The Big Question: Why do plants grow flowers and bees buzz?

| Launch Assembly: Assembly by a guest honey producer			WOW Day: Forest School		
Foley 5: Care and Kindness *Respect* and tolerance	**Foley 5: Individuality** *Responsibility* truth and forgiveness	**Foley 5: Community** *Tolerance* and Trust	**Foley 5: Resilience** Strength and weakness	**Foley 5: Growth** *Respect* enjoying success and pride	**Foley 5: Care and Kindness** *Individual rights* and Peace

Everything starts with a read!
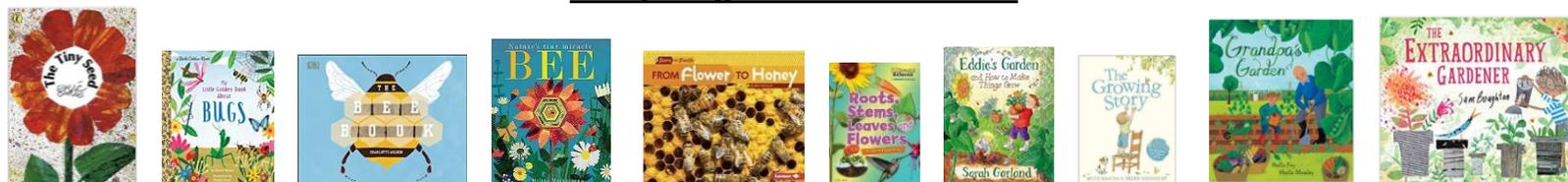
Local **Plants and bugs in the local area**	**National** Botanical Gardens trip	**International** Botanical Gardens trip
History and Geography **Geography** Use world maps, atlases and globes to identify the United Kingdom and its countries, as well as the countries, continents and oceans studied at this key stage. Use simple fieldwork and observational skills to study the geography of their school and its grounds and the key human and physical features of its surrounding environment.	**New Learning** Children will learn about the plants that grow in their local area. They will draw a map of where the plants were located using a simple key. Children will learn about the different types of plants that grow around the world including Italy, China and Mexico. Children will taste/ look at some real plants and fruits found in the UK, Italy, China and Mexico. They will use maps and atlases to locate where the countries are and investigate the climates that are found within these places. Children will find out about how honey is made Geography KS1: How honey is made - BBC Teach locate Devon on a map of the United Kingdom. If you had a bee hive where would you put it? – discuss a suitable location	**Building on prior learning:** Children will have visited their local area in autumn 1 and looked at maps and atlases earlier on in year 1. They will have compared Italian and Chinese foods so will have heard the name and been introduced to their locations. **Skills required:** Draw a simple map using a key Ask and answer simple questions about what they have seen or heard. Compare and contrast different localities and their produce. **First hand experiences:** Go on a plant walk around the local area. Where were the plants located? Taste/ look at some real plants and fruits found in the UK, Italy and Mexico. Visit the Botanical Gardens and learn about plants that grow in different climates.
History Significant historical events, people and places in their own locality.	**History** Learn about the history of Birmingham Botanical Gardens about its location and why the tropical plants ended up there. Look at some of the gardens Lancelot 'capability' Brown who designed the gardens at Croome in Worcestershire.	

	Key Knowledge / facts:	
	Plants growing in the UK: wheat, barley, oats, potatoes, sugar beet, vegetables, asparagus	
	Plants/foods growing in Italy: lemons, figs, tomatoes, grapes.	
	Plants growing in Mexico: sugar cane, peppers, avocado, apples, oranges, grapefruits, lemons, limes, mangoes, watermelons, pineapples, strawberries, bananas, coffee, cocoa.	
	Plants growing in China: rice, tea, sugarcane, cotton, lotus, blossom.	
	Key Language:	
	Soil, hot, cold, rain, sun	
Music - listen with concentration and understanding to a range of high-quality live and recorded music	**New Learning** The children will listen to famous pieces of music. They will compare the music and say whether they like or dislike a piece of music, stating the reasons why. They will develop their vocabulary to describe the music, commenting on the volume, tempo, pitch and dynamics. Flight of the Bumble Bee – Rimsky-Korsakov Contrast this fast piece of music to a slow piece e.g. 'Calm piano music 24/7. **Key Knowledge / facts:** Music can evoke emotion in people and not all people will have the same opinions about what they like or dislike. Vocabulary can be used to describe a piece of music. We can compare two pieces of music. **Key Language:** Volume – loud/quiet Tempo – fast/slow Pitch – high/low Dynamics – how loud or quiet should the music be played	**Building on prior learning:** The children have been using vocabulary such as loud/quiet, fast/slow, high/low when learning to sing a range of songs and listen to music based on previous topics. They have listened to and appraised music designed to create different moods. **Skills required:** Ability to listen to a range of music and comment on how it makes you feel. Express own opinions in response to hearing different music. Use of vocabulary to describe music and to describe how it makes you feel. **First hand experiences:** Music to listen to that have different tempo and pitch – Flight of the Bumble Bee, Calm piano music 24/7

