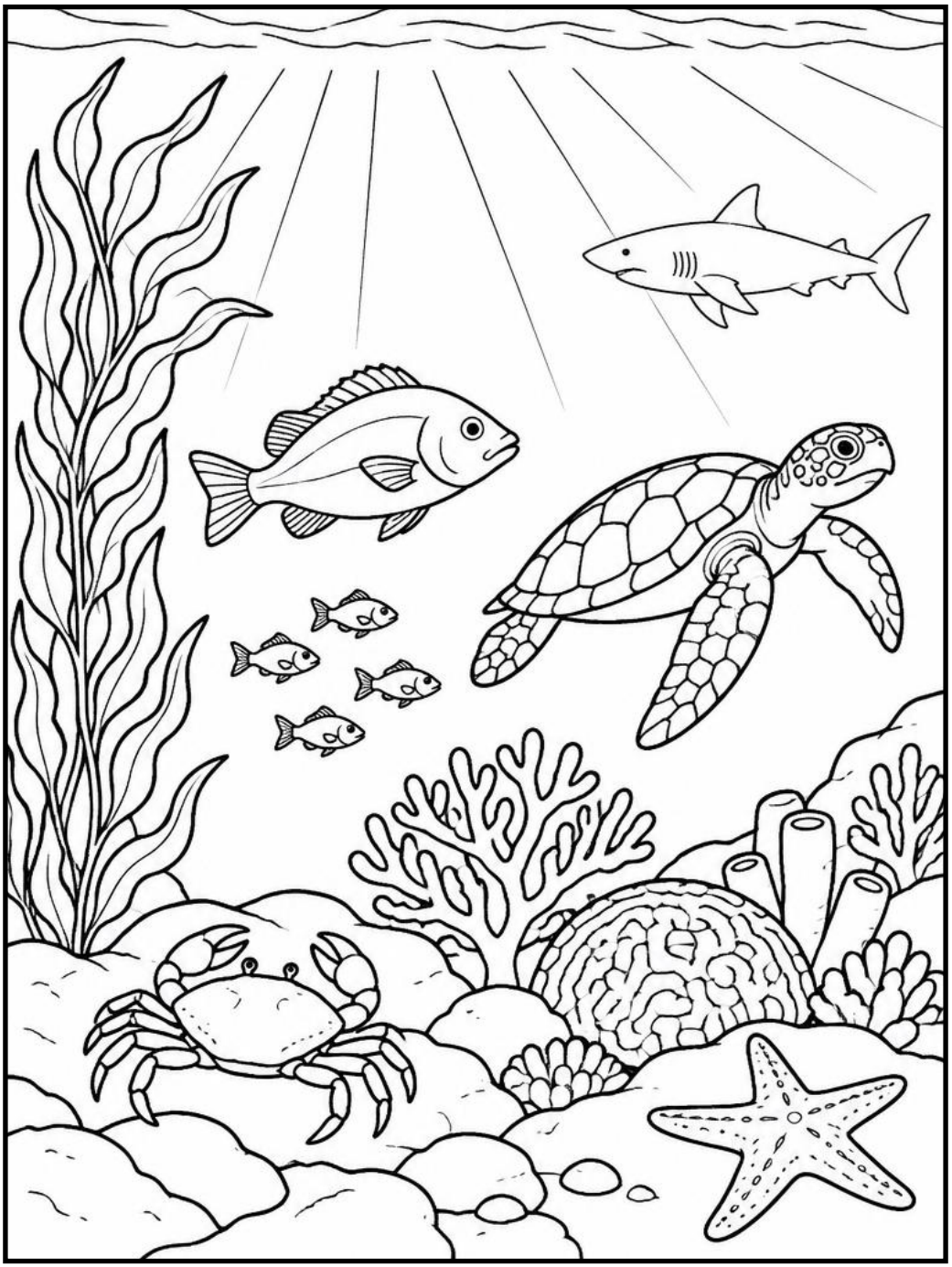
Ocean Ecosystems & Food Chains

Learning Pack · Color It. Learn It. Explore It.

