





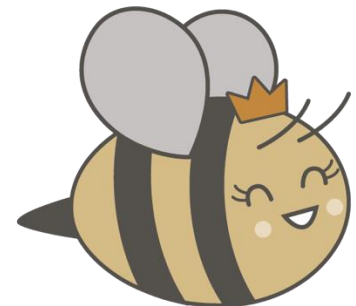


Buzzing Bees

Starter

What do you know about bees already? Discuss with your partner.

-  What do bees look like?
-  Are there different types of bees?
-  What do bees do?
-  Why do we need bees?



Introduction to Bees



Ant



Wasp



Bee

Bees are flying insects, closely related to wasps and ants.

They can be found in every continent, apart from Antarctica.

There are 275 different types of bee in the UK.

Bees are the only insect in the world that make food that people can eat.


Bees collect pollen and nectar from plants as food.


These consist of 24 bumblebee species; 1 honeybee species and the rest are made up of solitary bees.

**LO: I can
name and
identify the
key features
of a bee.**





Bee Camouflage

 The yellow and black stripes on a bee's body act as a camouflage.

 This makes them harder for other insects and animals to see.








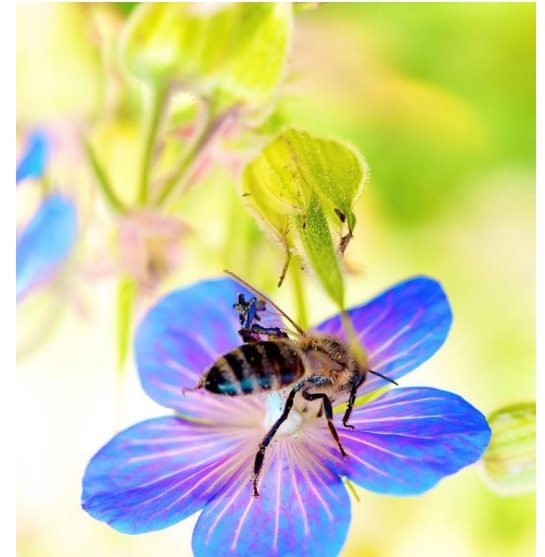
Bee Smell

-  A bee has a sniffer 100 times more powerful than a humans and can help it locate scents miles away.
-  This ability to smell aids a bee in finding the flowers from which to gather pollen.






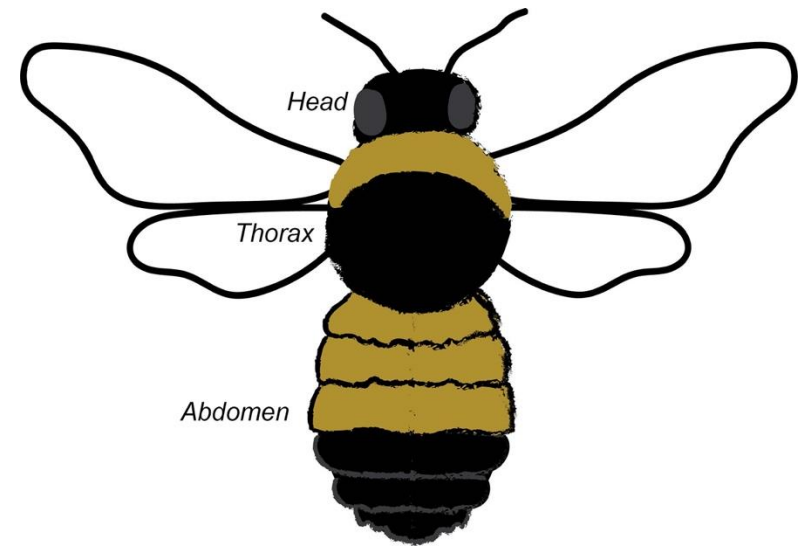
Bee Sight

-  Bees do not see the same flower colour as humans.
-  They can see ultraviolet light.
-  They are unable to see the colour red.
-  Many flowers have hidden patterns and colours which can only be seen by ultraviolet light.
-  Bees are guided to the nectar by these patterns.






