

Science Progression mapping KS2

	Autumn 1	Spring 1	Summer 1
<p>Year A 3 / 4</p> <p>WILLOW</p>	<p>How do living things work and why are there so many variations?</p> <p>Environmental challenge: Devon Wildlife Trust.</p> <p>Core Skills Asking relevant questions and using different types of scientific enquiries to answer them Setting up simple practical enquiries, comparative and fair tests Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p> <p>Knowledge DWT day to launch the challenge. Identify plants and seeds in local environment and identify what challenges they meet. Identify animals, including mini-beasts in the local area and what challenges they meet. Decide on a project to enhance the wildlife in our local area. Review the learning from KS1 re seeds and bulbs and plant hyacinths for Christmas presents. Monitor the growth of these. Take cuttings from geraniums in order to monitor the growth in spring. Use rooting hormone. Observe and describe how a plants change as they mature, and what happens to them in winter. How do animals and plants protect themselves and have enough food for winter</p>	<p>Why do people build houses near to cliffs and what are the dangers?</p> <p>ROCKS, FOSSILS and SOILS Plan B year 3</p> <p>Core Skills Asking relevant questions and using different types of scientific enquiries to answer them Setting up simple practical enquiries, comparative and fair tests Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions Identifying differences, similarities or changes related to simple scientific ideas and processes</p> <p>Knowledge Be able to identify naturally occurring rocks and explore their uses. Can children identify rocks that are naturally occurring and those that are man-made? Be able to group rocks according to their characteristics. Can children observe and compare rocks, and put them into different categories? Be able to plan, carry out and evaluate experiments to compare rocks. Understand and use the vocabulary of permeable, hard, soft, erosion and absorbent. Identify rocks that are used for particular purposes. Explore soil and how it is formed. Do children know that soil is made up of rock and decaying matter? (And that there are different types of soil?) Explore what fossils are and how they are formed. Do children know that rocks move in a continuous cycle? • Do children know what a fossil is? • Can children explain how fossils are formed? Be able to identify fossilised remains. Also, monitor the growth of their geraniums.</p>	<p>What might happen if the plants on the banks of the River Otter were destroyed?</p> <p>PLANTS How plants grow PLANBEE year 3</p> <p>Investigation into different season from autumn term: how have habitats changed?</p> <p>Core Skills 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 Using results to draw simple conclusions, make predictions for new values and suggest improvements and raise further questions Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>Knowledge Understand that different seeds grow into different plants and to describe them. Identify and describe the functions of the roots of flowering plants. (Dried beans such as butter beans etc., different to KS1 runner beans) Investigate the way in which water is transported within plants. Draw simple conclusions from investigations such as transpiration. Make planters for outside the classroom for the geraniums they have propagated in autumn. Identify and describe the functions of leaves in flowering plants. Draw diagrams of life cycle of some plants. Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. (Lilies are great for this activity and irises.) Explore some of the ways in which flowering plants disperse their seeds. Understand the structure of seeds and their importance as a food source.</p>

	Autumn 2	Spring 2	Summer 2
<p>Year A Year 3/ 4</p> <p>WILLOW</p>	<p>How do living things work and why are there so many variations?</p> <p>Animals including humans HEALTH AND MOVEMENT PLANBEE year 3</p> <p>Core Skills Asking relevant questions and using different types of scientific enquiries to answer them Setting up simple practical enquiries, comparative and fair tests Using results to draw simple conclusions, make predictions for new values and suggest improvements and raise further questions</p> <p>Knowledge Identify that humans get the nutrition they need from what they eat. identify that a balanced diet is needed in order to stay healthy. Investigate which foods different animals eat. Be able to classify animals as herbivore, omnivore or carnivore. Be able to draw simple food chains and food webs. Carry out an investigation to find out what pets eat. (Link to Maths drawing tables, graphs and charts.) Explore and compare human and animal skeleton. (Know the terms vertebrate and invertebrate.) Know the three functions of the skeleton, (protection, support and movement.) Name and identify the function of some human bones. Find out about how the skeleton supports and protects the body and to investigate how invertebrates are supported. Find out what muscles are and how skeletal muscles help us to move. Know that muscles work in pairs. Why are some muscles stronger in different animals?