

Subject links:
Science

Age: 5-7

Curriculum links:
UK wildlife, Biodiversity, Habitats, Creativity

Ocean Literacy Principles:

5. The ocean supports a great diversity of life and ecosystems
6. The ocean and humans are inextricably interconnected.

Learning Objectives:

- To learn how energy is transferred in a food chain from producer to consumer
- To give examples of animals in a marine food chain
- To learn to identify a variety of UK marine creatures

Resources provided:

- [Food chain Fact File](#)
- [Food chain cards](#)
- [Food chain worksheet](#)
- [Curriculum links](#)

Extra resources required:

Sellotape

What is a food chain?

Sustainability Goals:



Step 1

Background

All plants and animals need energy from their food to live. A food chain shows this transfer of energy, or who eats who. Within an ecosystem there are many food chains interlinked to create a food web. These webs show the interconnection between species in an ecosystem. Diversity of species is important for ecosystem health.

Further information is provided in the [Food chain Fact File](#).

Step 2

Set the Scene

5 minutes

Introduce the concept of a food chain using a simple example that students can relate to, for example sun, grass, zebra, lion. Explain that animals eat in order to get energy and that the food chain shows a transfer of energy. Ask them where grass gets its energy to grow (the sun) and explain that grass is a producer because it makes its own energy.

Step 3

Activities

Activity 1: 20 minutes – Making a food chain

Explain that you're going to play a food chain game, and that all of these food chains start with seaweed. Explain that seaweed, like grass, gets its energy from the sun.

Move to an open space and allocate each child a [Food chain card](#). These should be printed and mixed up and stuck to each child with sellotape. Explain that, in general, larger creatures eat the smaller creatures, but this isn't always the case. Children should first spread out and then find their food chain by grouping up with others of the same colour. They should then start with seaweed and arrange themselves in the correct order to create their chain and hold hands. Check the food chains using the order on the [worksheet](#).

Activity 2: 30 minutes – Producer or consumer? Predator or prey?

In the classroom, children should record their food chain using the [food chain worksheet](#). To show who eats who, they should draw a picture of each creature and record its name. Use the answers on the worksheets to discuss the terms producer, consumer, predator and prey, and ask children to give examples of each.

Step 4

Extend

10 minutes – Extinction

Define the word 'extinct.' Discuss the following questions: what would happen if one of the animals became extinct? How would this impact the other animals? What can we do to reduce this risk? Encourage children to identify actions we can all take to make a difference.

Step 5

Reflect

Can you give an example of a producer? How do producers get their energy? What do you call an animal at the top of the food chain? Can you give an example of a predator and the food they eat?

Step 6

Follow up

To explore how we can group marine animals further, take a look at our [Grouping animals](#) lesson plan.

Our [Protect the ocean](#) series of lessons looks into the threats our ocean and its wildlife faces and what we can do to reduce these threats.

Food Chain Fact File

What are food chains?

All plants and animals need energy from their food to live. A food chain shows this transfer of energy. Within an ecosystem, there are many food chains interlinked to create a food web. These webs show the interconnection between species within an ecosystem.

- A food chain always starts with the **sun**, as the source of energy for the producers
- Plants are **producers**, as they produce their own energy from the sun
- **Primary consumers** are animals that eat producers (plants)
- **Secondary consumers** are animals that get their energy by eating other animals
- **Tertiary consumers** eat secondary consumers
- Further up the food chain are **predators**
- At the top of food webs are **apex predators** who have few natural threats

Other key terms:

Herbivores are animals that only eat plants

Carnivores are animals that only eat other animals

Omnivores eat both plants and animals

Scavengers eat anything, including dead animals



Thorny seahorse
© Laura Dts via Shutterstock

Why is biodiversity important?

Biodiversity means 'variety of life,' and can be measured as the number of different living things in an area, and the quantities of each.

Biodiversity is vital for ecosystem health. All living things play an important role in their environments. Most organisms are dependent on, or at least affected by, each other. The interconnections between creatures creates a complex web of who eats who.

