

ALL ABOUT BEES

LINKS TO NATIONAL CURRICULUM

- Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other (Living things and their habitats, Year 2).
- Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain (Living things and their habitats, Year 2).
- Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment (Living things and their habitats, Year 4).
- Recognise that environments can sometimes change and that this can sometimes pose dangers to living things (Living things and their habitats, Year 4).

LEARNING OBJECTIVES

1. Why are bees so important?
2. What are bumblebees?
3. What are honey bees?
4. What are solitary bees?
5. Why are bees declining?
6. What can we do to help bees?

NOTES TO TEACHERS

- The lesson plans are not intended to be of equal length and can be amalgamated or split to suit timings.
- The PowerPoint presentation runs alongside the plans and all slides are referred to in the lesson plans. Please feel free to modify the presentation by adding your own slides or deleting those you don't need.
- The content of these lesson plans is aimed at Key Stage 2, but could be adapted for use by Key Stages 1 or 3. It may be necessary to tailor the resources to the group of children being taught, by selecting particular slides and information to be included.

KEY WORDS

Insect - any of a group of small and often winged animals that are arthropods having six jointed legs and a body formed of a head, thorax, and abdomen.

Species - a group of similar living things.

Colony - a group of living things of one kind living together.

Nectar - a sugary juice that bees suck out of flowers with their tongues like a straw. It gives them lots of energy.

Pollen - visible to the naked eye as dust like powder, often yellow. From the male parts (stamen) of flowers.

Pollination - the transfer of pollen from the stamen of one flower to the stigma of another flower.

Symbiotic relationship - a relationship of mutual benefit or dependence.

Reproduction - the process that produces new life e.g. babies, young animals or new plants.

Food chain - a sequence of organisms in which each depends on the next and usually lower member as a source of food.

Pheromones - chemical substances (as a scent) that are produced by an animal and serves as a signal to other individuals of the same species.

Hibernate - to pass all or part of the winter in an inactive state.

Proboscis - another name for a bee's tongue.

Larvae - an early form of any animal that at birth or hatching is very different from its parents.

Varroa Mite - a microscopic mite which is a debilitating parasite of the honeybee.

Swarm - a great number of honeybees emigrating together from a hive in company with a queen to start a new colony elsewhere.

WHY ARE BEES SO IMPORTANT?

SUGGESTED STARTER ACTIVITIES

Mind Map

Using the children's ideas, create a mindmap showing their starting knowledge of bees. It could include:

- What do bees look like?
- How many different types of bee are there?
- Why do we need bees?
- What would happen if there weren't any bees?

Bee Identification

Slide 4: The slide shows 3 bees - a **bumblebee**, a **honey bee** and a **solitary bee** (called the red mason bee). Can the children correctly identify them and if so, how do they know which bee is which? A = solitary bee, B = bumble bee, c = honey bee.

TEACHER INPUT

Introduction to Bees

Slides 5-8

Slide 9: Like most insects the bee's body can be divided into three main areas:

1. The **head** with the eyes, mouthparts and antennae
2. The **thorax** with the wings and legs
3. The **abdomen** which contains the digestive and reproductive organs and sting

Adaptations

Bees are cleverly adapted for survival in various ways:

Slide 10: Bees have 5 eyes - 2 large eyes on the front of their heads (called compound eyes) and 3 smaller eyes on the top (called simple eyes). The simple eyes help the bee see sunlight, even on a cloudy day, so it can find its way to and from the flowers and its nest.

Slide 11: Even though humans can see more colours, bees have a much broader range of colour vision. Their ability to see ultraviolet light gives them an advantage when seeking nectar. Many patterns on flowers are invisible to humans. These nectar "bulls-eyes" are visible only to animals, such as bees, that

have the ability to see ultra-violet light. This special vision makes finding nectar much easier.

Slide 12: The yellow and black colouring of a bee is a camouflage that enables them to blend in with the colour of the flowers. This helps to protect them from predators when they are gathering nectar and pollen from flowers.

Slide 13: Bees have amazing wings! The front and rear wings hook together to form one big pair of wings for flying and unhook for easy folding when not flying.

Slide 14: Only female bees can sting. Bees sting primarily to defend themselves, especially if their nest or hive is disturbed. Although bee stings can be quite painful, for most people they are harmless. Some people are allergic to the venom in bee stings and a sting can trigger an allergic reaction that causes a dangerous condition called anaphylactic shock.

