

LESSON NOTES

Subject: Basic Science

Year/Level: 10

Week 8

Strand	1 : LIVING THINGS AND THE ENVIRONMENT
Sub Strand	1.3 : BIODIVERSITY, CHANGE AND SUSTAINABILITY
Content Learning Outcome	Research the importance of the marine ecosystem and investigate man's activities that have influenced the resources of the different communities of this ecosystem and describe measures taken to conserve them.

2 General Categories of Corals/Coral Reefs

Features	Hard Corals (Stony Corals)	Soft Corals (including Sea fans)
Structure	<ul style="list-style-type: none"> - rigid or rock-like skeleton - various shapes of different colonies 	look like colourful plants or graceful trees
Calcium Carbonate (CaCO₃) <i>(chemical present in classroom chalk)</i>	<ul style="list-style-type: none"> - Skeleton is made up of Calcium Carbonate, hence produce a rigid structure. - Therefore, important for reef-building 	<ul style="list-style-type: none"> - they do not produce the hard calcified skeleton of many reef-building corals, though they may be present in a reef ecosystem. - Therefore are not reef builders -
Tentacles	have multiples of six tentacles	always have eight tentacles
Other facts	rely on symbiotic algae (zooxanthellae) living within their tissues <u>for nutrition and energy</u> to build their skeleton and must therefore live in shallow clear water to allow sunlight to reach the algae.	They do produce smaller amounts of calcium carbonate that help them keep their shape.

Coral Reefs

- animals (relatives of jellyfish and anemones)
- precious resource in the ocean because of their beauty and biodiversity.
- **Importance of Coral Reefs:**
 - provide shelter for a wide variety of marine life
 - provide humans with recreation
 - valuable source of organisms for potential medicine
 - create sand for beaches
 - serve as a buffer for shorelines.
- built by millions of:
 - ✓ coral polyps
 - ✓ small colonial animals resembling overturned jellyfish that use excess carbon dioxide in the water from the atmosphere and turn it into limestone.
- As much as 90% of the organic material, the algae manufacture photosynthetically is transferred to the host coral tissue.

Note: Coral reefs can be found in both shallow and deep waters.

ACTIVITY:

1. Name a chemical that produce a rigid skeleton in Corals.

2. How many tentacles does the two types of Corals have?

a) Hard Corals? _____

b) Soft Corals? _____

3. In exchange for building their skeleton, what two things does zooxanthellae get from the corals?

a) _____

b) _____

4. State three importance of Coral Reefs.

a) _____

b) _____

c) _____

...STAY SAFE... 