**Phylum Echinodermata**

 Name:

 **Read pages 734 - 738** Date:

1. Define "echino-derm"
2. What is an endoskeleton? What are they made of in an echinoderm?
3. What are the 5 defining characteristics of echinoderms?
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ b)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ d) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Why are echinoderms and vertebrates (animals with back bones) considered to be closely related?
2. What is the water vascular system and what does it do?
3. Label the diagram of the water vascular system.



1. What does a madreporite do and where does it lead to?
2. What is a tube foot and what are two things an echinoderm can do with its hundreds of tube feet?
3. Describe the process by which each member of this phylum obtains food.

Sea Stars

Sea Urchins

Sea Cucumbers

1. Describe how an echinoderm carries out respiration and circulation.
2. How do echinoderms excrete wastes?
3. What can the nervous system of an echinoderm detect?
4. What is the main reproductive strategy of echinoderms?
5. Echinoderm Diversity

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| --- | --- | --- | --- | --- | --- |
| Trait | Class Echinoidea | Class Ophiuroidea | Class Holothuroidea | Class Asteroidea | Class Crinoidea |
| Examples | Sea urchinsSand dollars  | Brittle starshttp://upload.wikimedia.org/wikipedia/commons/3/31/Brittle_star_on_the_beach_at_Whalers_Bay,_Deception_Island_(6019948411).jpgBasket stars  | Sea cucumbers | http://cache2.allpostersimages.com/p/LRG/21/2144/OJBCD00Z/posters/douwma-georgette-ochre-seastar-exposed-on-beach-at-low-tide-olympic-national-park-washington-usa.jpgSea stars | Sea lilieshttp://www.wonderfulinfo.com/winfo/joggingflower/humble_sea_lily_02.jpgFeather stars |
| Description: |  |  |  |  |  |
| Feeding Habits: |  |  |  |  |  |
| Interesting Facts: |  |  |  |  |  |

1. Describe how one type of echinoderm is detrimental to the Great Barrier Reef in Australia.
2. Describe two roles of echinoderms in their ecosystem.