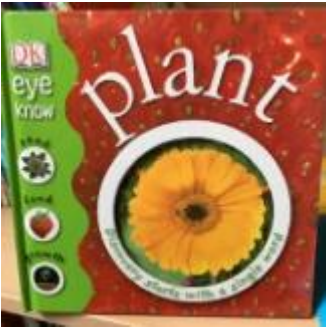
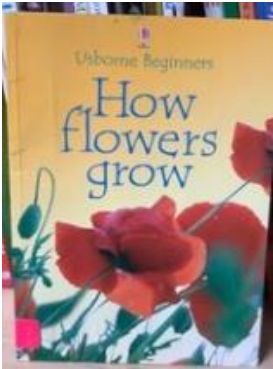
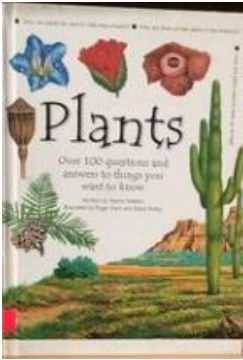

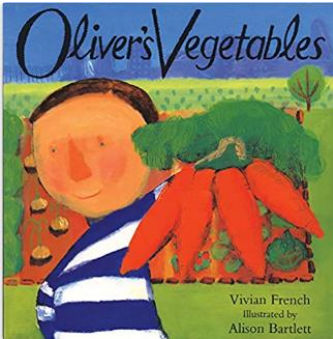


BILSTON CHURCH OF ENGLAND PRIMARY



MEDIUM TERM PLANNING

Subject	Topic/Key Question	Year Group	Term	Time Allocation
Science	The Apprentice Gardener	2	Spring 1	12 hours
 <p data-bbox="239 886 338 922">Library</p>	 <p data-bbox="632 927 730 963">Library</p>	 <p data-bbox="1020 919 1119 954">Library</p>	 <p data-bbox="1400 914 1499 950">Library</p>	 <p data-bbox="1703 886 1940 922">KS1 picture books</p>
<p data-bbox="107 984 449 1084">End of Key Stage 1 Outcomes</p>	<p data-bbox="495 984 1913 1089">Asking simple questions and recognising that they can be answered in different ways.</p> <p data-bbox="495 1101 1241 1149">Observing closely, using simple equipment.</p> <p data-bbox="495 1161 940 1209">Performing simple tests.</p> <p data-bbox="495 1221 972 1269">Identifying and classifying</p> <p data-bbox="495 1281 1766 1330">Using their observations and ideas to suggest answers to questions. ☐</p> <p data-bbox="495 1341 1587 1390">Gathering and recording data to help in answering questions.</p>			

End of Unit Outcomes	<p>I can observe and describe how seeds and bulbs grow into mature plants.</p> <p>I can find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>
Vocabulary	<p>seeds, plant (verb and noun), apprentice, gardener, bulb, grow, observe, observations, describe, identify, expert, question, predict, prediction, water, compare, answer, investigate, bean, soil, surface, test, bury, light, dark, water, germinate, fair, same, plan, suitable, radicle, root, shoot, leaves, change, evidence, height, tallest, shortest, bar chart, scale, pattern, question, connection, measure, seedling, mature plant, wilting, healthy, unhealthy, warmth, care, die, block, agree, disagree, alive, food store, first, next, later, after...days, order, conclusion, because</p>

Lesson Sequence	Time Allocation	Key Question/WALT	Teaching Activities (Possible Computing Activities)	Resources
Lesson 1 What will the seeds grow into?	2 hours	<p>WALT: understand seeds grow into plants</p> <p>WILF: I can make observations of different types of seeds. I can use my observations to describe and identify seeds.</p>	<p>Working Scientifically: Observing using simple equipment.</p> <p>Draw on children's prior learning to help establish that the objects are all seeds that come from plants. Explain that although many types of seeds provide food for animals, including humans, their main purpose is to grow into new plants.</p> <p>Explain to children that in this module they are going to become apprentice gardeners, learning how to grow plants from seeds. Explain that during the module they will need to ask and answer lots of questions in order to find out the information that they need to know. Let them know that at the end of the module they will have enough information</p>	Sets of 8–10 seeds (one set between two children), sets of six different bean seeds (in seed packets or dried beans for cooking), sticky tape, colouring pencils