Ages 6–10 · Grades 1–4 (approximate) · Life Science / Marine Ecology · 30–75 minutes

Name: _____



Inside: facts · vocabulary · food chain · food web · habitats · quiz · answer key · notes

What you will learn

Learning objectives

- ☐ Explain what an ocean ecosystem is.
- ☐ Tell producers and consumers apart.
- ☐ Follow energy through a simple food chain.
- ☐ Explain that a food web is made of connected food chains.
- ☐ Explain why protecting ocean habitats matters.

Five ocean facts

Fact 1: Ocean ecosystems

An ocean ecosystem is made of living things, like fish, plankton, seaweed and corals, plus nonliving things, like water, sunlight, temperature and nutrients. Different ocean habitats are home to different living things.

Fact 2: Ocean producers

Phytoplankton are tiny living things, many of them microscopic algae, that use sunlight to make food (photosynthesis). Seaweeds and seagrasses are producers too, near the coast.

Fact 3: Consumers

Animals get energy by eating other living things. For example, some zooplankton eat phytoplankton, small fish eat zooplankton, and bigger fish eat smaller fish. What each animal eats depends on its kind.

Fact 4: Food chains and food webs

A food chain shows one path energy can take from one living thing to another. A food web shows how many food chains connect together.

Fact 5: Healthy habitats

Coral reefs, kelp forests and seagrass meadows give many sea animals food, shelter and safe places to raise young. Pollution, damage and changing ocean conditions can harm them.

Sources (checked October 2026)

Facts 1, 3–4: NOAA, noaa.gov/education/resource-collections/marine-life/aquatic-food-webs
Fact 2: NOAA Ocean Service, oceanservice.noaa.gov/facts/phyto.html
Fact 5: NOAA Ocean Service, oceanservice.noaa.gov/facts/coral_reef.html and oceanservice.noaa.gov/facts/kelp.html

Ocean ecosystem words

Ecosystem	Living things and the place they live, including water, light and weather, all working together.
Habitat	The natural home where a plant or animal lives.
Producer	A living thing that makes its own food, usually using energy from sunlight.
Consumer	A living thing that gets energy by eating other living things.
Predator	An animal that hunts or catches other animals for food.
Prey	An animal that is hunted or eaten by a predator.
Food chain	One path that shows how energy moves from one living thing to another.
Food web	Many food chains joined together.
Phytoplankton	Tiny living things, many of them algae, that float in water and make food from sunlight. There are many different kinds.

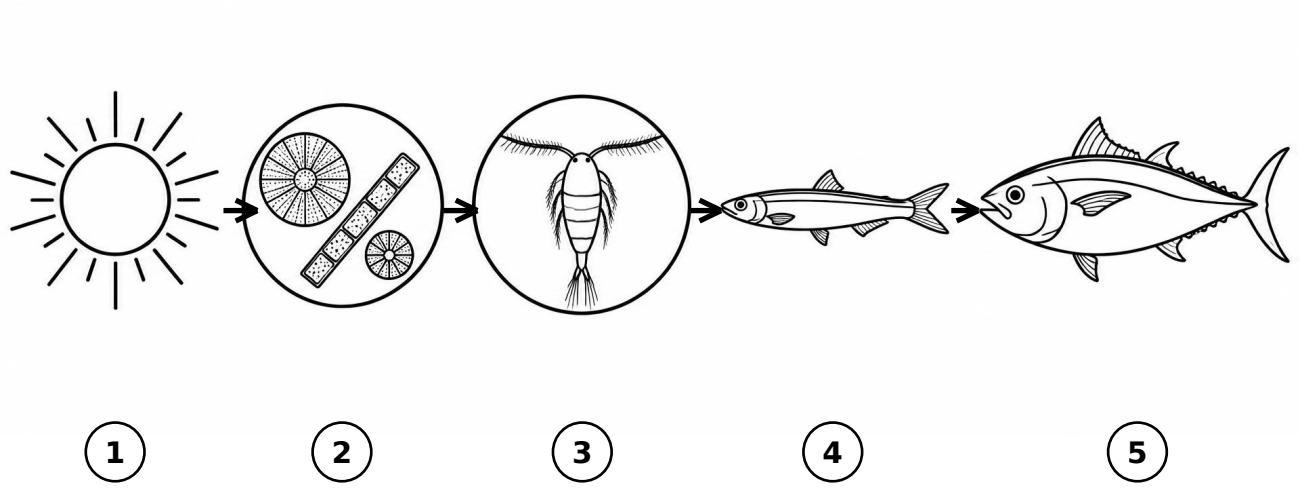
Your turn: write a sentence using two of the words.

