

# Science Subject Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>EYFS FOCUS</b>	Our bodies	Light and Dark	Weather	Space	Materials/Minibeasts	Comparing animals
Hook - Trip/Visit/Question	<p>Visit from Anne Jepsom NHS Healthy Mouths Stockport.</p> <p>How do we change? How are we different from others? How are we the same? How can we look after our bodies? What similarities/differences do I have compared to my friends?</p>	<p>Celebrating Diwali, making Diya Lamps, Exploring opaque and transparent objects and materials.</p> <p>How Did Rama and Sita celebrate? How do you celebrate special occasions? Why do they have fireworks? Have you ever seen fireworks? Compare and contrast Christmas celebrations and traditions in other countries. Changing state of materials- solids-liquids investigation.</p>	<p>Investigating how different liquids will decay an egg in relation to teeth.</p> <p>Investigating/predicting freezing/melting different liquids. Will they all melt at the same rate?</p> <p>Make fruit salad.</p> <p>How does the cold weather effect our body? How can we keep warm in Winter? What is hibernation? Why do some animals hibernate/migrate? Keeping fit and healthy. What is exercise? Why is it important to keep healthy? Do we know what foods are healthy?</p> <p>We look different from when we were a baby. How do Frogs change as they grow?</p>	<p>In a taped off area in the yard, a special rock has been discovered by Mr Campen. What could this be? Where do you think it has come from?</p> <p>What do Astronauts do? How do they survive in Space? How do they eat? Wash their hair? Brush their teeth?</p> <p>Was Mae Jemison brave? Have you ever felt scared?</p> <p>Have you ever conquered a fear? Could we live on the Moon?</p>	<p>Minibeast Roadshow visit. Caterpillars Different homes for Fairytale Characters.</p> <p>What creature is this? How do you know? Where does it live? What does it eat? Comparing different habitats. Comparing similarities and differences between the insects.</p> <p>Why have you chosen to make this home?</p> <p>Which materials will you make it from? Why? Is it strong? Will it keep the rain out?</p>	<p>Trip to Smithills Farm.</p> <p>What animals did we see? Which animals have you never seen before? How did we feed the animals? What did they eat? Where do they live?</p>
Text / Person / Place	What makes me a me? You Choose	Rama and Sita. A Meerkat Christmas	A Frog in Winter Information books about Winter and lifecycles.	Rocket Says Look up! Information texts	There's no Dragon in this story. Fairytales/Traditional Tales. Mad about Minibeasts and other information texts.	The Little Island. What the ladybird heard.
Vocabulary	Healthy/Unhealthy foods. Oral Hygiene. Teeth Mouth Brushing Healthy/unhealthy food and drink. Plaque Fillings Grow Taller	Opaque Transparent Light Dark Shapes and sizes of objects and materials. Natural objects including leaf's and trees Seasons Changes	Winter Cold/season Warm Freeze Melt Solid Liquid Predict Observe Investigate Decay	Space Atmosphere Moon Planets Astronaut Mae Jemison Constellation Gravity Neil Armstrong Asteroid Meteor	Minibeasts/insects Habitats/homes Food Shelter Predators Safe Classification of insects; legs/wings/antennae Light Dark	Animals Similar Different Legs Wings Bodies Eggs Milk Farm Shelter Habitats

