Who Was “Hunter Eve”?

Video Titles:

Whitey Hagedorn, Paleontologist: Traces of Early Animal Life

Flatworms: The First Hunter (from the beginning to 5:10)

Activity Subject: Gathering evidence, analyzing patterns

Grade Level: 7 – 12 grades

Introduction

The paleontological evidence of the first animal to hunt is tiny trails that have been fossilized in rocks. To start this lesson, students will consider the tracks and traces left by modern animals and what they can learn about an animal from its tracks. They then think about which animal might have been the first hunter. The class considers what it takes to be a hunter and what kind of evidence can we use to figure out what was the first hunter. Students write their ideas in their science notebooks and the teacher shares the ideas with the entire class. The class watches the shapeoflife.org scientist video: Whitey Hagedorn, Paleontologist: Traces of Early Life and the beginning of Flatworms: the First Hunter and answers the thought provoking questions in the Hunter’s Eve Worksheet.

Assessments

Worksheet

Time

One Class period (~50 minutes)

Group Size

Single student with class discussions

NEXT GENERATION SCIENCE STANDARDS

PERFORMANCE EXPECTATIONS:

Students who demonstrate understanding can:

MS-LS4-2. – Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships.

HS-LS4-1 - Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.

LEARNING OBJECTIVES:

Students will watch the shapeoflife.org scientist video about Whitey Hagedorn and the first 5 minutes of the phylum video about flatworms, answer leading questions, and consider the evidence for evolutionary relationships between fossils and modern organisms.

Materials and Preparation:

- The Shape of Life, scientist video about Whitey Hagedorn and Phyla video: *Flatworms: the First Hunter*
- Science Notebooks or Hunter Eve Worksheets
- Access to the internet

Procedure:

1. Warm-up. The teacher shows pictures of some common animal tracks (suggestions: dog, cat, bear, raccoon, crow, skunk, coyote, opossum, deer) [Note: Be sure to not display the labels of the tracks.]

2. The students try to guess the identities of each in their science notebooks. The class has a discussion on the usefulness of tracks as clues left by organisms. What kind of information can we get from tracks?

3. The teacher then asks the students to guess what animal they think might have been the first hunter. Individual answers are recorded in worksheets (or notebooks) and then shared with the class on the white board.

4. Since we can't go back in time, the teacher asks what kind of evidence can we use to figure out what was the first hunter? Students respond in their notebooks and aloud. Since modern hunters leave tracks, might the first hunter also have left tracks?

5. The teacher passes out the Hunter Eve Worksheets and explains the procedure to the class.

6. The class watches The Shape of Life, scientist *Whitey Hagedorn, Paleontologist: Traces of Early Life* and the first five minutes of *Flatworms: the First Hunter,* while answering the questions on the Hunter Eve Worksheet. [Note to teacher: you may need to stop the rewind if students need help in answering some questions.]

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Worksheet with Answers

1. Why is the paleontologist Whitey Hagadorn interested in rocks?

   He is looking for traces of the first hunter.

2. What information do we get from trails or tracks?

   The tracks record an animal's movement, behavior and size.

3. Why is Hagadorn looking at rocks in California?

   The geology of CA has pushed the past up to the surface.

4. Name some of the common animals that were stuck to the seafloor ½ billion years ago (bya).

   Sponges and Cnidarians (like sea anemones)

5. What brand, new talent did one creature have 565 million years (mya) and what evidence do we have of that talent?

   It moved around. We have tracks preserved in rocks, trace fossils.

6. Circle the characteristics we share with the first hunting creature:

   Both are:

   a. mobile b. flat c. bi-laterally symmetrical

   d. lead with a head e. think unique thoughts

   (Answers: a, c, d)

7. What is the scientific evidence that our very distant ancestors were like the first hunter Hagedorn discovers??

   Hagadorn and other scientists have gathered paleontological evidence that strongly suggests the following:

   We have similar general body plans, bilateral symmetry

   We are capable of hunting.

   We have heads.

   We usually move leading with our heads.

8. How is a flatworm like some of the animals at the base of our family tree?

   It moves with intent. It explores the world. It hunts.

9. What is the scientific evidence that our very distant ancestors were like flatworms?

   Hagadorn and other scientists have gathered paleontological evidence that strongly suggests the following:

   We have similar general body plans, bilateral symmetry.

   We are capable of hunting.

   We have heads.

   We usually move leading with our heads.

10. Name five ways in which we are very different from flatworms.

    Answers will vary. Some might include:

    We have arms and legs; they do not.

    We have complex eyes; they do not.

    We have 4-chambered hearts; they do not.

    We have cultures; they do not.

    We can invent machines; they do not.

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Worksheet

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