Habitats

What is an ecosystem?

The environment is made of many different types of **ecosystems**, such as beaches, forests, lakes and deserts.

Each ecosystem can be divided into a:

- **habitat** – the non-living part, i.e. the physical area in which organisms live
- **community** – the living part, i.e. all the different organisms living in that particular habitat.

Each community is made up of many different populations. A **population** is all the members of a particular species living in one habitat – for example, the population of gray squirrels in an oak forest.

Abiotic and biotic factors

A habitat is made up of non-living, or **abiotic**, factors. These might include water supply, sunlight and soil nutrients.

Most habitats are home to many different species. **Biotic** factors include all the living things in an ecosystem or habitat.

Biotic factors are important parts of any ecosystem. Many animals provide food for other animals. Plants produce oxygen that is necessary for the survival of other living things.

Biotic or abiotic?

What is a habitat?

What makes a habitat?

A habitat has all of the things that an organism needs to survive, such as the right amounts of oxygen, water, light and shelter.

How would you describe your habitat?

Different types of habitats

How are these habitats similar and how are they different?

Which land habitat?

Which land habitat does each organism live in?

giraffe

?

C

solve

Which water habitat?

Which water habitat does each organism live in?

seaweed

?

C

solve

Ecological terms

Match each ecological term to its definition

ecosystem	all populations of all organisms in an ecosystem
habitat	the living and non-living parts of a specific area
community	the non-living part of an ecosystem
population	the role of one species within an ecosystem
niche	all members of one species in an ecosystem

solve

Sampling in a habitat

Ecosystems are constantly changing. In order to tell how the populations within a community change over time, you first need to establish how many organisms there actually are.

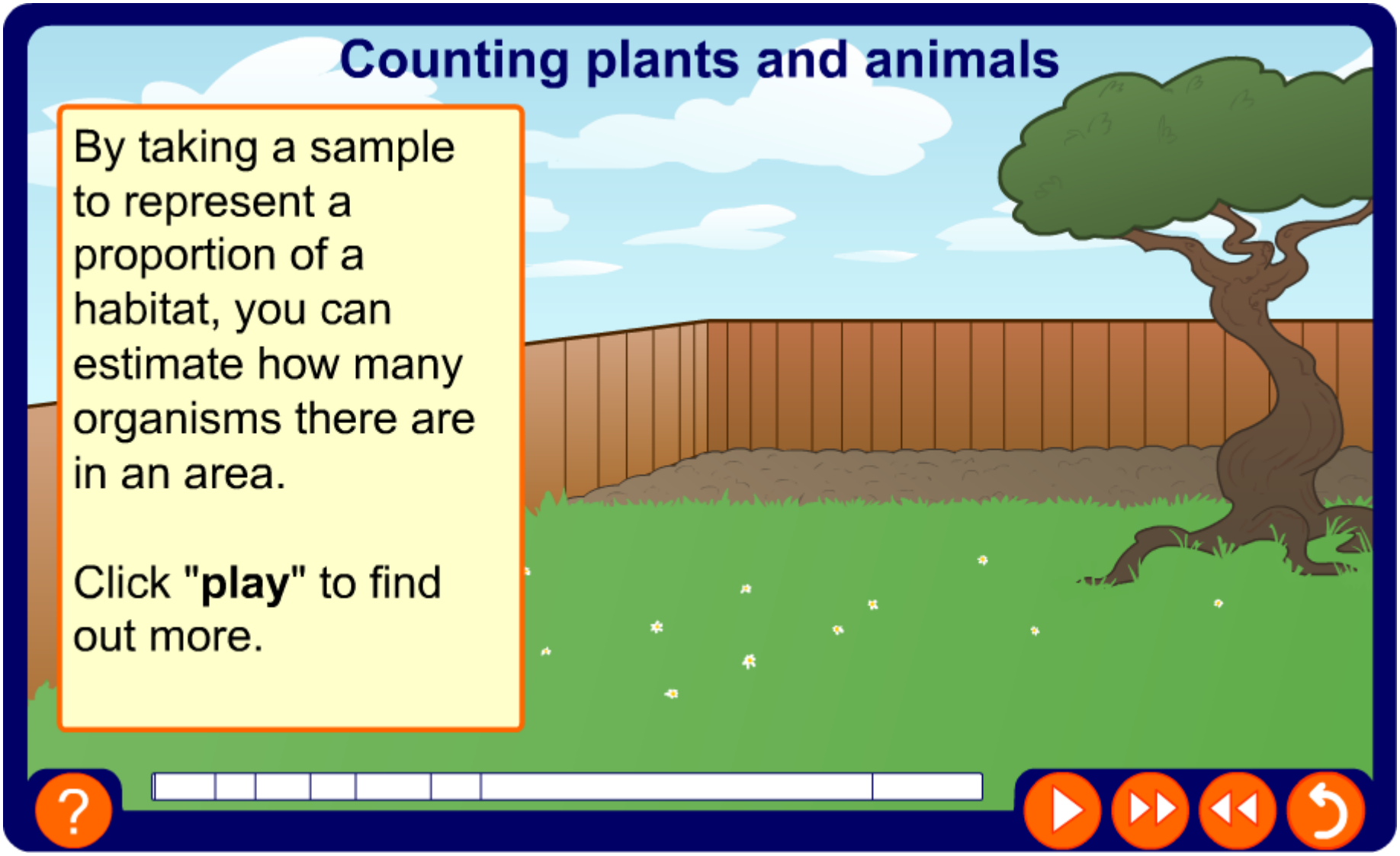
It would be impossible to count all the individual organisms in a habitat by hand. Instead we can count just a **sample** from a small area and multiply this by the total area of the habitat. This gives an estimate of the total number of the population.

Common sampling methods include:

- quadrat
- line transect
- belt transect
- trapping.

Sampling a population

Counting plants and animals



By taking a sample to represent a proportion of a habitat, you can estimate how many organisms there are in an area.

Click "**play**" to find out more.