

Lesson Plan Centers Snakes



GRADE LEVEL: First Grade

SCIENCE CONCEPT (the Main Idea or Enduring Understanding): Students will compare snakes to humans and will learn that there are some similarities between the two as well as several differences. Through this exploration students will learn how snakes have a unique way of smelling and hearing as well as other things.

RELATIONSHIP TO CALIFORNIA SCIENCE CONTENT STANDARDS:

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: Record observations and data with pictures, numbers, or written statements.

LEARNING OBJECTIVES: Students will generate 3 questions that they want to learn about snakes and will write these down in their science journals.

EVALUATION IDEAS:

1. Formative: Assess students on if they were able to stay on task at the centers. Were the students able to share what similarities and differences there were between snakes and humans? How did the students answer the questions during the explanation portion of the lesson?
2. Summative: Students will be assessed on if they generated 3 questions and wrote the questions down in their science journals.

CONCEPTUAL BACKGROUND: There are similarities and differences between snakes and humans. This lesson explores some of the differences.

- Snakes smell not only with their nostrils but also with the help of their tongue. They stick their tongue out and then put it into their nostrils. This is where an organ called the Jacobson's organ is located. The Jacobson's organ sends a message to the brain and lets the snake know what it smells.
- Snakes do not blink. They have no eyelids. Instead, they have a tough scale over their eyes (like a contact lens) to protect them.
- Snakes, like all reptiles, are cold blooded. Humans, like all mammals, are warm blooded. Cold-blooded animals take on the temperature of their surroundings. Warm-blooded animals maintain the same temperature no matter what the surrounding temperature is. Warm-blooded animals convert the food they eat into energy to keep their bodies at a constant temperature. Cold-blooded animals do not eat as much as warm-blooded animals because they do not need to convert the energy they get from food to keep their bodies warm.

LESSON IMPLEMENTATION PLAN:

ENGAGE – Ask, “How are humans and snakes alike? How are humans and snakes different?”

EXPLORE –Six Centers will be set up around the room. At least one adult volunteer will need to help with the centers. Instruct students to think about how each center may relate to snakes.

- Center 1: Have sliced fruit ready for students to work with. Enough fruit for each student to taste each different piece of fruit. Each student will have his or her own paper plate with his or her name on it. Students will put the blindfold. If there is an adult available have them work with the kids, if not have the kids do this by themselves. The kids will use their tongues to try and figure out what they are “smelling”. Have students record their observations.
- Center 2: With a timer, have students time each other on how long they can keep their eyes open before blinking. Have each student do this 3-4 times and record his or her results.
- Center 3: Have students take their temperature using a thermometer. Then have students put their hands in ice and rub the ice on their arms until they are cold. Have the students take their temperatures again and record their results. Then have the students warm up using the heater/heating pad until they are warm and take their temperature again.
- Center 4: Have students observe the snake. Direct them to notice what similarities and differences they notice between themselves and the snake.
- Center 5: The pitchfork will be used by hitting it near the student's ear and allowing the student to listen for a several seconds. Then hitting it

again and resting it along their jawbone. Have the students record their observations.

- Center 6: Books

EXPLAIN –Lead a class discussion on what students discovered during their journey thru the centers. Adult volunteers could help lead discussions in smaller groups as well.

Ask:

- “What are things are the same between humans and snakes?”
- “Do you think snakes can smell?” “How do you think they smell?”
- “How many times did you see the snake blink?” (Trick question). “Why don’t they blink?” “Why do humans have to blink?”
- “Does anyone know what it means to be cold blooded?” “Does anyone know what it means to be warm blooded?”
- “Can snakes hear?” “Do they have ears?” “How do you think they hear?”

ELABORATE – Have students find out the answers that they generated and wrote about in their journals using the Internet or the books provided.

EVALUATE –

(a) Summative: Assess students on if they were able to stay on task at the centers. Were the students able to share what similarities and differences there were between snakes and humans? How did the students answer the questions during the explanation portion of the lesson?

(b) Formative - Students will be assessed on if they generated 3 questions and wrote the questions down in their science journals.

DIFFERENTIATION PLANS:

Behavioral for Student A:

- Have the parent volunteer work closely as well as the teacher making sure the student is following directions and not disturbing others.

Cognitive for Student B,C:

- Explicit instruction of the concepts.
- Provide a graphic organizer.

Affective for Student D:

- Use multiple modalities for assessment
- Allow for extra time to finish tasks
- Allow students to pick which centers he or she wants to explore

Language Demands for Students E, F, G:

- Allow students to share knowledge of content learned verbally.
- Define terms that may need clarification such as blink and temperature.
- Model for students how to make observations.

LIST OF MATERIALS:

Center 1 Smell	Center 2 Eyes	Center 3 Temp	Center 4 Observe	Center 5 Hearing	Center 6 Books
Paper Plates Blind Folds Lemons Limes Oranges Grapefruits Knife	Timer	Thermometer Ice Space Heater Or Heating pads	Snake	Pitchfork	Several Non-fiction Snake Books

DIRECTIONS OR SPECIAL INSTRUCTIONS; SAFETY CONCERNS, ETC.

At least one adult volunteer will be needed to assist students at the centers.

Suggested Reading:

Mattison, C. (2007). *The New Encyclopedia of Snakes* . Princeton, NJ: Princeton University Press.





Crotalus durissus
Eugenio Coconier

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