

Grade: 2nd grade

Topic/Time Span: Animal Classifications and Bats (3-4 weeks - October)

## **Green Woods Charter School - EIC Curriculum Grid**

<p><u>Environment &amp; Ecology:</u></p> <ul style="list-style-type: none"><li>● 4.3.4.A - Know that plants, animals and humans depend on air and water</li><li>● 4.3.4.C - Understand that the elements of natural systems are interdependent</li><li>● 4.5.4 A – Know types of pests</li><li>● 4.5.4. B – Explain pest control</li><li>● 4.5.4.C - Understand society’s need for integrated pest management</li><li>● 4.6.4. A – Understand that living things are dependent on nonliving things in the environment for survival</li><li>● 4.7.4 A – Identify differences in living things</li><li>● 4.7.4 B – Know that adaptations are important for survival</li><li>● 4.7.4 C – Define and understand extinction</li><li>● 4.8.4.C - Explain how human activities may change the environment</li></ul>	<p><u>Reading, Writing, Speaking, Listening:</u></p> <ul style="list-style-type: none"><li>● 1.1.3 F – Understand the meaning of and use correctly new vocabulary learned in various subject areas.</li><li>● 1.1.3 G – Demonstrate after reading understanding and interpretation of both fiction and nonfiction text.</li><li>● 1.3.3 F – Respond to nonfiction and fiction works of literature</li><li>● 1.4.3 B – Write informational pieces</li><li>● 1.4.3 C – Write an opinion and support it with facts.</li><li>● 1.6.3 A – Listen to others</li><li>● 1.6.3 B – Listen to a selection of literature and relate it to similar experiences</li><li>● 1.6.3 D – Contribute to discussions</li><li>● 1.6.3. E – Participation in small and large group discussions and presentations.</li></ul>
<p><u>Science &amp; Technology:</u></p> <ul style="list-style-type: none"><li>● 3.1.4.A - Know that natural and human-made objects are made up of parts.</li><li>● 3.1.4.C - Illustrate patterns that regularly occur and reoccur in nature.</li><li>● 3.1.4.E - Recognize change in natural and physical systems.</li><li>● 3.3.4 A – Know the similarities and differences of living things</li><li>● 3.3.4.B - Know that living things are made up of parts that have specific functions.</li><li>● 3.7.4 C – Identify basic computer operations and concepts</li><li>● 3.7.4 D – Use basic computer software</li></ul>	<p><u>Math:</u></p> <ul style="list-style-type: none"><li>● 2.1.3.A - Count using whole numbers (to 10,000) and by 2’s, 3’s, 5’s, 10’s, 25’s and 100’s.</li><li>● 2.1.3.G - Use concrete objects to count, order and group.</li><li>● 2.5.3.A - Use appropriate problem-solving strategies</li></ul>
<p><u>Civics &amp; Government:</u></p> <ul style="list-style-type: none"><li>● 5.1.3 B – Explain the purposes of rules and laws and why they are important in the classroom, school, community, state and nation.</li></ul>	<p><u>Geography:</u></p> <ul style="list-style-type: none"><li>● N/A</li></ul>
<p><u>History:</u></p> <ul style="list-style-type: none"><li>● N/A</li></ul>	<p><u>Economics:</u></p> <ul style="list-style-type: none"><li>● N/A</li></ul>
<p><u>Health, Safety, &amp; Physical Ed:</u></p> <ul style="list-style-type: none"><li>● 10.4.3.F - Recognize positive and negative interactions of small group activities.</li></ul>	<p><u>Arts &amp; Humanities:</u></p> <ul style="list-style-type: none"><li>● 9.1.3 A – Know and use the elements and principles of each art form to create works in the arts and humanities</li><li>● 9.1.3 B – Recognize, know, use and demonstrate a variety of appropriate arts elements and principles to produce, review and revise original works in the arts</li><li>● 9.1.3 C – Recognize and use fundamental vocabulary within each of the arts forms</li><li>● 9.1.3 H – Handle materials, equipment and tools safely</li></ul>

at work and performance spaces.

Career Education & Work:

- N/A

Family & Consumer Science:

- 11.2.3.H - Identify how to resolve conflict using interpersonal communications skills.

**Goals and Objectives:**

- Students will learn the different classifications of animals.
- Students will learn how to identify animals based on their tracks.
- Students will learn why a bat is a special mammal.
- Students will learn to identify specific bats.
- Students will be able to locate the parts of a bat.
- Students will be able to explain why bats are natural pest management systems.
- Students will be able to describe the bat's role in the food chain.
- Students will begin to learn about echolocation.
- Students will write short informational paragraphs about bats.
- Students will be able to differentiate between bat facts and opinions.
- Students will identify what we can do in order to help protect a bat's habitat.
- Students will go on a field trip to Crystal Cave Park in Kutztown, Pennsylvania

**Overview of Integrated Activities:**

Science (possible lessons to use):

- Animal classifications lesson (2 classes)
  - mammals, birds, fish, amphibians, reptiles,
- Project Wild - First Impressions (to introduce the bat unit)
- Bat lesson - books and facts
- Bat videos online
- Little Brown Bat and Vampire Bat Lesson
- Bat Box Hike
- Build a bat box (if able)
- Incredible Bat Worksheet - bat ears (Science Made Simple)
- Vibrations Activity (Science Made Simple)
- Echolocation lesson and games (2 classes)
- Sound Waves Activity (Science Made Simple)
- Types bats lesson - microbats and megabats

Regular Classroom (possible integration lessons):

- Read the Great Ball Game and practiced using Venn Diagrams by comparing bats to birds
- Watched Magic School Bus Goes Batty and completed fact sheets about bats
- Used the How-To writing model to write a How-To Draw a Bat and students followed the model to draw a bat
- Used the How-To writing model to write a How-To Make a Bat paragraph from a sequence flow chart
- Created bat number stories using science vocabulary words
- Compound word bats
- Illustrated Bat Poems
- Looked at a variety of bat books to distinguish the difference between fiction and nonfiction. Then used a Venn diagram to compare fiction and nonfiction.

