Beekeeper activity 1

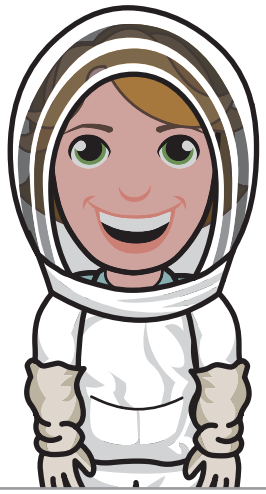
Bee-haviour

Age range: 7-11

Duration: Approx 90 minutes for each of the two separate activities

Aim

For pupils to learn about the lives of bees.



Learning objectives

Pupils should learn:

- Where and how bees collect food
- What honeycombs look like
- About the life-cycles of bees

Curriculum links

England

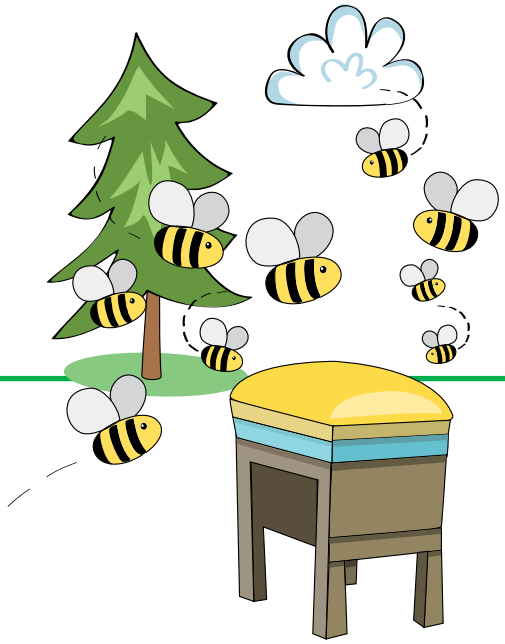
- National Curriculum Science: Sc1: 1; Sc2 1c, 2b, 5a
- Maths: Ma3 2b, 2c, 2d; Ma4 1a, 2a, 2c, 2f

Wales

- National Curriculum Science: Skills – Communication 2, Enquiry planning 1, 3, 5, Developing 2, 3, 4, Reflecting 1, 5
- Maths: Skills – 1 Solve mathematical problems, 'select and use appropriate mathematics…', 'use flexible and effective methods of computation..' 2 Communicate mathematically, 'visualise and describe shapes', 'read information from charts…', 'use a variety of methods to represent data'; Range – Shape, position and movement 1, Handling data 1

Materials and equipment

- Rough books and pens/pencils
- A4 sheets of thin card, one per pupil
- Scissors, glue, rulers
- Computers with Internet access
- Encyclopaedias of various types, plus dictionaries
- Copies of Worksheet Be1 (one per pupil if required – see below)



Key vocabulary

bee, flower, pollen, nectar, feed, honey, honeycomb, hexagon, prism, larva, larvae

Running the activity

a) Introduction:

Go to **Woodland > Beekeeper** and **show pupils the Beekeeper video to introduce them to the topic of bees and beekeeping.** Ask the pupils some basic questions about honeybees to reinforce their understanding: what types of animals are bees? (insects); Where do honeybees live? (in nests or hives); What do they eat? (pollen and nectar from flowers). Explain that nests are made from wax produced by the bees and that honey is produced as a food source for cold weather when flowers are scarce.

b) Investigate:

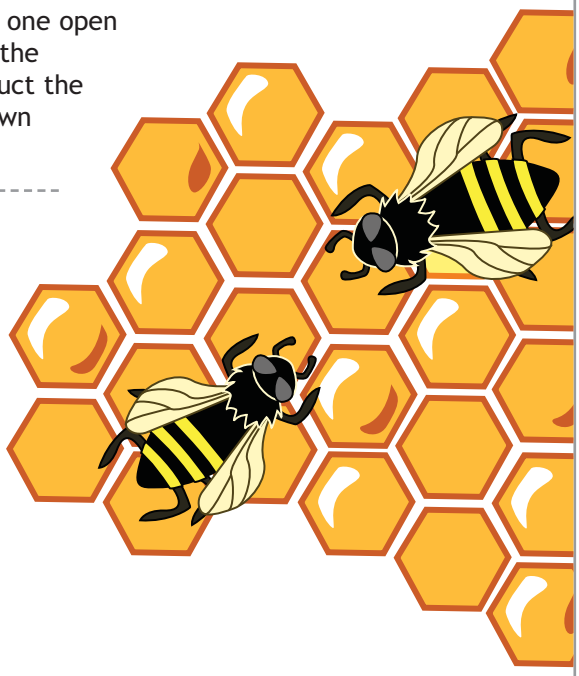
Carry out a simple science investigation or survey to discover which plants in the school grounds are most often visited by bees. This activity is suitable for the early autumn, late spring or summer terms when there are flowers or tree blossoms around. Remember that bees visit flowers in grass such as clover and dandelions too. For the survey, pupils can count all kinds of bee.