Why Are Bees So Important?

Slide 15: Before showing slide 16, ask the children which fruits and vegetables they think are **pollinated** by bees. One out of every three things we eat needs a bee to pollinate a plant, even meat, since farm animals eat plants too.

Slides 16 - 17: Without pollination, plants wouldn't grow seeds and without seeds no more plants could grow in the future. Although other insects and animals can pollinate e.g. bats, butterflies and wasps, none are designed to pollinate nearly as efficiently as bees - they are the superstars of pollination!

Slides 18 - 19: But bees don't deliberately pollinate plants; they visit them to get food - the **pollen** they collect provides them with protein and other nutrients, whilst the **nectar** is an energy source. When bees are busy drinking nectar from the middle of flowers, lots of yellow dust called pollen sticks to their furry bodies. This pollen is picked up from various flowers and then brushes off on others.

Insect pollinators, such as bees, and flower-bearing plants can be used as an excellent example of a **symbiotic relationship** in nature. Both have something the other needs:

- ❖ Bees need pollen and nectar for food and honey making
- ❖ Flowers need pollen transported to other flowers and another flower's pollen brought back to them in order to **reproduce** and make seeds.

When bees simply travel from flower to flower, both these needs are met.

Slide 20: Through pollination of many commercial crops such as tomatoes, peas, apples and strawberries, insects are estimated to contribute around £651m per annum to the UK economy.

Slide 21: Cotton is pollinated by bees and is a vital crop to us all - think about how our lives would change without it. Also, many of our medicines (conventional and alternative) come from flowering plants that need pollinating.

Slide 22: Much of our wildlife also relies on bees to pollinate plants. Insects, birds and small mammals feed off berries and seeds that rely on bee pollination. If they die, the omnivores and carnivores that continue the **food chain** would also starve.

SUGGESTED FOLLOW-UP ACTIVITIES

1. Bee Expressions

Bees are a vital part of our lives and have crept into our language through expressions and sayings. How many of these can you think of? (hints: 'busy as a bee', 'bee in your bonnet', 'none of your beeswax', 'the bees knees', 'make a bee-line', 'queen bee').

2. Pollination Worksheet (see page 6)

3. Food Diary

Think about what you ate for breakfast this morning - toast and jam, fresh fruit, cereal, fruit juice? What do you have in your lunch box - a ham sandwich, apple, chocolate biscuit? List all the food you eat that is brought to us by bees. Remember that bees will have played a part in pollinating the vegetables and fruit we eat as well as in pollinating food for the animals we eat.

4. Written Task - A World Without Bees

Think about how our lives would be different if bees no longer existed.

5. Research Task

In addition to their vision, colouring and sting can you find out other ways in which bees are adapted for survival.

SEQUENCING ACTIVITY: POLLINATION

How Do Bees Help Plants To Make Seeds?

Can you work out the correct order for these statements explaining how bees help plants to make seeds? Either cut them out and arrange them in the right order or draw a flowchart showing the pollination process.

The bee carries pollen with it to another flower on another plant	As the bee collects nectar from the flower, it brushes against the flower.
Pollen sticks to the bee's hairy body	Fertilisation takes place and a new seed develops
While the bee gathers nectar, some pollen from the first plant is rubbed onto the new plant (stigma)	Brightly coloured petals and the scent of the flower attract bees looking for nectar and pollen
Plants which use insects to transfer pollen usually have large petals which smell and are brightly coloured	Pollen from the first flower enters the flower

2. BUMBLEBEES

SUGGESTED STARTER ACTIVITY

Bumblebee Classification

Draw a simple classification pyramid for the bumblebee (animal, invertebrate, arthropod, insect etc)

TEACHER INPUT

In the UK there are 24 species of bumblebees, around 225 species of solitary bee and just one single honeybee species.

Bumblebee or Honeybee?

Slides 24-25: Bumblebees are the big furry ones that most people see in their gardens. They look quite different from honeybees and solitary bees.