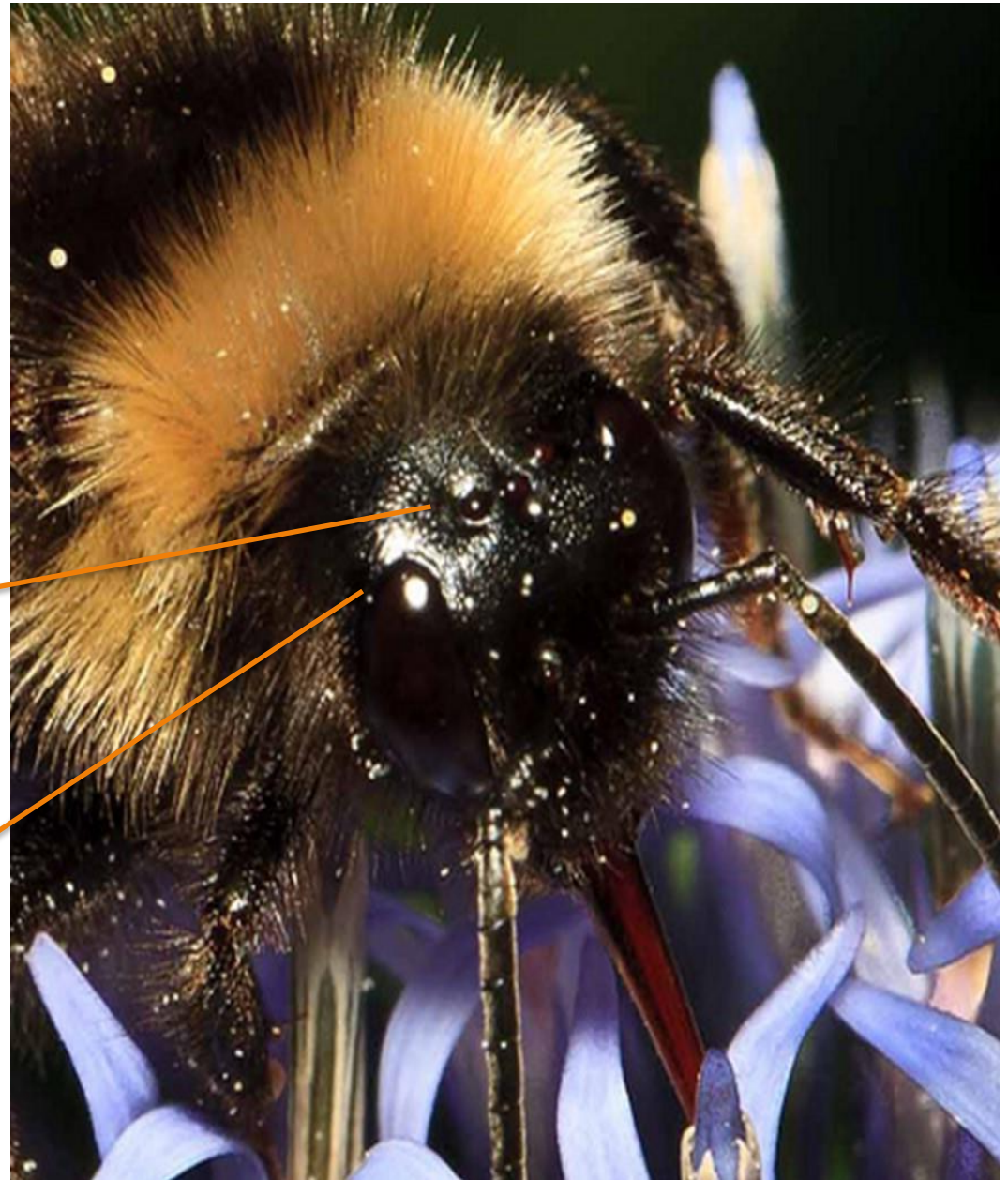
Bee Body

-  **Head** - this is where a bee's brain is, and also where the antennae, proboscis and eyes are attached.
-  **Thorax** - the body section of a bee, where the legs and wings are attached.
-  **Abdomen** - the end body section of a bee, where the stinger is found.





Bee Eyes

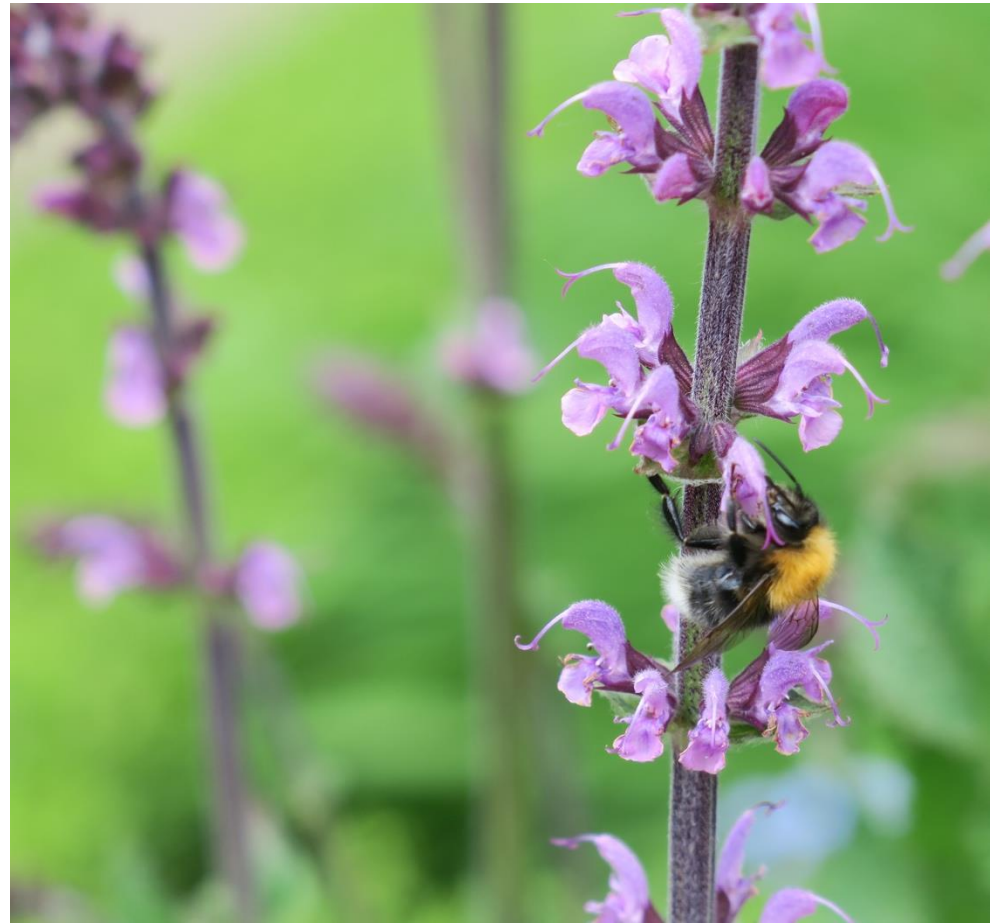
-  Bees have 2 large eyes on the front of their heads and 3 smaller eyes on the top.
-  The small eyes help them see in the dark.
-  The large compound eyes help them see all the colours in the daytime (except red).



