

- Radial Symmetry
- Nerve Net
- Two-Way Digestion
- Hydrostatic Skeleton

Name _____

Cnidarians (p. 622 - 628)

I. Two Body Forms

1. Jellyfish, corals, hydras, and sea anemones belong to the phylum Cnidaria.

2. Differentiate between the following cnidarian body forms.

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Medusa: Free-floating, jelly like, + umbrella-shaped

Polyp: Tubelike with a fringe of tentacles around the mouth

3. Which body form do cnidarians exhibit? (Circle all that apply)

- Medusa
 Polyp
 Alternate between phases

4. Cnidarian body cells are arranged in tissues.

Circle One: True False (Unlike sponges!)

5. Define the term cnidocytes.

Defining characteristic of Cnidarians

Cnidocytes - stinging cells that are located along cnidarian tentacles

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6. A poison-filled, stinging structure within a cnidocyte that contains a tightly coiled dart is called a nematocyst.

7. Where does cnidarian digestion initially occur?

Extracellularly (in a gastrovascular cavity)

II. Hydrozoans

1. Most species of hydrozoans exhibit a medusa or a polyp stage. (Both stages usually.)

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Circle One: True False

2. Why is freshwater *Hydra* unique structurally?

Exists only as a solitary polyp (No medusa stage)

3. What attaches *Hydra* to rocks or water plants? Basal Disk

4. What motion does *Hydra* perform while moving?

Tumbling (Flips using tentacles + basal disk)

5. Many marine hydrozoans form colonies.

Circle One: True False

Produce deadly nerve toxins.

6. Describe how *Physalia* (Portuguese man-of-war) is a specialized marine hydrozoan? p. 625

Gas-filled float (modified polyp) with dangling tentacles

7. Most hydrozoan species are hermaphroditic. separate sexes

Circle One: True False

8. Which type of reproduction occurs with each form of hydrozoan? (Circle one for each.)

Medusa : Asexual Sexual Polyp : Asexual Sexual

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9. Define the term planulae.

Planulae - free-swimming, ciliated larvae (zygote)
↳ settles on ocean floor as a polyp

III. Scyphozoans

1. What are scyphozoans?

- predators that ensnare + sting prey with tentacles

2. What are scyphozoans usually referred to as? Jelly fish

3. What makes the scyphozoan *Aurelia* different than the hydrozoan *Obelia*?

Aurelia - most of life as a medusa (*Obelia* = polyp)

4. What are two other jellyfish relatives?

1. Box Jellies - possess a cube-shaped medusa (Deadly)

2. Comb Jellies - have only a medusa stage and no cnidocytes
(Sticky tentacles trap plankton)

IV. Anthozoans

1. The largest class of cnidarians is anthozoans.

Circle One : True False

2. What are anthozoans?

- brightly colored polyps

3. List four examples of anthozoans.

1. Sea Anemones 2. Corals 3. Sea Pansies 4. Sea Fans

4. What produces the bright colors of anthozoans?

- Symbiotic algae (bioluminescent dinoflagellates)

5. What fish has a well-documented symbiotic relationship with sea anemones?

Clown Fish

6. Circle the letter of each sentence that is true about corals.

- a. Corals secrete an underlying skeleton of calcium carbonate.
- b. Corals are solitary polyps that live at all depths of the ocean.
- c. Coral skeletons provide a foundation for new coral polyps.
- d. Most corals are colonial.

7. Where are coral reefs typically located? Tropical Regions

Statocysts
- balance organs
Ocelli
- eyespots

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Great Barrier Reef
- 2000+ km long
- 80 km wide