

Science
Learning Intentions, Retrieval Questions and Vocabulary

2024 - 2025				
Year Group	Y1/2	Y3/4	Y4/5	Y5/6
Unit title	Animals including Humans (Y1)	Animals including Humans (Y4)	Animals including Humans (Y5)	Animals including Humans (Y6)
Vocabulary	Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves, names of animals, parts of human body, senses (touch, smell, see, taste, hear).	Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, teeth, incisor, canine, molar, premolars, herbivore, carnivore, omnivore, producer, predator, prey, food chain,	Puberty, offspring, pregnancy, reproductive system, fertilisation, gestation period, correct terminology for reproductive organs inline with PSHE/SRE unit.	Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs, lifestyle.
Aut 1	<p>Animals including Humans.</p> <p>Hook – animal man if possible to make observations or look at photos.</p> <p>Lls:</p> <ol style="list-style-type: none"> 1. To identify and name some common animals. 2. To describe and compare the structure of a variety of common animals. 3. To identify, name and sort animals that are herbivores, carnivores and omnivores. 4. To name and label the parts of the human body. 5. To name the five senses and to perform simple tests to find out more about them. 	<p>Animals including Humans</p> <p>Hook – demonstrate digestive system practically or show video. https://www.stem.org.uk/resources/library/resource/35396/digestive-system-experiment</p> <p>Lls:</p> <ol style="list-style-type: none"> 1. To discuss how to keep teeth healthy; plan and set up an investigation into tooth decay. 2. To draw conclusions from an investigation about keeping teeth healthy and to identify and examine different types of teeth. 3. To identify the parts of the digestive system and their function. 4. To demonstrate and explain the process of digestion. 	<p>Animals including Humans</p> <p>Hook – pictures of baby animals, can the children guess what the adult and baby animal are called? I.e. goat – kid, sheep -lamb etc.</p> <p>Lls:</p> <p>Note – Y3 objectives to be taught as a 2 lesson mini-unit:</p> <ol style="list-style-type: none"> 1 – To understand the importance of nutrition for animals, including humans 2-to understand that humans and some other animals have skeletons and muscles for support, protection and movement. <ol style="list-style-type: none"> 1. To explain what gestation periods are for different animals, including humans. 2. To describe the changes as humans develop from fertilisation to birth. 	<p>Animals including Humans</p> <p>Hook – show the demo hearts (with the blood in tubes) and ask the children to explore and discuss what they think is happening when you squeeze it.</p> <p>Lls:</p> <ol style="list-style-type: none"> 1. To know the three main parts of the circulatory system and describe the job of the heart. 2. To describe the important jobs of the blood vessels and blood. 3. To be able to describe the importance of exercise and how it affects the heart. 4. To understand that regular exercise is important for a healthy body.

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	<p>6. To sort animals according to a criteria.</p>	<p>5. To construct food chains for different habitats and explain findings using the correct scientific language. 6. To identify and explain differences and similarities in different animals teeth.</p>	<p>3. To explain how babies grow and develop into children. 4. To describe and explain the main changes that occur during puberty. 5. To identify the changes that take place in late adulthood. 6. To describe the stages of human development.</p>	<p>5. To be able to explain how diet and exercise affect the body. 6. To be able to recognise the impact of drugs and alcohol on the way bodies function.</p>
	<p>Key skills: Children observe and identify animals in the world around them. With a support resource, they sort and classify them into simple groups. • Children make careful observations of animals in the same group and can use simple features to compare living things (animals). • Children can use simple secondary sources to find answers to help them sort and classify animals according to what they eat. • Children can use their senses to carry out simple practical tests, using simple equipment. After making careful observations, they can draw simple conclusions and can, with support, record and communicate their findings in a range of ways. • Children use simple sorting diagrams to sort and classify objects (animals) into simple groups of their choice and are beginning to</p>	<p>Key skills: Children can set up and carry out simple comparative and fair tests. They can observe changes over time. • Children can draw simple conclusions from their results and suggest improvements to investigations. They can record findings using drawings and keys. • Children can use straightforward scientific evidence to answer questions or to support their findings. • Children can gather, record, classify and present data in a variety of ways to help in answering questions. • Children can identify similarities, differences, patterns and changes relating to simple scientific ideas and processes.</p>	<p>Key skills: Children can plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. • Children can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. • Children can report and present findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations. • Children can identify scientific evidence that has been used to support or refute ideas or arguments.</p>	<p>Key skills: Children can identify scientific evidence that has been used to support or refute ideas or arguments. • Children can plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary; record data and results of increasing complexity using classification keys, tables, scatter graphs, bar and line graphs; report findings from enquiries, including conclusions and degree of trust in results, in written forms by reporting and presenting the findings of their enquiry. • Children can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p>