Bee Proboscis


 The proboscis is another name for the tongue of a bee.

 It is shaped like a straw.



Bee Antennae


 A bee has 2 antennae.


 A bee uses its antennae to 'smell', and to feel when things are moving close by.



Bee Wings






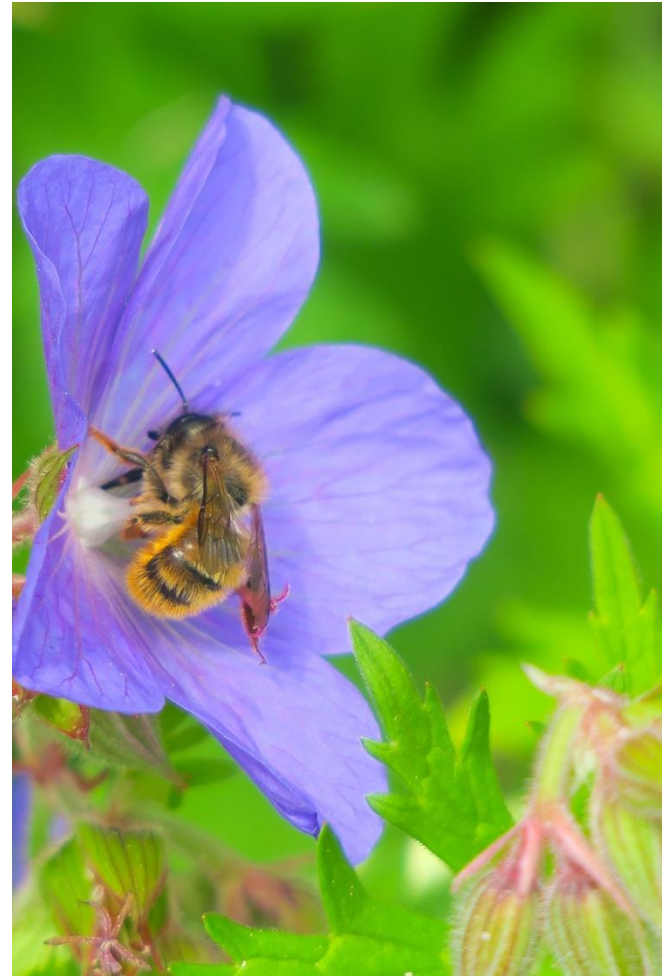
 Bees beat their wings very quickly – around 200 times per second. This is what makes them buzz.

 A bee's wings let it fly a long way from home in search of food.




Bee Legs

-  A bee has 6 legs.
-  At the end of their legs, bees have smelly feet!
-  They leave scent marks to tell the other bees they have already visited a flower.



Bee Stinger

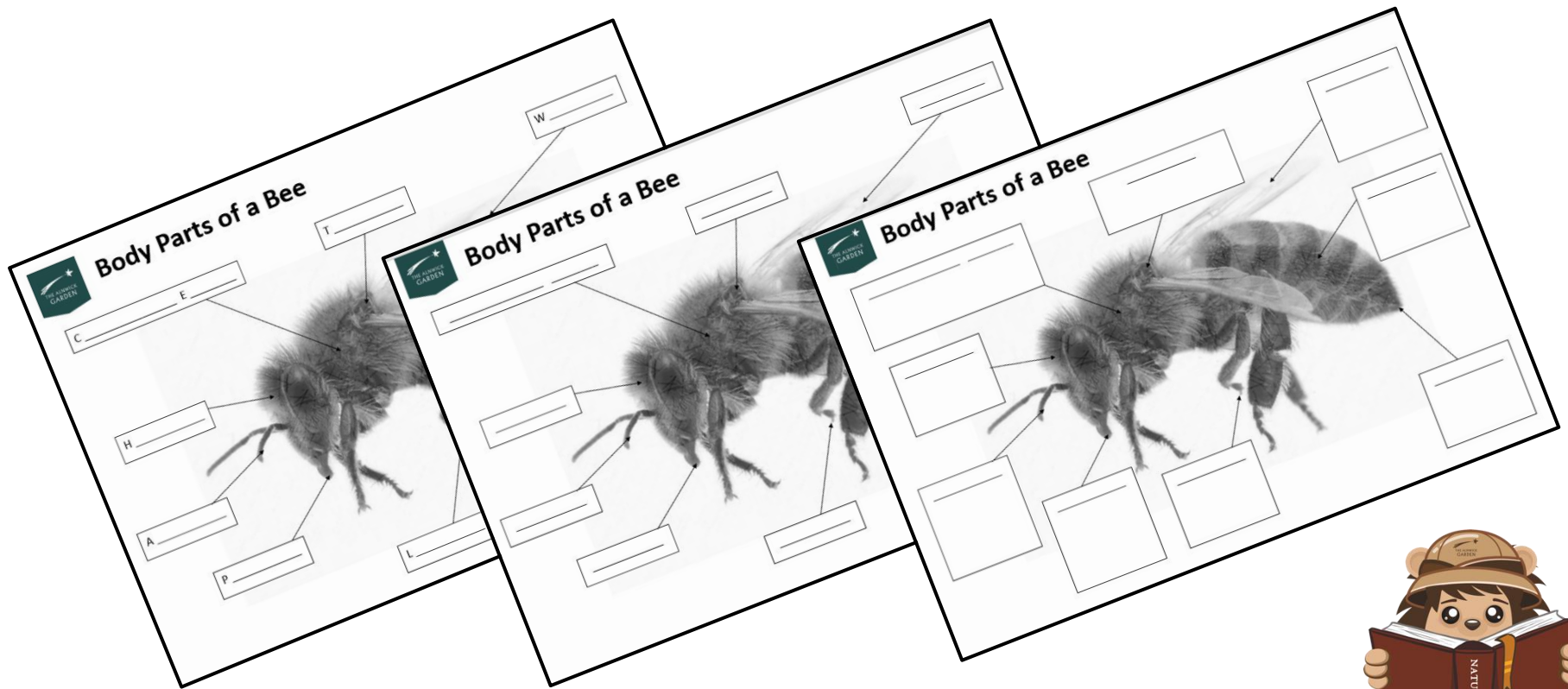
Bee stingers are
used to defend
themselves