</p>	<p>Can I make a magnetic game?</p> <p>Forces and magnets PLANBEE year 3</p> <p>SCIENCE WEEK</p> <p>Core Skills Asking relevant questions and using different types of scientific enquiries to answer them Setting up simple practical enquiries, comparative and fair tests Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions Identifying differences, similarities or changes related to simple scientific ideas and processes</p> <p>Knowledge Explore what forces are and notice that some forces need contact between two objects. (pushes and pulls) Compare how things move on different surfaces by setting up and carrying out an investigation. Draw their own conclusions from the investigations. Do children know that forces can be measured in Newtons using a forcemeter? Explore how magnetic forces work. Realise that sometimes they do not need to touch and make generalisations about magnetic forces. Be able to identify magnetic materials by making predictions and then testing. Investigate everyday uses for magnets and make their own magnetic game..</p>	<p>Which animals depend on the ecology of the River Otter and our coastline? (DWT challenge)</p> <p>Why are shadows longer or shorter?</p> <p>Light and Shadow PLANBEE year 3</p> <p>Core Skills 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 Using results to draw simple conclusions, make predictions for new values and suggest improvements and raise further questions Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>Knowledge Select one or two locations on the river bank to compare. Where is the river fastest? Slowest? What can we find on the river bank (ecology) and what depends upon what? What lives in the water here? Which insects in habit these areas? Which birds habituate these areas? Then do the same when going to the sea for a day. Which river runs down to the sea here? (Budleigh Salterton is a great area as you can walk back up the river to the mill and there is so much to see upon the route.) Or Exmouth, as great rock-pooling when the tide is out. Make food chain & food web from information gathered. Investigate the mussel beds if at Exmouth. Recognise that we need light in order to see. Know that darkness is the absence of light. Identify light sources as apposed to reflection. Explore the Sun as a light source and identify the difference between night and day. Investigate what shadows are and why they are formed. (i.e. that light is blocked.) To investigate how shadows behave. Can children record findings using drawings and diagrams and perhaps make a shadow puppet play? Investigate how the size of shadows change throughout the day. Can children plan and carry out an investigation? • Can children find patterns in the way the size of shadows change? Do children know that we see when light is reflected from a surface? Meet certain challenges with mirrors...i.e. can you see round corners, or how many times can you make your Lego man reflect using 4 mirrors eight mirrors.</p>

	Autumn 1	Spring 1	Summer 1
<p>Year A 5 / 6</p> <p>OAK</p>	<p>How and why do living and non-living things change? Properties and change of materials PLANBEE year 5</p> <p>Core Skills Generating questions an planning, carrying out and evaluating scientific enquires to answer them. Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Use data loggers to create and print out graphs. Interrogate those graphs. Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</p> <p>Knowledge One DWT day to investigate wildlife in Autumn. Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. Do children understand the terms 'dissolve', 'react', 'solution', 'soluble'? Know that some changes of state and dissolving and mixing processes can be reversed through filtering, sieving and evaporating. Explain that some changes form new materials, and that these changes are not usually reversible. Know that some reactions generate a gas. Explain that some changes, caused by heating or cooling form new materials, and that these changes are often not reversible. Explain that changes caused by burning form new materials, and that these changes are not reversible. Compare and group together everyday materials on the basis of their properties. give reasons based on evidence from comparative and fair tests, for the particular uses of everyday materials.</p>	<p>What is an optical illusion? SEEING LIGHT PLANBEE YEAR 6</p> <p>Core Skills Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Use data loggers to create and print out graphs. Interrogate those graphs. Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations . Identifying scientific evidence that has been used to support or refute ideas or arguments. Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Using test results to make predictions to set up further comparative and fair tests.