Give pupils in pairs one type of flower to watch for a period of 15 minutes; they should simply count the bees visiting. Back in the classroom, make a tally chart for all of the flowers and compare the data. Data can also be typed into a spreadsheet and graphs produced using ICT.

Explain that bees visit flowers to collect nectar and pollen and are attracted by bright colours – so large bright flowers producing a lot of nectar and pollen are likely to be visited most often, as well as plants that have many flowers.

c) Construct:

An alternative activity for winter is to make a model of a honeycomb. Worksheet Be1 has a template and instructions for making a hexagonal prism with one open end. Many prisms are then joined together to make the honeycomb. If the worksheet is photocopied onto thin card, pupils can cut out and construct the prisms easily. Otherwise, the prism net will need to be cut out and drawn around on card: younger pupils may need help with this.



d) Research:

When the prisms have been made and glued together to make a 3-D honeycomb structure, pupils can carry out some research to find out more facts about honeybees and honey. They can use a computer to type out labels with information from their research and attach them to the honeycomb display. Other items that will enhance the display include:

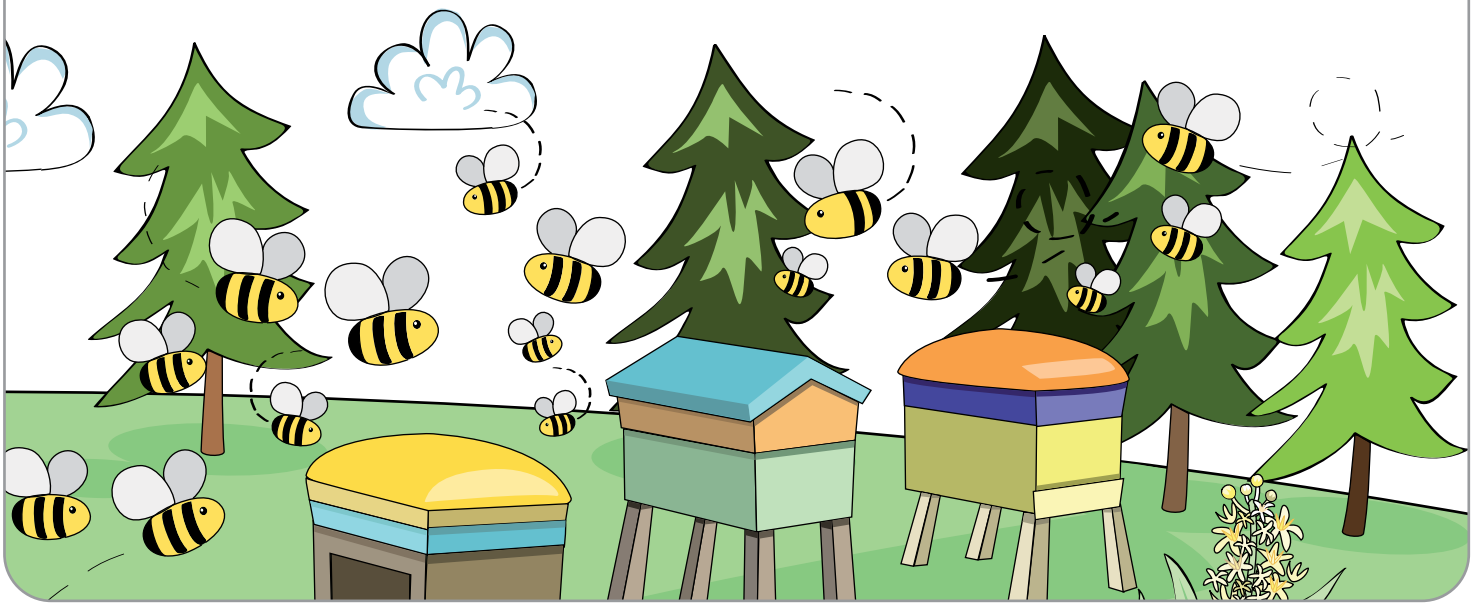
- Models of bees and larvae to go inside or around the honeycomb
- Jars of different kinds of honey
- Photos, e.g. of a queen and a hive with a real honeycomb

Extension activities

1. Pupils can present an assembly for the school about bees and bee-keeping, showing their honeycomb model and explaining how honey is made. The results of the bee flower survey can also be presented if this was carried out.
2. Invite a beekeeper to school to give a talk and perhaps bring in some interesting objects. More information about beekeeping can be found on the British Beekeepers Association website at **www.britishbee.org.uk**
3. There are several video clips on the Internet that show the inside of a hive and the behaviour of bees. Have a look at some of these and use them to inspire ideas for composing poems about bees. Type 'honeybee video' into Google to find some clips to watch.

