



# Myths and Rumors

## Teacher Lesson Plan

### Bats in Our Backyard Pre-Visit Lesson

**Duration:** 30-45 minutes

**Minnesota State  
Science Standard**

**Correlations:**

3.4.1.1.2

**Wisconsin State  
Science Standard**

**Correlations:**

C.4.1, C.4.2

**Supplies:**

- 1) Smart Board or Dry Erase Board and Markers
- 2) Appendix I PowerPoint, slide 3

**Overview**

Students will recognize the importance of making sure information is true before developing an opinion by identifying popular myths of bats and replacing them with true facts through discussion and a game.

**Objectives**

1. Students will catalog their current ideas of bats.
2. Students will learn how untrue facts about animals began by rumors and historic attempts to explain the unknown.
3. Students will identify popular false ideas of bats and replace them with true facts.
4. Students will recognize the importance of making sure information is true about an animal, or anything in general, before developing an opinion.
5. Students will appreciate bats for their true characteristics and recognize them as an important part of Minnesota that needs protection.

**Background**

Human concepts of bats are made up mainly of myths. Even though science is providing a better understanding of bats, it is difficult to replace old myths with real facts. Many myths support fear and hatred of bats, which is detrimental to their conservation.

Understanding the truth about bats leads to respecting and valuing bats as an important animal in our world.

# Myths and Rumors

## Procedure

- 1.) Students sit in a circle facing the board.
  - a. Ask the students what they think of when they think of bats. Likely answers will be "Halloween, vampires, scary, blind, etc."
  - b. Record the answers in lists or as an idea web on the board.
- 2.) Discuss myths that people have created about animals. Many myths began because of fear of the unknown; bats come out at night and many people don't like the dark; because we associate the dark with bad things, we assume things that like the dark must be bad. It is sort of like starting rumors. Often bat rumors tell you to fear and hate bats. Once a rumor is started, it is very hard to correct.
- 3.) Misunderstanding animals may also come from attempts to explain animal behavior a long time ago, before science really began to study them. This is why it is important for science to describe things in nature as accurately and clearly as possible to avoid misunderstandings.
  - a. An idea can also be changed as it is passed from person to person or down through generations. Illustrate this concept by playing the "Telephone Game," in which students pass a whispered message around the circle. The teacher begins the message by saying "Bats fly in the dark and eat bugs" or something similar, and see what message comes out the other end. Is it still the same?
- 4.) Now that students understand how myths about bats may have begun, it is time to correct the myths with facts.
  - a. Go through the myths and discuss the actual facts. As you discuss, cross out the untrue myths on the board, and circle the true facts that students offered earlier.
  - b. At the end, how many items on the board were true and how many were false?
  - c. Discuss why it is important to know the true facts about bats for their conservation and protection. People are more likely to protect an animal they believe is important and that they appreciate (e.g. pandas are cute, sea otters are ecologically important).

## Assessment:

- 1.) What is a myth? *An incorrect belief about something that many people believe is true.*
- 2.) What is a fact? *An idea that is supported as true with scientific evidence.*
- 3.) What are some myths about bats? *Bats are blind, dirty, all carry rabies, are vampires, attack people, and are mice/rodents/vermin.*
- 4.) What are some facts about bats? *Bats are not blind, they do not all carry rabies, most are not vampires, they do not attack people, and they are not related to mice.*
- 5.) How can myths about bats be exchanged for facts? *Tell people, share information.*

# Myths and Rumors

## Myths and Facts

### **Bats are blind.**

Bats are NOT blind. Bats can see just like most other animals.

### **Bats are vampires.**

Often you see bats as Halloween decorations, and in movies vampires can turn into bats. Of over 1,000 species of bat, only three bite large animals for blood, sort of like mosquitoes. Minnesota bats eat insects. Most bats eat fruit, leaves, nectar and bark.

### **Bats fly into people's hair.**

Bats do not fly into people's hair. Bats are good flyers because of echolocation. They zig-zag while they fly to hunt insects, so it might look like they'll run into you. But they have no trouble avoiding large objects in their way, including people.

### **Bats are dirty and carry rabies.**

Bats are clean; they groom themselves like cats. Bats can become sick with rabies like any other mammal. Bats die quickly from the disease, so they often do not bite other animals and make them sick too. Even so, you should never touch a sick, injured or dead bat. Leave healthy bats alone, too, so they do not get scared and try to defend themselves by biting. If you do not bother a bat, it will not bother you.

### **Bats are mice.**

Bats are sometimes called "flying mice," but they are not rodents like mice and rats. Genetically, humans are more closely related to rodents than bats are! Bats belong in their own group of mammals called "Chiroptera," which means "hand wing."

## Important Terms

**Adaptation** - Changes made by living things in response to their environment (where they live).

**Cones** - Cells in the retina of the eye which are responsible for color vision as well as eye color sensitivity; they function best in bright light, as opposed to rod cells that work better in dim light.

**Hibernation** – A resting state some animals enter in the winter where their heart rate slows, their temperature drops, and their body survives off of fat reserves.

**Echolocation** - Locating objects by reflecting sound.

**Ecosystem** - A community of living organisms who are connected by their environment (living and non-living components) and depend on each other for survival.

**Endotherm (warm-blooded)** - Animals that generate their own body heat. They are able to raise their body temperature by shivering or eating to increase energy, or lower their body temperature by sweating or panting.

**Mammal** - A warm-blooded (endotherm), vertebrate animal with fur/hair that gives birth to live young, feeds its young milk, and breathes through lungs. This group includes dogs, cats, bears and cows.

**Megabat** – There are 166 species found in Africa, Australia, and Asia. They have fox like faces with long noses, large eyes, and small ears. They rely more on their vision than echolocation and eat fruit, nectar, and flowers.

**Microbat** – There are 759 species found worldwide, they rely on echolocation more than vision so they usually have large ears and small eyes. Micro-bat species primarily eat insects, but some eat nectar, fruit, flowers, fish, or small animals. Three species of micro bats drink blood.

**Nocturnal** - Most active at night.

**Population** - A group of plants or animals of the same species all living in the same area.

**Retina** - The light sensing part of the eye that also holds the rods (vision at low light levels) and cones (vision at high light levels, color vision).

**Rods** - Cells in the retina of the eye that work better in dim light.

**Vertebrate** - An animal with a backbone.