

Biology I - diy NOTES

Chpt 29.2 & 30.1

Intro to Vertebrates & Fish

Name _____

Date _____ Hour _____

Read Chapter 29.2 and Chapter 30.1 in your text, pages 770-772 and 793-802.

Fill in the blanks (or answer the questions) below using the information you have read.

1. Phylum Chordata has includes 3 subphyla. Name them and give an example of each. Give the page number where a picture of it can be found in your text.

1.

2.

3.

2. What 7 characteristics do all chordates share?

3. The _____ of all chordates have a notochord.

In vertebrate chordates, this structure is replaced by a _____ as they develop.

4. In most adult chordates, the cells in the posterior portion of the dorsal hollow nerve cord develop into a _____. The cells in the anterior portion develop into a _____. A pair of nerves connects the _____ to each block of _____.

5. Many chordates have pharyngeal pouches only during _____.

In aquatic chordates, pharyngeal pouches develop openings called _____.

In terrestrial (land) chordates, pharyngeal pouches develop into other structures such as _____, _____, and _____.

6. At some point in development, all chordates have a _____,

including humans.

7. How are the tails of chordates different from the tails of other animals?

8. Because of their notochord, chordates tend to be more _____ than members of other phyla.

Chapter 30.1 The Fishes

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9. Fish are in phylum _____, subphylum _____.

10. In addition to the characteristics they share with all chordates, vertebrates have _____ skeletons, _____ circulatory systems, nervous systems with _____, and efficient _____ systems.

11. There are 4 classes of Fish. Name them and give the common name of the group, an example of a fish in this class, and the page number where a picture of it can be found in your text.

1. Superclass _____ = the "_____ fishes"

1. class _____

example: _____ page: _____

2. class _____

example: _____ page: _____

3. Class _____ = the "_____ fishes"

example: _____ page: _____

4. Class _____ = the "_____ fishes"

example: _____ page: _____

12. As a fish takes _____ in through its _____, water passes

over the _____ and then out through slits at the side of the fish.
_____ and _____ are exchanged through the
_____ in the _____ filaments.

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"lab"

13. In the gills, blood moves in the _____ direction of the flow of water because this causes the oxygen _____ difference between the water and the blood to be large enough for _____ to _____ from the _____ into the _____.

14. All fishes have a _____ heart. Describe what each chamber does.

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15. All fishes reproduce _____.

In *most* fish, fertilization is _____ and development is _____ . This type of reproduction is called _____ .

Exceptions include the _____ fishes such as sharks and rays.

16. What is an advantage of internal fertilization and development?

17. What are fins used for?

18. What did fins evolve into in other animals?

19. What does the lateral line system do?

20. What other senses do fish have?

21. _____ and _____ fishes have skin covered with _____ .

22. What are 3 advantages to having jaws?

23. _____ is hard, mineralized, _____ tissue that makes up the _____ of most vertebrates.

24. The evolution of a backbone made of _____ hard segments called _____ was significant in providing major _____ for the skeleton, and provide great _____ .

25. What does a swim bladder do?

26. The skeletons of _____ and hagfish (superclass _____) as well as _____ (class Chondrichthyes) are made of _____ .

27. Describe how jawless fish get their food.

28. Why are sharks called "living fossils"?

29. What are the 2 subclasses of bony fishes? How do they differ?

30. Scales are covered with _____, allowing fish to
_____ with minimal _____.

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31. Why was the development of bone an important evolutionary step in early vertebrates?

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32. What is a tetrapod?