

## Aims of session:

Identify food chains and webs and their components.

Explore interconnectivity in food webs and ecosystems.

## Resource list:

Make a food chain worksheet, match the terms worksheet, pyramid template.

## Activity guidance:

### Food chains and webs activities

#### What is a food chain?

Encourage students to discuss their ideas and agree a shared definition. Scribe it together on a board or large piece of paper.

*E.g: A food chain shows how plants and animals get their energy and who eats what in the chain.*

#### Make a food chain

Correctly order species in a food chain using the examples provided. Share outcomes.

#### What do we know?

Use the following questions to understand how the food chains are constructed.

**Q:** What do their food chains all start with? *A plant.*

**Q:** Why do they think that is? *A food chain nearly always starts with a plant. This is an organism that makes its own food. Most food chains start with a green plant, because plants can make their own food by photosynthesis.*

*(on hydrothermal vents in the deep ocean some bacteria start the food chain with a process called chemosynthesis.)*

**Q:** Where do the plants get their energy from? *The sun.*

**Q:** Where do animals in the food chain get their energy from? *The animal or plant they eat.*

**Q:** Which species ends the food chain? Why are they the last in the chain? *Nothing else eats them (they have no natural predators)*

**Q:** What do the arrows mean? *They show the direction of **energy** in the food chain, and who eats what.*

#### Match the terms

Use the corrects 'terms' to describe different parts of the chain using one of your examples - primary producer / producer / consumer.

Using the sheet, read through the definitions and then if desired, match the key words to the different species/levels in their chosen food chain.

Extend terms to include predator, apex predator and prey if appropriate.



# Food chains and webs

## **Design a food chain challenge**

Choose one of the food chains to design your own food chain.

Draw pictures or collage, use thread to tie images of species in your food chain together, or tubes in progressive sizes to show 'who eats what,' make a pyramid using the template, or any other creative way of showing a food chain.



# Food chains and webs

## What is a food web?

Explain that food chains make part of a **food web**, as animals within and between different **habitats** are all connected to each other. *A food web is several food chains joined together.* To demonstrate how animals interact within a food web, play a game. On individual sticky labels write species names from the food chains we have studied.

Give each student a label. One student will be the sun. They will need to hold a ball of wool/twine and stand in the middle with the others making a circle around them. Read out a food chain that the students have studied and pass the ball of wool/twine from producers to consumers in turn. The ball then goes back to the sun, and another food chain is read out. You now have a food web.

Show the **interdependence** between species and reveal what happens to other species in the food chain should one suffer a setback. For example, numbers of sardine have decreased due to overfishing. Tug on the strings attached to the sardine.

What happens? - The Galapagos hawk, Galapagos sea lion and squid should feel a tug, as they are all predators of the sardine.

The zooplankton will also feel a tug as they are eaten by the sardine.

What does this mean? How may population numbers be affected?

What would happen if apex predators were removed?

What if an invasive species is introduced?

Discuss the implications for the species and how they are all connected.

