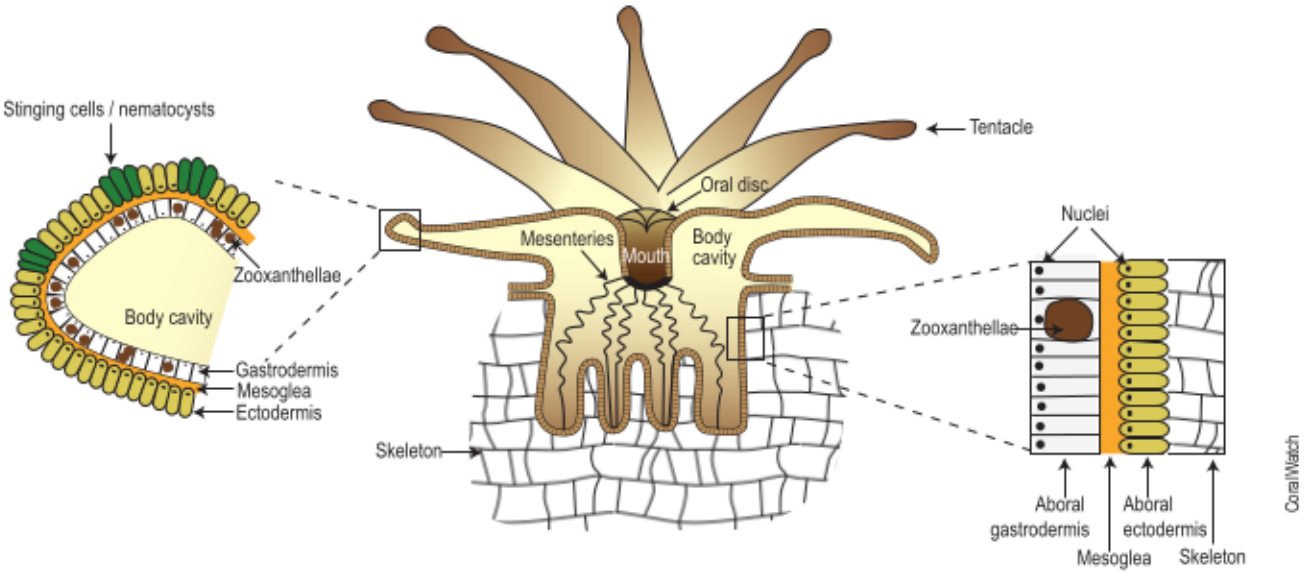
Corals: consumer or producer?



Corals build hard structures that can be seen from the air and even from space. Corals are animals. They build reefs by secreting a skeleton which the animal uses to hold itself in place. When viewed close up, **tentacles** and a **mouth** are visible. Corals use these structures at night to capture **plankton** and feed. However, during the day something very different occurs. Corals often have a relationship with a special type of algae called **zooxanthellae** (pronounced 'zoo-zan-thel-ay'). The algae actually live inside cells in the inner cell layer of the coral. When exposed to sunlight, just like other algae, the zooxanthellae are able to produce their own food through photosynthesis. In fact, they are so good at producing their food that they have enough left over for the coral to share. In turn, the coral shares nutrients with the algae. This type of relationship is called a **symbiosis**. In a symbiotic relationship, the organisms live together with one another to the benefit of both. This relationship has happened over such a long period that many corals now cannot survive very long without their algal partners. When coral becomes stressed, it can kick out the algae living inside it. This process is known as **coral bleaching**. Bleaching is the term used, because the algae are often what give the coral their brown or green appearance and when gone the white skeleton is visible underneath. If corals cannot recover and get the algae back into their cells in time, they can die.

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Some fish eat coral such as angelfish, butterflyfish and blennies. Other fish eat plankton such as damselfish and fusiliers. Sharks eat fish.

Instructions

1. Identify the primary producer in the coral-algae relationship.

2. Draw a food web on the worksheet with coral, plankton, zooxanthellae, coral-eating fish, plankton-eating fish and sharks.