

GREAT JOB!
Exciting Careers in Science, Technology, Engineering, and Math
EDUCATOR GUIDE

Segment Topic: Zoo Veterinarian

Ohio Science Academic Content Standards/Benchmarks Grades 6-8

2002 Ohio Science Standards:

Scientific Ways of Knowing

Benchmark C. Give examples of how thinking scientifically is helpful in daily life.

Life Science

- A. Explain that the basic functions of organisms are carried out in cells and groups of specialized cells form tissues and organs; the combination of these cells make up multicellular organisms that have a variety of body plans and internal structures

Science and Technology

- A. Give examples of how technological advances, influenced by scientific knowledge, affect the quality of life.
B. Design a solution or product taking into account needs and constraints (e.g., cost, time, trade-offs, properties of materials, safety, and aesthetics).

Scientific Inquiry

- A. Explain that there are differing sets of procedures for guiding scientific investigations and procedures are determined by the nature of the investigation, safety considerations and appropriate tools.

2010 Ohio Science Standards:

Grade Band Theme: (Grades 6-8) Order and Organization

This theme focuses on helping students use scientific inquiry to discover patterns, trends, structures and relationships that may be described by simple principles. These principles are related to the properties or interactions within and between systems.

Pre-Viewing Activity

1. Write the acronym STEM for the class to see. Ask each student to write down what they think each letter of the acronym represents (**S**cience, **T**echnology, **E**ngineering, **M**athematics [Some people include **M**edicine.]) Circulate the room and observe student work. Have select students share their responses.

2. **CUE** the video to the 00:03 second mark. Tell students that the words for the STEM acronym can be found in the video. **SHOW** students the **PAUSED** video. Check student comprehension.
3. Tell students that they are going to learn about a “Great Job!” in a STEM career.

OPTIONAL: The middle picture on the left of the paused video can be used to have students predict what the upcoming STEM job the video is about.

4. Tell students that they are now ready to learn about the job presented by the video!

Active Viewing Procedures

1. **FOCUS FOR MEDIA INTERACTION** tell students that they are going to meet Carmen, Joe and Mike. The student goal is to be able to respond the following questions.
 - *Who is Carmen and describe some physical features of Carmen?
 - *Who is Joe and what does Joe look like?
 - *Who Mike and what is his job title?
2. **PLAY** the video from the beginning and **PAUSE** at the 00:21 mark where you see Dr. Mike Selig looking into a cage. Check for comprehension.
3. Have a class discussion about what a Zoo Veterinarian might be like. Next, tell students that they are going to see Dr. Selig treat 3 zoo animals. **FOCUS FOR MEDIA INTERACTION** by having students take on the role of Dr. Selig’s assistant. Students should record on paper the following information for each patient.
 - *patient animal name (if applicable)
 - *type of animal
 - *procedure applied by Dr. Selig

PLAY video and **PAUSE** at the 2:22 mark where Dr. Selig is reaching into the elephant cage. Check for student comprehension (repeat the video clip if necessary).

OPTIONAL: Have students investigate Animal Planet: Parasite Pet Shop web site. Experiences from this site will provide more in-depth parasite information which is part of symbiotic relationships contained in 7th grade ODE Life Science Standards.

4. Tell students that Dr. Selig attended Lorain Community College and Ohio State University for his veterinary training. In the next clip, Dr. Selig explains the different types of science he uses on a daily basis. Deliver a **FOCUS FOR MEDIA INTERACTION** by providing the 4 types of science Dr. Selig discusses to students.

chemistry
biology
zoology
ethology

Students should be able to explain how Dr. Selig uses each type of science. **PLAY** the video and **PAUSE** at the 3:04 mark where Dr. Selig is reaching into a net. Check student comprehension.

5. **FOCUS FOR MEDIA INTERACTION** by explaining to students that the final segment with Dr. Selig features a problem with a turtle. Tell students to carefully look and listen to the video. At the conclusion of the video students should infer what “ballast” means. **PLAY** video until the end and **STOP**. Check student comprehension for the term “ballast” and how it applied to the turtle.

(Ballast definition: <http://www.thefreedictionary.com/ballast>)

NOTE: The Physical Science concept of ballast delivered in the turtle segment aligns with 8th grade Force and Motion Physical Science Standards. The Ohio Resource Center provides lessons, resources, and assessments for Physical Science 8th grade indicators.

Ohio Resource Center: 8th Grade Ohio Physical Science Standards Resources
<http://www.ohiorc.org/standards/ohio/grade/science/grade8.aspx>

6. Encourage students to keep their eyes open for a “Great Job!” in careers that involve science, technology, engineering and math!

Post-Viewing Activity

Additional Post-viewing questions (Check for Comprehension/Understanding)

1. What do you think would be challenges of a zoo veterinarian and why?
2. Give examples of how scientific thinking demonstrated by Dr. Selig can be helpful in everyday life.

NOTE: The Post-Viewing activities below are Web-based. A 1-to-1 student to computer ratio is recommended, either in a lab or in a computer “lab-on-wheels” environment. However, the activity can be completed in pairs, small cooperative groups, or as a teacher-directed projected activity

1. Display the *Minnesota Zoo: Who Pooped?* Website. Read the paragraph at the bottom of the page to the students. Tell students that they are going to learn about some animals by studying their poop. Allow 20-30 minutes for students to complete the activity.
Minnesota Zoo: Who Pooped? <http://www.whopooped.org/>
2. After completing the *Minnesota Zoo: Who Pooped?* activity, have students share their discoveries.
3. Encourage students to keep their eyes open for a “Great Job!” in careers that involve science, technology, engineering and math!

Additional Web Sites

Animal Planet: Parasite Pet Shop

<http://animal.discovery.com/tv/monsters-inside-me/pet-parasite/>

Who Pooped At The Minnesota Zoo?

http://www.minnpost.com/minnclips/2009/06/05/9261/who_pooped_at_the_minnesota_zoo

Minnesota Zoo: Who Pooped?

<http://www.whopooped.org/>

Minnesota Zoo: Games and Activities

http://www.mnzoo.com/education/education_games.asp

Cleveland Metroparks Zoo

<http://www.clemetzoo.com/>

Cleveland Metroparks Zoo: Veterinary Careers

http://www.clemetzoo.com/animal_plant/games/dlgames/careercenter/vetcareer.asp

Cleveland Metroparks Zoo Podcasts

<http://www.clemetzoo.com/podcasts/>

Ohio State University College of Veterinary Medicine

<http://vet.osu.edu/>

So You Want To Be A Vet?

<http://2009.vet.ohio-state.edu/BeAVet.htm>

Careers in AZA-Accredited Zoo and Aquariums

<http://www.aza.org/careers-zoos-aquariums/>

Sloan Career Cornerstone Center

<http://www.careercornerstone.org/>

WVIZ/PBS ideastream “Imagine”

<http://www.ideastream.org/imagine>

PBS Teachers: STEM Education Resource Center

<http://www.pbs.org/teachers/stem/>

Career Day: Exploring Careers in Science, Technology, Engineering, and Mathematics

http://www.fcps.edu/fairfaxnetwork/career_day/index.html