		<p>I can suggest what might help the seeds to grow. I can match the seed to the type of plant it will grow into.</p> <p>I use technology to collect information, including a microscope.</p>	<p>in the class gardening book to be able to plant a garden and grow vegetables to eat. Match seeds to plants and write a brief description. Plant sunflower seeds to monitor in the classroom. Order pictures of how to plant a seed. Write a short commentary. Do children know that seeds come from plants and that they will grow into new plants? Do they recognise that different types of seeds grow into different plants and that the same type of seed will produce the same plant? Can they make close observations using magnifiers? Can they describe what they observe? Can children match descriptions to the seeds? Can they write descriptions that enable others to draw or identify the seeds? Do they know what seeds need in order to start to grow?</p>	<p>Collins Lesson 1</p> <p>Digital Microscopes</p>
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<p>Lesson 2</p> <p>What do gardeners need to know?</p>	<p>2 hours</p>	<p>WALT: understand how bulbs and seeds grow best.</p> <p>WILF: I can think about what might happen to seeds when they grow. I can turn my ideas into questions. I can suggest what a gardener needs to know about seeds. I can decide how we might find answers to our questions.</p>	<p>Working Scientifically: Asking simple questions and recognising that they can be answered in different ways.</p> <p>Establish the difference between bulbs and seeds ensure children understand that bulbs are not the same as seeds, but they also grow into new plants. – List some plants that start from bulb.</p> <p>Place the bulbs into the necks of jars or vases of water so that the base of the bulb is in the water. Explain to children that they are going to be observing and photographing the bulbs over the next few weeks to see what happens. Set up a chart near the bulbs for children to display photographs. Explain we are going to observe germination. Keep a class diary.</p> <p>http://www.saps.org.uk/primary/teaching-resources/639-growing-seeds-in-a-plastic.</p> <p>Explain to the children that you are going to set up a test. We are going to investigate in what conditions seeds and bulbs grow best. Share the chart with the children and the different conditions each table will set up a Petri-Dish with or without water and put it with or without sunlight. Children to summarize what they have done and make a prediction In their own words and leave space to draw conclusions next week based on observations. (Picture evidence)- for books.</p>	<p>Small plant pots Soil</p> <p>Paperwhite narcissus bulbs</p> <p>Fast germinating test seeds</p> <p>Collins lesson 2 Twinkl sheet</p> <p>Twinkl lesson 4</p>
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<p>Lesson 3</p> <p>How should we plant the seeds?</p>	<p>2 hours</p>	<p>WALT: understand that plants need water and light to stay healthy</p> <p>WILF: I can suggest what might happen when seeds are planted in different ways. I can plan how my ideas can be tested. I can follow the plan to set up a test</p> <p>I am starting to understand a branching database.</p>	<p>Working Scientifically: Performing simple tests</p> <p>Refer to the bulbs in the jars from the previous lesson that have, water, a suitable temperature and light. Look at the seeds that have these conditions. Look at the seeds that don't. Make observations and discuss them. Establish that it is becoming clear that seeds and bulbs need all three to remain healthy.</p> <p>Make observations of the seeds planted on different materials in Enrichment lesson 1 (if taught) and water them, ensuring that all the seeds get the same amount of water.</p> <p>As each change is observed, provide children with the vocabulary to describe the process of germination and the emerging parts of the seedling. Encourage children to compare the changes in their own seeds with those of other groups.</p> <p>If some seeds were planted without water in Lesson 2, compare them with the watered seeds and confirm that children understand that the seeds need water to germinate. Later in the investigation, when all the other seeds have germinated, you could add water to the 'dry-planted' seeds to show that there is nothing wrong with the seeds and that they just needed to be watered.</p> <p>Encourage children to list 3 questions about plants. Encourage children to answer them.</p> <p>Create a simple data-base about plants and bulbs.</p> <p>If time allows allow children to plant beans today as an introduction to our food plant lesson.</p>	<p>Digital camera, children's seed diaries, bean diaries and group diaries, measuring jugs or cylinders</p> <p>2question (Purple Mash)</p>
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<p>Lesson 4</p> <p>How tall will they grow?</p>	<p>2 hours</p>	<p>WALT: observe how seeds grow into mature plants.</p> <p>WILF: I can make suggestions about which seeds might grow into the tallest plants. I can make a bar chart showing the heights of different plants. I can use the evidence on my bar chart to answer our question. I can make and save a chart or graph using the data I collect.</p>	<p>Working Scientifically: Gathering and recording data to help in answering questions.</p> <p>In this lesson we will match seeds to plants and find out which one will grow the tallest. Share the letter from Jackie. Explain that we can't plant today because she needs and answer quickly.</p> <p>Share some of the plants that have already developed from seeds and are growing well. Explain that the teacher has done some research to find out which plant will grow the tallest. Share the measurements. Ask children to match the seed and plot them on a graph for Jackie so she knows which one she will need to grow a large stalk so she can find her fortune.</p> <p>Create a bar chart to show Jackie the plant that will grow the tallest.</p>	<p>Seed sheet from Collins connect lesson 5.</p> <p>A letter from Jackie.</p> <p>Ribbon or string, sticky tape, glue, 30 cm and metre rulers, tape measures, scissors, sets of seeds, a container in which to sort the seeds</p> <p>2graph</p>
<p>Lesson 5</p> <p>What happens when a</p>	<p>2 hours</p>	<p>WALT: explain the lifecycle of plant</p> <p>WILF:</p>	<p>Working Scientifically: Observing closely using simple equipment.</p>	<p>Mini whiteboards and pens - 1 class set</p> <p>Scissors</p>

