

## **Cricket Lesson Plan**

**Grade Level:** 2

**Science Concept:** Crickets a kind of insect with distinct characteristics, and is an insect because it has 6 legs.

### **Relationship to California Science Content Standards:**

2.2.a: "Plants and animals have predictable life cycles. As a basis for understanding this concept: Students know that organisms reproduce offspring of their own kind and that the offspring resemble their parents and one another."

2.4.f: "[Students will] use magnifiers or microscopes to observe and draw descriptions of small objects or small features of objects."

**Learning Objective:** Students will observe a cricket and will demonstrate their observations of its physical appearance by drawing a picture of the cricket and its body parts.

### **Evaluation Ideas:**

- 1.) **Formative:** Students will observe the cricket and work on drawing an accurate depiction of these observations.
- 2.) **Summative:** Students will have completed a drawing of the cricket and will be able to compare and contrast the cricket with other insects.

**Conceptual Background:** There are over 120 species of crickets in the world, and they are found on every continent but Antarctica. Crickets can be a useful part of their ecosystem in that they renew minerals in the soil by eating organic materials, decaying plants, seedling plants, fungi, dead insects. Most are brown but some are black or green with white wings, strong, large back legs, ears on their legs, rounded heads, long, thin antennae (extend from the head to the end of the abdomen), wings on either side of their body (front wings and hind wings that fold and hide underneath the front wings). Males rub their forewings together to produce a chirping sound to attract females. This sound differs for each species and allows the crickets to find members of their own specific species. Their chirping is louder and more frequent when the temperature is warm. After mating, females lay eggs in the soil (this can range from a few dozen to a few hundred eggs). Females have a part of their body toward the end of their abdomen called an ovipositor that is used to lay these eggs. A cricket's lifespan is usually a year or more, but usually cannot live through more than one winter.

## Lesson Implementation Plan:

**Engage:** Turn out the lights in the classroom and instruct the students to close their eyes. Then play the sound of crickets using this link:

<http://www.youtube.com/watch?v=e2KVj2vVxUs&feature=related>

After about a minute turn on the lights and instruct the students to open their eyes. Begin a discussion with the class asking these questions?

- What is the sound that you just heard?
- Have you heard it before?
- When and where have you heard these sounds?
- Has anyone ever seen a cricket up close?

Pass out the KWL worksheet and allow students 10-15 minutes to fill in the “K” and “W” sections. Then draw a KWL chart on the board. Ask the students to volunteer responses from their own KWL chart as to what they know and want to know about crickets. Inform the class that they will soon get a chance to observe an actual cricket and make observations about it.

**Explore:** Explain to the class that they will be closely observing the cricket in groups, and that they must treat the cricket with respect. That means that they should use inside voices and not tap or shake the container that the cricket is in. Break the students into groups of 4 and have them move to each group’s designated area of observation. Explain to the students that they can use the magnifying glass provided to get a better look at the cricket. Demonstrate how a magnifying glass is used and then distribute the magnifying glasses to each group and tell them that everybody needs to share these tools. Pass out blank paper and colored pencils. Tell the students that they will be given 15 minutes to observe the crickets and to draw a picture of what they see. Emphasize the importance of drawing individual body parts and making the picture large enough on the paper so that these body parts can be seen. Let the observation period begin and circulate the room to monitor progress.

**Explain:** After the observation and drawing period has ended and the materials have been cleaned up, have the students return to their seats. Lead a discussion with the class that includes the following questions and write their answers on the “L” portion of the KWL chart. Encourage them to add some of the “L” answers to their own KWL charts.

- What did you observe about the cricket?
- Did it make any sounds while you were observing it?
- What body parts did it have?
- What did it have on its head?
- What did it have on its body?
- What color was it?
- How is it similar to humans?

- How is it similar to other animals?
- How many legs did it have?

**Elaborate:** After the students have determined that the cricket has 6 legs, tell them that because it has 6 legs it is classified as an insect. Ask the class to begin thinking about other insects that they have seen or know about. Pass out the Insect Compare/Contrast worksheet and have the class fill out 4 examples of other insects and their similarities and differences with crickets.

### **Evaluate:**

**Formative:** After writing in answers on their KWL chart students will observe the cricket and work on drawing an accurate depiction of these observations.

**Summative:** Students will have completed a drawing of the cricket and will be able to compare and contrast the cricket with other insects.

### **Differentiation Plans:**

**Behavioral for Student A:** For a student that has difficulty focusing for long periods of time, assign them the task of helping you distribute and collect materials (such as the magnifying glasses).

**Cognitive for Student B (low-level):** These students may be given extra time to complete their drawings and Insect Compare/Contrast worksheet. They will be offered one-on-one help if they need extra assistance.

**Cognitive for Student C (advanced):** These students will be encouraged to create drawings in greater detail as well as using more advanced vocabulary in their writing.

**Affective for Student D:** These students will not be required to contribute answers during the class discussion.

### **Language Demands for Students**

**E (Beginning):** These students may choose to write in their home language.

**F (Intermediate):** These students will be encouraged to write their responses in English, but if they need to write certain words in their home language then that will be acceptable. They will be encouraged to add new English words from this lesson to their personal word dictionary.

**G (Advanced):** Though these students may be able to write almost entirely in English, they will not be expected to write in great detail or complexity.

**List of Materials (per group)**

- 1 Cricket in a closed transparent container
- 2 Magnifying glasses
- Blank paper
- Colored pencils
- KWL worksheet and Insect Compare/Contrast worksheet (per student)

**Suggested Readings:**

Carle, Eric (1990). *A Very Quiet Cricket*. New York: Philomel Books.

Green, Emily K. (2007). *World of Insects: Crickets*. Minneapolis: Bellwether Media.

Howe, James and Young, Ed (1987). *I Wish I Were a Butterfly*. San Diego: Harcourt Brace

Jovanovich.