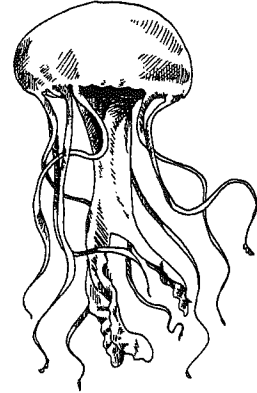


## Invertebrates: *What Is a Cnidarian?*

Kingdom: *Animalia*

Phylum: *Cnidaria* [ni DER ee uh] means “stinging cells.”

Student observers, have you ever seen a jellyfish? If you have, then you have seen a **cnidarian**. The cnidarians include some of the most beautiful animals. They include jellyfish, hydras, sea anemones, and corals. Today, we are going to study these amazing aquatic animals. Most cnidarians live in **marine** (salt) water, but a few, such as the hydra, live in fresh water. These simple, radially symmetrical animals are flower-like and in some ways resemble plants. **Radial symmetry** means that the body radiates out in all directions from the center like the spokes of a wheel. *Cnidaria* is Latin for “stinging cells.”



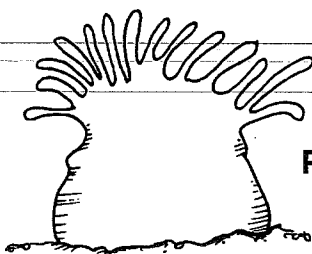
### Complexity and Structure

These animals find themselves up one step of the ladder of complexity from the sponges. They are still very simple animals, but they are more complex than the sponge. They have **two cell layers** that are organized into **tissue**. Cnidarians have digestive, muscle, nerve, and sensory tissue. The cnidarian body is a hollow sack with only one body opening (a mouth). It is surrounded by rope-like pieces of tissue called **tentacles** (arms). These tentacles may contain **cnidocytes** (stinging cells), which are used to capture food. These cells contain poison arrows connected to threads called **nematocysts**. When a small fish touches the tentacle, the arrow shoots out to paralyze the prey. The tentacle then brings the victim to the mouth and into a simple digestive cavity. After the prey is digested inside the hollow sack, the food passes into the body cells, and the waste must go back out the mouth.

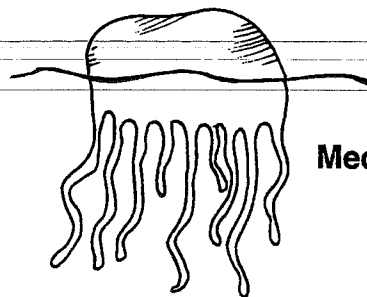
### Body Forms

The cnidarian has two body forms or shapes as shown below. Some have an umbrella shape where the mouth and tentacles hang down. This body plan is called **Medusa** (muh DOO suh). The Medusa form can float on the surface of water and swim about. Other cnidarians, such as the corals, hydras, and sea anemones, have a **polyp** form. A polyp does not usually move about; its tube-shaped body is attached to the bottom of the ocean, with the mouth and tentacles pointing upward.

Most jellyfish live as individuals. Some polyps tend to live in colonies or groups as the corals do. The corals secrete a calcium carbonate shelter around their bodies. In time, the shelters join together with neighboring corals to form coral reefs.



Polyp form



Medusa form