Habitat

Slide 26: Bumblebees are found in a variety of habitats and mainly in the northern hemisphere. In the UK there are 24 species, but only 8 are commonly found in most places. They have different coloured stripes - some have white tails, some have red tails and some are blonde/ginger all over. Bumblebees depend almost entirely on **nectar** from flowers for their food, as it is high in sugar. The best habitat for a bumblebee is one which offers plenty of flowers to feed from during the entire active phase of their lifecycle.

Slide 27: Different species of bumblebees have tongues of different lengths. Those with short tongues need short, open flowers where nectar is within easy reach. Others have a long tongue so they can get nectar from long-tubed flowers.

Slide 28: Bumblebees have smelly feet! They produce **pheromones** that get left on flowers that they have visited. If other bumblebees visit these flowers soon after, they will know that the flowers have already been visited by another bumblebee, and are likely to be low on nectar or pollen. They therefore don't waste any time trying to feed from these flowers and visit others instead.

Slide 29: Bumblebees are not generally aggressive, but they may get aggravated if you interfere with their nest. Male bumblebees have no sting. Females may sting as a defence but hardly ever do. The surface of the bumblebee sting is

smooth, just like a needle. This means that the sting doesn't get caught in skin, so the bumblebee can sting several times without dying.

Nest Sites

Slides 30-31: Most species of bumblebee prefer dark, dry cavities for their nest site. This could be underground e.g. abandoned rodent holes, under garden sheds and in compost heaps. Or above ground it could be thick grass, bird boxes, lofts or in trees. A well established nest may contain 50 - 400 bees (much smaller than honeybee hives).

Slide 32: Compared to the organised and geometric honey bee's hive, a bumblebee's nest can look quite untidy. There are lots of wax balls with baby bees growing inside and little wax pots filled with nectar to feed them - and of course lots of bumblebees crawling around. Bumblebees do not make honey. They collect nectar from flowers and bring it back to the nests. The bumblebee worker then regurgitates the nectar into a little wax pot. The honey-like liquid is used to feed the queen, the other workers and any new baby bumblebees.

Life Cycle

Spring

The lifecycle begins in the Spring when rising temperatures awaken a queen bumblebee that has been hibernating in the soil throughout the winter. When she first emerges she feeds on flowers, drinking nectar to gain energy. She then begins to search for a suitable nest site.

The Queen then begins to collect pollen from flowers and brings it back to the nest. She forms a mound of pollen and wax and lays her first brood of eggs. After incubating these eggs for several days, little white grub-like larvae emerge. They are fed on pollen and nectar, collected by the Queen from nearby flowers. After 2 weeks or so they spin a cocoon, inside which they develop into adult bees.

Early Summer

The first brood of offspring are all 'worker' females and they carry out work inside and outside the nest. The Queen now does not leave the nest but remains inside laying more eggs and ordering the workers around!

Late Summer

The nest now begins producing offspring which are not workers. New queens and male bumblebees are produced so that the colony can reproduce. Male bees leave the nest and spend their time feeding on nectar from flowers and trying to mate.

The new queens leave the nest and will mate soon after. Once mated they feed heavily on pollen and nectar, storing energy as fat inside their bodies - this will be used to provide energy during hibernation. Only the new queens survive by hibernating underground.

SUGGESTED ACTIVITIES

1. Research Task

Find out some key facts about some of the different species of bumblebee in the UK.

2. Draw and Label a Bumblebee

Annotate your drawing with the adaptation features which help a bumblebee survive.

3. Make a Bumblebee Wild Herb Garden

There are many herbs such as rosemary, chives, thyme, sage and marjoram that make our food more tasty. They also provide bumblebees with lots of pollen and nectar. So making your own wild herb garden is a great idea.

4. Bumblebee Identification

There is an iPhone app called "Bumblebees of Britain and Ireland" that can be used to help identify different species of bumblebee.

The Bumblebee Conservation Trust also has some good identification resources: <https://bumblebeeconservation.org/about-bees/identification/top-tips-for-bee-id>

3. HONEY BEES

SUGGESTED STARTER ACTIVITY

Honey Bee Mind Map

Have the children ever seen a beehive - perhaps at school, on a local farm or farm park etc? How much do they know about these special bees and how important they are to us? Record the children's ideas in a mind map.

TEACHER INPUT

Appearance and Behaviour

Slide 34: There is only one species of honey bee. They are smaller and slimmer than bumblebees.

