

# What are the 5 senses of a Cricket?

## An Elementary Science Lesson Plan Designed For Group Inquiry Based On The 5E Inquiry Model

**GRADE LEVEL:** 2nd

**SCIENCE CONCEPT (the Main Idea or Enduring Understanding):** Students will learn the five senses of a cricket. They will learn how a cricket can smell, see, hear, touch and taste.

### **RELATIONSHIP TO CALIFORNIA SCIENCE CONTENT STANDARDS:**

Life Sciences

3. Adaptations in physical structure or behavior may improve an organism's chance for survival. As a basis for understanding this concept:
  - a. Students know plants and animals have structures that serve different functions in growth, survival, and reproduction.

### **LEARNING OBJECTIVES:**

1. Students will identify the five senses of a cricket by performing a poem and completing the five senses of a cricket worksheet.

### **EVALUATION IDEAS:**

1. **Formative:** Students will be asked to fill in the five senses of a cricket on a worksheet.
2. **Summative:** Students will perform a poem on the five senses of a cricket.

### **CONCEPTUAL BACKGROUND:**

Crickets can see with their eyes, smell with their antenna, hear with tympana (like human eardrums) on their legs, taste with taste- buds on their palps (finger- like structures) in their mouth and touch with the tiny hairs all over their bodies.

Vocabulary words:

1. Antenna (plural antennae): a pair of appendages on the head of an insect used as sensory organs.
2. Cerci: two long appendages at the end of the abdomen that contain on the surface tiny hairs that respond to touch or air movement. Both male and female crickets have them. Females, however, have a long ovipositor (see diagram).
3. Palps: finger-like structures on the insect's mouth that help them handle and hold food, but also contain taste bud-like receptors that are for tasting food.

4. Tympanum: sense organ, like human eardrum, but in crickets located on their front legs (see diagram).
5. Tibia: section of insect leg before foot; tympana located on it.

### **LESSON IMPLEMENTATION PLAN:**

**ENGAGE** – Bring in a handful of crickets into the classroom and have the class observe the crickets. You can break the class into small groups and have the students observe the crickets one group at a time. Another option is to place a few crickets in a container at each group for students to observe as a group. Ask the students to predict how crickets use the five senses: See, Hear, Smell, Touch and Taste. Write the predictions on the board.

**EXPLORE**- The teacher will read the book, **A Very Quiet Cricket**, by Eric Carle. After, the teacher will begin the discussion by asking the students, were our predictions correct?

**EXPLAIN** – Students will each get a copy of the poem “Walking on Ears”. The teacher will first read the poem to the class and then read as a class. Break the class into six groups. Each group will have a part in the poem. Have the groups practice their lines first. Then the whole class will come together to read the poem by each part. Students can also act out their lines or use hand motions.

**ELABORATE** – Give each student a 5 senses chart. Have them fill in the chart the five senses and where they belong. Explain that crickets see with their eyes, smell with their antenna, hear with tympana (like human eardrums) on their legs, taste with taste- buds on their palps (finger- like structures) in their mouth and touch with the tiny hairs all over their bodies. The teacher can use a large diagram on the board to fill out as class, with students sharing their answers or have the students fill out the chart in groups.

**EVALUATE** – Students’ learning will be evaluated on their participation in the class poem and if they complete the cricket diagram correctly.

### **DIFFERENTIATION PLANS:**

**Behavioral for Student A:** For students who struggle with following the rules and have behavioral issues, have student observe crickets with the teacher.

**Cognitive for Student B:** Students who have a hard time focusing during instruction can be the teacher’s assistant. For example, during the prediction discussion, student can help call on students to respond or write the predictions on the board.

**Cognitive for Student C:** Students who struggle with writing can draw or color a cricket diagram.

Affective for Student D: For visual learners, use pictures and movement to represent vocabulary.

Language Demands for Students E, F, G

Second Language Learner students who struggle with reading can act out the lines of the poem instead of saying the words. Use gestures and hand movements to teach the vocabulary including the: five senses and parts of the crickets. In groups, pair struggling ELL students with English speakers in the class.

**LIST OF MATERIALS (PER GROUP):**

Crickets

Walking on Ears poem

A Very Quiet Cricket by Eric Carle

Fill in Cricket Sense's worksheet

**DIRECTIONS OR SPECIAL INSTRUCTIONS; SAFETY CONCERNS, ETC.**

**Students are not to touch the crickets, only observe with their eyes.**

**References:**

The University of Arizona, Center for Insects Science Education Outreach. (1997). Using Live Insects in Elementary Classrooms. Retrieved from <http://insected.arizona.edu>

**Books:**

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

This book is story about a cricket learning how to use his wings. The young cricket goes through a journey of figuring out how to communicate with other crickets. He soon learns by watching other crickets and produces the most beautiful chirping sounds.

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

This is a story about a cricket who wants to be a butterfly because he doesn't think there is anything special about a cricket. A wise dragonfly helps the cricket realize that he is

special in his own way. This is a good book to teach diversity and acceptance to young children.

### **Walking On Ears**

- Voice 1        A cricket chirps with its wings.
- Voice 2        Yes, that's how a boy cricket sings.
- Voice 1        A cricket hears with it's ears
- Voice 2        one here and one there.
- Voice 3        A cricket sees
- Voice 4        with it's eyes, not it's knees.
- Voice 5        A cricket smells
- Voice 6        with antennae long and round.
- 
- Voice 1        We see with our eyes.
- Voice 2        We feel with our skin.
- Voice 3        We smell with our nose.
- Voice 4        We hear with our ears.
- Voice 5        We sing and talk through our mouth.
- Voice 6        What if we sang with our arms and had ears on ours knees, and smelled with our hands?
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- Voice 5        Would the world feel inside out and upside down and wrong side out?
- All            It may for us.

One Voice but not for the cricket.

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Reference: From The University of Arizona: Center for Insect Science Education  
Outreach

# Sense Chart

Body Part Name	HEAR	SEE	TASTE	SMELL	TOUCH
	EAR	EYES	MOUTH/TONGUE	NOSE	SKIN/HANDS
HUMAN SENSES (pictures) Draw the body part					