Stinger

Activity

Can you label the parts of the bee in the boxes?



**LO: I understand
a bee's role in
pollination.**







Pollination



Watch the video


<https://www.bbc.co.uk/bitesize/articles/zx4k96f#zydjwnb>

Answer the following questions:

-  What do plants need bees to do?
-  What do bees love?
-  What do bees like about flowers?
-  What does most of the food we eat from?




Pollination

 Bees are fantastic pollinators as they are great at gathering and transporting pollen.




Pollination

 When bees are busy drinking nectar from flowers, pollen sticks to their furry bodies and is carried to the next flower.



Pollination



 Birds and small mammals feed off berries and seeds that rely on bees to be pollinated.





Think about what you have eaten this week. Look at the food below which bees pollinate. How many have you eaten? Without bees these would no longer be available.

Apples



Peaches



Pears



Strawberries



Onions



Green Beans



Sunflower Oil



Lemons



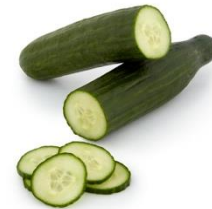
Figs



Carrots



Cucumber



Grapes



Broccoli



Cabbage



Peppers



Tomatoes



Cauliflower



Brussel Sprouts







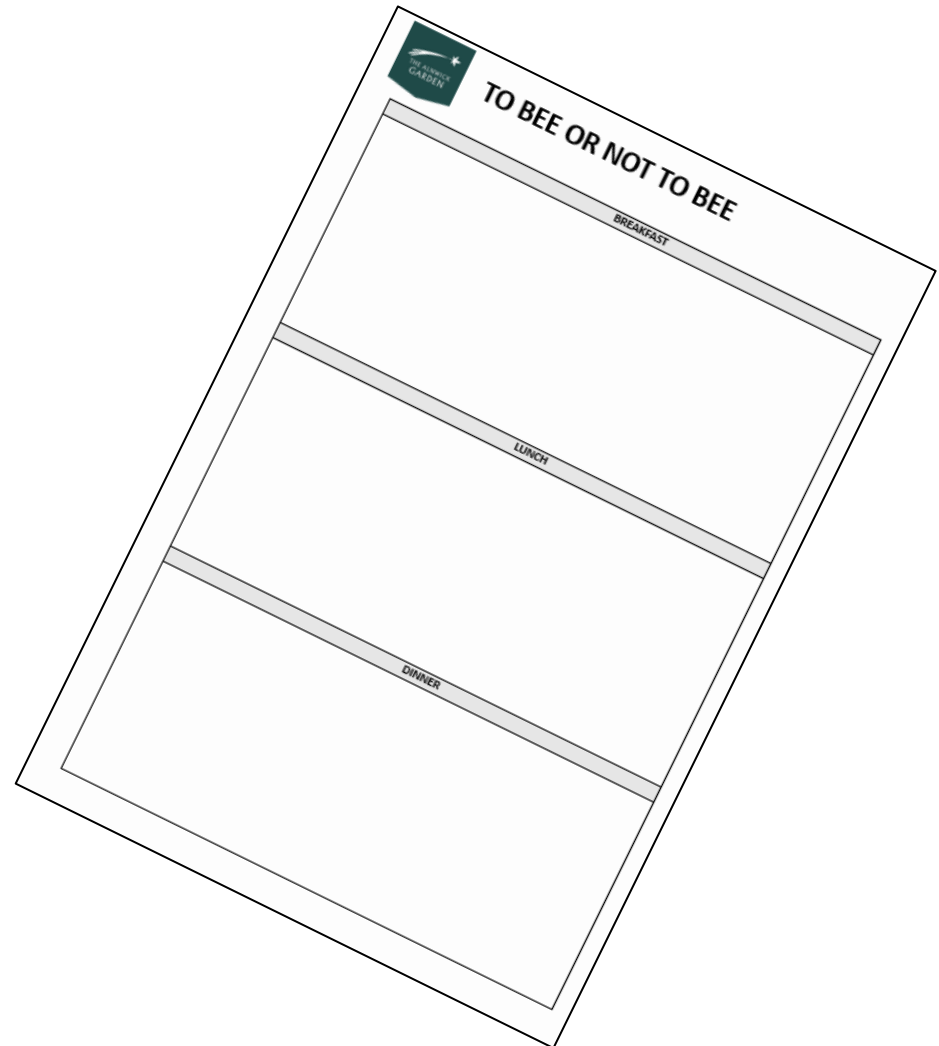
To Bee or Not To Bee

- 🐝 Think about what you ate yesterday:
 - Breakfast- toast and jam, fresh fruit, cereal, fruit juice?
 - What did you have in your lunch box - a ham sandwich, apple, chocolate biscuit?
 - What did you have for your school lunch? OR
 - What did you have for lunch at home?
- 🐝 What did you have for your dinner last night?
- 🐝 Discuss these with your partner.



To Bee or Not To Bee Activity

-  Draw or list all the food you ate for these three meals on your activity sheet.
-  Once you have completed your list or drawings, tick which foods you think bees have played a part in.
-  Discuss with your partner why you have chosen your ticked foods.
-  Feedback to the rest of the class.



