

Snake Adaptation

Grade Level: This lesson is designed for a 4th grade class.

Science Concept:

Students will be introduced to the concept of adaptation for survival. They will learn the importance of adaptation, and the different types of physical adaptation needed to survive within a habitat.

Relationship to California Science Content Standard:

3. Living organisms depend on one another and on their environment for survival. As a basis for understanding this concept:
 - b. Students know that in any particular environment, some kinds of plants and animals survive well, some survive less well, and some cannot survive at all.

Learning Objective:

Students will identify the structures that serve different functions for survival in the snake genus.

Evaluating Ideas:

Formative: During discussions, students will have a chart, “Snake Adaptation Chart” to record their ideas about adaptations.

Summative: Students will choose one of the following questions and write about it.

How does not having any legs help a snake?

How does the adaptation of mimicry save a snake’s life?

Why does a snake’s jaw need to be flexible?

Conceptual Background:

Snakes have many different adaptations that help them to survive within their habitats. A few of their adaptations are: no appendages, flexible jaw mechanism, teeth that are directed backwards, forked tongue used for smelling, variety of patterns of colors (camouflage), defense mechanism such as mimicry, etc. There are so many adaptations that allow different snakes to live all over the world; this lesson addresses a few.

Vocabulary

- *Adaptation*: a change in a body part or behavior that helps an organism survive.
- *Mimicry*: to imitate very closely
- *Camouflage*: a color or shape that helps an animal hide.
- *Characteristics*: a special quality or appearance that makes an individual or group different from others
- *Habitat*: the place where a plant or animal grows or lives in nature
- *Survival*: a living or continuing longer than another person or thing

Implementation Plan: This lesson is designed for individual and group discussions.

Engage: Show pictures of animals that have physical adaptations that ensure their survival.
see (Adaptation slide show 1)

elephant cheetah giraffe hawk snake

Class will discuss the adaptations that these animals' possess that are necessary for survival.

Explore: Activity: A power point of 6 slides will be shown; *see* (Adaptation slide show) students will write about the things they think they will need to survive. The slides will represent different environments and climates.

Six environments: underwater, desert, rainforest, savannah, swamplands, mountains

Discuss the choices students made; which environment it matches to, and how it helps survival.

Explain: Have class discussion about vocabulary in this lesson and the concept of adaptations. Then turn the focus towards three adaptations of snakes.

Elaborate: Specific snake adaptations to be discussed:

- mimicry
- flexible jaw
- no legs
- egg laying/ live birth
- camouflage

Evaluate:

Formative: During discussions, students will have a chart, “Snake Adaptation” to record their ideas about adaptations.

Summative: Students will choose one of the following questions and write about it.
How does not having any legs help a snake? How does the adaptation of mimicry save a snake’s life? How does camouflage help a snake catch its food? Why does a snake’s jaw need to be flexible?

Differentiation Plans:

Behavioral for student A

Students will be responsible for passing out materials to students.

Cognitive for student B

In summative assessment, student can give simple sentences that answer questions.

Cognitive for student C

A complete paragraph will be required, and if finish before allotted time, they can answer another question.

Affective for Student D

Student can work with a student who can be a good motivator.

Language Demand for Student

E An illustration of adaptations will be provided, in order for student to understand the concept.

A drawing with one word description in response to assessment will be accepted.

F Sentence frames can be used to aid in answering questions.

G Use all three vocabulary words in the response to make three sentences.

List of materials:

Pictures of animals with adaptations (See disk)

Snake Adaptation worksheet (see worksheet section)

Suggested Reading:

-Wexo, J. B. (1991). Snakes. Mankato, MN: Creative Education, Inc.

Snake Adaptation Chart

Name: _____

Date: _____

Adaptation	How does this adaptation help the snake?	Give one example of this adaptation.	Drawing of a snake showing the adaptation.
Camouflage			
Mimicry			

Adaptation	How does this adaptation help the snake?	Give one example of this adaptation.	Drawing of a snake showing the adaptation.
Flexible Jaw			
No Arms or Legs			

Name: _____

Date: _____

Snake Adaptations

Directions: Find adaptation words.

mou	is	dap	rac
a	or	cry	vi
cha	ha	be	mi
ism	ta	flage	vio
mi	sur	ral	tat
bi	ter	ha	gan
tics	val	cam	tion

1. _____

5. _____

2. _____

6. _____

3. _____

7. _____

4. _____

8. _____