

SEA★**LIFE**

This resource aligns with NSW Stage 2 outcomes in Science & Technology (Living World and Working Scientifically) and Geography, with a focus on sustainability and human impact on environments

Cauliflower Soft Coral

TEACHER SLIDE

Curriculum Links (Stage 2 – NSW):
SC2-4LW-ST, ST2-1WS-S, ST2-2WS-S, ST2-3WS-S, ST2-4WS-S, ST2-5WT-S
GE2-1, GE2-2

Cross-curriculum priority: Sustainability

**TEACHER
USE ONLY**

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Cauliflower Soft Coral

Cauliflower Soft Coral (*Dendronephthya australis*)
is a soft coral in the octocoral family

What is cauliflower soft coral?

Cauliflower soft coral (*Dendronephthya australis*) is a marine animal that lives in coastal waters.

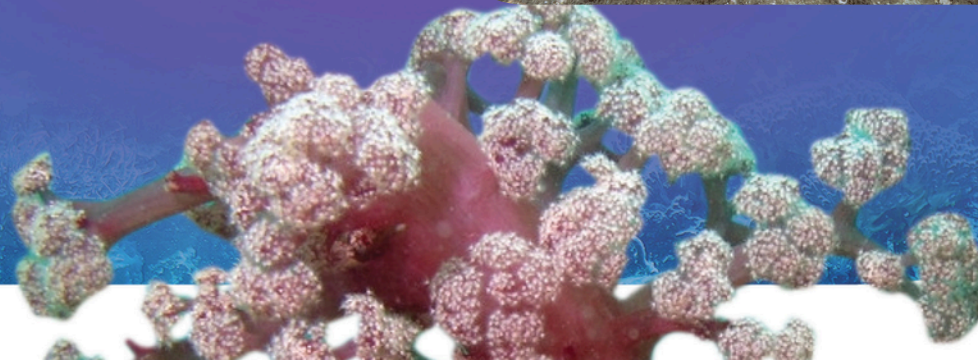
Although it looks like a plant, it is made up of tiny animals called polyps.

This species is found only along the east coast of Australia.

Observation task:

Describe its:

shape & colour
what it reminds
you of



The Conservation Project

Scientists at SEA LIFE Sydney Aquarium are working with NSW scientists to help protect cauliflower coral.

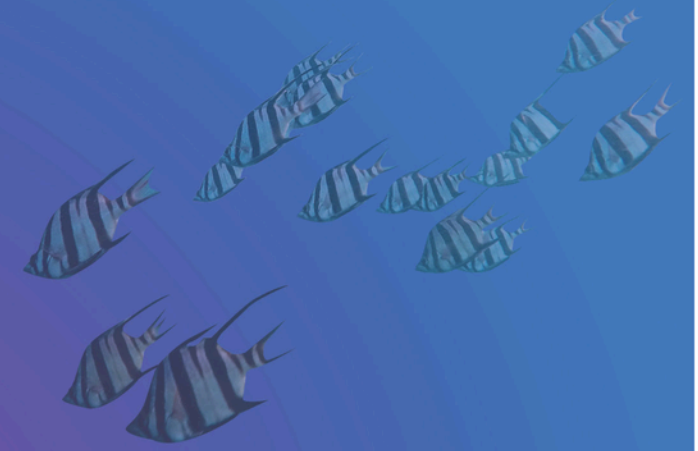
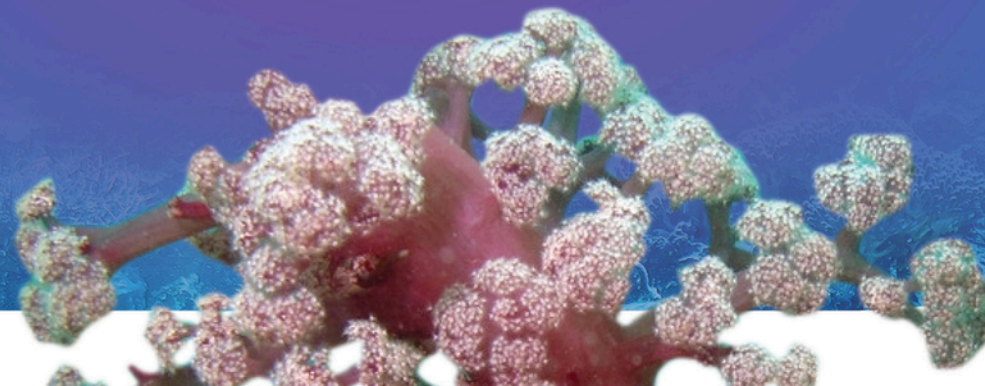
They grow coral in carefully controlled aquarium systems and then return it to the ocean.