Slide 35: The normal speed of a worker honey bee is about 15-20 mph when flying to find food and about 12 mph when returning laden with nectar, pollen or water.

Slide 36: Honey bees will only sting to protect their colony or when frightened. They die after they sting a human or other mammal as the stinger is barbed and sticks in the skin. Either the victim will brush off the bee, or the bee will eventually pull itself free. Either way, the sting is torn from the bee's abdomen, leading to its death in minutes. Worker bees (all female) are the only ones who will sting.

Slide 37: Honey bees do not **hibernate** over winter. A colony will cluster together in a ball (about the size of a football) and use their bodies to generate heat.

Honey Bee Colonies

Honey bees are the highest form of insect life. They live in well organised colonies and use the same hive from one year to the next. All members of the colony have to work together in order for it to survive.

Slide 38-39: Honey bees need a warm, secure and dry place to live and live in nests called **colonies**. In the wild, bees make their nest in a variety of places such as hollow trees and holes in rocks. However, humans have domesticated the honey bee and the **beehive** has been developed to make it easier to manage a colony of bees and collect honey.

In high summer there can be 35,000 to 50,000 honey bees in a hive and in the winter about 5,000. There are three main types of honey bee that live in a hive. In a colony of 50,000 bees there will be 1 **queen**, around 300 **drones** and the rest will be female **worker bees**. They perform different roles:

Queen Bee

Slide 40: There is only one **queen bee** in a hive and she can live for 4 to 5 years. She is the largest of the bees in the colony, measuring around 2 cm (about twice the length of a worker bee). Her job is mate with drones and produce eggs that will spawn the hive's next generation of bees. During April and May she lays eggs day and night, each egg taking about 20 seconds - that's over 2,000 eggs a day! If she is not laying enough eggs, the colony may decide to replace her with a new queen. The queen does not rule the colony - she is simply an egg-laying machine with a smaller brain than the worker bees.

She also produces chemicals called **pheromones** (or bee perfume!) that only bees in the hive can smell. This guides their behaviour and is very efficient for communicating within the colony. If a queen is removed from the hive, within 15 minutes all the bees know about it and frantically begin the task of creating a replacement.

Worker Bees

Slides 41-42: The queen lays fertilised eggs in small wax cells and in 21 days they develop into female **worker bees**. The worker bees are the only bees that most people see flying around outside a hive. Their bodies have special adaptations to help them collect pollen and nectar from flowers.

Slide 43: Life in the hive is very structured and each worker bee has a different job at each stage of its life, including:

- Gathering pollen, nectar and water
- Guarding the hive and the honey
- Caring for the queen and the larvae
- Keeping the hive clean
- Producing honey

Slide 44: The **waggle dance** is a special figure of eight dance. Honey bees perform this dance to share information with other members of the colony, such as the direction and distance to patches of flowers, water sources or new nest-site locations.

Slide 45: Honey bees need a lot of water, especially in the summer. They use it to cool the inside of the hive, dilute stored honey that has crystallized and feed the larvae. Their tongue (**proboscis**) sucks up water, but they can often end up falling into swimming pools etc.

Drones

Slide 46: The **drones** are the male bees. Their function is to compete for mating with the queen and only about 20 or so will succeed - when they do they will die. In the spring and summer several hundred drones live in each hive. Drones do no work and in the early autumn they are evicted by the workers and die.

Valuable Pollinators

Slide 47: The huge number of honeybees in a hive and their ability to be managed and transported by humans, makes them the most valuable pollinator

Honey

Slides 48-50: Honey bees produce honey as a food store for the hive during the winter. Luckily for us, they are efficient workers and produce 2-3 times more honey than they need.

SUGGESTED ACTIVITIES

1. Research Tasks

a) Honey Project

Produce an illustrated factfile on honey bees. Try to include the following:

- Why do bees make honey?
- How do they make honey?
- How much honey can one hive produce?
- How does the beekeeper get the honey from the bees?
- Why are there different types of honey?

b) A Swarm of Bees

Have you ever seen a cloud of bees in the air? This is called a **swarm**. Find out why honey bees swarm sometimes?

3. Comparison of Bumblebees and Honeybees

Try to find out how bumblebees and honeybees are different. e.g.:

- What do they look like?
- How many types of species are there?
- Where do they live?
- How big are the nests?

- How long does the queen live?
- Do they make honey?
- Why are they declining?

