

Instructional Recipe
Are Bats so Bad?
2nd Grade
Science



Online research and information resources available through a partnership between the Texas State Library and Archives Commission, the Texas Education Agency and Education Service Center, Region 20
<http://web.esc20.net/k12databases>

Step 1 – Ask

Objectives: Students will describe the physical characteristics, diet, and habitat of bats. Students will explain why bats are helpful to humans and the environment.

Introduction: Show students a photograph of a bat. You can search the EBSCO Image Collection, Nature and Science Photos, for “bat.”



“Bat hanging.” Online Image. EBSCO Image Collection. 1 September 2009
<<http://search.ebscohost.com/login.aspx?direct=true&db=imh&AN=imh216448&site=srck5-live>>

Ask:

Ask students to describe what they see in the picture. Why are many people afraid of bats? Are bats really so bad? Complete a KWL chart as a whole class. Include what the students think they *know* about bats in the first column. Generate a list of questions students *want* to know in the second column. Some suggested questions are:

- ★ What do bats eat?
- ★ How do bats find their way in the dark?
- ★ Where do bats live?
- ★ Do bats hurt people?
- ★ How many kinds of bats are there?

Vocabulary:

Students may encounter several new words as they research bats. You may wish to define these words for the students ahead of time. You can use the Dictionary in EBSCO Kids Search to define most of these words:

- ★ Mammal
- ★ Nocturnal
- ★ Echolocation
- ★ Habitat

Science TEKS:

(2.9) Organisms and environments. The student knows that living organisms have basic needs that must be met for them to survive within their environment. The student is expected to:
(A) identify the basic needs of plants and animals;
(C) 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
(2.10) Organisms and environments. The student knows that organisms resemble their parents and have structures and processes that help them survive within their environments. The student is expected to:
(A) observe, record, and compare how the physical characteristics and behaviors of animals help them meet their basic needs such as fins help fish move and balance in the water;
Technology Application TEKS:
4A Apply keyword searches to acquire information
4B Select appropriate strategies to navigate and access information for research and resource sharing
5A Acquire information including text, audio, video, and graphics
7A Use software programs with audio, video, and graphics to enhance learning experiences
7B Use appropriate software, including the use of word processing and multimedia, to express ideas and solve problems
8B Use electronic tools and research skills to build a knowledge base regarding a topic, task or assignment
10A Use font attributes, color, white space, and graphics to ensure that products are appropriate for the defined audience
10B Use font attributes, color, white space, and graphics to ensure that products are appropriate for the communication media including multimedia screen displays and printed materials.
11A Publish information in a variety of media including, but not limited to, printed copy or monitor display

Step 2 – Investigate

Search the K-12 Databases for *bats*, or *bats AND mammal*.

Here are suggested articles:

- ★ The Amazing World of Bats. *Weekly Reader - Edition 2*, Oct2008, Vol. 78, Special section p2-4, 3p; (AN 34694895)
<<http://search.ebscohost.com/login.aspx?direct=true&db=prh&AN=34694895&site=srck5-live>>
- ★ 13 REASONS YOU SHOULD LOVE BATS. By: Gordon, David George. *National Geographic Kids*, Oct2003, Issue 334, Special Section p8, 4p, 1 color; Reading Level (Lexile): 1030; (AN 11070869)
<<http://search.ebscohost.com/login.aspx?direct=true&db=prh&AN=11070869&site=srck5-live>>
- ★ Bat Loves the Night. By: Davies, Nicola. *Click*, Oct2008, Vol. 11 Issue 8, p16-21, 6p, 9 color; Reading Level (Lexile): 610; (AN 34639412)
<<http://search.ebscohost.com/login.aspx?direct=true&db=prh&AN=34639412&site=srck5-live>>
- ★ 5 Reasons to Like Bats. *Scholastic News -- Edition 2*, Oct2005, Vol. 62 Issue 2, p2-3, 2p, 2 color; Reading Level (Lexile): 580; (AN 18380383)
<<http://search.ebscohost.com/login.aspx?direct=true&db=prh&AN=18380383&site=srck5-live>>
- ★ "bat." *Britannica Elementary Encyclopedia*. 2009. Encyclopædia Britannica Online School Edition. 27 Aug. 2009 <<http://school.eb.com/elementary/article?articleId=352835>>.

Additional Websites:

<http://www.batconservation.org/content/Kidsandbats.html>

<http://kids.nationalgeographic.com/Animals/CreatureFeature/Vampire-bat>

(Students may use the attached note-taking sheet to record information as they are reading. Students may work in pairs to gather their information.)

Book: Cannon, Janell. *Stellaluna*. Orlando, Florida: Carlsen Verlag GmbH, 2006.

