



#8941

VERTEBRATES

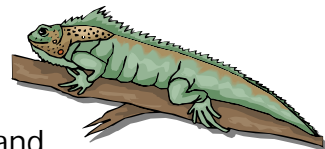
Grade Levels: 6-9

11 minutes

NEW DIMENSION MEDIA 1997

DESCRIPTION

Vertebrates use their backbones to move in a variety of ways. Observes and comments on the movement of fish, moray eels, newts, salmon, cheetahs, dolphins, birds, and babies. Highlights the differences and similarities of their movement. Motorized models reveal precisely how some animals' backbones move.



ACADEMIC STANDARDS

Subject Area: Life Sciences

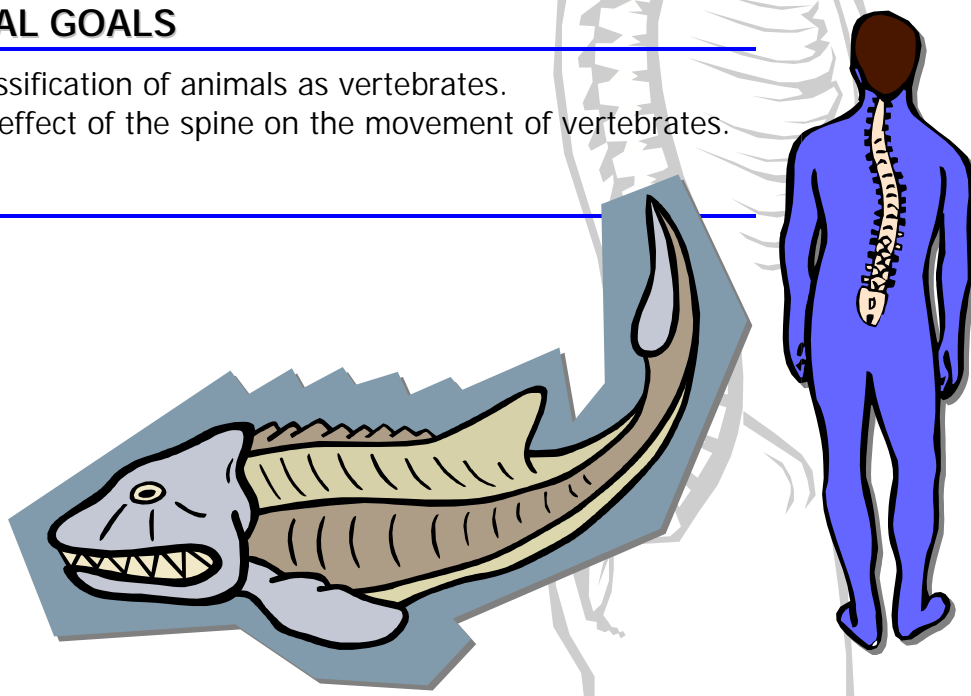
- ◆ Standard: Understands the structure and function of cells and organisms
 - Benchmark: Knows that organisms have a great variety of body plans and internal structures that serve specific functions for survival (e.g., digestive structures in vertebrates, invertebrates, unicellular organisms, and plants)

INSTRUCTIONAL GOALS

1. To study the classification of animals as vertebrates.
2. To examine the effect of the spine on the movement of vertebrates.

VOCABULARY

1. caudal
2. fins
3. flukes
4. iguana
5. mammal
6. marine
7. newt
8. pectoral
9. spine
10. vertebra
11. vertebrate



BEFORE SHOWING

1. Gather as many pictures or models of animals as you can. Put together a display that can be used to discuss the way the animals move. Also discuss the distinguishing characteristics of vertebrates.
2. Locate the Galapagos Islands on a map or globe.

AFTER SHOWING

Discussion Items and Questions

1. What is a *vertebrate*? What kinds of animals are classified as vertebrates?
2. The spine can move in different ways for different animals. Discuss how the spine moves and its effect on movement.
3. How does the moray eel move? How does its movement differ from other vertebrates?
4. Some animals can move on land or in water. Describe their unique spinal movement and its effect on these animals.
5. The cheetah and the dog move in similar ways. Describe their unique spinal movement and its effect on these animals.
6. What animals move the same way as human babies? Describe this form of movement.
7. Describe the movement of dolphins. What body parts make this possible?
8. What is the significance of the spine for vertebrates?

Applications and Activities

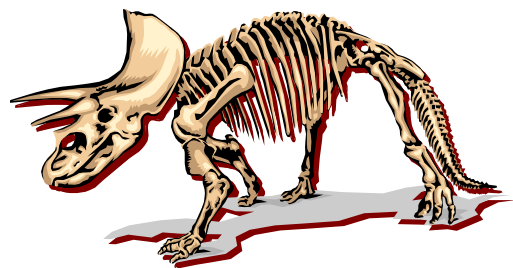
1. Allow the students to choose an animal to study independently.
2. For younger students, make a backbone using pipe cleaners and wheel-shaped macaroni and cotton balls.

RELATED RESOURCES



Captioned Media Program

- Animals With Backbones #2355
- The Vertebrates: This Was the Beginning #2025



World Wide Web



The following Web sites complement the contents of this guide; they were selected by professionals who have experience in teaching deaf and hard of hearing students. Every effort was made to select accurate, educationally relevant, and “kid-safe” sites. However, teachers should preview them before use. The U.S. Department of Education, the National Association of the Deaf, and the Captioned Media Program do not endorse the sites and are not responsible for their content.

- **HIGH SCHOOL HUB BIOLOGY GUIDE**

<http://www.highschoolhub.org/hub/biology.cfm>

An excellent, free online academic resource. Links provided to biology and zoology sites.

- **INTRODUCTION TO THE VERTEBRATES**

<http://www.ucmp.berkeley.edu/vertebrates/vertintro.html>

University of California, Berkeley, provides an overview of the fossil record, life history, ecology, systematics and morphology of vertebrates.

- **ANIMAL CLASSIFICATIONS: VERTEBRATES FOR K - 12**

<http://falcon.jmu.edu/~ramseyil/vertebrates.htm>

James Madison University provides links and information for students related to classroom research projects. Link to mammals, amphibians, reptiles, birds, fish and other life science topics.