</p> <p>Knowledge Review understanding of light and shadow and to explore how light travels, from a source and in a straight line. Investigate how we see things through light entering the eyes. Can children recognise the main parts of the eye and how they work? Explore how light can be reflected and change direction. Investigate reflections from a variety of surfaces. Be able to plan and carry out an experiment to investigate how shadows behave. Can children choose a question to investigate and plan an investigation, deciding how they will make it a fair test and then draw conclusions from their results? Explore the differences between shadows and reflections and consolidate knowledge of how we see things. Be able to describe the difference between a shadow and a reflection.</p>	<p>What are the differences in life cycles and habitats of animals and plants in different regions of the world? LIFE CYCLES PLANBEE year 5</p> <p>Core Skills Generating questions an planning, carrying out and evaluating scientific enquires to answer them. Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</p> <p>Knowledge Describe the process of sexual reproduction in flowering plants. Describe the process of asexual reproduction in plants. Describe the process of sexual reproduction in animals. Compare species that reproduce sexually using scientific graphs and diagrams Observe and compare the life cycles of animals in our local environment with other environments around the world. Describe the conditions and life cycles of different environments making links. Compare how different animals reproduce and grow. Find out about the work of naturalists. Focus on the work of Sylvia Earle and other naturalists, perhaps one of their choice. Can children explain why the secondary sources of evidence cannot always be trusted?</p>

	Autumn 2	Spring 2	Summer 2
<p>Year A 5 / 6</p> <p>OAK</p>	<p>Why are different materials used for everyday things? Properties and change of materials PLANBEE year 5</p> <p>Core Skills Generating questions and planning, carrying out and evaluating scientific enquiries to answer them. Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Use data loggers to create and print out graphs. Interrogate those graphs. Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations .</p> <p>Knowledge</p> <p>Explain that some changes, caused by heating or cooling form new materials, and that these changes are often not reversible. Explain that changes caused by burning form new materials, and that these changes are not reversible. Compare and group together everyday materials on the basis of their properties. Give reasons based on evidence from comparative and fair tests, for the particular uses of everyday materials.</p>	<p>What is a universe? Earth and Space PLANBEE YEAR 5 SCIENCE WEEK</p> <p>Core Skills Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Use data loggers to create and print out graphs. Interrogate those graphs. Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Identifying scientific evidence that has been used to support or refute ideas or arguments. Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Using test results to make predictions to set up further comparative and fair tests.</p> <p>Knowledge Recognise and describe the Sun, Earth and Moon as approximately spherical bodies. Do the children know that people did not always think this and what evidence can they give to explain that the Earth is not flat? Find out about the size of the Earth, Sun and Moon and how far away from each other they are. https://www.ogdentrust.com/resources/phizzi-focus-earth-space Also, other Great universe resources here. Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky. Use data to draw conclusions about the Sun at different times of the year. Describe the movement of the Earth, and other planets, relative to the Sun in the Solar System. describe the movement of the Moon relative to the Earth.</p>	<p>CHANGES AND REPRODUCTION PLANBEE YEAR 5 Describe the changes as humans develop to old age. All living things fits with activities on residential MICRO ORGANISMS</p> <p>Core Skills Generating questions and planning, carrying out and evaluating scientific enquiries to answer them. Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</p> <p>Knowledge Recognise the stages of growth and development in humans. Know the stages in the gestation period of humans and compare them to other animals. Can children describe the main stages of gestation in humans? • Can children explain how embryos and fetuses grow and develop in the womb? • Can children define and use key vocabulary to describe gestation in humans? Recognise the stages of development during childhood and understand the needs of children at those stages. Can they describe the needs of a human baby to other animals? Can they explain the key points of change in a human life cycle? Understand the initial changes inside and outside of the body during puberty. Can children correctly identify the parts of the body that change during puberty? • Can children explain in simple terms the role played by hormones in the growth of humans and other animals? Know the changes that occur during puberty and how they differ for boys and girls. Understand how the body changes during adulthood and old age.</p> <p>Know what microorganisms are. Know that microorganisms can be useful as well as harmful. https://www.bbc.co.uk/bitesize/topics/zfxxsbk/resources/1 Research a range of microorganisms after watching the clips. Research the work of either Edward Jenner or Alexander Fleming and make a presentation. Experiment with making bread to see how yeast helps the bread to rise. This is also studied in Classifying Organisms PLANBEE year 6 Year B Autumn 2.</p>