The activity sheet is titled "TO BEE OR NOT TO BEE" and features the Alnwick Garden logo in the top left corner. It is divided into three horizontal sections for recording food intake: "BREAKFAST", "LUNCH", and "DINNER". Each section is a large empty box for drawing or listing food items.

Solitary Bees

LO: I can recall some facts about Solitary Bees.



Solitary Bees

Solitary bees live alone or in pairs.

They are smaller than the social bees but they are much more efficient as pollinators.

One solitary bee can pollinate as many plants as 120 social bees!

Solitary bees often live underground or burrow into wood.

They never swarm.

They do not produce honey or have a queen.

Solitary bees are not aggressive.





They do not produce any honey.

Bumblebees

**LO: I can
recall some
facts about
bumblebees.**







Bumblebees

-  Bumblebees are round and furry.
-  There are over 25 species of bumblebee in the UK
-  Bumblebees live in the wild (usually underground) – in gardens and the countryside.
-  The best habitat for them is one with plenty of wildflowers as they depend on them for food.






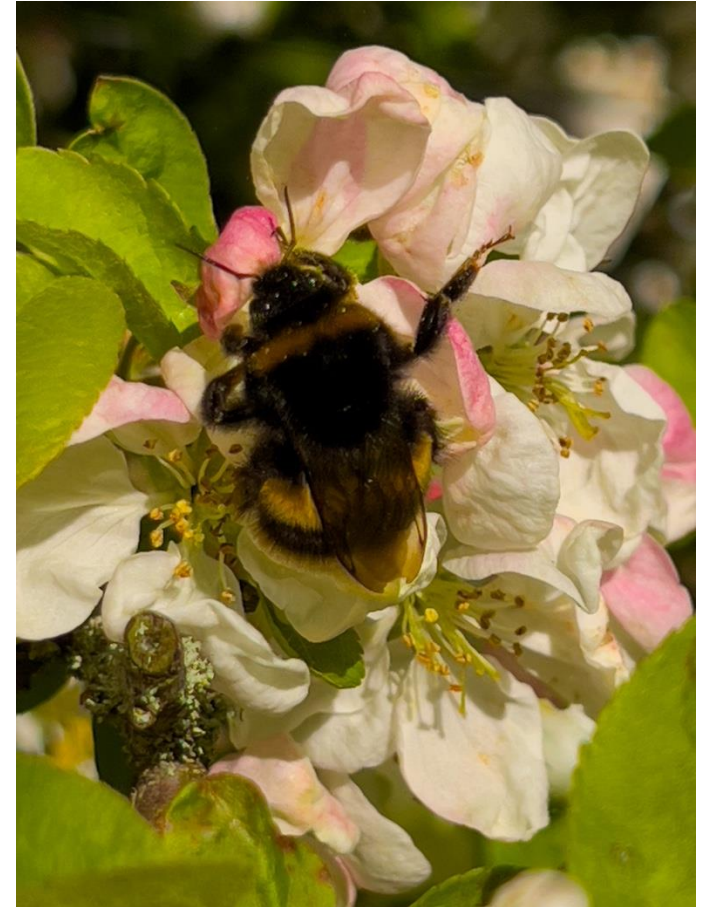
Bumblebees

-  Bumblebees can sting more than once.
-  There are over 25 species of bumblebee in the UK.
-  They live in small colonies.
-  They break down their communities into three distinct groups: queens, drones and workers.




Bumblebees

-  Bumblebees eat pollen and nectar.
-  Worker bees gather this from flowers and bring it back to the colony to feed to the other bees and to the larvae.
-  They make a small amount of honey to feed themselves.



Bumblebees

 Different species of bumblebee have different lengths of tongue, so they feed from different shaped flowers.



Honeybees

**LO: I can recall
some facts about
honeybees.**






Honeybees

-  Honeybees look quite different from bumblebees as they are smaller and slimmer.
-  There is only one species of honeybee in the UK.
-  Honeybees can only sting once.
-  Their stingers are barbed and tear off when they try to get away.