	Hair Eyes Skin colour/tone Similar/same Different Families Exercise Food/drink/healthy choices Washing and hygiene	Celebrations Events Family Colours Patterns New beginnings Compare Similar/same/different Solid Liquid Freeze Frozen Observe Predict	Hibernate Migrate Habitat Exercise Healthy Life Cycle Baby Grow Change	Sun Space Shuttle-Endeavour Fear Survive Heights Microphone Telescope Binoculars Music Songs Phone Freezing Nocturnal Craters Rock Sky Dark Light Rockets High	Looking after and keeping safe Wood Bricks Straw Strong Weak Waterproof Hot/Cold Texture Rough Smooth Soft Fall down/collapse Weather-wind/rain	Smell Touch Hear Sounds Babies Fur
<b>Year 1</b> <b>Focus</b>	Animals – including humans	Animals – including humans	Everyday Materials	Animals	Plants	Seasons
Hook - Trip/Visit/Question	Can I name a range of body parts? Can I link the body parts to senses? Can I talk about the differences and similarities of body parts? Can I name some internal organs? Can I talk about how humans change?	Can I name a range of body parts? Can I link the body parts to senses? Can I talk about the differences and similarities of body parts? Can I name some internal organs? Can I talk about how humans change?	Possible trip to a recycling centre Fairy tales Do I know the differences between the name of an object and the material it is made from? Can I identify and name a variety of everyday materials? Can I explain what the properties of materials are?	<b>Chester Zoo trip</b> Can I identify and name a variety of animals? Do I understand what carnivore, herbivore and omnivores are? Can I describe the differences between animals?	Can I name a range of plants and trees? Can I identify and describe the parts of a plant?	Can I describe the changes across the four seasons Can I observe and describe the different weather we find in seasons? Do I understand that the lengths of days vary?
Text / Person / Place			Three little pigs	Various non-fiction texts	How do we grow beans?	
Vocabulary	Senses Hear Touch Smell See/feel Taste Human	Senses Hear Touch Smell See/feel Taste Human	Wood Plastic Metal Paper Rock Brick Glass	Body Skeleton Bones, Fur Scales Hair Skin	Grow Stem/stalk Leaves Petal Pollen Root Water	Winter Spring Summer Autumn Leaves Weather Temperature

	<p>Animal Body Head, shoulders, knees, toes, arm, leg, stomach, elbow, ankle, thigh, finger, wrist, neck, ear, eyes, nose, mouth, joints, bones, life cycle, baby, toddler, child, teenager, adult, elderly.</p>	<p>Animal Body Head, shoulders, knees, toes, arm, leg, stomach, elbow, ankle, thigh, finger, wrist, neck, ear, eyes, nose, mouth, joints, bones, life cycle, baby, toddler, child, teenager, adult, elderly. Heart, lungs, brain.</p>	<p>Bendy Hard Stretchy Malleable Soft Hard Transparent, translucent, opaque, see through, material</p>	<p>Shed Muscles Joints Move/movement Label Babies Live young Mammal, amphibian, reptile, fish, bird, insect, food group, herbivore, carnivore, omnivore</p>	<p>Nutrients Sunshine Sunlight/daylight Filament Stamen Stigma Pollenate Light Dark Cold Warm</p>	<p>Hot Cold Rain Wind Sun Clouds Hail Snow Compare</p>
<p><b>Year 2</b> <b>Focus</b></p>	<p>Animals including humans</p>		<p>Living things and their habitats</p>		<p>Materials</p>	<p>Plants</p>
<p>Hook - Trip/Visit/Question</p>	<p>How do animals change as they grow? What are the differences between adults and children? What is a life cycle? Who can run faster; older or younger children? What do we need to survive?</p>		<p><b>Park visit/mini beast hunt</b>  What do all living things do? What clues can I use to classify things into living, dead and never alive? What is a habitat? How are animals adapted to their habitat?</p>		<p>Raft building (DT)  What properties do different materials have? Why do we make certain things out of certain materials? How can I make a raft that will float and is waterproof?</p>	<p><b>Forest Schools</b>  What are the different parts of a plant? What does a plant need to survive? Can I plant a seed and make it grow into a plant? What observations can I make as a plant grows?</p>

