

Ch 29 REVIEW: Echinoderms and Invertebrate Chordates

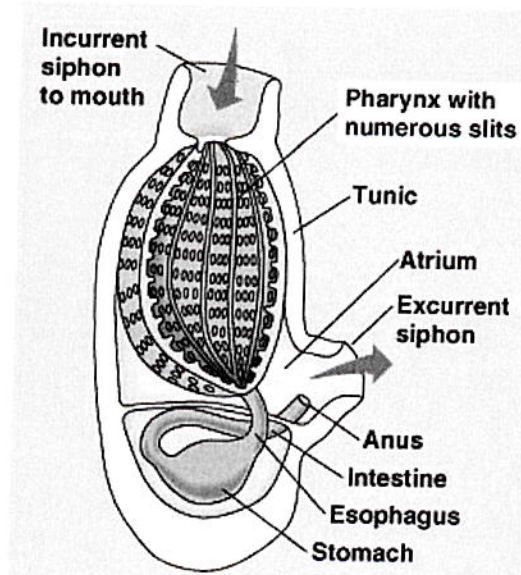
1. List the 4 characteristics that unify the echinoderms.
2. List the 3 characteristics that unify the chordates.
3. Why are echinoderms considered our relations? (Distant, that is!)
4. How are the “top” and the “bottom” of a starfish described?
5. Describe the water vascular system, listing all its structures.
6. What is the water vascular system used for in echinoderms?
7. Describe the step-by-step process that would occur after a starfish captured a bivalve.
8. How and what do sea lilies/basket and brittle stars eat?
9. How and what do sea cucumbers eat?
10. How do echinoderms breathe?
11. How do starfish distribute nutrients to its cells?
12. Where does excretion of solid waste occur in echinoderms? What is the one exception to this rule?
13. Where do metabolic wastes get excreted in echinoderms?
14. How is the nervous system of starfish arranged?
15. What major structure of a nervous system do echinoderms lack?
16. What types of sensory cells do echinoderms have?
17. How do starfish move? Sea urchins? Sea cucumbers?
18. What type of sexual reproduction do starfish employ? How is this executed?
19. Describe the lifecycle of a starfish.
20. What happens to a starfish if you cut it up?
21. List the 5 classes of echinoderms. Study the pictures in the book and be prepared to identify these classes and some individuals on the test.
22. How do echinoderms (site the different classes) defend themselves against predators?
23. How does the endoskeleton of starfish differ from the sand dollars and sea urchins?
24. Why are evolutionists interested in sea lilies and feather stars?
25. What makes sea urchins the perfect subject for studying embryology?
26. What is a notochord? What happens to it?
27. How do pharyngeal slits differ between aquatic chordates and terrestrial? How about humans?
28. Why are tunicates included in the chordate classification?
29. How do tunicates eat?
30. What do lancelets have that adult tunicates don't?
31. How are the muscles/nerves of a lancelet arranged? Why is this significant?
32. Lancelets look a lot like fish, except for the fact that they have no _____
33. What is the common theory regarding the evolution of chordates, invertebrate and vertebrate?

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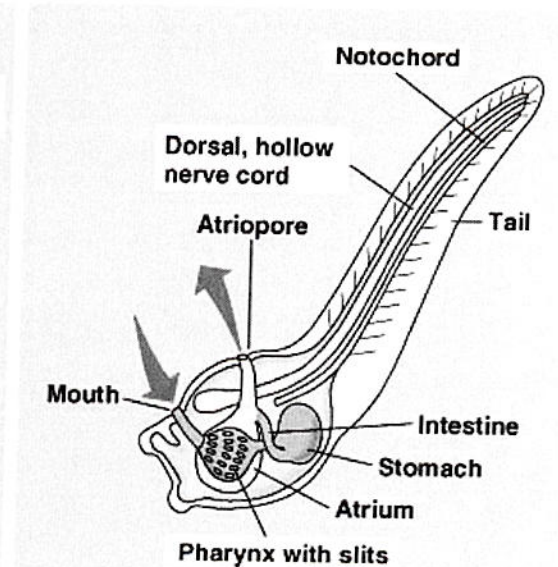
34. Label the following diagrams.



(a)

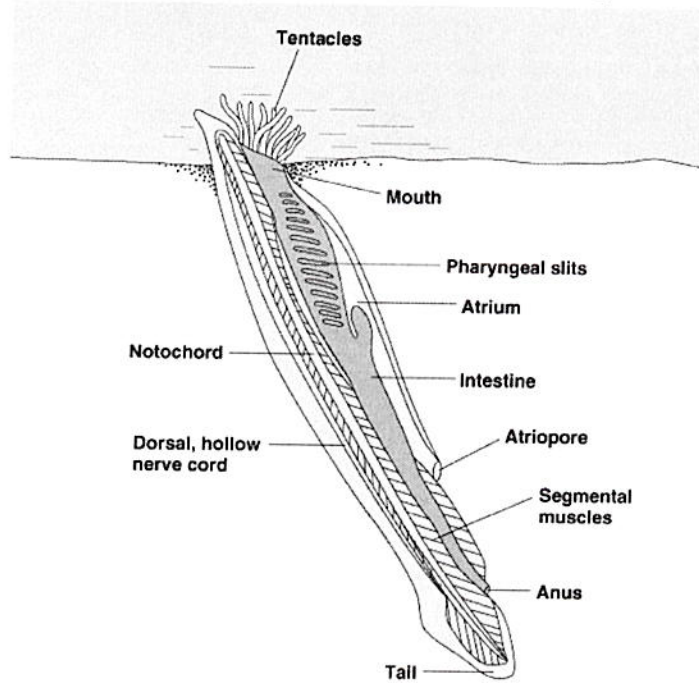


(b)



(c)

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