- Fact & Opinion (Science Made Simple)
- Bat quiz

### **Assessment:**

- Students will complete a Venn diagram comparing two types of bats (including what they eat and their habitat).
- Students will write bat fact and opinion sentences.
- In their journals, students will describe the basic needs of animals and list animals that can be classified as mammals.
- Students will explain, in their journals, how bats are natural IPM systems.
- Students will use the information that they have learned about bats to write a short paragraph.
- Students will complete a quiz on bats detailing types of bats, bat homes, echolocation, and what bats eat.
- Students will explain what happens to bats when mines are closed and what we can do to help them survive.
- Students will explain what white nose syndrome is.
- Students will be able to detail where bats fit into the food chain.
- Students will be able to describe why bats facial features (ears and nose) are important to their survival.
- Students will be able to explain what echolocation is.
- Students will be able to complete an end of the unit bat test with at least 75% accuracy.

### **Science Resources:**

- [Amazing Mammals Part II](#) by, National Wildlife Federation
- [A Homeowner's Guide to Northeastern Bats and Bat Problems](#) by, PennState College of Ag.
- [Project Wild: K-12 Curriculum & Activity Guide](#)
- [Bats Incredible!](#) – AIMS Activities Grades 2 – 4
- [Shadows of Night: The Hidden World of the Little Brown Bat](#) by, Barbara Bash
- Bat Kit – PA Fish and Game Commission
- [Science Made Simple](#) – (Grades 1-3) Best of Mailbox Magazine

#### **Video/DVD:**

- [Season of the Bat](#) – Pennsylvania's Wild Resource Conservation Fun (1993)
- [Amazing Animals, Nighttime Animals](#) – Partridge Films (1996)

#### **Other:**

- Bat Box Kit – Pennsylvania Fish and Game Commission
- Brenda Malinics – bat expert – [Brenda.malinics@temple.edu](mailto:Brenda.malinics@temple.edu)

- <http://members.aol.com/bats4kids>
- Pennsylvania Bats - [http://sites.state.pa.us/PA\\_Exec/PGC/w\\_notes/bats.htm](http://sites.state.pa.us/PA_Exec/PGC/w_notes/bats.htm)
- Bat Thematic Unit Resources – <http://www.cccoe.k12.ca.us/bats/welcome.html>
- The Teacher’s Guide: Bats – <http://www.theteacherguide.com/batslessonplans.htm>

**Websites and Online Videos:**

- <http://www.incrediblebats.com/interactive.html>
- <http://kids.nationalgeographic.com/kids/animals/creaturefeature/vampire-bat/>
- <http://www.kidzone.ws/animals/bats/index.htm>
- <http://bats4kids.org/>
- <http://www.batrescue.org/batfacts/batfacts.html>
- <http://www.youtube.com/watch?v=vpxE0D0gu0Q>
- <http://video.nationalgeographic.com/video/kids/animals-pets-kids/mammals-kids/bat-flying-fox-kids/>
- <http://video.nationalgeographic.com/video/animals/mammals-animals/bats/weirdest-long-eared-bat/>
- <http://video.nationalgeographic.com/video/news/animals-news/bat-hospital-wcvin/>
- <http://video.nationalgeographic.com/video/animals/mammals-animals/bats/weirdest-flying-fox/>

**Literature:**

- [Stellaluna](#) by Janell Cannon
- [Bats](#) by, Lily Wood
- [The Bat Book](#) by, Luann Columbo
- [Squeaking Bats](#) by, Ruth Berman
- [Bats](#) by, Anne Gordon
- [Eyes on Nature: Bats](#)
- [Bats in the Dark](#) by, John Kaufmann
- [Bats – Creatures of the Night](#) by, Joyce Milton
- [Bats and Other Animals of the Night](#) by, Joyce Milton
- [Bat Loves the Night](#) by, Nicola Davies
- [Bats](#) by, Gail Gibbons
- [Amazing Bats](#) by, Seymour Simon
- [I Can Read About Bats](#) by, Elizabeth Warren
- [Caves](#) by, Veda Boyd Jones
- [Shadows of the Night: The Hidden World of the Little](#)
- [Brown Bat](#) by, Barbara Bash
- [Eyes on Nature: Bats](#) by, Celia Bland
- [The Magic School Bus: The Truth About Bats](#) by, Eva Moore
- [Five Little Bats Flying in the Night](#) by, Steve Metzger

**Classroom Resources:**

-

### **Extension Activities:**

- Students can research one type of bat.
- Students can take a nighttime walk to look for bats.
- Students can build a bat box and put it up.
- Students can create posters for each type of animal classification.
- Students can visit a local cave.
- Students can research other types of bat homes.
- Students can read bat books.
- Students can watch bat movies.
- Students can complete bat crafts.