	What is a balanced diet? What causes changes to our pulse rate?					
Text / Person / Place	Lila and the Rain Kenyan animals (factfiles)		Beegu		Traction Man	Tin Forest?
Vocabulary	Offspring Grow Adults Water Food Air Exercise Hygiene Nutrition Reproduce Egg- chick- chicken Egg- caterpillar- pupa- butterfly Spawn- tadpole- frog Lamb- sheep Baby- toddler- child- teenager- adult		Living Dead Never alive Micro-habitats Food Food chain Sun Grass Cow Human Alive Leaf litter Stony path Under bushes Shelter Seashore Ocean Rainforest Conditions Hot/ warm/ cold Dry/ damp/ wet Bright/ shade/ dark		Wood – matches, floors Metal- coins, cans, cars Plastic- spoons Glass Brick Rock Paper Cardboard Squashing Bending Twisting Stretching Waterproof	Wild plants Garden plants Tree- Deciduous, Evergreen, Trunk, Branches, Leaf, Root Leaf/ leaves Rose Bud Flowers Blossom Petal Root Stem Grow Healthy Fruit Vegetables Seed Water Light Sustainable Temperature Germination Reproduction
<b>Year 3 Focus</b>	Forces and Magnets	Rocks and Fossils	Animals including Humans	Animals including Humans	Light	Plants
Hook - Trip/Visit/Question	Which is easier: to pull someone on their clothes or on their bare feet?  Which is the strongest magnet?  What attracts a magnet?	<b>Visit from Stone Age Man – rocks &amp; fossils session</b>  Layers of jelly and sweets to represent layers of rock containing fossils.  How many layers of rock are there?	Muscles and skeletons  Which muscles do I use the most?  What are the different types of joints in my body called?  What type of skeleton does a jellyfish have?	<b>Chester Zoo Trip</b>  Food and Nutrition  Which food types do we eat the most of?  Is my diet balanced?  Which food values are there in a tin of baked beans?	Where does light come from?  How can we stop light travelling?  At what time of day are shadows the longest?  Can the sun hurt me?  Which type of materials reflect light?	<b>Local park walk</b>  How many parts make up a plant?  What is soil made from?  Can plants come back to life?  How do plants take in water?

		Are all rocks the same? What do we mean by permeable? How are fossils made?				
Text / Person / Place	Extreme Earth (Volcanoes, Tsunamis, Earthquakes, Tornadoes)	Stone Age Boy	Research of favourite animal	Funny Bones	Shadow experiment using playground poles	Outdoor learning – forest school based learning
Vocabulary	Pull Push Friction Surface Magnet Magnetic field Pole Attract Repel Compass	Anthropic Sandstone Seabed Pumice Quartzite Obsidian Formation Igneous Sedimentary Metamorphic Volcanic Intrusive Extrusive Magma Strata Granite Fossil	Nutrients Fibre Carbohydrates Protein Fats Vitamins Minerals Calories Energy Hypothesis	Bones Muscles Joints Endoskeleton Exoskeleton Vertebrate Invertebrate Contract Relax Joints Ball and socket Hinge Gliding joint	Light Dark Source Reflect Beam Straight Transparent Translucent Opaque Pupil Retina Glare Sun Block shadow	Carpel Stamen Pollen Seed pollination Ovule Ovary Germination Anther Petal Style Sepal Dispersion
<b>Year 4</b> <b>Focus</b>	Electricity	Scientists and Inventions	Animals including Humans	States of Matter	Sound	Living things and their habitats
Hook - Trip/Visit/Question	How can I light up a light bulb? Can I identify common appliances that run on electricity? Can I construct a simple series electrical circuit, identifying and naming its basic parts,	<b>Trip to MOSI</b> <b>The Revolution Manchester Show – scientific inventions in Manchester</b>	Animal 'pooh' How did this get here? Can I describe the simple functions of the basic parts of the digestive system in humans? Can I identify the different types of teeth in humans and their simple functions? Can I construct and interpret a variety of food chains,	Ice Bombs Can I compare and group materials together, according to whether they are solids, liquids or gases? Can I observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)?	What is making that sound? Can I identify how sounds are made, associating some of them with something vibrating? Do I recognise that vibrations from sounds travel through a medium to the ear? Can I find patterns between the pitch of a sound and features of the object that produced it?	What lives here? <b>Use of the outdoor area.</b> Do I recognise that living things can be grouped in a variety of ways? Can I explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment?