Food chain cards



Seaweed



Prawn



Blenny



Otter



Seaweed



Limpet



Crab



Seagull

Food chain cards



Seaweed



Prawn



Flounder



Seal



Seaweed



Sea urchin



Lobster



Human

Food chain cards



Dead seaweed



Sand-hopper



Turnstone



Peregrine falcon



Seaweed



Hermit crab



Octopus



Human

Food chain cards



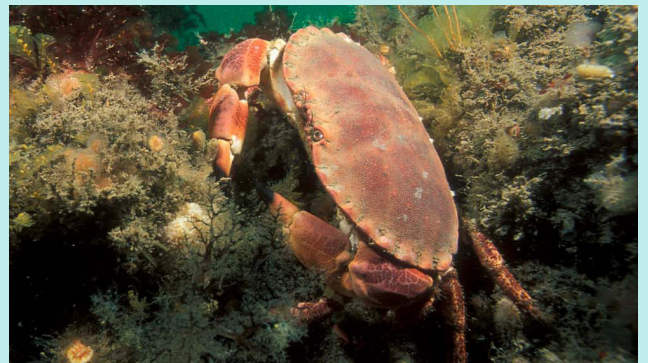
Seaweed



Limpet



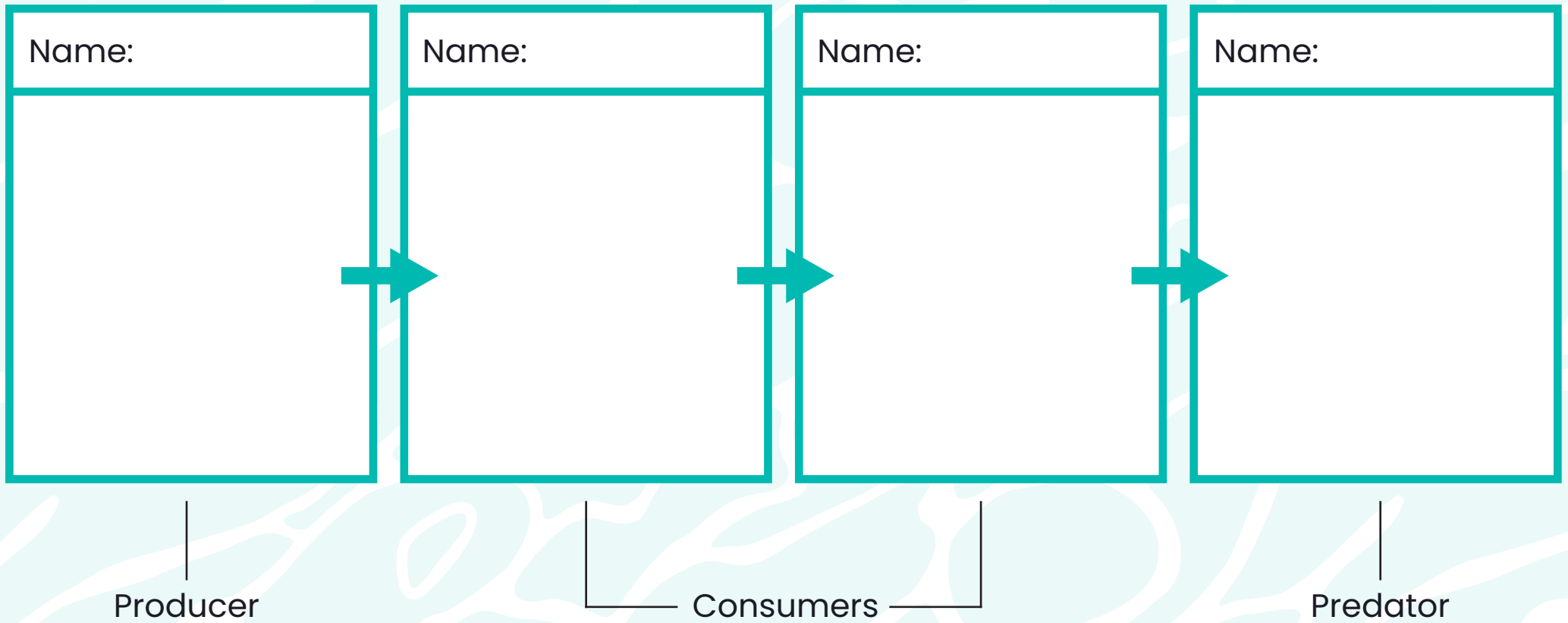
Dog-whelk



Crab

Food chain

Name:



Curriculum links

England

Science

- Identify and name a variety of plants and animals in their habitats.
- Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.

Art

- To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space.

Wales

Science

- I can explore relationships between living things, their habitats and their life cycles.

Scotland

Sciences

- I can explore examples of food chains and show an appreciation of how animals and plants depend on each other for food:
- Demonstrates awareness of how energy from the sun can be taken in by plants to provide the major source of food for all living things.
- Interprets and constructs a simple food chain, using vocabulary such as 'producer', 'consumer', 'predator' and 'prey'.