
- Cotton balls
- Glue
- Orange, mint, vanilla, banana, lemon, and coconut extract (or other scents as available)
- Sidewalk chalk
- Tape measure
- Masking tape
- *Stellaluna* by Jannell Cannon
- Stopwatch
- Markers
- Crayons
- Colored pencils
- Bandanas
- Index cards
- Envelopes

Teacher Presentation

- Read *Stellaluna* and complete activity.
- Talk about the biology, adaptations, habitats, and misconceptions regarding bats.
 - See Resource File 1 – All About Bats!
- Introduce the related vocabulary list.
 - See Resource File 2 – Related Vocabulary
- Complete hands-on activities which reinforce learning objectives.

Essential Questions to Ask

- What are some common myths about bats?
- How do bats find food?
- What are some of the adaptations that make bats unique mammals?

Activities

Activity: *Stellaluna*

Although bats and birds both fly, they are not closely related. Bats are, in fact, mammals. Birds are able to fly because they have hollow bones and feathers, while bats have fur and lighter versions of mammal bones, which are marrow-filled. This activity will introduce students to the anatomy of bats.

*Please see the resource files for detailed instruction on *Stellaluna*.*

Activity: How Do Bats Fly?

In this activity you and your students will discuss how bats fly by comparing bats to humans and by determining what your wingspan would be if you had wings like a bat.

*Please see the resource files for detailed instructions on *How Do Bats Fly*.*

Activity: Echolocation

Although bats cannot see in the dark, they navigate in total darkness using echolocation. Echolocation consists of two parts: creating sound and 'catching' sound. This allows bats to avoid obstacles such as people, trees, and cave walls. In this activity, your students will be able to learn what echolocation is by playing a group version of Marco Polo that demonstrates how bats use echolocation.

*Please see the resource files for detailed instructions on *Echolocation*.*

Activity: Family Sense

Even though bats rely heavily on their other senses to get around and hunt, the sense of smell is vital for a mother to locate her offspring. In this activity, students will learn how a mother bat uses her sense of smell and hearing to find her pup.

*Please see the resource files for detailed instructions on *Family Sense*.*

New Mexico State Standards

Please see Resource File 4 for a list of benchmarks and standards for this lesson.

Resources/Citations:

Please see Resource File 5 for a list of resources and citations for the background information.

Questions and Comments

We would love to hear from you and your students. Let us know about the fun you have learning about bats! Send us photos of you and your students doing some of your favorite activities from this lesson. Please contact the instructional coordinator, Alexandra McKinney, with any questions or comments at alexandra.mckinney@state.nm.us.