Honeybees

-  Honeybees live in large colonies.
-  Humans have been looking after honeybees for centuries.
-  Hives make it easier to manage a colony of bees and collect honey.
-  Beekeepers only take the honey that the bees do not need.




Honeybees Hive

- 🐝 Like bumblebees, they break down their communities into three distinct groups: queens, drones and workers.
- 🐝 The **Queen Bee** is larger than any other bee in the hive. Her main purpose is to lay eggs.
- 🐝 The **worker bees** are all female. They keep very busy finding pollen and nectar from flowers.
- 🐝 The **drone bees** are male.



The Queen Bee

Honeybees' Waggle Dance

-  Honeybees perform a special dance called the “waggle dance” that tells the rest of the hive where to find the best flowers.

Activity

-  Watch the video
[https://www.youtube.com/
watch?v=NVYh6RyzWLA](https://www.youtube.com/watch?v=NVYh6RyzWLA)

-  Have a go at the waggle dance.









**LO: I can identify
the similarities and
differences
between a
bumblebee and a
honeybee.**



Comparison Activity



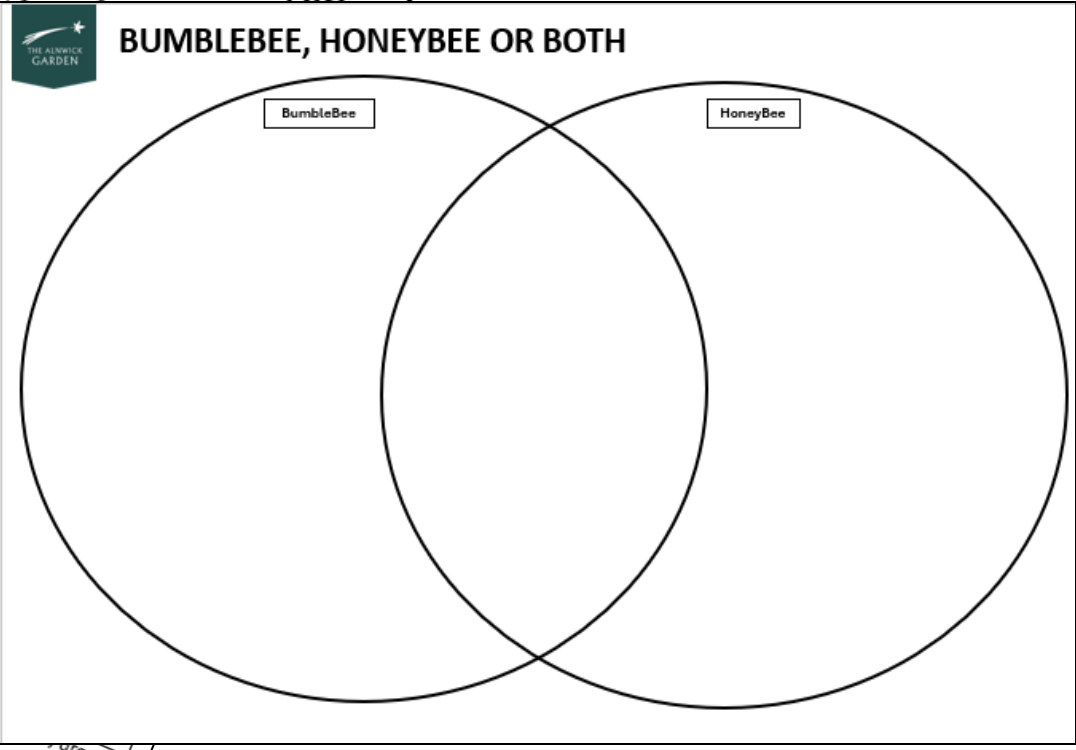
-  Find out the differences and similarities between bumblebees and honeybees.
-  You may want to look at textbooks or the internet to gather some additional information.
-  You will be given a sheet with some descriptions on them.
-  Cut them out and put the descriptions into three piles – bumblebee, honeybee or both.
-  Place the descriptions into the correct place on the Venn Diagram.
-  Once completed write a paragraph to describe either a bumblebee or a honeybee.

Comparison Activity

BUMBLEBEE, HONEYBEE OR BOTH

BUMBLEBEE, HONEYBEE OR BOTH







- They have 6 legs.
- They are great at gathering and storing pollen.
- They have over 250 species in the UK.
- They do not see the same colour.
- They live in a very large colony.
- They mostly live in hives.
- They have 5 eyes.
- They have different lengths of tongue to eat pollen.
- They have only one species in the UK.
- They eat pollen and nectar from a flower.
- They make a small amount of honey.
- They have yellow and black stripes.
- They live in small colony.
- Their body has three parts.
- Pollen from the wild (gardens and countryside).
- They can only sting once.
- They have smelly feet.
- They are round and furry.
- They are mainly looked after by bee keepers.
- They usually live underground.
- They make lots of honey.
- They have a tongue called a proboscis.
- They break down their communities into three distinct groups: queen, workers and drones.
- They are small and slim (they look like a wasp).
- They have two antennae.
- They can sting more than once.

