

Fact Sheet: Cnidarians

Phase of learning

Years 7 - 8, Years 9 - 10, Senior Secondary (Years 11-12)

Region

North Coast, Gascoyne Coast, West Coast, South Coast, Indian Ocean Territories

Summary

Cnidarians are a diverse group of animals that all share a key feature: the presence of 'nematocysts', or stinging cells. This fact sheet describes the main characteristics and four classes of Cnidarians.

Corals, anemones, and sea jellies are all in a group of animals called cnidarians (pronounced 'nigh-dare-se-ans'). The name comes from the Greek word 'cnidos', meaning 'stinging nettle'. A key feature of these animals is the presence of nematocytes, or stinging cells, found mainly in the tentacles.

Cnidarians have a relatively basic body form which consists of a cup-shaped body with tentacles. They all display radial symmetry, meaning their body parts extend outward from the centre. There are two distinct body forms and some species have both body forms during their life cycle:



Polyp: have a tubular body, attached at the base to the seabed or each other (in a colony) and their tentacles point upwards.



Medusa: are generally free swimming, bell-shaped animals with tentacles that dangle below the main body.

Cnidarians have a central mouth that also functions as the anus and leads into the stomach, called the gastrovascular. The earlier classification for cnidarians, that of Coelenterata, originated from this organ. The coelenterates, however, also included the Ctenophora (comb jellies) and sea gooseberries, that are without stinging cells. Hence Ctenophora and Cnidaria are now separate phyla.

Cnidarians are divided into four classes:

Hydrozoa

The name 'hydrozoa' means water animal but is also associated with the hydral or many-headed serpent. This makes sense when you realise that what they may look like a single animal, they are a colony (individuals living together and interacting in a symbiotic way). Hydrozoans include blue bottles and hydroids.



Anthozoa

Anthozoans (meaning 'flower animals') include corals, sea pinks, sea fans and anemones. They exist only as polyps, which are solitary as with anemones or colonial as is the case for corals. The mouth is surrounded by one or more rows of tentacles – hence they may look like flowers.



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