Marine Food Webs & Relationships

Coral Crown Reef with Aqualing

Learning target

Trace simple feeding links in a marine ecosystem.

Before you begin

Use the reference page and discussion prompts on their own, or open the optional browser adventure. No earlier lesson or physical kit is required.

For online play: use an internet-connected current browser with local storage enabled. Read the three-part Gemling briefing, answer the quick check, and apply the evidence at three checkpoints. Retry feedback supports review; results are not a secure test or gradebook.

Use for teacher-led review, science centers or partner practice. Independent readers may need support with the vocabulary below. The design target is grades 3-5; choose support based on the learner.

Vocabulary and concepts to discuss

Producers; consumers; predators; reef relationships; energy flow

Open Coral Crown Reef - direct lesson link

Scan the QR code or use the clickable link. This guide is usable offline; the adventure runs on an external educational website.

Marine Food Webs & Relationships - key ideas

1. The first clues

Many ocean food webs begin with producers such as phytoplankton or algae using sunlight. Consumers get food by eating organisms.

2. How the clues connect

Food-web arrows show energy moving from food to eater. In our model, phytoplankton feed small grazers and the grazers feed fish.

3. Our evidence record

If producers decline, less food may be available to grazers and then fish. Real webs have many links, so the size of each effect needs evidence.

Keep the science accurate

Use qualitative depth, tide and current models. Do not require pressure equations, global-current memorization or ocean-zone trivia.

Apply the evidence

Use a specific observation from this lesson to explain one choice. Point to a clue, then connect that clue to a scientific idea.

Curriculum reference: https://www.nextgenscience.org/dci-arrangement/5-ess2-earths-systems

Talk through the evidence

1. Where should an arrow point from a grazer eaten by a fish?

Expected answer: Toward the fish

Reasoning: Food-web arrows show energy moving from food to eater. In our model, phytoplankton feed small grazers and the grazers feed fish.

2. Which is a producer in this model?

Expected answer: Phytoplankton

Reasoning: Many ocean food webs begin with producers such as phytoplankton or algae using sunlight. Consumers get food by eating organisms.

3. What might producer decline cause?

Expected answer: Less food for grazers

Reasoning: If producers decline, less food may be available to grazers and then fish. Real webs have many links, so the size of each effect needs evidence.

4. Why avoid an exact prediction from one link?

Expected answer: Food webs have other connections

Reasoning: If producers decline, less food may be available to grazers and then fish. Real webs have many links, so the size of each effect needs evidence.

Guide the discussion

Ask learners to name the evidence that supports their answer. If an answer differs, revisit the matching key idea on page 2 and invite a revised explanation.

Online rewards: this lesson grants one fixed digital Expedition Discovery. Five saved digital Gemling friends become available only after all six distinct subject lessons are complete, in any order. Digital rewards do not establish physical ownership.