

Lifecycles - Pollination and dispersal

Focus:

- Life cycles

These lessons look at the ways in which animals are connected to the life cycles of plants, focusing on pollination and dispersal. There are two optional sets of lesson ideas:

- **Set 1** is designed to be carried out during the spring/summer in a setting where there is access to flower beds
- **Set 2** can be carried out in the classroom at any time of year.

Country:

- England

Key stage:

- Key stage 2

Subject/Area of learning:

- Science - [Animals, including humans](#)
[Living things and their habitats](#)

Curriculum objectives

Pupils should learn to:

- recognise that environments can change and that this can sometimes pose dangers to living things
- construct and interpret a variety of food chains, identifying producers, predators and prey
- describe the differences in life cycles of a mammal, an amphibian, **an insect** and bird
- Describe the life process of reproduction in some plants and animals

Animal welfare objectives

Pupils should learn:

- to understand how animals play a vital role in the life cycles of plants.
- to recognise the importance of pollination in human food production

Learning outcomes

At the end of this lesson:

- most pupils will: describe the processes of pollination and seed dispersal
- some pupils will not have made so much progress and will: explain how pollen and seeds are dispersed

- some pupils will have progressed further and will also: explain the interdependence between animals and plants for successful pollination and seed dispersal.

Starter activity 1

Bees help to pollinate flowers

- Pupils look at the features of cut flowers.
- What would attract a bee to this flower?
- Look closely at the image of the bee. What is the bee doing?
- Touch one of the flowers lightly with a dry paintbrush and then tap it on a piece of paper. This shows how it has picked up the pollen.

Learning styles: visual, auditory, kinaesthetic.

Main activity 1

Observation

- In pairs or groups, ask the pupils to observe some bees on growing flowers from a safe distance. Alternatively, watch a video clip of bees pollinating flowers.
- Explain that they will need to stay very still and quiet. What are the bees doing? Which plants do the bees seem to like the best? What do they do when they land on a flower?

Learning styles: visual, auditory, kinaesthetic.

Plenary activity 1

Plant reproduction

- Discuss the importance of insects in plant reproduction. Some plants would not be able to reproduce without them.
- Discuss what pupils think would happen if the bee population was dramatically reduced or if bees became extinct.

Learning styles: auditory.

Starter activity 2

Animal seed carriers

- Use a collection (or pictures) of real fruits and seed pods.
- Ask the pupils to identify where the seeds are in these fruits.
- Discuss how they think seeds are dispersed. Have they:
 1. seen dandelion clocks blowing in the wind?
 2. come home with burrs on their clothes?
 3. seen birds eating strawberries or apples?
 4. seen animals collecting acorns or other similar seeds?

Learning styles: visual, auditory, kinaesthetic.

Main activity 2

Venn diagram

- Make a Venn diagram with three interlocking circles labelled: 'wind', 'animals as consumers' and 'animals as carriers'.

- Pupils cut out pictures of plants and their seeds from the activity sheet *Plants and their seeds*.
- They then place them in the correct circle for their method of dispersal. See the teachers' notes *Venn diagram* for a completed version.
- Discuss why some seeds are dispersed in more than one way.

Learning styles: visual, auditory, kinaesthetic.

Plenary activity 2

What would happen?

- Discuss with pupils whether it would matter if we didn't have animals helping to move seeds around.
- How can we help to make sure that there are wild animals around to disperse the seeds?

Learning styles: auditory.

Extension activities

- Ask pupils to create a timeline/'cartoon strip' of the dispersal process of a single seed from the adult plant to a place where it can grow into a new plant.
- Ask pupils to include two or more steps that include an animal.
- Pupils explore attitudes to minibeasts and develop a minibeasts code of conduct. See the main activity 'Making a code' from the resource *Attitudes to minibeasts* (see *Useful websites* tab).

Display

Mount the pupils' work about different seeds and the ways they are dispersed.

What you need

Equipment

- Set 1
 1. Image of bee
 2. Video clip of a bee pollinating a flower (*see below*)
 3. A place to observe plants, flowers and bees
 4. Cut flowers
 5. Dry paint brushes
- Set 2
 1. Collection (or pictures) of fruits and seed pods
 2. Paper and pens OR whiteboard/pen and computers
 3. Circle template

Activity sheets (*see Downloads* tab)

- *Plants and their seeds*

Teachers' notes (*see Downloads* tab)

- *Venn diagram*

Did you know?

- Bees gather nectar and pollen from plants.

- They use a long hollow tube called a 'proboscis' to collect nectar.
- They also gather pollen in baskets on their hind legs.
- Velcro © was invented by a Swiss engineer after he noticed his dog covered in burrs during a walk.

Vocabulary

animals

bee

dispersal

nectar

plant

pollen

pollination

proboscis

reproduction

seed

water

wind

Downloads

Plants and their seeds

Venn diagram