<p>seed germinates?</p>		<p>I can make detailed observations of seeds during germination. I can name the parts of a seedling. I can remember the order in which they grow. I can compare the germination of different seeds. I can use technology to organise and present my ideas in different ways.</p>	<p>Introduce the idea that plants are alive. How can we tell that plants are living things? Give children time to discuss their ideas, and ask each pair to record their answers on a whiteboard. If children get stuck, encourage them to consider how we can tell that humans and other animals are living things, and to draw similarities. Share ideas and discuss. Watch the BBC learning clip to explore the life processes of plants. Explain the 7 life processes in simple terms. At each stage ask the children as a class to make comparisons with the life processes in humans and other animals. Recap MRS NERG – from the Growing and Changing Unit. Introduce the idea of life cycles and talk children through the life cycle of a bean plant. Children order the stages of the life cycle and use the writing frame to write a sentence about each stage.</p> <p>EXT: animate the life-cycle of a bean using 2 animate.</p>	<p>Glue</p> <p>2animate</p>
<p>Lesson 6 (Our Changing World Unit)</p> <p>How do plants grow and change over time?</p>	<p>2 hours</p>	<p>WALT: understand when to plant and harvest vegetables. WILF: I can sow seeds and bulbs taking into account how much space they</p>	<p>Working Scientifically: Observing closely, using simple equipment.</p> <p>A suitable growing space is required. The planting model suggested is ‘square foot gardening’. This requires a very small space to be made available and used for growing. Look out for redundant corners or spaces near fences or paths. These can often be re-purposed with the addition of planters or raised beds. Grow-bags can be used as an alternative, but these will only support plants that do not need to send their roots deep into the soil.</p>	<p>Straws, sticky labels, paper to be cut into strips, 30 cm x 30 cm pieces of sugar paper, OCW diaries (optional)</p>

		<p>need to grow well. I can care for the seeds and bulbs as they grow. I can observe and measure plants carefully. I can describe and compare some changes that take place over time as the plants grow.</p>	<p>Explain to children that they are going to grow some ingredients they need to make a soup. Use Which ingredients do you think we can grow to use in our soup? (Interactive 1), which shows some common soups and their ingredients. Ask children to discuss with their talk partner which ingredients they think come from plants and to also think about whether they grow from seeds or bulbs. Before showing them the pictures, you may wish to ask them to sketch what they think the mature plant will look like, indicating the part that will be eaten. Additional information can be displayed about the ingredients that do not come from plants or that they will not be able to grow by clicking on the images.</p> <p>Explain to children that they need to find information about each of the plants that they will be growing so that they know how and when to plant them. The challenges are differentiated by the level of support each one requires.</p> <p>Create a planting and harvesting calendar, Identify seedlings that the teacher brings in move on to plant vegetables in the raised beds for Harvesting in the Autumn.</p>	<p>Seedlings to plant Lollypop Sticks to Label</p>
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