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	explain why they have sorted them this way.			
Unit title	1 week on seasonal changes Animals including Humans (Y2)	Living things and their Habitats	Living things and their Habitats	Evolution and Inheritance
Vocabulary	Vocabulary: Offspring, grow, adults, survival, water, food, air, exercise, hygiene, nutrition, reproduce, egg, chick, chicken, caterpillar, pupa, butterfly, spawn, tadpole, frog, lamb, sheep, baby, toddler, child, teenager, adult.	Vocabulary: Environment, flowering, non-flowering, plants, animals, vertebrate, environment, dangers, vertebrate, fish, amphibians, reptiles, birds, mammals, invertebrate, snails, slugs, worms, spiders, insects, flowering and non-flowering plants, human impact, ecologically planned parks, population, development, litter, deforestation	Vocabulary: Life cycles, mammals, amphibian, insect, bird, plants, animals, vegetable garden, flower border, David Attenborough, Jane Goodall, reproduction, sexual, asexual, rainforest, oceans, desert, prehistoric, similarities, differences	Vocabulary: Offspring, inheritance, variations, characteristics, adaptation, habitat, environment, evolution, natural selection, fossil, adaptive traits, inherited traits
Aut 2	<p>1 week on seasonal changes</p> <p>Animals including Humans.</p> <p>Pre-assessment: What they know already about animals including humans?</p> <p>HOOK: Picture puzzle – who am I? Horse photo in shared area. Also play who am I (I have ? legs, tail, no fur, I like eating bugs etc)</p> <p>LIs 1.To match, sort and group young animals and their adults. 2.To find out how animals change as they grow into adults.</p>	<p>Living things and their Habitats</p> <p>Pre-assessment: What they know already about Living things and their habitats?</p> <p>HOOK: https://www.stem.org.uk/resources/library/resource/32764/newly-discovered-species-age-7-11</p> <p>LIs 1. To use a range of methods to sort living things. 2. To identify vertebrates by observing their similarities and differences. 3. To use a key to identify invertebrates. 4.To show the characteristics of living things in a table and a key.</p>	<p>Y4 Rocks and Soils</p> <p>Pre- assessment: What do they already know and what would they like to find out?</p> <p>HOOK: https://thestemhub.org.uk/stem-at-home/item/bread-fossils</p> <p>LIs 1. To compare different types of rocks. 2. To group rocks based on their properties. 3. To explain how fossils are formed. 4. To explain Mary Anning’s contribution to palaeontology. 5. To explain how soil is formed. 6. To</p>	<p>Evolution and Inheritance.</p> <p>Pre-assessment: What they know already about evolution and inheritance?</p> <p>HOOK: Survival of the Fittest</p> <p>LIs 1. To explain the scientific concept of inheritance. 2. To demonstrate the understanding of adaptation. 3. To identify the key ideas of the theory of evolution. 4. To identify evidence of evolution from fossil records. 5. To understand how human beings have evolved.</p>

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	<p>3. To compare the stages of the human life cycle.</p> <p>4. To research and describe what animals, including humans need to survive.</p> <p>5. To test the effects of exercise on the human body.</p> <p>6. To investigate the importance of healthy eating and hygiene.</p>	<p>5. To recognise positive and negative changes to the local environment.</p> <p>6. To describe environmental dangers to endangered species.</p>	<p>Y5 Living things and their Habitats</p> <p>Pre-assessment: What they know already about Living things and their habitats?</p> <p>HOOK: https://www.stem.org.uk/resources/elibrary/resource/32881/turtle-life-cycle</p> <p>LIs</p> <ol style="list-style-type: none"> 1. To describe how some plants reproduce. 2. To describe the life cycles of different mammals 3. To explain what Jane Goodall discovered about chimpanzees. 4. To compare the life cycles of amphibians and insects. 5. To compare the life cycles of plants, mammals, amphibians, insects and birds. 6. To write a biography about David Attenborough or Jane Goodall and their contribution to science (nature and animal behaviour). 	<p>6. To explain how human intervention affects evolution.</p>
	<p>Key Skills: Asking simple questions and recognising that they can be answered in different ways. Identifying and classifying. Using their observations and ideas to suggest answers to questions.</p>	<p>Key Skills: Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</p>	<p>Key Skills: Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p>	<p>Key Skills: Observing and raising questions. Analysing advantages and disadvantages. Identifying scientific evidence that has been used to support or refute ideas or arguments.</p>