	<p>including cells, wires, bulbs, switches and buzzers?</p> <p>Can I identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery?</p> <p>Do I recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit?</p> <p>Do I recognise some common conductors and insulators, and associate metals with being good conductors?</p>		<p>identifying producers, predators and Prey?</p>	<p>Can I identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature?</p>	<p>Can recognise that sounds get fainter as the distance from the sound source increases?</p>	<p>Can I recognise that environments can change and that this can sometimes pose dangers to living things?</p>
Text / Person / Place		MOSI – look at the exhibitions and investigate who invented what.		Journey to The River Sea – Eva Ibbotson The Cataract at Lodore – Robert Southey	Current exhibitions at MoSI complement this unit	
Vocabulary	<p>Appliances</p> <p>Electricity</p> <p>Electrical circuit</p> <p>Cell</p> <p>Wire</p> <p>Bulb</p> <p>Buzzer</p> <p>Danger</p> <p>Electrical safety</p> <p>Sign</p> <p>Insulators</p> <p>Wood</p> <p>Rubber</p> <p>Plastic</p> <p>Glass</p> <p>Conductors</p> <p>Metal</p> <p>Water</p> <p>Switch</p> <p>Open</p> <p>closed</p>	<p>Research</p> <p>Questions</p> <p>Enquiry</p> <p>Comparative test</p> <p>Fair test</p> <p>Systematic</p> <p>Observation</p> <p>Accurate</p> <p>Measurement</p> <p>Equipment</p> <p>Classify</p> <p>Record</p> <p>Explanation</p> <p>Conclusion</p> <p>Prediction</p> <p>Difference</p> <p>Similarities</p> <p>Evidence</p> <p>Sources</p> <p>Keys</p> <p>Construct</p> <p>Interpret</p>	<p>Digestive system</p> <p>Incisors</p> <p>Molars</p> <p>Oesophagus</p> <p>Transports</p> <p>Stomach</p> <p>Acid</p> <p>Enzymes</p> <p>Small intestine</p> <p>Large intestine</p> <p>Carnivore</p> <p>Herbivore</p> <p>Food chain</p> <p>Producers</p> <p>Prey</p> <p>predator</p>	<p>Solid</p> <p>Liquid</p> <p>Gas</p> <p>Melt</p> <p>Freeze</p> <p>Evaporate</p> <p>Condense</p> <p>Container</p> <p>Heated</p> <p>Cooled</p> <p>Degrees Celsius</p> <p>Thermometer</p> <p>Water cycle</p> <p>Evaporate</p> <p>evaporation</p> <p>Condense</p> <p>condensation</p> <p>Temperature</p> <p>Water vapour</p>	<p>Sound</p> <p>Vibrate</p> <p>Vibration</p> <p>Vibrating</p> <p>Air</p> <p>Medium</p> <p>Ear</p> <p>Hear</p> <p>Sound</p> <p>Volume</p> <p>Pitch</p> <p>Faint</p> <p>Fainter</p> <p>Loud</p> <p>Louder</p> <p>String</p> <p>Percussion</p> <p>Woodwind</p> <p>Brass</p> <p>Insulate</p>	<p>Environment</p> <p>Flowering</p> <p>Non – flowering</p> <p>Plants</p> <p>Animals</p> <p>Vertebrate</p> <p>Environment</p> <p>Fish</p> <p>Amphibians</p> <p>Reptiles</p> <p>Birds</p> <p>Mammals</p> <p>Invertebrates</p> <p>Human impact</p> <p>Positive</p> <p>negative</p>

<b>Year 5 Focus</b>	Lifecycle (Continuous) Properties and changes of materials	Lifecycles (Cont.) Forces	Lifecycles (Cont.) Earth and Space	Lifecycles (Cont.)	Lifecycles (Cont.) Animals including Humans	Lifecycles
Hook - Trip/Visit/Question	<p>Thinking Walk: Outdoor Learning Area</p> <p>Nature table of seeds in classroom. Classify seeds according to dispersal.</p> <p>How do we separate a solution? What's the difference between reversible and irreversible changes? Can heat travel through materials?</p>	<p>Links to STEM Week in Spring 2 - Research the mechanisms (cam shafts) of Al-Jazari and make cam toys.</p> <p>Why do we not float up to space? What happens when a person skydives? Does shape affect whether objects float or sink? Is it more difficult for an object to move over a smooth or rough surface? How can a lever help move heavy objects?</p>	<p>Mobile Planetarium or visit to Jodrell Bank (TBC)</p> <p>'Les Planetes' topic in French</p> <p>Moon Diary homework for a month (making observations over time)</p> <p>Space Art Project (homework)</p> <p>How do the planets move around the Sun? How do we measure and record the rotation of the Earth? How do we know the Sun does not orbit around the Earth? Why does the Moon appear to change shape in the sky? How is day and night created? Is the Sun moving across the sky? Why are the days longer in the Summer?</p>	<p>'Grow Your Own Potatoes' competition – outdoor areas (chitting and planting outside)</p> <p>Make Easter Gardens in outdoor area, looking at flowers, signs of Spring.</p>	<p>'Guess the Baby' competition Photo Timelines</p> <p>'Check out the changes!' (RSE lessons in PSHE)</p> <p>What are the stages in the human life cycle? What changes happen during infancy and old age? How do gestation periods differ between different animals? What does life expectancy mean?</p>	<p>'Grow Your Own Potatoes' competition – outdoor areas (harvest)</p> <p>What can the measurements of a tree tell you about the time it was planted? How do you grow potatoes? What are the 7 life processes? What are the internal and external features of strawberries?</p> <p>What is the difference between sexual and asexual reproduction in plants? What characteristics do mammals have? What is metamorphosis? What are the stages in the life cycle of a bird/insects/amphibian?</p>

