Introduction
This unit will familiarize students with the differences between mammals and birds. Students will compare and contrast bats and birds in this lesson. The teacher will read the storybook *Stellaluna* by Janell Cannon.

The general subjects addressed are Language Arts and Science. The posing question is:

*If bats can fly, why aren’t they birds?*

Some of the concepts this lesson will teach are identifying bats' and birds' body shapes, sizes, body coverings, movements, and body parts. Students will review the differences between living and nonliving things.

Student Outcomes
After completing this lesson on bats and birds, students will understand:
- The key differences between mammals and birds.
- Bats are flying mammals.
- What effects bats and birds have on people.
- An understanding of bat anatomy.

Content Area and Grade Levels

**Grade Skills: First Grade: Language Arts**
1. The students will be able to read and understand the meaning of simple words.
2. The student will read for meaning (main idea, sequence) and be able to read aloud smoothly.
3. The student will be able to communicate with legible and complete sentences.
4. The student can discuss what they have read and listen to and be able to give a brief sequences speech about one thing or one idea.
5. The student will listen attentively and politely for the main ideas and sequences.

**Grade Skills: First Grade: Science**
1. The student will be able to put animals in groups by size, shape, body covering, and movement.
2. The student will understand differences and similarities between living and nonliving.

Content Standards and Benchmarks
Language Arts: Content Standard 1: Students will understand and use language arts for communication. Benchmark K-4
Science: Content Standard 1: unifying concepts and processes. Students will understand science concepts of order and organization. Benchmark K-4

Visual Arts: Content Standard 1: Learn and develop the essential skills and technical demands unique to dance, music, theatre, drama, and visual arts.

III. NM Technology Standards: Teaching, Learning, And The Curriculum.

Teachers:
- A. Facilitate technology-enhanced experiences that address content standards and student technology standards.
- B. Use technology to support learner-centered strategies that address the diverse needs of students.
- D. Manage student-learning activities in a technology-enhanced environment.

**Technology Usage**

The use of technology would occur through the usage of several software programs. There is no limit to what could be done with this unit utilizing technology. Some suggestions have been made throughout this unit. MS Paint or KidPix are two drawing/painting software programs that allow very young students to illustrate ideas. PowerPoint is a presentation software program. It allows the user to create slideshows that display their thoughts.

- **Word**
- **Power Point Presentation**
- **MS/PAINT or KidPix**

**Resources**

**Online**
1. [http://www.cccoe.k12.ca.us/bats/books.html](http://www.cccoe.k12.ca.us/bats/books.html)
5. [http://www.nature.ca/notebooks/english/bigbat.html](http://www.nature.ca/notebooks/english/bigbat.html)
6. [http://home.earthlink.net/~cmsquare/bbrwnbat.html](http://home.earthlink.net/~cmsquare/bbrwnbat.html)
7. [http://www.nsrl.ttu.edu/tmot1/epetfusc.htm](http://www.nsrl.ttu.edu/tmot1/epetfusc.htm)

**Off line**
1. First Grade Picture Dictionary
2. Word Wall vocabulary on bats and birds
3. KWIL Chart & Information
4. *Stellaluna* by: Janell Cannon
5. Pictures of bats and birds
8. Strange Creatures of the Night, National Geographic Video, 1973

Process

Tips:
Other bat resources should be shared and discussed in length prior to beginning the activities. The teacher and students will discuss the differences and similarities in bats and birds. The students will work in groups of three to complete the bats and birds fact template on the computer. Each student will draw a picture of a bat on KidPix or MS Paint, labeling the animal’s body parts. The students will save their work on the desktop and on a diskette. The student will print both pages after their work is completed. A PowerPoint slide show is suggested as an extension method if the teacher so desires.

Remember being prepared ahead of time saves class time! Here are some suggestions:
1. *Stellaluna* book is displayed for students
2. Pictures of bats and birds are easily accessible to students
3. Poster paper, or chart tablet, for K-W-L chart is hanging up and has titles listed on it,
4. Computer materials are prepared

Materials:

Materials needed for this activity/lesson are:
- Large poster, or chart tablet, for K-W-L chart and marker
- *Stellaluna* by Janell Cannon
- Other library books
- Pictures of bats and birds
- Diskettes
- Printer Paper
- Bats and Birds Fact Template
- Poster-Step-by-step directions for the computer
- Posters of a bat and bird with label body parts
- Student Activity template (if desired)

Preparation:

Post the title, author, and illustrator on cards around the classroom. Discuss these important people as you introduce the story, *Stellaluna*. Have the book *Stellaluna* on display at all times so students can view it at their leisure. Post pictures of bats and birds. Hang up a big piece of poster paper. Write the titles on the K-W-L chart. Post a step-by-step poster that includes simple (rebus) directions describing the computer task to be completed using text and pictures.

NOTE: prior computer experience is necessary for this unit. Make sure the bat and bird template is saved on the desktop in the student’s folder, and MS PAINT or KidPix is available for student use. It would be good to have extra diskettes and plenty of printer paper. The teacher should
choose groups of three students to place into teams that establish multi-level learners. Posters of a bat and a bird with labeled body parts should be displayed and discussed with students.

