A description of phylum: porifera

Phylum: Porifera A sponge has differentiated cells and functionally distinct layers. The ameobocytes secrete spicules which stack up together to make the sponge. The choanocytes are composed of a flagellum and a collar (collar cells). The amoebocytes and choanocytes are the work force of the sponge--they create the body of the sponge. The major sponge groups of today had an ancestor in the Cambrian period. The sponges reproduce either sexually or asexually. When they reproduce sexually, they usually cross-fertilize.

Eggs and sperm unite to make a free-swimming larva that settles on a different surface. Asexually, the sponge produces small, internal buds called gemules. These gemules each produce a new sponge. Sponges can also reconstitiute themselves if their cells are separated into a suspension. (1) Pictures: [pic]An Orange Finger Sponge (Neoesperiopsis rigida) The anatomy of a sponge. [pic]What the skeleton of a sponge looks like. [pic](*) Purple and Yellow Tube Sponge (1) " Sponge," Microsoft Encarta 96 Encyclopedia, 1993-1995 Microsoft Corporation.

Phylum: Cnidaria Class: Anthozoa [pic] Corals come in all shapes and sizes--some are reef-builders while others are non reef-builders: The reef builders are the corals that can be seen in the Great Barrier Reef off Austrailia. Reef builders build high structures composed of living and non- living materials. The living materials are most often sponges, algae, and the corals themselves. The non-living materials are most often the discarded shells of dead bivalves (clams, mussels, etc.) and other CaC03 materials.

Coral reefs grow about a eter every one thousand years, so you see why it's very difficult for a reef to recover if it is destroyed. An example of a reef-builder. Non reef-builders usually inhabit the bottom of more shallow areas of the ocean. They do not build high structures. An example of a Fire Coral, a non reef-builder. What is a Coral anyway? Corals are invertebrates that are in symbiosis with an algae (phylums: chlorophyta, rhodophyta, or phaeophyta) or a dinoflagellate (phylum: dinophyta)--that means they exchange nutrients or other services with one another in order for both to survive etter.

They are of the phylum cnidaria and therefore have an alternation of stage). However, the class anthozoa's medusa stage is absent and once they fix themselves in one place, they become sessile. They only move during their developing stages. To obtain food, corals filter feed. Coral Bleaching Coral bleaching occurs when the corals lose their algae (the algae or dinoflagellate is what cause the beautiful colors that a coral has). The result of losing its algae causes the coral to " bleach" (become completely white).

Scientists are not quite sure why his happens, but there is some evidence to suggest that a rise in water temperature may be involved. Most organisms' metabolisms cannot handle even a small change in temperature. A possible cause of this rise in temperature is the heavily debated global warming situation. Look at the Photo gallery Back to the Anthozoans page! Order: Actiniaria A sea anemone usually attaches itself to rocks or coral. They have a central mouth which is surrounded by tentacles with nematocysts, stinging cells that paralyze and entangle small marine animals.

Sea anemones primarily reproduce sexually: most often, their eggs are fertilized in the gastric cavity, and then their young are released through the mouth temporarily as free-swimming larvae--they soon find somewhere to attach themselves to. A few sea anemones have symbiotic relationships with some hermit crabs; they attach themselves on the shell of the hermit crab (or they are attached by the hermit crab). There are theories that this is beneficial to the hermit crab for protection since the stinging cells on certain sea anemones can be quite otent, and the sea anemone may benefit from scraps of the hermit crab's food that it did not eat.