



Silver Birch Class/Year Group

Year 5/6

Topic

Plants (evolutionary adaptations) Term Summer

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| Curriculum Drivers | Aspiration | Community | Key Vocabulary | Adaptation, habitat, Transport, stem, evaporate, compare, temperature, leaves, flower, observe, prediction, conclusion, xylem, evaporation |
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| National Curriculum | Pupils should be taught to identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution | | | |
| Intent | This unit intends that pupils follow on from their knowledge of plants from LKS2 to relate to studies of evolution and inheritance. Children will revise how water and nutrients are transported through the plant from the roots to the leaves before investigating how plants have learned to survive in harsh conditions by adapting their leaves and roots. | | Cross Curricular Links and wider influences | Climate in India - rainforest and dry arid desert. |
| Curriculum Driver Links | Community- how plants in our marshy/ coastal areas have adapted. Aspiration- never giving up- the fight to survive. | | Links to prior learning | Sexual and asexual reproduction in plants Plant life cycles Conditions needed for growth in plants |
| Concept Thread | Understand plants - This concept involves becoming familiar with different types of plants, their structure and reproduction | | Links to future learning | KS3- the reactants in, and products of, photosynthesis, and a word summary for photosynthesis the dependence of almost all life on Earth on the ability of photosynthetic organisms, such as plants and algae, to use sunlight in photosynthesis to build organic molecules that are an essential energy store and to maintain levels of oxygen and carbon dioxide in the atmosphere |



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| | | | <p>the adaptations of leaves for photosynthesis.</p> <p>plants making carbohydrates in their leaves by photosynthesis and gaining mineral nutrients and water from the soil via their roots.</p> |
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| Lesson Intent | Links to Prior Knowledge | Skills | Implementation/Intent |
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Last term's topic was longer than normal so may need to be finished first.

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| <p>WALT - To identify and name the main parts of the human circulatory system. -To describe the functions of the heart, blood vessels and blood.</p> | <p>Previous work on the systems of the body. PE lessons and exercise makes our heart beat faster.</p> | <p>Children will learn about the parts of the body that make up the circulatory system and their functions. They will learn how blood is transported around the body and why this is important.</p> | <p>Remind children of the other systems of the human body that they have learned previously- skeletal, muscular, digestive.</p> <p>Introduce circulatory system- what does circulation mean?</p> <p>Powerpoint on the parts of the system- children to label</p> <p>Watch the videos on bbc bitesize https://www.bbc.co.uk/bitesize/topics/zwdr6yc</p> <p>Children to create a game to show their knowledge of circulatory system.</p> |
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| <p>WALT- To describe the ways in which nutrients and water are transported within animals, including humans</p> | <p>Digestive system</p> | <p>Children will learn about the different nutrients our bodies need and how these are obtained from food and then through the digestive process are transported around the body.</p> | <p>Powerpoint on transporting nutrients- children to take notes whilst going through to enable them to create their own diagram. In groups children to draw and label a diagram to show how water and nutrients are transported around the body.</p> |
| <p>WALT To plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary taking measurement with increasing accuracy and precision, taking repeat readings when appropriate -To record data - To report findings</p> | <p>Previous investigations and questioning.</p> | <p>Children will have the opportunity to conduct their own investigation. They will generate a question and investigate it themselves.</p> | <p>Watch bbc bitesize clip https://www.bbc.co.uk/bitesize/clips/z274d2p What are the different types of exercise? Look at the 3 definitions of exercise- requires effort, raises heart rate and works your muscles. Which is the only one that can be measured accurately- heart rate. Show children how to take their pulse. In groups children to plan their own investigation, coming up with a question and prediction. Conduct the investigation Present findings.</p> |
| <p>WALT To recognise the impact of diet and exercise on the way their bodies function To recognise the impact of drugs on the way their bodies function</p> | <p>PSHE and PE lessons of healthy eating.</p> | <p>Children will learn about the importance of healthy eating and exercise. They will learn about the different food groups that humans need to survive. Children will learn that drugs and alcohol have an impact on the way are bodies are able to function.</p> | <p>Healthy eating Powerpoint. Children to sort images into a venn diagram explaining their choices. Drugs and alcohol powerpoint Children to create an information leaflet on how to keep their bodies healthy.</p> |
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| <p>WALT- to explain how water and nutrients are transported through the roots.</p> | <p>Plants need water and nutrients from the soil. They take it through the roots.</p> | <p>Look at how water is transported within plants Discover the function of different parts of a plant Choose a type of scientific enquiry to use</p> | <p>Drop a folded paper flower into water. Observe what happens. The flower should open as water moves through the fibres of the paper (capillary action). Another good starter for looking at capillary action is the 'Walking water' activity.</p> <ol style="list-style-type: none"> 1. Place a white carnation flower in a clear container of coloured water (use water-based food colouring). Observe what happens. You could do this with a series of photographs. 2. Try the same activity with leafy celery stalks. |



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| | | Collect data from own observations | 3. Using cut leafy stems and recycled small water bottles, can learners devise an experiment to measure how much water is taken up by the stem, in an agreed time period? What method will learners choose to conduct this scientific enquiry? What success indicators will they be looking for? How will they measure and record their results? |
| WALT- to explain how plants have adapted to live in the rainforest | The conditions plants need to grow | | https://www.twinkl.co.uk/resource/t3-g-109-rainforest-plant-adaptations-powerpoint Share the slides and discuss each picture. What do they notice? How are they different? Explain and draw diagram of each different adaptation. Design own plant that would be ideally suited to live in the rainforest. |
| WALT- to explain how plants have adapted to live in the desert. | The conditions plants need to grow | | https://www.twinkl.co.uk/resource/adaptations-of-australian-desert-plants-powerpoint-au-t2-s-1487 Share the slides and discuss each picture. What do they notice? How are they different? Explain and draw diagram of each different adaptation. Design own plant that would be ideally suited to live in the desert. |