

Bats Need a Cave



SUBJECT: Science and English, Language Arts & Reading

GRADES: K-3

ACTIVITY SUMMARY: Students will play a game to simulate how human impact can affect the habitat of bats.

DURATION: approximately 45 minutes

OBJECTIVES:

The students will be able to:

1. Become a productive team member by following the directions to the activity.
2. Conceptualize how people's impact on a cave changes that environment.
3. Write a dialogue between bats and landowners discussing why a bat's home should be saved.

TEKS ADDRESSED:

Kindergarten-Science

9B-examine evidence that living organisms have basic needs such as food, water, and shelter for animals and air, water, nutrients, sunlight, and space for plants.

1st grade-Science

9C-gather evidence of interdependence among living organisms such as energy transfer through food chains and animals using plants for shelter.

10A-investigate how the external characteristics of an animal are related to where it lives, how it moves, and what it eats.

2nd grade-Science

9A-identify the basic needs of plants and animals.

9C-compare and give examples of the ways living organisms depend on each other and on their environments such as food chains within a garden, park, beach, lake and wooded area.

3rd grade-Science

9A-observe and describe the physical characteristics of environments and how they support populations within an ecosystem.

Kindergarten-English, Language Arts, and Reading

4B—ask and respond to questions about texts read aloud.

17A—form upper- and lower-case letters legibly using basic conventions of print (left-to-right and top-to-bottom progression).

17B—capitalize the first letter in a sentence.

17C—use punctuation at the end of a sentence.

1st grade-English, Language Arts, and Reading

4C—establish purpose for reading selected texts.

21A—form upper- and lower-case letters legibly in text, using the basic conventions of print (left-to-right and top-to-bottom progression), including spacing between words and sentences.

21B—recognize and use basic capitalization for:

- (i) the beginning of sentences.
- (ii) the pronoun "I".
- (iii) names of people.

21C—recognize and use punctuation marks at the end of declarative, exclamatory, and interrogative sentences.

2nd grade-English, Language Arts, and Reading

3C—establish purpose for reading selected texts.

17A—plan a rough draft by generating ideas for writing (e.g., drawing, sharing ideas, listing key ideas).

17B—develop drafts by sequencing ideas through writing sentences.

17C—revise drafts by adding or deleting words, phrases, or sentences.

17D—edit drafts for grammar, punctuation, and spelling using a teacher developed rubric.

17E—publish and share writing with others.

22A—write legibly leaving appropriate margins for readability.

22B—use capitalization for:

- (i) proper nouns.
- (ii) months and days of the week.
- (iii) the salutation and closing of a letter.

22C—recognize and use punctuation marks, including:

- (i) ending punctuation in sentences.
- (ii) apostrophes and contractions.
- (iii) apostrophes and possessives.

3rd grade-English, Language Arts, and Reading

2C—establish purpose for reading selected texts.

23A—write legibly in cursive script with spacing between words in a sentence.

23B—use capitalization for:

- (i) geographical names and places.
- (ii) historical periods.
- (iii) official titles of people.

23C—recognize and use punctuation marks including :

- (i) apostrophes in contractions and possessives.
- (ii) commas in series and dates.

23D—use correct mechanics including paragraph indentions.

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NATIONAL SCIENCE STANDARDS:

Content Standard C: Life Science

Grades K-4

The Characteristics of Organisms

- Organisms have basic needs. For example, animals need air, water, and food; plants require air, water, nutrients, and light. Organisms can survive only in environments in which their needs can be met. The world has many different environments, and distinct environments support the life of different types of organisms.
- The behavior of individual organisms is influenced by internal cues (such as

hunger) and by external cues (such as a change in the environment). Humans and other organisms have senses that help them detect internal and external cues.

Organisms and Their Environment

- An organism's patterns of behavior are related to the nature of that organism's environment, including the kinds and numbers of other organisms present, the availability of food and resources, and the physical characteristics of the environment. When the environment changes, some plants and animals survive and reproduce, and others die or move to new locations.

VOCABULARY: home, habitat, bats, "Bat Friendly Gate"

MATERIALS: None are needed


BACKGROUND:

This game teaches the concept that animals need a place to live. It also illustrates the importance of people making appropriate choices when wildlife habitat is involved. This activity develops the concepts that bats need a cave to live in and when the cave entrance is boarded up, bats can be left homeless.

Sometimes people need to protect their cave from trespassers. The cave could be vandalized and people could also be injured. Many times people board up the entrance ways to keep people out. The only problem is it also keeps bats out. The other alternative is using a "Bat Friendly Gate" over the entrance. This keeps people out, but the squares of the gate are large enough to allow bats to fly in and out freely.

PROCEDURE:

1. Have students list all the basic needs of living organisms. Explain that one of their needs is a place to live—called a habitat. Ask students, "Where do bats live?" The students should answer, "Caves." Discuss with the students why caves are a good habitat for bats. Explain that some of the students will be caves and some of the students will be bats and each bat will need a cave to live in.
2. Count the children into groups of three, making two students join hands facing each other, and then put the third child in the middle to be the bat. After all the children are arranged into groups of three, the game is ready to begin. If you have one extra student, they can be a bat looking for a home or if you have two you can have an extra cave or two bats that need homes.
3. Explain that it is time for the bats to look for a new home. When it is time to move say, "Bats need a new home." The caves will raise their arms to let the bats fly to find a new cave. The caves will keep their arms raised until a new bat moves in. Then they will lower their arms to protect the new bat. Remember, only one bat per cave.
4. Several rounds (at least 3) are played trading off the bats with half of a cave until all have had a turn. The next round, the instructor can bring up the idea that people want to move into the area. Some of the caves are now on private property and the owners want to keep trespassers out. The instructor "boards up" a cave and now the bat needs a new home. The "cave" becomes two new baby bats who also need new homes. Announce, "Bats need a new home." At the end of the round there should be several bats without a home. Ask how these bats will live and how they are to survive.
5. The instructor can continue to board up cave entrances and build houses. Explain that new landowners have moved in. These owners understand that bats need homes too, so they un-board the entrance and put up "bat friendly" gates. Trespassers are still kept out, but the bats can get in. Take two bats and turn them into a cave. Five to seven rounds (total) is usually the maximum for this game depending on the students and their age.
6. At the end of the game, talk with the students about how important it is for people to think about animals and their homes when they build in an area.

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7. Have students write a dialogue between a landowner who wants to close up a cave and a bat who lives there. The students will be the bat trying to convince the developer that saving your home is important.

EVALUATION: The teacher is able to evaluate the students during the game's discussions.

EXTENSIONS:

1. The students could make posters telling people to think about animals before they make any decisions that might affect the animals' homes.
2. The students may want to draw a picture of another animal that might be affected by changing the natural landscape.
3. The students could write to an organization like Bat Conservation International, and request posters dealing with bats and their habitats.

Bat Conservation International contact information:

Bat Conservation International

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Batcon.org