5. Performance

Can you find out how honey bees do the waggle dance and perhaps perform it as a class?

6. Creative Task

Make a bee, using recycled materials where possible.

7. Design and Create

a) Design and plant a bee garden

WARNING: Honey bees are unlikely to sting unless stepped on, caught or threatened. **But this is not an appropriate activity for children who are allergic to bees.**

b) Design a safe place for honey bees to gather water.

8. School Beehive Project

For inspiration from schools that have a successful bee hive, see

<https://betterenergyschoolawards.org/winners/2017/8828>

<https://betterenergyschoolawards.org/winners/2017/8796>

4. SOLITARY BEES

SUGGESTED STARTER ACTIVITY

Word Search (page 16)

How many solitary bee species can you find in the word search? The names may be horizontal, vertical, diagonal, forwards or backwards.

TEACHER INPUT

Slide 52: Most people are familiar with honey bees and bumblebees. But if you look carefully you will see there are also smaller furry bees flying from flower to flower. Many solitary bee species can easily be mistaken for wasps, hoverflies or even honeybees.

They are called this as they tend not to live in colonies (like honey bees and bumblebees) and family units are made up of a single pair. Although lots of solitary bees can be found in one area, they operate alone. Solitary bees do not make honey.

Slide 53: Solitary bees vary considerably in size, appearance and where they choose to nest. The majority of British species nest in the ground, with the females excavating their own nest. Others like hollow stems or holes in wood.

Slide 54: Many solitary bees can be encouraged into the garden by providing hollow canes.

Slide 55: Roughly 70% of solitary bees are called **mining bees** and nest in underground burrows. There are about 100 types of mining bee in the UK.

Slide 56: **leafcutter bees** cut neat circles out of leaves to build nests in dead plant stems or stacks of old flowerpots.

Slide 57: The **red mason bee** is the most familiar solitary bee to many people.

Slide 58: **Cuckoo bees** are unable to make their own nests or collect their own pollen. Instead they enter the nest of another suitable host bee and lay their eggs there. When the cuckoo bee's eggs hatch, the larvae make use of the nectar and pollen food store provided by the host bee.

Slide 59-60: Solitary bees are fantastic **pollinators**. Most collect pollen on their legs on specialised hairs. They do not have pollen baskets for carrying pollen, meaning that each time they visit a flower they lose far more pollen than social bees, which makes them much better pollinators.

SUGGESTED ACTIVITIES

Research Task

Choose a solitary bee found in the UK and produce a factfile for it. You should try to include the following information about your bee:

- What does it look like? (are the males and females different?)
- How many species are there in the UK?
- How does it collect pollen?
- Where does it build its nest?

Design and Build

Install a bee house in your school grounds or garden. This will allow you to observe the bees at close hand and your garden will benefit from the pollination service they provide. Only the females can sting and do so very rarely.

WARNING: Honey bees are unlikely to sting unless stepped on, caught or threatened. **But this is not an appropriate activity for children who are allergic to bees.**

Bee Identification Task

Spend time outside, preferably in the spring or summer, and see how many different bee species you can spot. There are various online identification guides you could use, for example:

The **British bees on Flickr website**. This collection covers most of the species of bee to be found on the British and Irish list (including the Channel Islands).

<https://www.flickr.com/photos/63075200@N07/collections/72157631518508520/>

Friends of the Earth also have a simple identification guide:

<https://www.foe.co.uk/bee-count/great-british-bee-count-bee-identification-guide>

Solitary Bees of the UK



Red Mason
Wool Carder
Common Mourning

Hairy Footed Flower
Leafcutter
Orange Tailed Mining

Tawny Mining
Sweat
Long Horned

Ashy Mining
Yellow Faced

5. WHY ARE BEES DECLINING?

SUGGESTED STARTER ACTIVITY

Research Task

Can the children find out how many species of bee have already disappeared from the UK and how many are at present under threat of becoming extinct? Can they suggest reasons for this decline?

TEACHER INPUT

Since 1900 the UK has lost 20 species of bee and a further 35 are now under threat of extinction. Bees are in danger of disappearing from our environment and the effects could be catastrophic.

