

Chapter 30

Fishes and Amphibians

Reinforcement and Study Guide

Section 30.1 Fishes

In your textbook, read about what is a fish.

Complete each statement.

- All vertebrates are in the phylum _____, and fish, amphibians, reptiles, birds, and mammals are in the subphylum _____.
- Vertebrates are bilaterally symmetrical, coelomate animals with endoskeletons, closed _____ systems, complex _____, and efficient _____ systems.
- If you compared the number of fish species to the number of all other vertebrate species combined, there would be more species of _____.

Complete the table below to compare the three different kinds of fishes.

Class	Kind of Fish	Jaws?	Skeleton	Fertilization
4. _____	Lamprey and Hagfish	5. _____	6. _____	7. _____
Chondrichthyes	8. _____	9. _____	Cartilage	10. _____
11. _____	12. _____	Yes	13. _____	External and Internal

Answer the following questions.

- 14.** How does a fish breathe through its gills?

- 15.** What two adaptations of cartilaginous and bony fishes help them to locate food?

Chapter 30

Fishes and Amphibians, *continued*

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Section 30.1 Fishes, *continued*

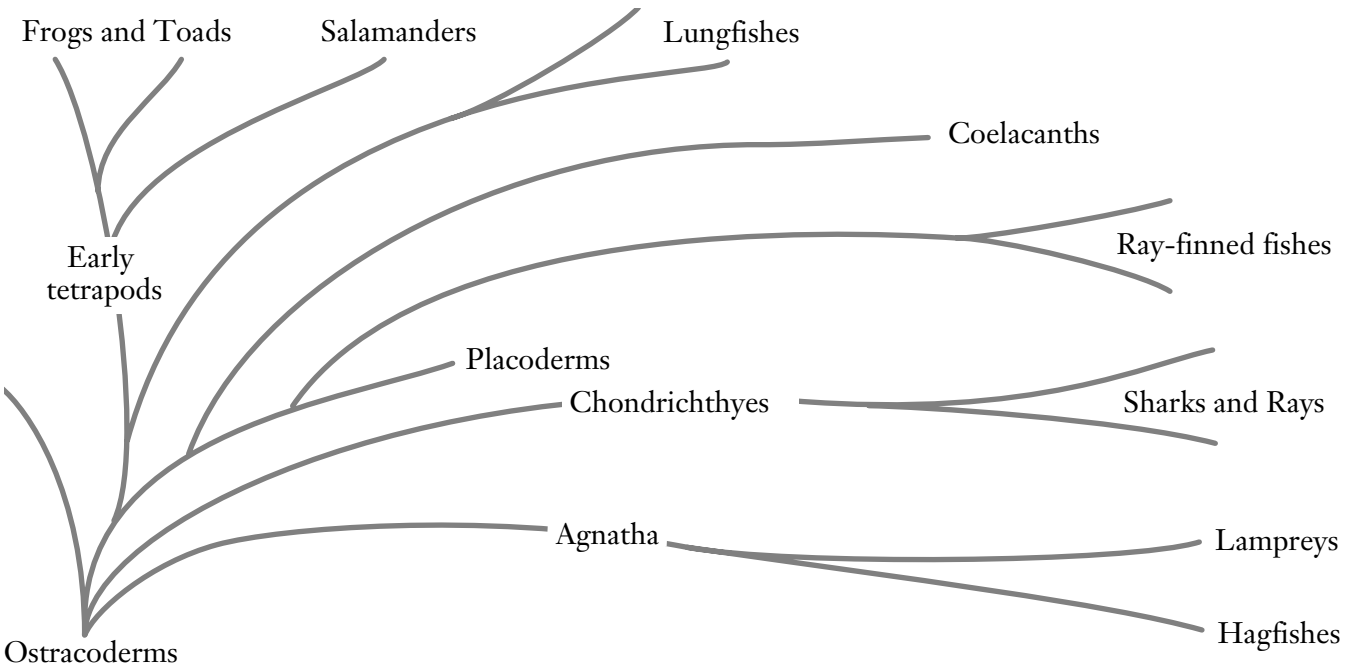
In your textbook, read about bony fishes.

Determine if the statement is true. If it is not, rewrite the italicized part to make it true.

- 16.** While spawning, a female bony fish may lay *millions of eggs* to be fertilized externally by the male, but only a few will survive. _____
- 17.** The development of *bone* was an important event in the evolution of vertebrates because it eventually allowed them to move onto land and support their body weight. _____
- 18.** The backbone, comprised of separate *gills*, was a major evolutionary event for fishes because it provided support as well as flexibility, which helped to propel them through the water. _____
- 19.** The *swim bladder*, an organ found in bony fishes, allows fish to control their depth in water. _____

In your textbook, read about origins of fishes.

Examine the phylogenetic tree below. Then answer the question that follows.



- 20.** Which group of fishes do you think are most closely related to ancestral amphibians? Why?