Art / DT	New Learning	Building on prior learning:
- **DESIGN** - Design purposeful, functional, appealing products for themselves and other users based on design criteria - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology - **MAKE** - select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] - select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics - **EVALUATE** - explore and evaluate a range of existing products - evaluate their ideas and products against design criteria - **TECHNICAL KNOWLEDGE** - build structures, exploring how they can be made stronger, stiffer and more stable - explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	**Design and Make task 1 -** Create a 'moving picture' for the Nursery children to illustrate the rhyme 'Mary, Mary, quite contrary'. Create flowers that move in some way, using a slide, or pop-up function. Or create a lever using split pins and cardboard to make the flowers move. **Design and Make task 2 -** Create a sun catcher – use a paper plate with the centre cut out and punch holes round the edge to thread through ribbons and wool and decorate using a range of items such as feathers and cellophane. **Key Knowledge / facts:** **Moving Flower picture DT –** - Investigate how a lever works – look at examples where part of the picture moves either by sliding card through a piece of card or by split pins enabling it to move. Look at 'pop up' books and investigate how they work. - Design you own moving flower picture – how will it illustrate the rhyme 'Mary, Mary Quite contrary'? - Create a moving part to your picture to illustrate the rhyme. **Sun catcher DT –** - Investigate sun catchers – analyse designs from the internet, what materials work best and why? - Design your own sun catcher, thinking about the materials to use and why ... will they catch the light? - Specific Skills – being able to cut out the centre of the paper plate by making a hole to get scissors in, using a hole punch, threading wool, ribbon, strings through holes, attaching cellophane, fabrics, foil and other materials to decorate	In EYFS the children have used a range of construction kits to create structures with moving parts for example making vehicles that have moving parts e.g. tractors and transporters. They have used a range of tools and techniques to create their own models for example they have built houses for characters out of stories we have read. They have used and explored a variety of materials, tools and techniques, experimenting with design, colour, texture, form and function. E.g., they have designed and made Diwas and designed and made transport for Santa to use to deliver presents. **Skills required:** • Knowledge of moving parts – levers, sliders • Use of tools – hole punch • Threading and tying skills • Understanding of materials and their suitability to the purpose of the design **First hand experiences:** • Explore existing books/pictures with moving parts – how do they work? • Explore sun catchers and talk about the designs and materials used • Develop specific DT skills – cutting materials, hole punching card, using split pins, threading and knotting wool • Design own products and make final product • Evaluate designs – do they work? **Key Language:** Lever, illustrate, design, materials, reflect, transparent, opaque, reflective, properties of materials. Thread, knot Tools – hole punch
Science **National Curriculum Links** **Plants** - identify and name a variety of common wild and garden plants, including deciduous and evergreen trees - identify and describe the basic structure of a variety of common flowering plants, including trees - **Working Scientifically** - asking simple questions and recognising that they can be answered in different ways	**New Learning** Children will explore the question: 'What flowers, plants and trees can be found in the United Kingdom?' They will learn to identify and name a variety of common wild and garden plants, including learning the names of the nation flowers of England, Scotland, Wales and Northern Ireland. Children will also learn that we can eat many plants such as fruits and vegetables. They will use the book 'Is It a Fruit?' to learn about fruit and be able to sort fruit from other plants. (Asking simple questions and recognising they can be answered in different ways, identifying and classifying). They will use their observation skills to explore the similarities and differences between different plants. Children will go on a 'tree hunt' to find out which trees are growing in the school grounds. They will look at different	**Building on prior learning:** In EYFS, children have made observations of plants and will have begun to name some common plants and flowers in their environment. They have learnt to show care for the world around them and living things. Children have had opportunities to sing songs and join in with rhymes and poems about the natural world. They are encouraged to interact with the outdoor learning environment, having opportunities to touch, smell and look at objects from the natural world. **Skills required:**

