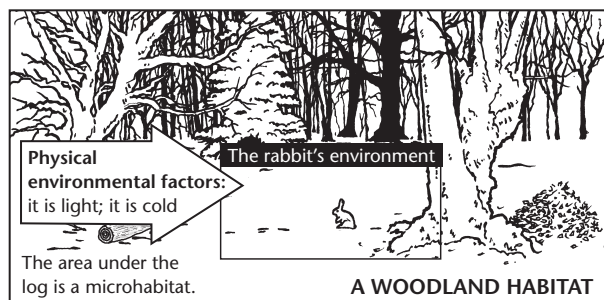


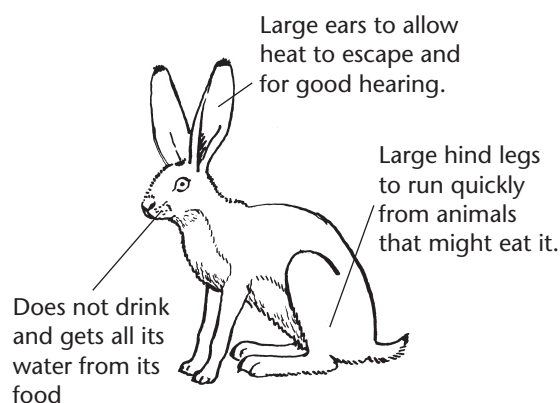
Habitats and adaptations

A **habitat** is the area where an organism lives. The surroundings of an organism are called its **environment**. The conditions in an environment are caused by **physical environmental factors**. Examples include how light it is and what the temperature is. Smaller areas in a habitat are called **microhabitats**.



Where you can find a certain organism in a habitat is known as the organism's **distribution**. A **community** is all the plants and animals in a habitat.

Animals and plants are **adapted** to where they live. This means that they have certain features that allow them to survive in a habitat. For example, fish are adapted to living underwater. They have gills to take oxygen out of the water, fins to swim with and streamlined bodies to help them move easily through the water. This jack rabbit is another example.



Physical environmental factors change from day to day (**daily changes**). Animals alter their **behaviour** in response to those changes. For example, some animals only come out at night; they are called **nocturnal** animals (e.g. owls).

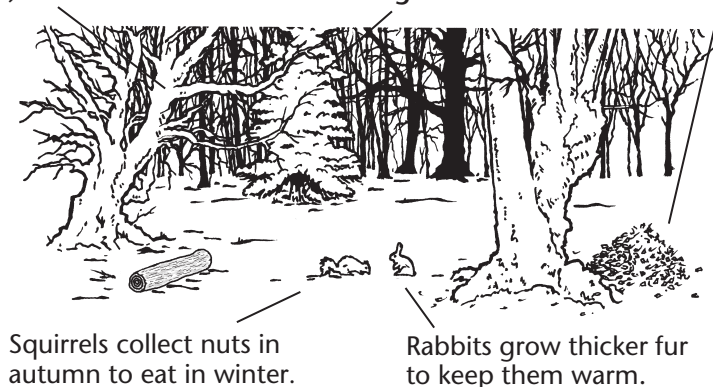
Jack rabbits are adapted to living in a desert habitat.

Physical environmental factors change over the year (**seasonal changes**). Organisms respond to these changes by changing their behaviour or parts of their bodies. When it starts to get colder, some birds **migrate** to warmer countries where there is more food. There are other ways plants and animals cope. Look at the picture below to discover some of these.

There is not much light for photosynthesis in winter so many trees drop their leaves (they are **deciduous**).

Trees that keep their leaves are **evergreen**.

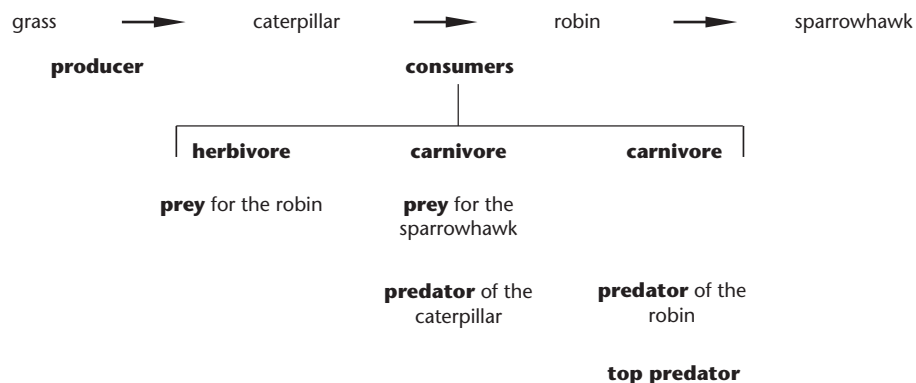
Hedgehogs **hibernate** under piles of leaves.



Organisms are in **competition** with each other. Animals compete for food and space. Plants compete for light, water and nutrients (mineral salts).

Feeding relationships

An animal that hunts other animals is a **predator**. What it hunts is its **prey**. We can show what eats what on a **food chain**. Different words are used to describe the organisms in a food chain. Food chains are joined to form **food webs**. Food webs can also show **omnivores** (animals that eat both plants and other animals).



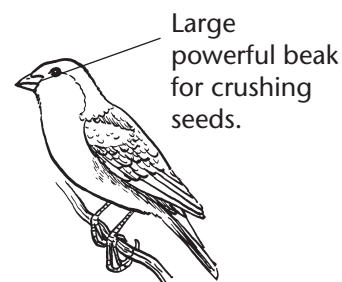
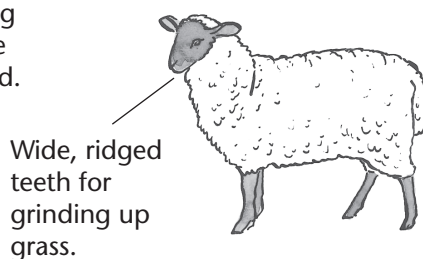
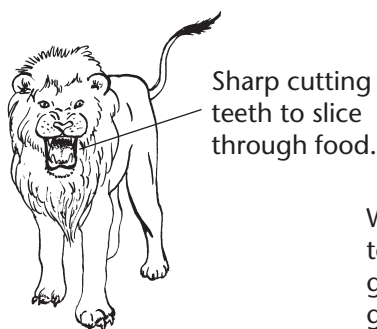
Plants are **producers** because they can produce their own food. Energy from the Sun is used to help them do this. This light energy is turned into **chemical energy** in the producer. When a **consumer** eats a producer, the consumer gets the chemical energy.

Food chains and food webs show how energy is transferred through a community.

Animals that are predators have adaptations that allow them to catch their prey. Animals that are prey have adaptations for avoiding being eaten!

Many predators have ...	Many prey have ...
forward-facing eyes to pinpoint the position of their prey.	eyes on the sides of their heads so that they can keep a lookout behind them.
large, sharp claws.	some form of protection (e.g. horns, spines or armour).

Often, animals have adaptations for eating, either in or on their mouths:



You can find evidence of what has been eating something by:

- seeing it happen
- finding animal droppings or footprints near a damaged plant or dead animal
- finding teeth marks in a damaged plant or dead animal.

We can use this evidence to draw food chains and food webs for habitats.