So far, around 200 pieces of coral have been returned to the ocean in places like Sydney Harbour and Port Stephens.

This work helps rebuild coral populations that have declined.

Think-pair-share:

Why might scientists need to help some species survive in the wild?



Why is this coral important?

Cauliflower soft coral provides important habitat for other marine animals.

Species such as White's seahorse and juvenile fish rely on this coral for shelter and protection.

When coral habitats are lost, animal populations can also decline.

For example, some seahorse populations have dropped by up to 90% in recent years due to habitat loss.

Healthy coral habitats support a wide range of marine life.

Activity: Habitat Mapping

Draw a simple underwater habitat and include: coral, fish, seahorses

Label how each animal uses the coral



What is threatening the coral?

One of the biggest threats to cauliflower coral is sediment in the water.

Sediment is made up of small particles like mud and sand. When too much sediment settles on the coral, it can smother the polyps and stop the coral from feeding and growing.

This problem is often linked to human activities such as coastal development and land clearing.

Recent flood events and human activities have caused major damage. In some areas, coral populations have declined by up to 99% in just a few years.

Finish the sentence:

“If too much sediment enters the ocean, then _____.”

Activity: What does a “99% decline” mean?

→ If there were 100 corals, how many would be left?

How scientists grow new coral

Scientists can grow new coral using a process called fragmentation.

This involves taking a small piece of coral and allowing it to grow into a new colony.

These new coral fragments are grown in aquariums where scientists can control water quality and feeding conditions.

Once strong enough, the coral is placed back into the ocean.



Activity: Sequencing Task

Put these steps in order:

1. Coral is placed back in the ocean
2. A small piece of coral is taken
3. Coral grows in a tank



What does this coral need to survive?

Cauliflower soft coral does not rely on sunlight like many other corals. Instead, it feeds on tiny organisms such as plankton that float in the water.

To survive, it needs:

- Clean water
- A steady flow of water
- Enough food drifting past

Scientists carefully manage these conditions when growing coral in aquariums.



Compare & explain:

Why is clean, flowing water important for this coral?



What has the project achieved?

Scientists have successfully returned many coral fragments to the ocean in places like Sydney Harbour and Port Stephens.

A large proportion of the coral has survived, showing that conservation efforts can be successful.

Results show that about 82% of the coral survived after being reintroduced.

- Around 65% were healthy
- About 17% were still alive but needed support

These results are helping scientists improve how they protect this species.

To watch this release view video here <https://www.visitsealife.com/sydney/conservation/local-conservation-projects/cauliflower-coral-conservation-project/>



Create a simple bar graph showing:
Healthy coral & struggling coral



What has happened to this coral?

- Coral populations have dropped by up to 99% in some areas
- Some seahorse populations have dropped by around 90%
- Scientists have returned 200 coral fragments to the ocean
- About 82% survived after being reintroduced

Ways we can help include:

- Reducing pollution, especially rubbish that can enter waterways
- Protecting local habitats such as beaches, rivers, and estuaries
- Being mindful of how human activities impact the ocean
- Learning about conservation projects and sharing what we know with others

Supporting scientific projects, like the cauliflower coral conservation program, helps protect marine life and restore damaged ecosystems.