**Tasks:**
1. Make bat resources widely available. Read, discuss, and study as many bat facts as possible.
2. Look at pictures of bats and birds.
3. Pose the driving question: "If bats can fly, why aren’t they birds?"
4. Discuss the differences and similarities between mammals and birds.
5. Generate a K-W-L chart with students. An example of a K-W-L is provided.
6. Read the storybook *Stellaluna* by Janell Cannon.
7. Discuss the character in the book and what they found interesting.
8. Use available books and other resources, K-W-L chart, to complete the fact template on bats and birds.
9. Use the MS PAINT or KidPix software to draw a bat or bird and label the body parts.
10. Save on the desktop in student folder and on a diskette.
11. Share all work. Display in the hallway. The teacher and students can create a class newsletter to share their work with their parents.
12. As an extension, students could create a Power Point presentation on bats. Each group would be responsible for creating a slide on a bat fact. Once all slides have been created, the teacher could link the slides together to make a slideshow presentation.
13. A printed “hard-copy” of the slide show could be used as an assessment tool, among another way to present the student’s acquired bat knowledge.

**Presentation**
1. Students could create a PowerPoint presentation to share with the parents on Parent’s Night.
2. Display work in the hallway.
3. Rotate groups and share work in small settings.
4. Present work to another class.
5. Make a video of each group sharing their work.

**Credits**
Teacher’s Helper Sept/Oct 1999
The Magic School Bus, Going Batty, 1995 Scholastic Inc.
Bats, Complete Cross-Curricular Theme Unit, by Robin Bernard
Bats, 1999 Monday Morning Books, Inc.
Bats, A Complete Thematic Unit, Moore, JoEllen, Evan-Moor Corp 1995

http://www.nps.gov/cave/teacherguide/activities.bats.html
http://members.aol.com/bat4kids2/bird.htm
http://www.yahooligans.com/tg/bats.html
Assessment

1. Students will be evaluated with a common grade for the entire group and an individual grade. The teacher will be doing informal observation and taking anecdotal notes while the students work in groups and individually. Students will evaluate their own learning using a self-assessment rubric. The student rubric will be called, “How Did I Do?” Use pictures to go along with the text (rebus). Students will evaluate themselves on listening skills, participation, working in a group, taking turns typing facts on the computer, drawing and labeling pictures. The teacher will use a rubric to rate the degree in which a student has met the specified objectives listed above. The rubric will also evaluate whether the child knows the different facts about bats and birds and living and non-living things.

2. Use an anecdotal record rubric, portfolios, and interviews with the students to record and assess individual progress.

Extension

Home-School Connection:

1. The students can look for bats and birds at home with their parents. Write down their descriptions or draw pictures. Bring the information to school and share with the class.

2. Go to the public library and check out books, videos, and the Internet on information about bats and birds.


5. Strange Creatures of the Night, National Geographic Video, 1973


7. [http://www.cccoe.k12.ca.us/bats/books.html](http://www.cccoe.k12.ca.us/bats/books.html)

8. Planning a trip soon? Carlsbad Caverns is a great place for students to extend their knowledge about bats.

9. Internet website focusing on bats are ample. Extensions are endless with these resources.
<table>
<thead>
<tr>
<th>K</th>
<th>W</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>What you know….</td>
<td>What you want to know…</td>
<td>What you learned…</td>
</tr>
</tbody>
</table>
## K-W-L CHART

<table>
<thead>
<tr>
<th>K</th>
<th>W</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What I Know</strong></td>
<td><strong>What I Want to Know</strong></td>
<td><strong>What I Learned</strong></td>
</tr>
</tbody>
</table>

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My Bat Report

Think about what you know about bats. Write a report that tells…

What does your bat look like?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

What does your bat eat? How does your bat get its food?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Where does your bat live?

Name:
Daytime and Nighttime Animals

Directions: Write your name.

Directions: Write the animal names in the sun or the moon column.

<table>
<thead>
<tr>
<th>Daytime Animals</th>
<th>Nighttime Animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>lion</td>
<td></td>
</tr>
<tr>
<td>bird</td>
<td></td>
</tr>
<tr>
<td>mouse</td>
<td>bat</td>
</tr>
<tr>
<td>man</td>
<td>rooster</td>
</tr>
<tr>
<td>bat</td>
<td>dog</td>
</tr>
</tbody>
</table>
Bat Graphics
Directions:
Type last name.
Type first name.
Pick the sentence that tells how you feel about bats. Type that sentence in the graph.

Bat Graph

Do you like bats?

<table>
<thead>
<tr>
<th>Last Name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>First name</td>
<td></td>
</tr>
<tr>
<td>I like bats.</td>
<td></td>
</tr>
<tr>
<td>I don't like bats.</td>
<td></td>
</tr>
<tr>
<td>I am not sure.</td>
<td></td>
</tr>
</tbody>
</table>

Excel Spreadsheet
By: Sharon Terry
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- Locke