

## Year Three LTP: Autumn & Spring

<b>Working scientifically overview</b>	<b>Lines of enquiry:</b> research, pattern seeking, comparative testing, identifying & classifying, investigation over time		<b>7 super science skills:</b> asking questions, setting up tests, observations, recording and presenting data, interpreting data, evaluating.
<b>Summary</b>	<b>Autumn 1: light</b> (Rock of Ages) <b>Science: physics</b> <b>Strand: light</b>	<b>Autumn 2: Rock of Ages</b> <b>Science: Geology</b> <b>Strand: rocks</b>	<b>Spring 1 &amp; 2: forces and magnets</b> (Romans) <b>Science: physics</b> <b>Strand: forces and magnets</b>
<b>Prior knowledge</b>	EYFS: Children will be familiar with light and dark concepts and sources of light such as the sun and torches.	Through their learning about materials in KS1, Children will understand and be able to use a wide range of vocabulary to describe properties of rocks. Through KS1 Geography children will know about different places such as: beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley.	KS1: Children will be able to identify and classify materials & name properties. EYFS, they will be familiar with push and pull toys
<b>Key Vocabulary</b>	Light source, absence of light, transparent, translucent, opaque, shiny, matt, shadow, reflect, mirror, sunlight, dangerous, ultra-violet light.	Rock, stone, limestone, marble, sandstone, pumice, granite, chalk, slate, granite, layers, erosion, properties, absorb, porous, durable, rock cycle, igneous, metamorphic, sedimentary, molten rock, fossil, soil, peat, clay, silt.	Force, contact force, non-contact force, push, pull, rub, friction, gravity, magnetic force, magnet, magnetism, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole
<b>Cultural capital</b>	<b>Celebrating other cultures:</b> Festival of Diwali and the symbol of light.  <b>Visit:</b> Planetarium  <b>Famous scientists:</b> Story of Thomas Edison and the electrical lightbulb	<b>Ancient monuments:</b> Study of Stonehenge (UK)  <b>Trips:</b> Creswell Crags  <b>Careers:</b> What are scientists called who study rocks? Becoming archaeologists - Making our own fossil and 'excavating millions of years later'  Study of Mount Merapi (Indonesia) and Mount Vesuvius (Italy) Volcanoes: How igneous rock is formed.	<b>Famous Scientists:</b> Isaac Newton and his discovery of gravity.  <b>STEM Careers:</b> highlight jobs in which magnets are required eg) Doctors and engineers.  <b>Geography:</b> The earth's magnet, use of compass.

<b>Core (sticky) knowledge/ skills</b>	Children will know how to use their 7SSS ( <b>specifically recoding data/ interpreting &amp; communicating data</b> ) to <b>pattern seek</b> to show how shadows change. Children will know that they need light to see things; that light is <b>reflected</b> from <b>surfaces</b> ; how to <b>protect their eyes</b> from the sun; and how <b>shadows</b> are formed when light is blocked by an <b>opaque object</b> .	Pupils will use their 7SSS ( <b>specifically observing and measuring</b> ) to <b>investigate rocks over time</b> . Children will be able to <b>identify and classify igneous, metamorphic &amp; sedimentary rocks</b> . Children will understand how <b>fossils &amp; soils</b> are formed	Children will use their 7SSS ( <b>specifically asking questions &amp; setting up tests</b> ) to carry out <b>fair, comparative tests</b> . Children will understand that <b>magnetic forces</b> act from a distance; magnets <b>attract &amp; repel</b> ; compare and group materials based on magnetic attraction; magnets have <b>2 poles</b> ; how two magnets attract based on where their poles are facing.
<b>Future links</b>	Y6- Light	Y6 – evolution and inheritance.	Y5 – forces
<b>Forest school links</b>	Autumn 1&2 – Children take part in a nature walk in which they observe changes in the environment. They also study various plant species and seed dispersal, linking with our plants topic.		

## Year Three LTP : Summer

<b>Working scientifically overview</b>	<b>Lines of enquiry:</b> research, pattern seeking, comparative testing, identifying & classifying, investigation over time	<b>7 super science skills:</b> asking questions, setting up tests, observations, recording and presenting data, interpreting data, evaluating.
<b>Summary</b>	<b>Summer 1: Plants</b> (Robin Hood) <b>Science:</b> biology <b>Strand:</b> plants	<b>Summer 2:</b> Where's my funny bone? <b>Science:</b> biology <b>Strand:</b> animals inc humans
<b>Prior knowledge</b>	Y2: Children will know how bulbs and seeds mature and what a plant needs to thrive.	Y2: Children will know that humans grow from babies to adults and how to make healthy choices.
<b>Key Vocabulary</b>	Nutrients, leaves, roots, stem, germinate, photosynthesis, pollen, insect/wind pollination, seed formation, seed/wind/animal/water dispersal	Nutrition, nutrients, energy, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, skeleton, bones, muscles, support, protect, move, skull, ribs, spine, muscles, joints, contract.
<b>Cultural capital</b>	<b>Trips:</b> Sherwood forest residential <b>Environmental awareness:</b> The importance of trees and plants for oxygen and homes for wildlife <b>STEM Careers:</b> Botanists & conservationists. <b>Artists:</b> Using observational drawing of trees to use water colour in the style of the artists Georgia O'Keeffe	<b>Geography:</b> Food milage & carbon footprint. <b>Healthy eating across cultures:</b> designing a healthy plate based on the 'eat well guide' that supports their own or another's culture. <b>Careers:</b> Athlete, doctor, dentist, nutritionist, chef.
<b>Core (sticky) knowledge/ skills</b>	Children will use their 7SSS (specifically setting up tests & recording data) to identify and classify/ observe over time the parts and functions of a plant. They will be able to explain how plants requirements vary from plant to plant; how water is transported; and how flowers play a part in the life cycle inc pollination, seed formation, seed dispersal.	Children will know how to use their 7SSS (specifically observing and measuring) to identify and classify animals with and without skeletons. They will understand that animals inc humans get nutrition from what they eat; that animals need the right types and amount of nutrition; that humans have skeletons & muscles for support, protection & movement.
<b>Future links</b>	<b>Y4</b> – grouping living things inc, plants <b>Y5</b> - reproduction of plants <b>Y6</b> - how have plants adapted?/ classifying plants (classification keys).	<b>Y4</b> - Classifying animals (vertebrates, invertebrates) <b>Y5</b> – growing up inc puberty & old age.

