

**0107.2.2** Record information about living or non-living objects in local environments.

POSSIBLE if cubs are available:

**GLE 0107.4.2** Describe ways in which animals closely resemble their parents.

**0107.4.2** Match pictures of parents and related offspring by identifying common characteristics.

# Black Bear Lesson

## Plan

### Black Bear Aware

#### **Objective:**

Students will observe a black bear at the zoo, recording the various observed behaviors on a data sheet. Students will then compare and contrast their observations of time the bear spent at various activities and draw conclusions based on their observations.

#### **Materials:**

Clip boards

Pencils

Data sheet

Computer

#### **Preparation:**

Make arrangements for transporting your class to the zoo on a field trip.

Make arrangements with the zoo for observation time.

#### **Procedure:**

Engagement: The day before your field trip to the zoo, show the video *The Great White Bear* to the class (National Geographic Society (1998). The

Great White Bear. [VHS]. Washington, D.C.: The National Geographic Society.) (If this is not available, check out United Streaming's grizzly bears at

<http://streaming.discoveryeducation.com/search/assetDetail.cfm?guidAssetID=644BB834-40D7-42AF-8C95-3329FA8E7A22>.) Ask the students to pay

close attention to the daily activities of the bears: walking, swimming, hunting, etc. Explain to students that they will be conducting a scientific observation of black bears at the zoo. Divide the class into teams of two students. Distribute a polar bear data sheet, clipboard, and directions to each team.

**Directions:**

- Make sure that your team has a black bear data sheet, a clipboard, and a pencil with eraser.
- Find a comfortable place in the bear exhibit for observing a bear for at least 20 minutes.
- Fill out the top portion of the data sheet.
- Review the recording portion of the data sheet with your teammate.
- When you are ready to begin, write the beginning time in the space provided.

**Exploration:**

During the Zoo visit, have the teams complete their observations of a bear on the data sheet. Explain that each team can observe only one bear. If possible, you should probably have no more than two or three teams at a time in the exhibit to do their observations. Also, some observed behaviors may be difficult to interpret. Teams should do their best and not spend a lot of time worrying whether they interpreted the behavior properly.

**Explanation:**

After the field trip, each team should set about the task of comparing and contrasting their observations. In addition, each team should answer the following questions on the *Ursus americanus* data sheet:

- Do you think that the 20 minutes that you observed the bear was long enough to get an accurate picture of the bear's normal behavior? Why or why not? (Equate to human activity. Each student will have different activities in the morning [eating breakfast, getting dressed, etc.] than at mid-day.)

- Based on your observations from the video and the observations that you made at the zoo, do you think that the time budget for captive bears is different or the same as wild black bears? Why or Why not?
- What are some ways that you might be able to alter the time budget of captive black bears to more closely resemble wild black bears? (Zoo staff are constantly trying to alter stereotypic pacing that is observed in many captive bears through better exhibit design and animal enrichment [hiding food instead of just plopping food into the exhibit, etc.] )

**Extension:**

- Using appropriate computer software such as Microsoft Word or PowerPoint, have each team create a colorful presentation for the rest of the class. Have students research the natural history of polar bears and design a zoo exhibit where captive black bears would elicit a behaviors that would more closely resemble that of wild black bears.
  - If cubs are available, students can observe how the cubs closely resemble their parents.
  - Match pictures or discuss the observations made at the zoo of parents and cubs. Relate how they share common characteristics.

# Ursus americanus (Black Bear)

## Observation Sheet

Date:

Time Begin:

Air Temperature (if available):

Time End:

Weather conditions:

Observer names:

|             |  |
|-------------|--|
| Feed        |  |
| Drink       |  |
| Urinate     |  |
| Defecate    |  |
| Look Around |  |
| Play        |  |
| Sleep       |  |
| Smell       |  |
| Groom       |  |
| Scratch     |  |
| Rub         |  |
| Bite        |  |
| Walk        |  |
| Run         |  |
| Swim        |  |
| Stand       |  |
| Eat         |  |
| Chew        |  |