Deuterostomes Do questions in red for Homework .

1. Describe the water vascular system of echinoderms. Could this system be considered a synapomorphy?
2. What is unique about the skeleton and “skin” of echinoderms?
3. What adaptation do echinoderms exhibit for hebivory? Are most echinoderms hermaphrodites? Describe the hemal system? From previous study how in your own words does it compare to a hemocoel system?
4. Compare sea stars to brittle stars.

5. Describe unique features of sea urchins. Describe how sea urchins have been used as models for development.

6. Make a table comparing all subgroups of echinoderms, Stelleroidea, Echinoidea, Holothuroidea and Crinoidea. Make sure to include differences in shape, water vascular system and skeleton if such exist. Also have a column for unique features of the group and their economic or scientific importance.

7. Describe the four main characteristics of the clade Chordata.

8. Describe feeding in tunicates. Focus on the function of the gill slits.

9. Describe unique features of the tunicate circulatory system.

10. Compare larva forms with adults. How do most tunicates reproduce?

11. Compare salps and larvaceans with more typical tunicates.

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12. What characteristics of cephalochordates (amphioxus), and tunicates make them chordates? Do they maintain these characteristics throughout all stages of their life cycles?

13. What characteristics do hemichordates share with chordates?

14.How do acorn worms, adult tunicates and cephalochordates (amphioxus) feed and move?

**To prepare for exam**

15. Compare and contrast Hemichordates with Cephalochordates and Urochordates (tunicates).

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|  | Acorn wormsHemichordates | Tunicate larvae | Tunicate adult | Cephalochordates(Amphioxus) |
| Gill slits and function |  |  |  |  |
| Nerve cord |  |  |  |  |
| Muscular tail |  |  |  |  |
| Stomochord ornotochord |  |  |  |  |
| Circulation |  |  |  |  |
| Other unique characteristics |  |  |  |  |
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