Label an ocean food chain

Name: _____ Date: _____

One example of energy moving through an ocean food chain. Write each word from the word bank on the line with the matching number.

large fish · phytoplankton · Sun · small fish · zooplankton



1. _____

2. _____

3. _____

4. _____

5. _____

- The arrows point the way energy moves: from the food to the living thing that eats it.
- The Sun is not a living thing. It gives phytoplankton the light energy they use to make food.
- Phytoplankton and zooplankton are drawn much bigger than they really are (magnified). Not to scale.
- This is just one example. Real ocean animals eat many different foods.

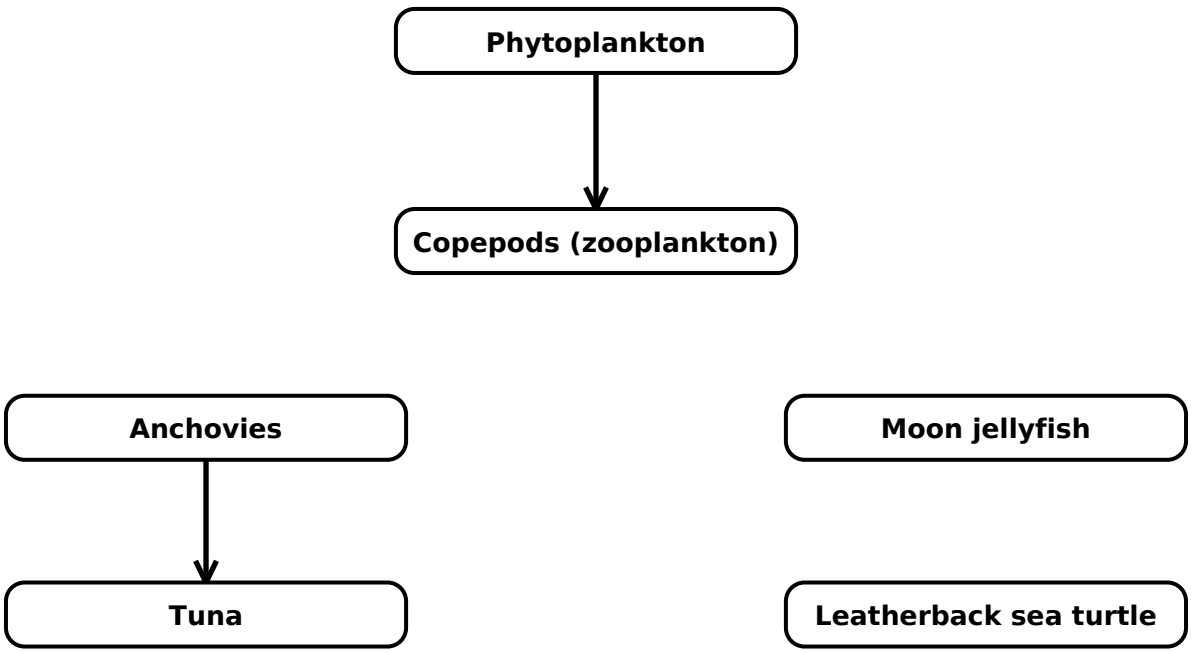
Ocean science activities

Name: _____ Date: _____

Activity A: Build a food web

Two arrows are drawn for you. Draw arrows from the living thing being eaten toward the living thing that eats it. Draw 3 more arrows.

