



The content of this unit of work is aimed at KS2, but could be adapted for use by other age groups or have additional extension activities included. It may be necessary to tailor the resources to the group of children being taught, by selecting particular slides and information to be included.

Links to the Science National Curriculum

Working Scientifically

- Asking relevant questions and using different types of scientific enquiries to answer them
- Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables

Year 3

- Pupils should use the local environment throughout the year to explore and answer questions about animals in their habitat. They should understand how to take care of animals taken from their local environment and the need to return them safely after study
- Pupils might work scientifically by: using their observations to compare and contrast animals at first hand or through videos and photographs, describing how they identify and group them; grouping animals according to what they eat; and using their senses to compare different textures, sounds and smells.

LEARNING OBJECTIVE	LEARNING ACTIVITIES	RESOURCES
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?	Slide 2
Introduction to Bees	Read slide 3 <ul style="list-style-type: none"> • Bees are flying insects, closely related to wasps and ants. • Bees collect pollen and nectar from plants as food. • They can be found in every continent, apart from Antarctica. • There are 275 different types of bee in the UK. • These consist of 24 bumblebee species; 1 honeybee species and the rest are made up of solitary bees. • Bees are the only insect in the world that make food that people can eat. 	Slide 3
I can name and identify the key features of a bee	Read slides 5-14 Camouflage – slide 5 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. Smell – slide 6 A bee has a sniffer 100 times more powerful than a human and can help it locate scents miles away. This ability to smell aids a bee in finding the flowers from which to gather pollen. Sight – slide 7 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. Body – slide 8 Head - this is where a bee’s brain is, and also where the eyes, antennae and proboscis and are attached.	Slides 4-15 Parts of a Bee (differentiated) activity sheet. Coloured Pencils (optional)

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	<p>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.</p> <p>Eyes – slide 9 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).</p> <p>Proboscis – slide 10 The proboscis is another name for the tongue of a bee. It is shaped like a straw.</p> <p>Antennae – slide 11 A bee has 2 antennae. A bee uses its antennae to ‘smell’ and to feel when things are moving close by.</p> <p>Wings – slide 12 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.</p> <p>Legs – slide 13 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.</p> <p>Stinger – slide 14 Bee stingers are used to defend themselves.</p> <p>Activity – slide 15 Label the parts of the bee (differentiated activity sheets) You may ask some children to put a definition on their diagram. This could be coloured in.</p>	
<p>I understand a bee's role in pollination.</p>	<p>Display slides 16-20</p> <p>Slide 17 Watch the video https://www.youtube.com/watch?v=CUPzbTUlJgc&t=11s</p> <p>Ask the children the following questions: <ul style="list-style-type: none"> 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 come from? </p> <p>Slides 18-20 Bees are fantastic pollinators as they are great at gathering and transporting pollen.</p> <p>When bees are busy drinking nectar from flowers, pollen sticks to their furry bodies and is carried to the next flower.</p> <p>Birds and small mammals feed off berries and seeds that rely on bees to be pollinated.</p> <p>Activity 1 – Slide 21 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.</p> <p>Activity 2 – Too Bee or not to Bee – Slide 22- 23 Think about what you ate yesterday: Breakfast- toast and jam, fresh fruit, cereal, fruit juice? What did you have in your lunch box - a 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? Draw or list all the food you ate for these three meals on your activity sheet.</p> <p>Once you have completed your list or drawings, tick which foods you think bees have played a part in.</p> <p>Discuss with your partner why you have chosen your ticked foods.</p> <p>Feedback to the rest of the class.</p>	<p>Slides 16-23</p> <p>‘Too Bee or not Too Bee’ Activity Sheet</p>
<p>I can recall some facts about Solitary Bees.</p>	<p>Read Slide 24</p> <ul style="list-style-type: none"> • Solitary bees live alone or in pairs. • They are smaller than the social bees but they are much more efficient as pollinators. 	<p>Slides 24-25</p>

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	<ul style="list-style-type: none"> • 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. 	
I can recall some facts about bumblebees.	<p>Read slides 25-29</p> <ul style="list-style-type: none"> • 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 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 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. • Different species of bumblebee have different lengths of tongue, so they feed from different shaped flowers. 	Slides 26-30
I can recall some facts about honeybees.	<p>Read slides 32-35</p> <ul style="list-style-type: none"> • 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 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. <p>The Honey Bee Hive</p> <ul style="list-style-type: none"> • 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. <p>The Waggle Dance Honeybees perform a special dance called the “waggle dance” that tells the rest of the hive where to find the best flowers.</p> <p>Watch the video https://www.youtube.com/watch?v=NVYh6RyzWLA</p> <p>Have a go at the waggle dance.</p>	Slides 31-35
I can identify the similarities and differences between a bumblebee and a honeybee.	<p>Read slides 37-38</p> <p>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 – suggested this is copied to A3. Cut them out (or write them) and place the descriptions on the Venn Diagram – bumblebee, honeybee or both. Again, suggested that this is photocopied to A3.</p> <p>Extension Exercise Once completed write a paragraph to describe either a bumblebee or a honeybee.</p>	Slides 36-38 'Bumblebee, Honeybee or Both' Statement sheet and Venn diagram.
I can make a bumblebee or honeybee using re-cycled or re-purposed materials.	<p>This can be completed in groups, pairs or individually.</p> <p>Have a selection of materials that the children can choose to use for their bee.</p> <p>The children must be able to justify their reasoning for picking certain materials for each body part.</p> <p>These could be completed on paper, table tops or floor space depending on the materials chosen by you to complete the activity.</p> <p>Once photographed, the bees can be dismantled – they do not have to be permanent.</p>	Slides 39-40 My Model Bee Activity sheet for the planned model. Suggested Materials: Tissue paper Off cuts of material Wool Cardboard Net curtains

