

The organisms belonging to the phylum Echinodermata are exclusively marine. Till date, there have been no traces of any terrestrial or freshwater Echinoderms.

These are multicellular organisms with well-developed organ systems. All the animals belonging to this phylum share the same characteristics features. They are colourful organisms with unique shapes. They are ecologically and geologically very important.

The Echinoderms are found in sea-depths as well as in the intertidal zones. An interesting feature of the phylum Echinodermata is that all the organisms belonging to this phylum are marine. None of the organisms is freshwater or marine.

The water vascular system present in echinoderms accounts for gaseous exchange, circulation of nutrients and waste elimination.

## Characteristics of Echinodermata

1. They have a star-like appearance and are spherical or elongated.
2. They are exclusively marine animals.
3. The organisms are spiny-skinned.
4. They exhibit organ level of organization.
5. They are triploblastic and have a coelomic cavity.
6. The skeleton is made up of calcium carbonate.
7. They have an open circulatory system.
8. They respire through gills or cloacal respiratory tree.
9. They have a simple radial nervous system and the excretory system are absent.
10. The body is unsegmented with no distinct head. The mouth is present on the ventral side while the anus is on the dorsal side.
11. The tube feet aids in locomotion.
12. They reproduce sexually through gametic fusion and asexually through regeneration. **Fertilization** is external.
13. The development is indirect.
14. They possess the power of regeneration.
15. They have poorly developed sense organs. These include chemoreceptors, tactile organs, terminal tentacles, etc.