	Autumn 1	Spring 1	Summer 1
Year B 3 / 4 Willow	<p>What is an ecowarrior? Launch of DWT challenge What keeps me healthy? Link to PE and DT PLANBEE year 4 Eating and digestion first part Core Skills Setting up simple practical enquiries, comparative and fair tests Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions Identifying differences, similarities or changes related to simple scientific ideas and processes Knowledge Be able to identify and classify carnivores, herbivores and omnivores both in our local environment and in other environments. Can children classify animals according to their diet? be able to construct and interpret a variety of food chains. Know what the terms consumer and producer mean. Know what a healthy diet means to humans. What diseases or deficiencies are linked to an unhealthy diet?</p>	<p>What's that noise? Y4 PlanBee Changing sound. <ul style="list-style-type: none"> Sources of sound Pitch and volume Vibrations and the ear. Why do I have to eat? Remaining part of PlanBee Y4 Eating and Digestion. <ol style="list-style-type: none"> The process The need teeth Core Skills Asking relevant questions and using different types of scientific enquiries to answer them Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers Identifying differences, similarities or changes related to simple scientific ideas and processes Knowledge Find out that sounds are made when objects and materials vibrate. Investigate whether sounds can travel through different materials. Do children know that sound travels through solids, liquids and gases? Explore the relationship between distance and volume. Find out that some materials are effective in preventing vibrations from sound sources reaching the ear. Identify the different types of teeth in humans and identify their functions. Explore different ways of keeping teeth healthy. Investigate how the digestive system works. To be able to describe the functions of the basic parts of the digestive system. Describe and explain how digestion works... perhaps the digestion of a cheese sandwich. Investigate how sounds can be different pitches and volumes. Find out how the length, thickness and tightness of a string affects its pitch. Find out how sounds can be made by air vibrating and how to change the pitch of notes produced by vibrating air.</p>	<p>What's in our world? PLANBEE year 4 Environments Classification of living things ECOWARRIORS Mapping of species before and after project. Core Skills Asking relevant questions and using different types of scientific enquiries to answer them Setting up simple practical enquiries, comparative and fair tests Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions Identifying differences, similarities or changes related to simple scientific ideas and processes Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables Using straightforward scientific evidence to answer questions or to support their findings Using results to draw simple conclusions, make predictions for new values and suggest improvements and raise further questions Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions Knowledge Be able to identify a variety of habitats and explore why organisms live in different habitats. Classify the range of animals that may live in one or more habitat. Be able to group organisms according to their characteristics. Be able to classify animals into specific groups according to their characteristics. Be able to use a classification key to identify animals. Be able to identify and classify a variety of British plants. (Especially those in our local area.) Explore the positive and negative human impact on habitats and environments.</p>

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<p>Year B 3 / 4</p> <p>Willow</p>	<p>Why is jelly wobbly and sticky? (PLANBEE year 4 States of Matter)</p> <p>Core Skills Setting up simple practical enquiries, comparative and fair tests Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions Identifying differences, similarities or changes related to simple scientific ideas and processes</p> <p>Knowledge Compare and group materials together according to whether they are solids or liquids. Identify and explore the properties of gases. Do children know that air has weight and is different to solids and liquids in the way shape is/is not maintained? Observe that materials change state when they are heated or cooled. Research the temperature in degrees Celsius ($^{\circ}C$) at which materials change state. Understand the process of evaporation. Use and take measurements using a rain gauge on a hot day. Understand the process of condensation. Use and explain the water cycle simulation kit. Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>	<p>What do I need to know to make a burglar alarm (link to DT) ? Y4 PlanBee Circuits and Conductors. ECOWARRIORS to look at alternative sources of power (Archimedes screw) and if any are in Tipton.