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	Gathering and recording data to help in answering questions. Notice patterns and relationships. Use secondary sources to find answers.	Identifying differences, similarities or changes related to simple scientific ideas and processes.	Identifying scientific evidence that has been used to support or refute ideas or arguments. 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. Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas and talk about how scientific ideas have developed over time.	Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas and talk about how scientific ideas have developed over time.
Unit title	Everyday Materials (Y1)	Sound (Y4)	Properties of Materials (Y5)	Electricity (Y6)
Vocabulary	Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see-through	Sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, loud, insulation	Thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/non-reversible change, burning, rusting, new material	Circuit, complete circuit, circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, switch, voltage
Spr 1	Everyday Materials Pre-assessment – Feely bag – what are things made from? HOOK - https://www.twinkl.co.uk/resources/t-tp-427-different-materials-hunting-activity-sheet Lls:	Sound Vocabulary: Pre-assessment – Sound quiz on kahoot. HOOK – Sound walk Lls 1. To describe and explain sound sources.	Properties of Materials Vocabulary: Pre-assessment – Recap knowledge from KS1 – can do post assessment from Y2 Everyday materials. HOOK – Does it float? Pick items to float/sink in tub of water. Children make predictions. Lls	Electricity Vocabulary: Pre-assessment – Recap knowledge from Y4 Electricity – can do post assessment from Y4. HOOK – Static electricity https:// www.stem.org.uk/rxvyr Lls

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	<p>1. To identify and name different materials. 2. To identify the material an object is made from. 3. To describe the properties of everyday materials. 4. To identify which materials have certain properties. 5. To investigate waterproof materials. 6. To sort objects by their properties. Post assessment</p>	<p>2. To explain how different sounds travels. 3. To explore ways to change the pitch of a sound. 4. To investigate ways to absorb sound. 5. To investigate ways to absorb sound. 6. To make a musical instrument to play different sounds. Post assessment -</p>	<p>1. To compare materials according to their properties. 2. To investigate thermal conductors and insulators. 3. To investigate the best electrical conductors. 4. To investigate materials which will dissolve. 5. To use different processes to separate mixtures of materials. 6. To identify and explain irreversible chemical changes. Post assessment -</p>	<p>1. To explain the importance of the major discoveries in electricity. 2. To observe and explain the effects of differing volts in a circuit. 3. To observe and explain the effects of differing volts in a circuit. 4. To plan an investigation. 5. To record my data and report my findings. 6. To investigate my results further. Post assessment -</p>
	<p>Key skills: Distinguish between an object and the material it is made from. • Make a prediction. • Perform simple tests. • Use their observations to answer simple questions. • Sort objects 3 ways.</p>	<p>Key skills: Explain how sound sources vibrate to make sounds. • Explain how vibrations change when the loudness of a sound changes. • Explain how sounds travel to reach our ears. • Describe the pitch of a sound. • Describe patterns between the pitch of a sound and the features of the object that made the sound. • Explain how sound travels through a string telephone. • Identify the best material for absorbing sound. • Create a musical instrument that can play high, low, loud and quiet sounds. • Make observations and conclusions. • Be able to answer questions based on their learning.</p>	<p>Key skills: Follow instructions to test a material's properties. • Explain the uses of thermal and electrical conductors and insulators. • Order materials according to their electrical conductivity. • Explain and investigate dissolving. • Explain the processes used to separate mixtures. • Explain irreversible changes. • Identify the variables in an investigation. • Make observations and conclusions. • Be able to answer questions based on their learning.</p>	<p>Key skills: explain how our understanding of electricity has changed over time; • draw circuit diagrams using the correct symbols and label the voltage correctly; • decide which variables to control while planning an investigation; • decide how to report their findings; • make new predictions based on the previous results; • select an appropriate scientific enquiry.</p>
Unit title	Living things and their habitats (Y2)	Electricity (Y4)	Earth and Space (Y5)	Light (Y6)