Text / Person / Place		Cracking Contraptions (Wallace & Grommet). Explanation texts	Gallileo Tim Peake Compare daylight hours in South America and Britain			David Attenborough (biographies)
Vocabulary	Solubility Conductivity Transparency Thermal evaporation Dissolve Bicarbonate of soda Thermal Filtering Melting Separate	Friction Gravity Air resistance Water resistance Levers Pulleys Gears Parachute Galileo Newton	Orbit Solar System Astronomical Planet Rotation Spherical Crescent moon Gibbous moon Eclipse Lunar		Puberty Gestation Classification Precision Reproduction Teenager Obese Toddler Embryo	life cycle habitat asexual / sexual reproduction mammal insect amphibian metamorphosis
<b>Year 6</b> <b>Focus</b>	Animals including humans  'The Circulatory System'	Evolution and Inheritance  'Charles Darwin & his Discoveries'	Living things and their habitats	Electricity	Light	
Hook - Trip/Visit/Question	Terrific Scientific 'Exercise' investigation icl bleep test  'Does exercise improve our mood and recall skills?'  'Can Christmas dinner be nutritionally balanced?'  'Which element of a healthy lifestyle is MOST important?' (Debate) – opportunity for discursive write	'Are all my traits inherited?'	'Why is classification necessary?'  'Which of the world's 'kingdoms' is the most magical?'	'Do more batteries mean brighter lights?'  'Do more bulbs mean brighter lights?'	'How are shadows formed and altered?'  'Can light bend?'  'Does light carry colour?'	
Text / Person / Place	Christmas dinner across the globe <a href="https://www.dailymail.co.uk/femail/article-2870627/From-Japan-s-festive-KFC-bucket-raw-Arctic-birds-Greenland-Christmas-Day-feasts-differ-world.html">https://www.dailymail.co.uk/femail/article-2870627/From-Japan-s-festive-KFC-bucket-raw-Arctic-birds-Greenland-Christmas-Day-feasts-differ-world.html</a>	Darwin  Famous Scientists  Scientists who changed the world  'Evolved' an illustrated guide to evolution	<b>School pond</b> <b>Forest school based learning</b>	Thomas Edison  <a href="https://youtu.be/b1IKwZTzlY">https://youtu.be/b1IKwZTzlY</a>	The shadow puppet story of science <a href="https://youtu.be/UvasOZ8msdg">https://youtu.be/UvasOZ8msdg</a>  Animal shadow animation  <a href="https://youtu.be/lwpfZ9AP9H4">https://youtu.be/lwpfZ9AP9H4</a>	



	Pig Heart Boy						
Vocabulary	Left ventricle Right ventricle Aorta Veins Capillaries Red blood cells White blood cells Endorphins Lungs Heart Nutrients Inferior Superior Atrium                      Artery	Evolution Adaption Inheritance Genes Parent Fossil Environment Offspring Plants Variation DNA habitat	Classify Mould Compare Linnaean Domain Kingdom Phylum Class Family Genus Species Organism Flowering Vertebrates	Fungus Bacteria	Voltage Brightness Volume Switches Danger Series circuit Electrical safety Switch Bulb Buzzer Motor	Light Travels Straight Reflect Reflection Light source Rainbow Filters Mirrors Periscope Object Shadows Refract	