</p> <p>SCIENCE WEEK</p> <p>Core Skills Asking relevant questions and using different types of scientific enquiries to answer them Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers Identifying differences, similarities or changes related to simple scientific ideas and processes</p> <p>Knowledge Investigate circuits and their different components Investigate the differences between mains and battery-powered circuits. Recognise some common conductors and insulators, and associate metals with being good conductors. Can children construct a circuit to test which materials allow electricity to pass through? - Can children explain that with some materials the bulb did not light because the circuit was not complete? Can children make generalisations about which materials are conductors and which are insulators? Investigate the purposes of conducting and insulating materials. Be able to use knowledge of conductors and insulators to create switches to complete a circuit. (Link to DT and making a burglar alarm. Do children know that a switch can be used to make or break a circuit to turn a device on or off? Be able to plan and carry out an experiment to see how to change the brightness of a bulb.</p>	<p>What can we do to make a difference? Possible trip to Bicton Heathland...Clinton estates Kingfisher AWARD 3 wk. project run by Clinton Estates.</p> <p>Core Skills Asking relevant questions and using different types of scientific enquiries to answer them Setting up simple practical enquiries, comparative and fair tests Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions Identifying differences, similarities or changes related to simple scientific ideas and processes Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables Using straightforward scientific evidence to answer questions or to support their findings Using results to draw simple conclusions, make predictions for new values and suggest improvements and raise further questions Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>Knowledge Identify physical and human features of our environment. Investigate plastic pollution https://www.twinkl.co.uk/resource/t-t2-073-plastic-pollution-resource-pack Investigate endangered animals and chose one to write about : . https://www.twinkl.co.uk/resource/t-he-437-endangered-animal-fact-file-research-activity-sheet https://www.twinkl.co.uk/resource/t2-t-1058-endangered-animals-activity-powerpoint Find out about deforestation in the Amazon and compare it to the managed heathland on the Clinton Estate. How many species are endangered in each of these areas by deforestation? https://www.twinkl.co.uk/resource/t2-t-1057-ks2-deforestation-information-powerpoint Select one activity which will make a difference and carry it out.</p>

	Autumn 1	Spring 1	Summer 1
Year B 5 / 6 Oak	<p>What Changes?</p> <p>HEALTHY BODIES PLANBEE year 6</p> <p>Core Skills Generating questions an planning, carrying out and evaluating scientific enquires to answer them. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Use data loggers to create and print out graphs. Interrogate those graphs. Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Using test results to make predictions to set up further comparative and fair tests.</p> <p>Knowledge Find out how scientific ideas about food and diet were tested in the past and how this has contributed to our knowledge of a balanced diet. Investigate some different food groups and find out why a variety of foods are important for a healthy diet. Find out how nutrients and water are transported in the human body. Can children describe how the circulatory system works? • Can children record their own resting pulse rate investigate what happens to the heart when we exercise and why. Investigate how muscles move the skeleton and how muscle activity requires increased blood flow. Investigate the effects of tobacco, alcohol and other drugs. Evaluate what we can do to keep our bodies healthy. Can children describe the impact that diet has on the body? • Can children describe why exercise is important for a healthy lifestyle? • Can children describe the harmful effects some drugs can have on the body?</p>	<p>What should I measure and How can I measure it?</p> <p>FORCES IN ACTION PLANBEE year 5</p> <p>Core Skills Generating questions an planning, carrying out and evaluating scientific enquires to answer them. Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Use data loggers to create and print out graphs. Interrogate those graphs. Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Using test results to make predictions to set up further comparative and fair tests.</p> <p>Knowledge Explain and investigate that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Ensure the difference between mass and weight is understood. Identify the effects of friction acting between moving surfaces. When is friction a useful thing? Carry out an investigation into friction (who has the best grip on their trainers?) Plan, do and review! Identify and explain the effects of air resistance. Carry out an investigation taking measurements and drawing a graph. Identify and explain the effects of water resistance. Identify trends and draw conclusions. Use a stopwatch. Recognise that levers and pulleys allow a smaller force to have a greater effect. Can children explore the effects of changing parts of their model? Recognise that gears allow a smaller force to have a greater effect.