

Fishes

Key

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

- D 1. These two organs develop in very similar ways in sharks.
a. jaws and skull c. rostrum and tail
b. brain and gills d. teeth and scales
- B 2. This class of animals is an invasive species of the Great Lakes.
a. Class Chondrichthyes c. Class Osteichthyes
b. Class Cephalaspidomorphi d. Class Myxini
- D 3. What is the main thing that distinguishes skates from rays?
a. skates are viviparous while rays are oviparous c. skates are ovoviviparous while skates are viviparous
b. skates are oviparous while rays are viviparous d. skates are oviparous while rays are ovoviviparous
- C 4. Member of class Chondrichthyes fertilize in this way.
a. externally c. internally
b. self fertilization d. spawning
- A 5. This structure allows sharks to sense electrical fields.
a. Ampullae of Lorenzini c. Lateral line
b. Neuromast organs d. Cochlea
- A 6. This organ provides members of class chondrichthyes with buoyancy.
a. liver c. swim bladder
b. spiral intestine d. spleen
- D 7. This group is considered the closest living relative to the original vertebrate fish.
a. Rays c. Sharks
b. Lampreys d. Hagfish
- C 8. From greatest distance to least this is the order of shark senses.
a. Electrical, smell, vision, pressure, hearing c. Hearing, smell, pressure, vision, electrical
b. Vision, pressure, smell, electrical, hearing d. Smell, hearing, electrical, smell, vision
- A 9. What characteristic sets the Agnathans apart from other vertebrates?
a. lack of jaws c. producing slime
b. lack of eyes d. lack of calcified (ossified) bones
- A 10. This class is known for producing tons of slime and "knotting" to tear off food.
a. Class Myxini c. Class Chondrichthyes
b. Class Osteichthyes d. Class Cephalaspidomorphi
- D 11. Shark hearing is tuned into _____ frequencies.
a. middle c. chords
b. high d. low
- A 12. A good tail for lift is a _____ while the _____ is a good tail for thrust.
a. Heterocercal; homocercal c. Long; short
b. Wide; muscular d. Homocercal; heterocercal

- A 13. What makes a "fish" a "fish"?
- a. An animal with basic chordate characteristics that primarily lives in water and breathes with gills
 - b. An animal with most of the chordate characteristics that primarily lives in water and breathes with gills
 - c. An animal with a bony skeleton that primarily lives in water and breathes with gills
 - d. An animal with basic chordate characteristics that primarily lives in water and breathes with lungs
- A 14. What is the function of the lateral line?
- a. sensing pressure changes
 - b. sensing electrical fields
 - c. sensing light changes
 - d. sensing sound
- B 15. Why are lampreys a problem in lakes while fine in the ocean?
- a. Small ocean fish can tolerate being parasitized by a lamprey
 - b. Lake fish are too small and die when parasitized by lampreys
 - c. Fish can use ocean waves to knock off lampreys while lake waves are too small
 - d. Lampreys migrate from area to area while at sea while they stay in on location in a lake
- B 16. If an animal hatches eggs internally it is...
- a. viviparous
 - b. ovoviviparous
 - c. oviparous
 - d. a chicken in pain

Short Answer: Answer each question completely using appropriate terms from the unit.

17. Compare and contrast the ways that Osteichthyes and Chondrichthyes maintain buoyancy.

Osteichthyes use a swim bladder and chondrichthyes use an oily liver

18. The development of teeth seems to be very important in the creation of structures that appear on the outside of the body. Choose one structure besides teeth and describe how it is "toothy".

Scales ⇒ dentine middle with projection covered by enamel

19. You fall off of a boat in the middle of shark infested waters. Describe one thing that you would or would not do to remain safe and why (think sensory systems).

Don't thrash ⇒ avoid low frequencies + pressure waves through water

20. Why is the body of a "fish" a good model to discover how the human body developed?

It contains almost every body system found in a human; just in a ancestral (more primitive) condition.