Slide 62: Loss of Wildflowers

Farming practices disturb natural habitats. In the early 20th century Britain had thousands of acres of wildflower meadows which supported a great diversity of flowers of different colours and shapes - perfect for bees. But increased demand for food and changes in the way we manage land to grow food has led to the destruction of most of our meadows, leaving bees with little to feed on. As a result, most UK species of bumblebee have begun to decline rapidly, with 2 becoming extinct in the UK since 1940. Several other bumblebee species are in trouble e.g. the Great Yellow bumblebee and could become extinct in the UK within a short time.

Slide 63: Nesting Sites and Unfriendly Gardens

There are no longer as many natural places as there used to be e.g. long grass, hedges, underground holes made by other creatures. Many gardens are covered with paving slabs or decking so plants cannot grow. Some garden flowers are very pretty but don't have much pollen or nectar inside them, so are no good for bees.

Slide 64: Pesticides

Sometimes pesticides kill useful insects as well as harmful ones. One type, called **neonicotinoids**, have been linked to a drop in bee numbers. They are found in crops and in products around the home such as pet flea treatments and lawn care products. They are believed to damage the immune system of the bee, making them susceptible to disease. Neonicotinoids have now been temporarily

banned in Europe and Friends of the Earth are campaigning to make this permanent.

Slide 65: Mobile Phone Masts

These can confuse bees, upsetting their sense of direction and the way they navigate, so they can't find their way back to their hives.

Slide: 66: Weather

Some UK summers have been particularly wet which is no good for bees who cannot forage (look for food) unless it is dry.

Slide 67: Varroa Mite

The varroa mite is a major factor in the decline of honey bee populations across the world. Most wild honey bee colonies have died out as a result of this disease. It doesn't kill the bees straight away but passes disease and viruses which shorten bees' lifespans and can cause colonies to collapse.

SUGGESTED ACTIVITIES

Film or Broadcast

Make a short film or news broadcast about the plight of bees.

Persuasive Writing

Write about why bees are so important to us and the threats that now face them.

Class Debate

Technology vs. bees.

WHAT CAN WE DO TO HELP BEES?

SUGGESTED STARTER ACTIVITY

Recap the reasons why bees are declining. Ask the children for ideas on what they and other people can do to help protect the bees. Record their ideas in a mind map.

TEACHER INPUT

The decline of bees has huge consequences for our food supply and economy.

Slide 69: Changing Farming Practices

The Bumblebee Conservation Trust is working with farmers who farm in ways that are sympathetic to bumblebees. A few simple changes to techniques can result in more flowers blooming and bumblebee populations recovering in some areas. There are three main things that farmers can do to help bees:

- Provide sites for managed honey bees
- Use pesticides with care
- Provide food sources and suitable habitats by allowing wild flowers to grow.

Slide 70: Making Our Gardens Bee Friendly

- Gardens cover over 1 million acres in the UK. By planting bee-friendly plants in our gardens, we can help to provide food for bees. If you don't have a garden, one or two potted plants will help or even a window box or hanging basket. Planting flowers rich in nectar will really help the bees find the food they need. Try to choose a range of plants that will provide a succession of flowers for as long as possible during the year - bees need nectar from very early spring until early winter.
- Leaving a small patch of the garden to 'go wild' and allowing weeds to grow means that some will be wildflowers which bees like.
- Avoid using pesticides in your garden such as lawn care products.
- Provide water for bees - this can be as simple as a shallow-edged dish of water with some pebbles to help the bees climb out.

Slide 71: Buy Organic Food

This means that food hasn't been sprayed with pesticides or insecticides to kill bees and other insects.

Slide 72: Buy Local Honey

Buying local British honey will help support British bees and beekeepers.

Slide 73: Create a 'Bee and Bee' in Your Garden

Friends of the Earth suggest creating bed and breakfast accommodation in your garden or on your patio. You will be helping bees by providing food, water and nesting space. You can get your own free guide from

<https://www.foe.co.uk/page/get-your-bee-saver-kit>.

SUGGESTED ACTIVITIES

Make a Bee Hotel (see above)

Poster Design

Design and produce a poster informing people what they can do to help save our bees.

Research Task

Research the types of wildflowers which we can plant to help make sure bees have enough food.

We value your feedback!

Let us know what you thought of this lesson plan by completing this Google Form <https://forms.gle/cGAwi9AWXfSZgrYa9>. **Thank you!**