</p>	<p>What is diversity? (As much outdoor learning as possible, including residential)</p> <p>EVOLUTION AND INHERITANCE PLANBEE year 6</p> <p>Core Skills Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Use data loggers to create and print out graphs. Interrogate those graphs. Identifying scientific evidence that has been used to support or refute ideas or arguments.</p> <p>Knowledge Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Identify how animals and plants are adapted to suit their environment in different ways. Understand that adaptation of plants and animals to suit their environment may lead to evolution. Do children know that not all inherited characteristics are advantageous? • Can children explain why advantageous characteristics are more likely to be passed from generation to generation? • Do children understand that whole species can evolve in this way? (i.e. the beak of the Toucan?) Find out about how the work of scientists has helped develop our understanding of the process of evolution.</p>
	Autumn 2	Spring 2	Summer 2

<p>Year B 5 / 6</p> <p>Oak</p>	<p>What Changes? Classifying Organisms PLANBEE year 6 Probably covered by environmental trip day</p> <p>Core Skills Generating questions and planning, carrying out and evaluating scientific enquires to answer them. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Use data loggers to create and print out graphs. Interrogate those graphs. Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Using test results to make predictions to set up further comparative and fair tests.</p> <p>Knowledge Recap ways of grouping organisms according to their characteristics. Explore ways of distinguishing between organisms that have similar characteristics. Be able to classify plants according to their characteristics. Find out about Carl Linnaeus and his classification system. Do children know who Carl Linnaeus is and how he contributed to science? • Do children know that animals can be assigned to specific groups based on their characteristics? • Can children give reasons for why classification systems are important? Explore what micro-organisms are and how they can be grouped. Be able to identify and classify organisms in the local area. Can children identify a variety of different organisms found in their local environment? • Can children classify a variety of organisms appropriately? • Can children use a variety of sources of information to identify organisms they are unfamiliar with?</p>	<p>What should I measure and How can I measure it? Changing Circuits PLANBEE year 6 SCIENCE WEEK Core Skills Generating questions an planning, carrying out and evaluating scientific enquires to answer them. Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Use data loggers to create and print out graphs. Interrogate those graphs. Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations . Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Using test results</p> <p>Knowledge To recap knowledge of electricity and circuits. What else would you like to find out about circuits? What questions could we investigate throughout this unit? Do children know what the main components of a circuit are? • Do children recognise what the difference between a series and a parallel circuit is? • Can children draw and/or construct working circuits? Investigate ways in which the brightness of a bulb or speed of a motor is changed. Do children know that the brightness of a bulb or speed of a motor depends on how much power is supplied to each component? • Do children know that bulbs and motors will blow out if too high a voltage is used? Be able to recognise and use conventional symbols for circuits. Be able to plan, carry out and evaluate an experiment to see how changing the wire in a circuit affects the brightness of a bulb. Be able to review and assess understanding of circuits. Can children answer questions to demonstrate their knowledge? • Can children convey knowledge of circuits in a variety of ways?</p>	<p>What is diversity? The diversity of organisms, including classification Core Skills Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Use data loggers to create and print out graphs. Interrogate those graphs. Identifying scientific evidence that has been used to support or refute ideas or arguments.</p> <p>Knowledge Can children share what they have learned about the process of evolution? • Can children share what they have learned about the life and work of Charles Darwin? Compare Darwin's theories with those of Alfred Russel Wallace and Jean-Baptiste-Lamarck. To recognise that living things have changed over time and that a number of factors can affect a species' evolution. Understand how humans have evolved over time, and how human behaviour can affect change in species over time. Compare the work of Carl Linnaeus (Autumn term) with these other scientists.</p>
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