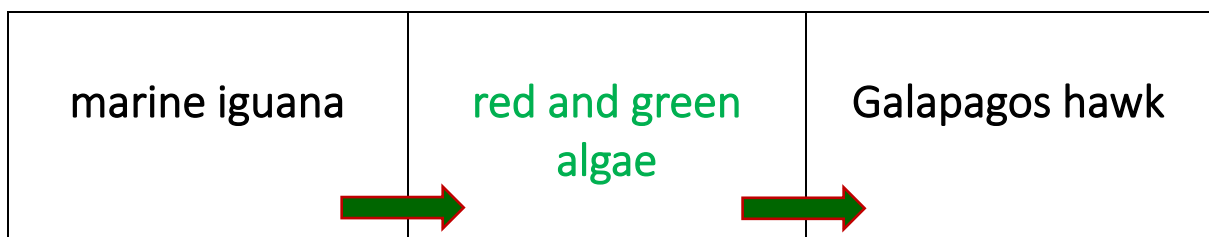
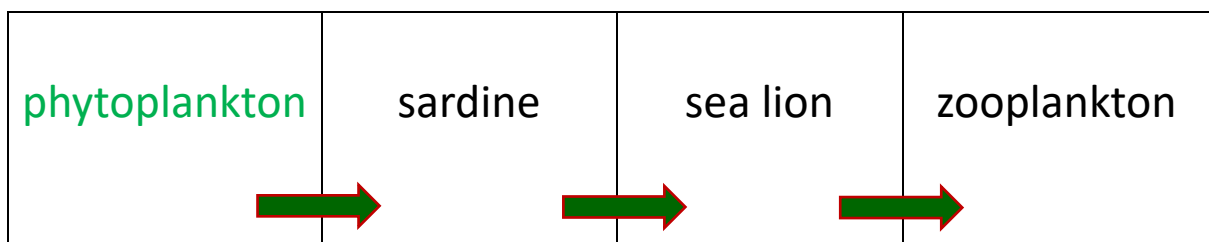
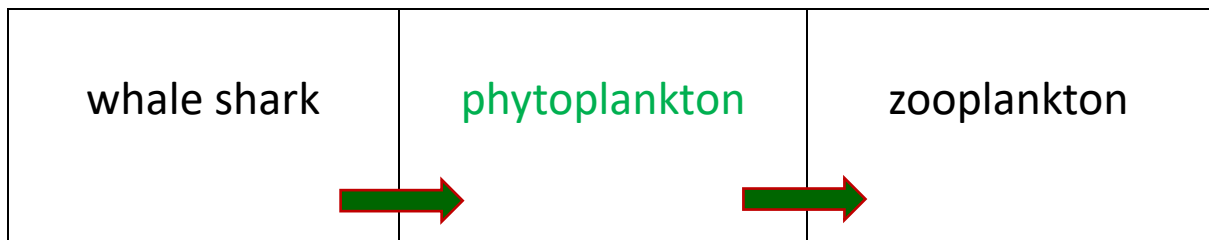
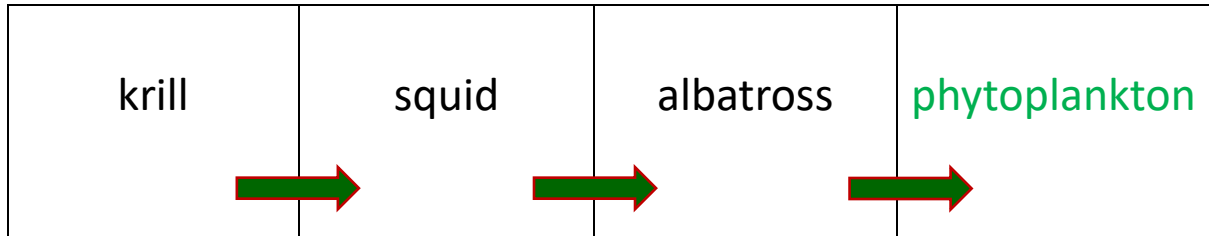
Repeat with other examples.

Create further activities and games.

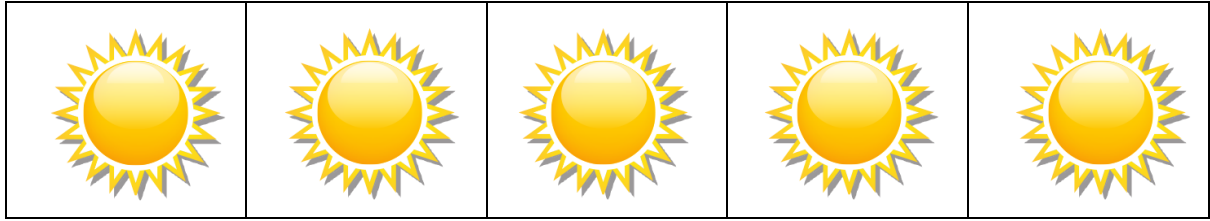
# Food chains and webs

## Make a food chain

- ✓ Cut out the species in each food chain below and order them in the order of who eats what!
- ✓ Cut out and put a sun at the beginning of each of your food chains.



## Food chains and webs





# Food chains and webs

## Match the terms

These special words or terms describes each part of the food chain. Use one of your food chains to label each part correctly.

**Primary producer:** All life on earth starts with this energy provider.

**Producer:** An organism that makes its own food through a process called *photosynthesis*. Food chains begin with this.

**Consumer:** A living thing that eats other plants and animals.

<b>Primary producer</b>	<b>Producer</b>	<b>Consumer</b>
<b>Consumer</b>	<b>Consumer</b>	<b>Consumer</b>

You can even go on to think about which animals in your food chain are prey and predators to which, and which one is the apex or top predator:

**Predator:** An animal that eats other animals.

**Apex or top predator:** The animal at the top of the food chain. It has no natural predators.

**Prey:** Animals that predators eat.

Template for pyramid food chain