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Vocabulary	Living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed, water, air, survive, survival, names of local habitats, (e.g. pond, woodland etc), names of micro-habitats (e.g. under logs, in bushes etc), conditions, light, dark, shady, sunny, wet, damp, dry, hot, cold, names of living things in the habitats and micro-habitats studied.	Electricity, electrical appliance/device, mains, plug, electrical circuit, complete circuit, component, cell, battery, positive, negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol	Sun, Moon, Earth, planets (Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune), spherical, Solar System, rotate, star, orbit	Light, straight lines, surfaces, opaque, transparency, translucent, conductivity, convex, reflection, absorption, retina, frequencies of light, prisms, shadow, periscope, angles.
Spring 2	<p>Living things and their habitats</p> <p>HOOK – quick game in groups. ON whiteboards ask the chn to write down as many living things as they can think off in 2 minutes.</p> <p>Lls</p> <ol style="list-style-type: none"> 1. To compare the differences between things that are living, dead and have never been alive. 2. To map a habitat and identify what is in it. 3. To identify animals in their habitats. 4. To describe a habitat and identify animals live in it. 5. To identify how an animal is suited to its habitat. 6. To describe how animals get their food. 	<p>Electricity</p> <p>HOOK – Name as many electrical items as you can think of.</p> <p>Lls</p> <ol style="list-style-type: none"> 1. To identify common appliances that run on electricity. 2. To identify circuit components and build working circuits. 3. To investigate whether circuits are complete or incomplete. 4. To investigate which materials are electrical conductors or insulators. 5. To explain how a switch works in a circuit, build switches and report my findings. 6. To discuss and solve problems about electricity using reasoning skills. 	<p>Earth and Space</p> <p>HOOK – Show short video about the solar system.</p> <p>Lls</p> <ol style="list-style-type: none"> 1. To explain why we know the Sun, Earth and Moon are spherical. 2. To name and describe features of the planets in our solar system. 3. To explain how planets move in our solar system. 4. To explain day and night and the apparent movement of the sun across the sky. 5. To investigate night and day in different parts of the Earth. 6. To explain the movement of the Moon. 	<p>Light</p> <p>HOOK – Demonstrate prisms with light or rainbows.</p> <p>Lls</p> <ol style="list-style-type: none"> 1. To explain that light travels in straight lines. 2. To understand how mirrors reflect light, and how they can help us see objects. 3. To investigate how refraction changes the direction in which light travels. 4. To investigate how a prism changes a ray of light. 5. To investigate how light enables us to see colours. 6. To explain why shadows have the same shape as the object that casts them.

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	<p>Key skills: Explain some of the life processes. • Ask questions to decide if a thing is living, dead or has never been alive. • Identify some plants and animals in global habitats. • Draw a map of a local habitat. • Sort objects into categories and give reasons for their choices. • Identify and name minibeasts in microhabitats. • Gather and record information. • Suggest how an animal is able to survive in their habitat. • Answer questions about habitats they have researched. • Explain why the animals in a habitat need the plants. • Draw a simple food chain.</p>	<p>Key skills: Children can group and classify things (appliances) and record their findings using labelled diagrams. • Children can use a range of (electrical) equipment and record findings using labelled diagrams. • Children can make predictions, use a range of (electrical) equipment and draw simple conclusions from their results. • With some guidance, children can decide how to set up a simple practical enquiry, make predictions and draw simple conclusions from their results. • Children can report and present their results and conclusions to others in oral forms. • Children can use straightforward scientific evidence to answer questions and identify similarities, differences, patterns and changes relating to simple scientific ideas and processes.</p>	<p>Key skills: Describe the Sun, Earth and Moon as spherical. • Name the planets in the solar system independently. • Distinguish between heliocentric and geocentric ideas of planetary movement. • Explain that day and night is due to rotation of the Earth. • Support the idea that different places on Earth experience night and day at different times with evidence. • Report and present findings from enquiries. • Explain how the Moon moves relative to the Earth.</p>	<p>Key skills: Explain how light travels to enable us to see. • Understand that all objects reflect light. • Identify the angles of incidence and reflection. • Understand refraction as light bending or changing direction. • Explain how a prism allows us to see the visible spectrum. • Understand that colours are a result of light reflecting off an object. • Explain Isaac Newton’s experiments about light and colour. • Understand how shadows change size. • Understand that shadows are the same shape as the object that casts them. • Make observations and conclusions. • Be able to answer questions based on their learning.</p>
Unit title	Plants (Y2)	States of matter (Y4)	Forces and Magnets (Y4) Twinkl Y3 Forces (Y5)	Living things and their Habitats (Y6)
Vocabulary	Light, shade, sun, warm, cool, water, space, grow, healthy, bulb, germinate, shoot, seedling	Solid, liquid, gas, heating, cooling, state change, melting, freezing, melting point, boiling, boiling point, evaporation, condensation, temperature, water cycle	Force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears, magnetic, poles	micro-organisms, plants, animal, classification, classify animals, invertebrates, insects, spiders, snails, worms, vertebrates, fish, amphibians, reptiles, birds, mammals
Sum 1	Plants HOOK – Nature walk around the school – how many plants can they spot?	States of matter HOOK – Solid, liquid and gas sorting. In groups – sort out different things into the correct categories.	Forces HOOK – Go on gym equipment on the field can they describe the movements that are being made on each piece of equipment?	Living things and their habitats HOOK – Show a classification key with missing parts, ask the children to fill in the gaps.

