NAME _____

Episode 2: Superheroes of the Caribbean Reef

Key Terms from the broadcast

During today's broadcast, we explored how different reef organisms act like "superheroes", each serving an important role to keep the ecosystem healthy. Scientists use specific vocabulary to describe these roles and interactions.

Draw a line between each keyword and its correct definition.

Keywords
Keystone species
Food web
Apex predator
Overfishing
Food chain
Restoration

Definitions
animal at the top of a food chain that is typically not preyed upon by other animals
when people catch fish faster than they can reproduce so there aren't enough left in the ocean
a species that has a big impact on its ecosystem because if it were to disappear, it would cause major changes and problems for the rest of the system
simple representation to show how energy moves from producers to consumers in an ecosystem
renewal of a damaged, degraded, or destroyed ecosystem by active human intervention
representation to show how energy moves from producers to consumers in an ecosystem while also showing how these interactions between organisms in an ecosystem can be multi-faceted

Understanding roles

Using the clues below, match each organism to its role.

Clues:

A - “I eat other fish and keep populations balanced.”

B - “I swim in groups and eat algae all day.”

C - “I build the reef and provide homes for other animals.”

D - “I defend my small patch of reef and ‘farm’ algae.”

Match each to the correct organism AND role:

Clue	Organism	Role
A	_____	_____
B	_____	_____
C	_____	_____
D	_____	_____

Word bank:

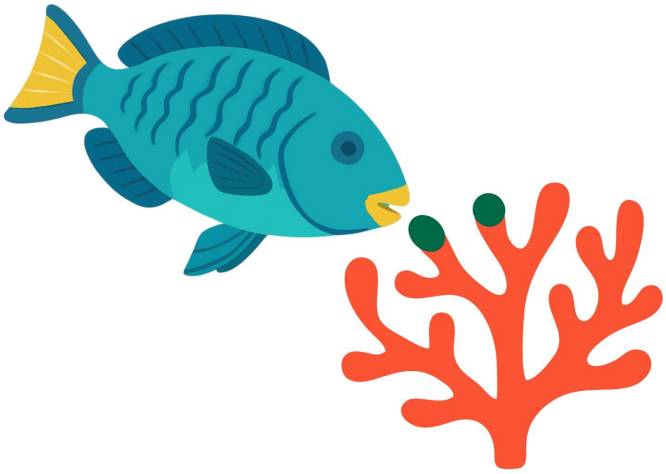
Coral • Surgeonfish • Damselfish • Reef shark • Builder • Herbivore • Territorial grazer • Predator

Extension:
Which TWO organisms above help control algae?

_____

Processes on the Reef

Below is an image of a reef fish feeding on the reef surface.



What is the fish feeding on? _____

The process is called: _____

Explain:

How does this behaviour help maintain a healthy reef?

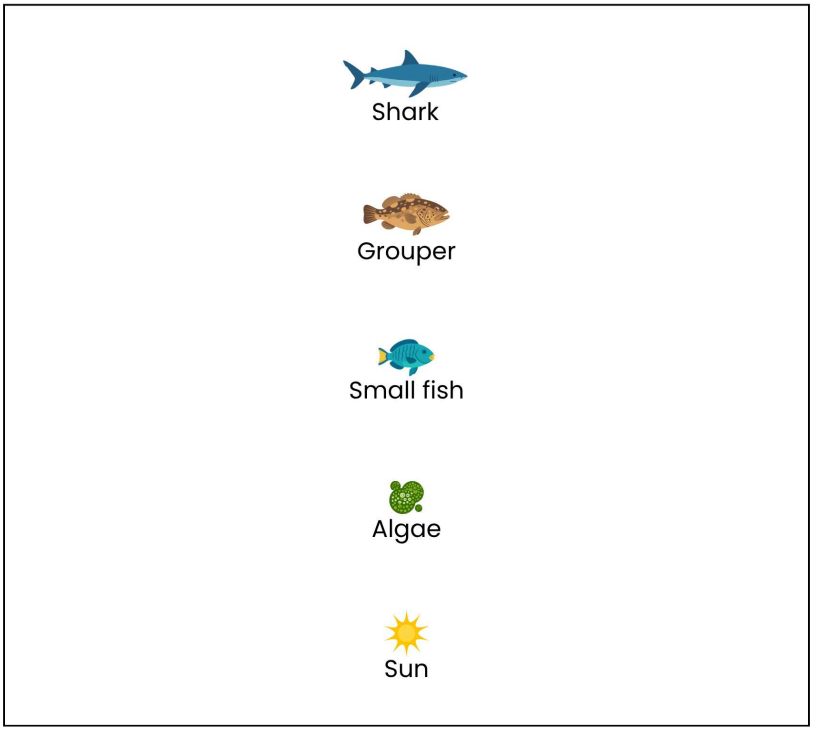
_____

_____

Food Web Thinking

Everything on the reef is connected through the food web.

In the diagram below draw arrows to show how energy moves through the reef.



Label:

- Producer: _____
- Herbivore: _____
- Predator: _____

What might happen if predators disappeared?

_____

Working Like a Scientist

Scientists at CCMI are working to understand and protect coral reefs.

You are studying herbivorous fish. What would you measure? (tick 2)

☐ Coral growth

☐ Number of sharks

☐ Amount of algae

☐ Water temperature

Look at the reefs:

What do you notice? (You may notice differences in number of herbivores, amount of algae, variety of coral, and more.)

_____

_____

Do herbivorous fish help coral reefs stay healthy? _____

Scientists grow coral in nurseries and transplant it back onto reefs.

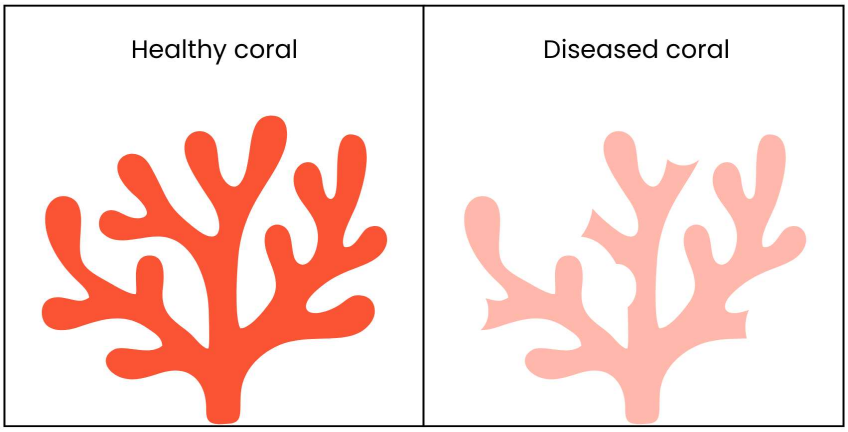
Why might this help reefs recover?

_____

_____

Coral Disease Investigation

Corals are the foundation of coral reefs. Like all living things, they may be affected or harmed by a disease. Scientists study diseases like Stony Coral Tissue Loss Disease (SCTLD) to understand how reefs are changing.



1. Label the diagrams with the correct descriptor below:

Living tissue Dead skeleton

2. What differences can you see?

_____

3. How can you tell the coral is unhealthy?

_____

4. What happens next?

Coral dies → _____ → _____

5. Why is this a serious threat?

_____

_____

Design a Reef Superhero

Create your own reef organism with a special “superpower”.

Examples:

- Sharp teeth for scraping algae
- Camouflage to hide from predators
- Strong jaws for eating coral

Label your design:

What does it eat? _____

What is its role? _____

What is its superpower? _____

How does it help the reef? _____