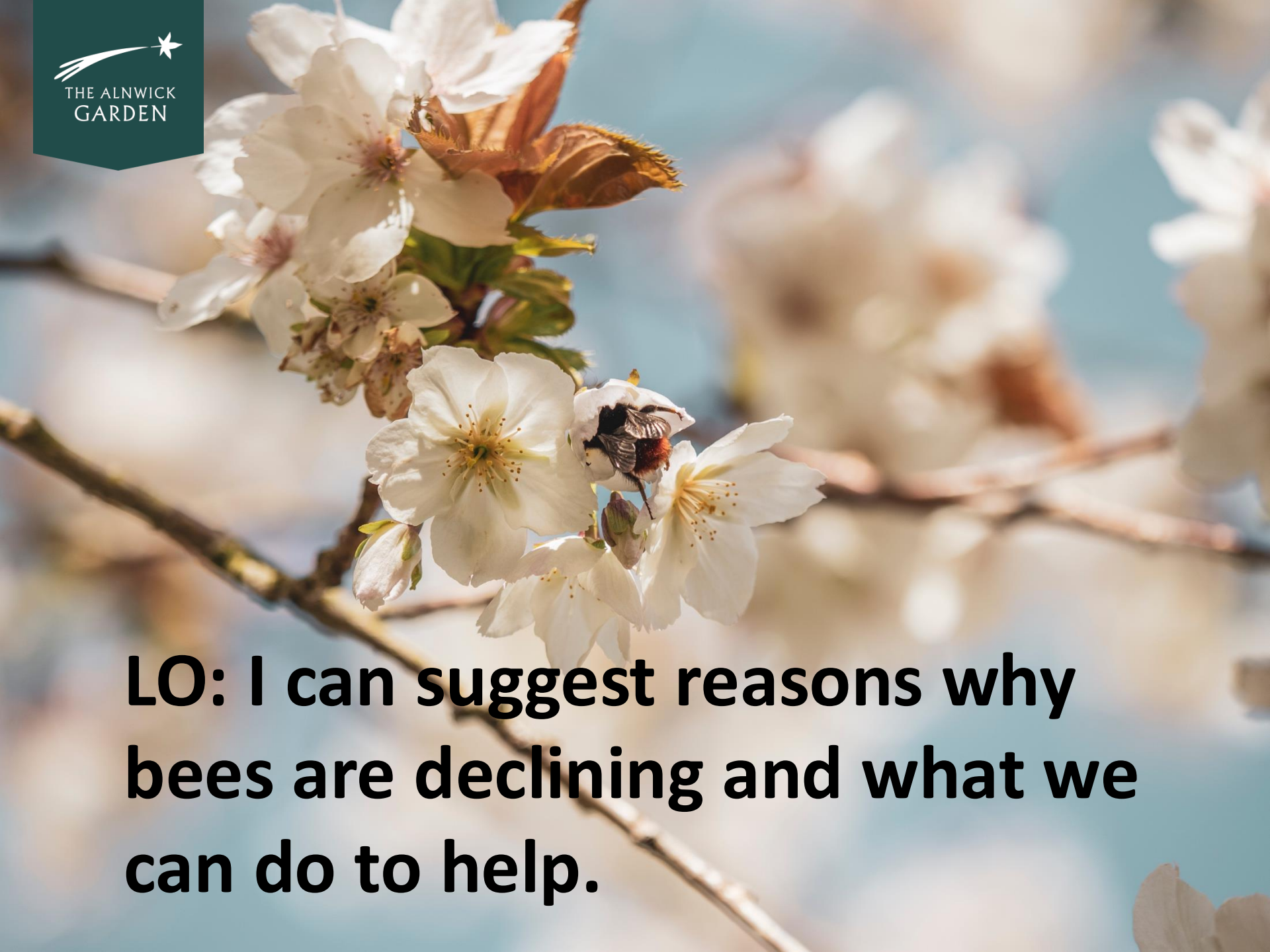


**LO: I can make a
bumblebee or honeybee
using recycled or
repurposed materials.**



Bumblebee or Honeybee Activity

-  You are going to make a bumblebee or honeybee using recycled or repurposed materials.
-  Once you have decided on the materials that you are going to use, draw and label your model on the activity sheet provided.
-  Can you give reasons why you have used certain materials for certain body parts?
-  Try to ensure that you include all the body parts of your bee.
-  Can you give reasons why you have used certain materials for certain body parts?
-  Take a photograph of your finished model.

A close-up photograph of a bee on a white cherry blossom flower. The bee is positioned on the center of the flower, facing right. The flower has five white petals and a yellow center with stamens. The background is a soft-focus blue sky with other cherry blossom branches visible.

LO: I can suggest reasons why bees are declining and what we can do to help.

Wet summers are not good for the bees as they can only forage for food in the dry.





In our gardens, we have less lawns, trees and flower beds that bees collect pollen from as we cover our gardens in gravel, patios and decking.



New houses are being built on grassland that used to have lots of flowers so there are not enough wildflowers in the countryside for bees to feed from.





Sometimes the chemicals used to grow crops can harm the bees.



Most lawns in gardens are neatly cut and do not have wildflowers growing on them.





Bees get confused by mobile phone masts and they upset their sense of direction so the bees cannot find their way back to their hives.



**What can
we do to
help?**


A photograph of a person holding a large white sign with a pink border. The sign has the words "SAVE THE BEES" written in large, bold, black, sans-serif capital letters. A cutout illustration of a bumblebee is attached to the sign, positioned over the word "THE". The bee is yellow and black with detailed wings and legs. The sign is held up by a person wearing a colorful, patterned garment. The background shows green grass and other people, suggesting an outdoor event.