Step 3 – Create

Complete the KWL chart that the class began at the beginning of the lesson. Add the information that was *learned* in the third column.

| Know | Want to know | Learned |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------|
| Bats can fly. They live in caves. Bats drink blood. Bats eat insects. | How many types of bats are there? Do bats really drink blood? What else do bats eat? | |

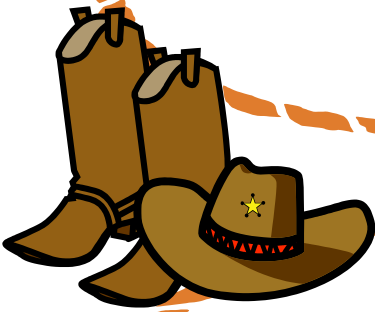
🔗 Technology Link: Use any graphic organizer software program, such as Inspiration, to create the KWL chart. Use a projector to display the chart to the entire class.

Step 4 – Discuss

Students may choose to complete one of the following projects:

- ★ Children in your neighborhood have seen bats flying around the trees in the evening. Many of them are scared that the bats might hurt them. Write a book to help children learn the facts about bats. Include as much information as you can. Some topics you could include are what bats eat, where they live, and how they help people.
- ★ Pretend you are a bat. Write a story about what you do each day and night. In your story, tell where you live and what you eat. You might also tell how you feel about people. Perhaps you might meet a person in your story.

🔗 Technology Link: Use any multimedia software program, such as Microsoft PowerPoint or Kid Pix, to create an electronic storybook about bats. Students' artwork could be scanned and inserted into the slides. They may also use images from the EBSCO Image Collection.



Step 5 – Reflect

Allow students to present their projects to the rest of the class. Use the following suggested rubric to assess the students' work. Make sure that the students are familiar with the rubric *before* they begin creating their project. They should refer to the rubric repeatedly to monitor their progress in creating their project.

🔗 Technology Link: You can also create your own rubric with your students at <http://rubistar.4teachers.org/index.php>.

Bat Fact Book / Bat Story

| CATEGORY | 4 | 3 | 2 | 1 |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Knowledge Gained | Book or story includes at least 9-10 facts about bats. | Book or story includes at least 7-8 facts about bats. | Book or story includes at least 5-6 facts about bats. | Book or story includes less than 5 facts about bats. |
| Accuracy of Facts | 90-100% of the facts presented in the book or story are accurate. | 80-89% of the facts are accurate. | 70-79% of the facts are accurate. | Less than 70% of the facts story are accurate. |
| Organization | The story or book is very well organized. One idea or scene follows another in a logical sequence with clear transitions. | The story or book is pretty well organized. One idea or scene may seem out of place. Clear transitions are used. | The story or book is a little hard to follow. The transitions are sometimes not clear. | Ideas and scenes seem to be randomly arranged. |
| Illustrations / Graphics | Illustrations or graphics are attractive, creative and relate to the text on the page. | Illustrations or graphics are somewhat attractive, creative and relate to the text on the page. | Illustrations or graphics may not be very attractive, but they do relate to the text on the page. | Illustrations or graphics are not present OR they do not relate to the text on the page. |
| Neatness | The final draft of the story is readable, clean, neat and attractive. It is free of erasures and crossed-out words. It looks like the author took great pride in it. | The final draft of the story is readable, neat and attractive. It may have one or two erasures, but they are not distracting. It looks like the author took some pride in it. | The final draft of the story is readable and some of the pages are attractive. It looks like parts of it might have been done in a hurry. | The final draft is not neat or attractive. It looks like the student just wanted to get it done and didn't care what it looked like. |
| Spelling and Punctuation | There are 0-1 spelling or punctuation errors in the final draft. | There are only 2-3 spelling or punctuation error in the final draft. | There are 3-4 spelling and punctuation errors in the final draft. | The final draft has 5 or more spelling and punctuation errors. |
| Creativity (for Bat Story only) | The story contains many creative details and/or descriptions that contribute to the reader's enjoyment. The author has really used his imagination. | The story contains a few creative details and/or descriptions that contribute to the reader's enjoyment. The author has used his imagination. | The story contains a few creative details and/or descriptions, but they distract from the story. The author has tried to use his imagination. | There is little evidence of creativity in the story. The author does not seem to have used much imagination. |

Name: _____ Date: _____

Bat Facts

| | |
|-----------------------------------------------------------------|--------------------------|
| What do bats eat? | Draw a picture of a bat. |
| Where do bats live? | |
| When are bats usually active – day or night? | How do bats help people? |
| Wow! I never knew that! List a fun fact you learned about bats. | |
| What do you think of bats? Why? | |

