Have you ever seen a Hissing Cockroach?

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 about the life of a Hissing Cockroaches. Students will be provided with the background information and facts of a Hissing Cockroach. Students will learn the interesting body parts of a Hissing Cockroach

RELATIONSHIP TO CALIFORNIA SCIENCE CONTENT STANDARDS:

Investigation and Experimentation

4. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:

  f. Use magnifiers or microscopes to observe and draw descriptions of small objects or small features of objects.

LEARNING OBJECTIVES:

1. Students will show their understanding of a Hissing Cockroach after observing, by creating their own picture labeling the parts of a Hissing Cockroach.

EVALUATION IDEAS:

1. Formative: Students will learn about the Hissing Cockroach and will participate in creating the KWL chart.

2. Summative: Students will create a picture to show their understanding of the body parts of a Hissing Cockroach.

CONCEPTUAL BACKGROUND

The Madagascar hissing cockroach has been characterized by it hissing sound, large size and appearance. A Hissing Cockroach is oval shaped, with leathery-like skin. The cockroach got its nickname “hissing cockroach” because of their ability to force gas through the breathing pores on their body. Unlike most cockroaches, the hissing cockroaches do not have wings, however it has six legs and they are equipped with a set of little claws on their feet that enable them to climb walls. The legs are also used for
running or sometimes digging. Cockroaches use their antennae as their noses. They are able to recognize family and friends by their distinctive odors. Males can be distinguished from females by their thicker, hairier antennae and males have large horns.

LESSON IMPLEMENTATION PLAN:

**ENGAGE** – The teacher will ask the students if they have ever seen or heard of a Hissing Cockroach. The teacher will start a KWL chart with the students to see what they already know. Live Cockroaches will then be brought into the class to entice the students' curiosity.

**EXPLORE** - Students will observe the Hissing Cockroaches in groups using magnify glasses. Students will then predict the different body parts of a Hissing Cockroach.

**EXPLAIN** - The teacher will show pictures of a Hissing Cockroach and will teach the students the background information. The teacher can also read children's books about Cockroaches. Students will be introduced to the different body parts.

**ELABORATE** - The teacher will refer back to the KWL chart to complete what students have learned from the lesson. This will be completed as a class discussion with teacher directed instruction.

**EVALUATE** - Students will draw their own picture of a Hissing Cockroach by incorporating the new facts and information they have learned about the Hissing Cockroach and from also observing the creatures.

DIFFERENTIATION PLANS:

Behavioral for Student A: Students with behavioral issues can work with teacher or assistants.

Cognitive for Student B: Students who have a hard time paying attention or still can be the teacher's assistant with the KWL chart, handing out materials, etc.

Cognitive for Student C: Students can be strategically paired in groups based on their strengths that they can offer to the group. (Recorder, Facilitator, Materials, Reporter, etc.)

Affective for Student D: Students who may be scared of the live Hissing Cockroach does not have to be near the Hissing Cockroach for observing, these students can use the pictures to observe and participate in discussion.

Language Demands for Students E, F, G: Introduce academic vocabulary with pictures and a word wall. Gestures and hand movements can be used to describe the body parts. Students can orally discuss their observations with the teacher or group and have a recorder in the group.

LIST OF MATERIALS:

Hissing Cockroaches
Magnifying glasses
Background Sheet
Pictures
Construction Paper
Markers/Crayons

DIRECTIONS OR SPECIAL INSTRUCTIONS; SAFETY CONCERNS, ETC.
No touching of the Hissing Cockroaches, only observing.