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	<p>Lls</p> <ol style="list-style-type: none"> 1. To find out what plants need to grow. 2. To investigate what is inside a seed. 3. To describe the life cycle of a plant. 4. To explain what plants need to stay healthy. 5. To explain what plants need to stay healthy. 6. To explain how plants are suited to their habitats. 	<p>Lls</p> <ol style="list-style-type: none"> 1. To sort and describe materials 2. To investigate gases and explain their properties. 3. To investigate materials as they change state. 4. To explore how water changes state. 5. To investigate how water evaporates. 6. To identify and describe the different stages of the water cycle. 	<p>Lls</p> <ol style="list-style-type: none"> 1. To identify forces acting on objects. (Y4 and Y5) 2. To investigate how a toy car moves over different surfaces. (Y4) <p>To explore the effect gravity has on objects and how gravity was discovered. (Y5)</p> <ol style="list-style-type: none"> 3. To sort magnetic and non-magnetic materials. (Y4) To investigate the effects of air resistance. (Y5) 4. To investigate the strength of magnets. (Y3) To explore the effects of water resistance. (Y5) 5. To explore magnetic poles. (Y4) To investigate the effects of friction. 6. To observe how magnets attract some materials. (Y4) To explore and design mechanisms. 	<p>Lls</p> <ol style="list-style-type: none"> 1. To give reasons for classifying animals based on their similarities and differences. 2. To describe how living things are classified into groups. 3. To identify the characteristics of different types of animals. 4. To describe and investigate helpful and harmful microorganisms. 5. To identify the characteristics of different types of microorganisms. 6. To classify organisms found in my local habitat.
	<p>Key skills:</p> <p>Children can begin to recognise ways in which they might answer scientific questions. They can carry out simple practical tests, using simple equipment. • Children observe the natural world around them. • Children can notice links between cause and effect and talk about their findings to a variety of audiences in a variety of ways. • Children can use simple features to compare living things.</p>	<p>Key skills:</p> <p>Describe the properties of solids, liquids and gases. • Explain that melting and freezing are opposite processes that change the state of a material. • Identify the melting and freezing point of several different materials. • Explain that heating causes evaporation and cooling causes condensation. • Explain that evaporation and condensation are opposite processes that change the state of a material. • Explain that the higher the temperature, the</p>	<p>Key skills:</p> <p>identify and explain the different forces acting on objects; • explain Newton’s role in discovering gravity; • accurately measure an object’s weight and mass; • explain how to increase the effects of air resistance; • explain Galileo’s ‘Tower of Pisa’ experiment into gravity and air resistance; • identify streamlined shapes; • explain how friction is used in brake pads; • investigate the effects of friction; • explain how different mechanisms</p>	<p>Key skills:</p> <p>Give reasons for the classification of animals, using examples as a guide. • Classify living things using the Linnaean system. • Match groups of animals to their characteristics. • Classify creatures based on their characteristics. • Design a creature that has a specific set of characteristics, using prompts. • Describe the useful and harmful effects of different microorganisms. • Identify the variables in an investigation into harmful microorganisms. • Draw conclusions</p>