- observing closely, using simple equipment - identifying and classifying - using their observations and ideas to suggest answers to questions - Gathering and recording data to help in answering questions.	colours, shapes and sizes of petals and leaves and will sort and group them according to their properties. (Observing closely, using simple equipment, identifying and classifying). Children will discover that plants have different parts and will identify these parts to label a diagram of a flowering plant and a tree. Children will also use their skills of observation to draw a scientific drawing of a flowering plant. (Observing closely, using simple equipment, identifying and classifying). Children will learn that plants grow from seeds or bulbs and will plant some sunflower seeds of their own. They will be exploring the question 'How does my sunflower change each week?' by observing their planted sunflower at weekly intervals. Children will be measure how tall their sunflower is and record this information in a simple table. (Using their observations and ideas to suggest answers to questions, gathering and recording data to help in answering questions) **Key Knowledge / facts:** - People may grow plants in their gardens and care for them. They may grow flowering plants that are beautiful to look at or they may grow plants for food. (Flowering plants include: rose, poppy, sunflower, tomato, mint) - A wild plant will grow by itself in places that people do not need to care for them. If a plant grows somewhere it is not wanted, it may be a weed. (Wild flowers include: dandelion, daisy, buttercup, nettle, clover) - Deciduous trees lose their leaves in the autumn every year. Evergreen trees have green leaves all year round. (Trees include: oak, sycamore, horse chestnut, hazel)	• Making close observations of flowers and plants to identify and name the different parts • Sort and classify plants according to different criterion (for example fruit/not a fruit, tree/not a tree) • Collecting simple data – such as measurements of the sunflower • Recording data in a simple table or chart **First hand experiences:** • Looking at pictures of and real-life examples of different plants, looking for similarities and differences • Going on a 'tree hunt' to explore differences in trees, collecting samples of leaves to identify, compare and group • Observe real flowers and trees to identify the different parts of a flower and a tree • Creating a scientific drawing of a flowering plant from observation Planting sunflower seeds, nurturing them with light and water and recording the changes as the sunflowers grow. **Key Language:** **Plant vocabulary:** blossom, branch, bud, bulb, deciduous, evergreen, flower, flowering, fruit, garden, leaves, petals, roots, seed, stem, trunk, vegetables, wild **Working scientifically:** chart, classify, compare, diagram different, draw, group, identify, label, name, observe, same, similar, table
Computing - understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions - create and debug simple programs - use logical reasoning to predict the behaviour of simple programs	**New Learning** Programming – Moving a Robot Firstly, children will make sure they are familiar with the beebot buttons – trying out the directional buttons. They will link outcomes to the buttons. Children will also learn about the 'clear' and 'go' buttons to run a simple command. Next, children will think about the language used to give directions and how precise it needs to be. They will work with a partner to give and follow instructions in 'real-life'. Children will relate these real-life commands to those buttons they have learnt about on the beebots. Children will then use the beebots to focus on the forwards and backwards functions. Children will input a simple sequence using these buttons and learn that they are able to accurately predict the outcome of their sequence. Then children will introduce the left and right turn buttons (along with forwards and backwards), using all 4	**Building on prior learning:** In EYFS, children have had opportunities to explore using beebots on mats and within a maze puzzle. Children have had opportunities to explore the functions of the buttons on the beebots. **Skills required:** • Understand the difference between forwards and backwards, left and right. • Inputting simple sequences of instructions to make a beebot move • Plan a simple route for a beebot to travel • Make predictions of a finishing place for an algorithm • Problem solve to write an algorithm to get a beebot to a specified finishing point • Identify and correct errors in algorithms (debug)

directional buttons on the beebot. Children will experiment with turns and movement using trial and error to get the beebot to a specific finishing point. Children will then decide what they want their beebot to do. They will plan a simple algorithm (set of commands) in order to instruct the beebot to do this. They will test their algorithm. Where needed, children will debug (correct errors) their algorithm so that it performs the way they want it to. Children will use their beebot programming skills to find more than one solution to a problem. Children will learn that there isn't a 'right way' when solving these programming challenges.

Key Knowledge / facts:
- Beebots are programmable floor robots which have 4 directional buttons as well as a 'go' and 'clear' button.
- The left and right buttons make the beebot turn a quarter turn (clockwise and anticlockwise). The forwards and backwards buttons make the beebot move in these directions. The clear button clears the memory of all previously inputted instructions. The go button makes the beebot follow all previously input instructions.
- We can press the directional buttons in a sequence in order to make the beebot travel.
- When we input a series of instructions it is called an algorithm.
- If our algorithm hasn't worked as expected we need to find and correct the errors. This is called debugging.

First hand experiences:
- Investigate and explore the directional buttons on a beebot to see cause and effect.
- Give verbal directional instructions to a partner and follow directional instructions from a partner.
- Use the forward and backwards directional buttons to input a simple sequence and predict the outcome
- Use the left and right turn buttons in conjunction with the forward and backwards buttons to create simple sequences of instructions (algorithms)
- Plan and input their own algorithms to make the beebot travel a route
- Solve problems to get the beebot to a specified finishing point.

Key Language:
algorithm, anti-clockwise, backwards, beebot, clear, clockwise, debug, direction, forwards, go, input, instructions, left, plan, predict, program, right, route, sequence