**SAVE
THE
BEES**

 Grow bee friendly plants in your garden and around your school





 Buy organic food and local food that has not been sprayed with pesticides or insecticides

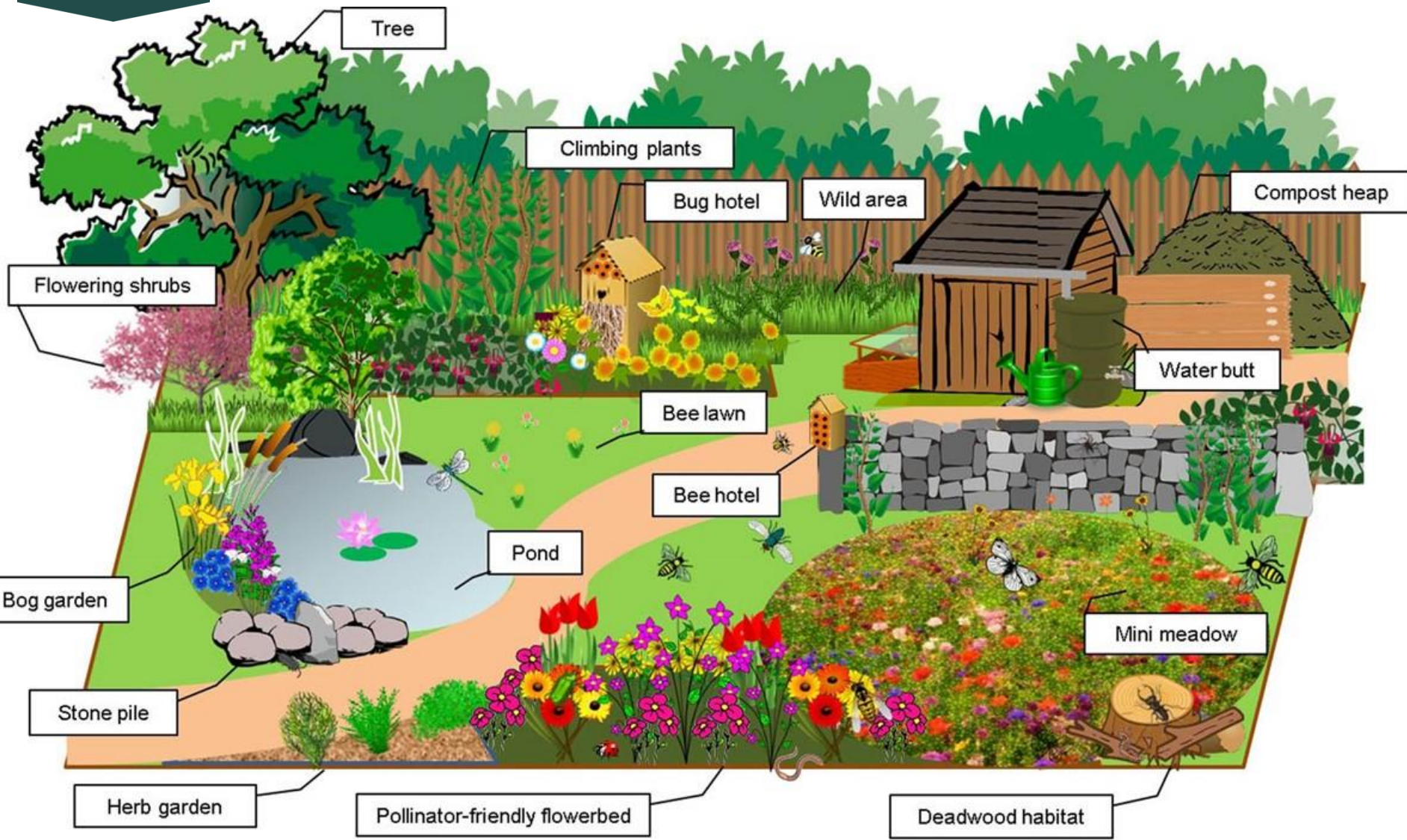


Support British bees and beekeepers by buying local honey

 Create a
Bee Hotel



Try to make your garden area bee friendly



Scene – News Broadcast

- 🐝 You are a part of a research team for the local television company.
- 🐝 You are becoming increasingly concerned about the decline in bees.
- 🐝 You have been asked to lead a 30 second news broadcast on the Decline of Bees and suggest ways that we can help them.
- 🐝 You will be working in your research team.

What you need to do...

- 🐝 You may need to conduct some additional research:
Primary Research – interviewing people
Secondary Research – textbook or internet.
- 🐝 You must plan your broadcast.
- 🐝 You will be given a planning board to help you do this.
- 🐝 You will need to write your script , decide on your scene and make your props.
- 🐝 You will need to practice your broadcast.
- 🐝 You will film your broadcast.
- 🐝 Your broadcast may go out to the rest of the school in an assembly.

Bee Vocabulary



 Solitary

 Larvae

 Hive

 Insect

 Compound Eyes

 Solitary

 Species

 Transporting

 Queen

 Colony

 Nectar

 Waggle Dance

 Nectar

 Flower

 Drone

 Pollen

 Antennae

 Worker

 Pollination

 Honey

 Proboscis