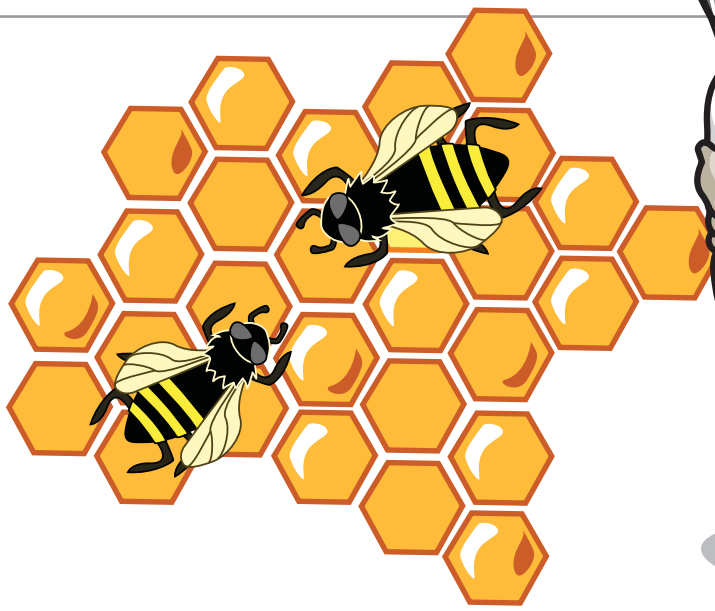
Background information for teachers

Go to **Teachers** > **Useful links** to find out more about beekeepers and their work.



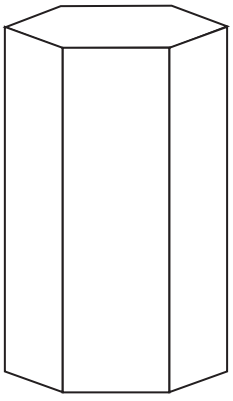
Be1: Honeycomb hexagon

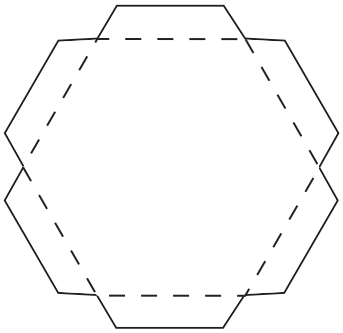
Honeybees construct a nest made up of an amazing thing called a honeycomb. Honeycombs are made out of wax produced by the bees and they are made up of a series of small hexagon-shaped cells joined together.

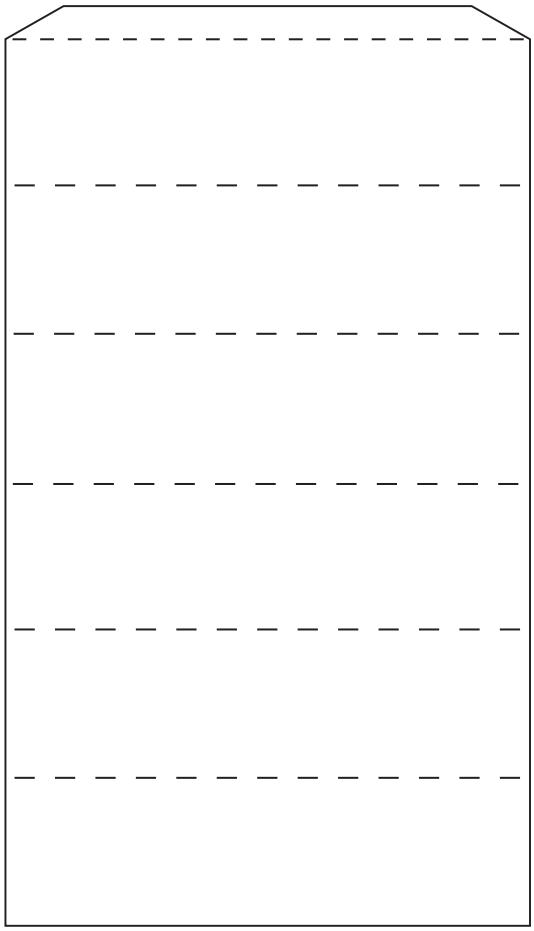


You are going to make a **hexagonal prism** to join together with others to make a model honeycomb. It will be open at one end. Carefully follow the instructions below:

1. Cut out the solid lines.
2. Fold along the dotted lines.
3. Glue the shaded areas with a thin layer of glue.
4. Assemble the shape to form a hexagonal prism like the drawing below.







When you have finished

Find out four interesting facts about honeybees and write these down.