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		quicker water evaporates. • Explain what happens to water at the different stages of the water cycle. • Make observations and conclusions. • Be able to answer questions based on their learning.	work; • design their own mechanism to achieve a given purpose; • identify the variables in an investigation; • make observations and conclusions; • be able to answer questions based on their learning.	based on their results. • Describe the characteristics of different microorganisms. • Describe the characteristics of groups or organisms, using images as prompts.
Unit title	Seasonal changes (Y1)	Plants (Y3)	Light	Science investigations
Vocabulary	Weather, sunny, rainy, raining, shower, windy, snowy, cloudy, hot, warm, cold, storm, thunder, lightning, hail, sleet, snow, icy, frost, puddles, rainbow, seasons, winter, summer, spring, autumn, Sun, sunrise, sunset, day length.	Photosynthesis, pollen, insect/wind pollination, male, female, seed formation, seed dispersal, air, nutrients, minerals, soil, absorb, transport.	Light, reflection, reflective, transparent, translucent, opaque, ultra violet.	Light, light source, reflect, reflective, absorb, direct/ direction, transparent, opaque, translucent, straight
Sum 2	Seasonal Changes HOOK Sketch pictures of landscapes outside. LIs 1. To describe how things change between seasons. 2. To describe what happens in summer and how to stay safe in the sun. 3. To observe and describe the weather. 4. To identify seasonal changes. 5. To use data to suggest answers about how daylight hours vary. 6. To compare the four seasons.	Plants HOOK Plant hunt around school grounds. LIs 1. To name the different parts of flowering plants and explain their jobs. 2. To set up an investigation to find out what plants need to grow well. 3. To present the results of my investigation using scientific language. 4. To investigate how water is transported in plants. 5. To name the different parts of a flower and explain their role in pollination and fertilisation. 6. To understand and order the stages of the life cycle of a flowering plant.	Light Y4 – cover Twinkl unit and Y5 recap and then investigate using Hamilton HOOK LIs 1. To recognise that I need light to see things, and that dark is the absence of light. (Y4 and Y5) 2. To investigate which surfaces reflect light.(Y4) 3. To use a mirror to reflect light and explain how mirrors work. 4. To know that light from the sun can be dangerous and that there are ways we can protect our eyes. 5. To investigate which materials block light to form shadows. 6. To find patterns when investigating how shadows change size.	Working Scientifically – investigations. https://www.hamilton-trust.org.uk/science/year-6-science/crime-lab-investigation/ LIs: 1. To recognise that light appears to travel in straight lines. 2. To explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. 3. To use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye. 4. To use the idea that light travels in straight lines to explain why shadows

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	<p>Great ideas for investigations on here: https://www.stem.org.uk/prima/ry/resources/collections/science</p>			<p>have the same shape as the objects that cast them. 5. To plan and carry out an investigation into the strength of various magnifying lenses. 6. To suggest and carry out further investigations on the effects of coloured light on coloured materials.</p>
	<p>Key skills: 1. Children are able to identify and classify things that happen in the different seasons. 2. Children make observations to identify features of seasons and compare them, explaining their reasoning. 3. Children can make observations using simple equipment. Children can gather and record data to help in answering questions. 4. Children are able to use simple equipment to make observations. 5. Children can use a secondary source to gather data and complete a table. They can then use the data to help them match answers to questions. 6. Children can decide how to sort and classify features of seasons into simple groups with some help and record classification tasks using simple tables or sorting diagrams.</p>	<p>Key skills: Explain the functions of the different parts of plants. • Set up an investigation and make predictions. • Make observations and conclusions. • Identify different parts of a flower. • Identify and describe the stages of the life cycle of flowering plants. ...some children will be able to: • Make and explain predictions. • Be able to answer questions based on their learning.</p>	<p>Key skills: Understand that dark is the absence of light. • Set up an investigation and make predictions. • Understand how surfaces reflect light. • Recognise that a mirror appears to reverse an image. • Identify some parts of the eye. • Understand how the Sun can damage parts of the eye. • Identify opaque, translucent and transparent objects. • Know how shadows change size.</p>	<p>Key skills: Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Record data and results of increasing complexity using scientific diagrams and labels, tables, bar and line graphs. Report and present 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>