Hints: copepods eat phytoplankton. Anchovies and moon jellyfish eat copepods. Tuna eat anchovies. Leatherback sea turtles eat jellyfish.



Activity B: Match the ocean habitat

Draw a line from each habitat to the words that describe it.

Coral reef	○	○ underwater fields of flowering plants that grow in shallow water
Kelp forest	○	○ built by colonies of tiny coral animals; shelter for many sea creatures
Seagrass meadow	○	○ the huge, deep water far from the coast, home to plankton and big predators
Open ocean	○	○ tall, underwater forests of large brown algae (seaweed)

Ocean ecosystem quiz

Name: _____ Date: _____

Fill in the circle next to the best answer.

1. What is an ecosystem?

- ◯ a) Only the water in the ocean
- ◯ b) Living things and their surroundings, working together
- ◯ c) One kind of fish

2. Which of these is a producer?

- ◯ a) Phytoplankton
- ◯ b) Tuna
- ◯ c) A shark

3. In a food chain, an arrow shows...

- ◯ a) which animal is the biggest
- ◯ b) the direction energy moves, from food to eater
- ◯ c) which way the animal swims

4. How is a food web different from a food chain?

- ◯ a) A food web shows many connected food chains
- ◯ b) A food web has only one animal
- ◯ c) A food web is only on land

5. Why are habitats like coral reefs and kelp forests important?

- ◯ a) They give sea life food, shelter and places to raise young
- ◯ b) They make the ocean salty
- ◯ c) They stop the tides

Bonus: What might happen to other animals in a food web if one important food became hard to find?

Answer key

Label an ocean food chain

1. Sun 2. phytoplankton 3. zooplankton 4. small fish 5. large fish

Every arrow points right: Sun → phytoplankton → zooplankton → small fish → large fish (the direction energy moves).

Activity A: food web (3 new arrows)

Copepods (zooplankton) → Anchovies
Copepods (zooplankton) → Moon jellyfish
Moon jellyfish → Leatherback sea turtle
Already drawn: Phytoplankton → Copepods; Anchovies → Tuna.

Activity B: habitats

Coral reef → built by colonies of tiny coral animals; shelter for many sea creatures

Kelp forest → tall, underwater forests of large brown algae (seaweed)

Seagrass meadow → underwater fields of flowering plants that grow in shallow water

Open ocean → the huge, deep water far from the coast, home to plankton and big predators

Quiz

1. b) Living things and their surroundings, working together
2. a) Phytoplankton
3. b) the direction energy moves, from food to eater
4. a) A food web shows many connected food chains
5. a) They give sea life food, shelter and places to raise young

Bonus (answers will vary): for example, animals that eat that food might go hungry, move away or switch to other foods, and there could be fewer of them. What happens depends on which animals are involved and what else they can eat.

Teacher and parent notes

Who it is for

Ages 6–10 (about grades 1–4). Younger children can do the coloring, vocabulary and habitat pages with help reading.

Time

30–75 minutes, depending on the activities selected.

Suggested order

1) Read the facts. 2) Vocabulary. 3) Food chain. 4) Food web. 5) Habitat matching. 6) Quiz. 7) Color a sheet from the free Ocean & Deep Sea collection.

Hands-on: tabletop food web

Make one paper card for each living thing on page 5. Lay the cards on a table and connect them with string or yarn laid flat, following the arrows. Remove one card and discuss what might happen to the others.

Safety

Keep the string on the table — never wrap it around fingers, wrists, necks or bodies. Younger children can draw the lines with crayons instead. Do not touch, collect or disturb live sea creatures; on any shore visit, follow an adult and local rules.

Indoor alternative

Everything in this pack works on paper — no beach or aquarium visit is needed.

Discussion questions

Where does the energy in many ocean food chains begin? What is the difference between a food chain and a food web? Why are tiny living things important to big ocean animals? What could happen if a habitat were damaged?

A note on the science

Food chains and webs are simple models of very complex ecosystems. Not every ocean food chain starts with sunlight: some deep-sea communities near hot vents get energy from chemicals instead.