

LKS2 Science Medium Term Planning- Cycle A

Year group KS1	Aspect	Main Enquiry Question	Learning Challenges	Knowledge	Working Scientifically
Autumn 1	Physics <i>Electricity</i>	<i>How would you cope for a day without electricity?</i>	<p>LC1- Why have we become so dependent on electricity?</p> <p>LC2- How can you create an electrical circuit that has a switch or buzzer?</p> <p>LC3- What are conductors and insulators and how are they associated with electricity?</p> <p>LC4- How is electricity generated and what do we mean by alternative sources?</p> <p>LC5- Reflection: Can you put together a presentation that tells us about electricity?</p>	<ul style="list-style-type: none"> - Identify and name appliances that require electricity to function. - Construct a simple series circuit identifying and naming the components (wires, cells, bulbs, switches and buzzers). - Predict and test whether a lamp will light within a circuit. - Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. - Know the difference between a conductor and an insulator and associate metals with being good conductors. - Recognise some common conductors and insulators. 	<ul style="list-style-type: none"> - 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.
Autumn 2	Physics <i>Rocks and Magnets</i>	<i>What do rocks tell us about the way the earth is formed?</i>	<p>LC1- What can we learn by considering the soil that lies beneath our feet?</p> <p>LC2- What are fossils and why are they so fascinating?</p> <p>LC3- What can you find out about sedimentary, metamorphic and igneous rocks?</p> <p>LC4- Why is a diamond a 'girl's best friend'?</p> <p>LC5- Reflection: Write a fictional story about a journey to the centre of the earth and back again.</p>	<ul style="list-style-type: none"> - Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. - Describe in simple terms how fossils are formed when things that have lived are trapped within a rock. - Recognise that soils are made from rocks and organic matter. - Know about and explain the difference between sedimentary, metamorphic and igneous rocks. 	<ul style="list-style-type: none"> - 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. - Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
Spring 1	Physics <i>Forces and magnets</i>	<i>How do we use forces and magnets in everyday life?</i>	<p>LC1- What is a magnet and what is its relationship to the north pole?</p> <p>LC2- What do we mean by attract and repel?</p> <p>LC3- How does friction affect moving objects?</p> <p>LC4- Can we classify forces?</p> <p>LC5- Reflection: Plan, design and make a simple magnetic game based on magnets.</p>	<ul style="list-style-type: none"> - Compare how things move on different surfaces. - Notice that some forces need contact between two objects, but magnetic forces can act at a distance. - Know magnets attract or repel each other and attract some materials and not others. - Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet and identify some magnetic materials. 	<ul style="list-style-type: none"> - Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. - Identifying differences, similarities or changes related to simple scientific ideas and processes.

				- Describe magnets as having two poles and predict whether two magnets will attract or repel each other.	- Using straightforward evidence to answer questions or to support their findings.
Spring 2	Chemistry <i>States of Matter</i>	<i>How would we survive without water?</i>	<p>LC1- How can you classify solids, liquids and gases? LC2- How do we measure temperature and how does temperature vary during the day and across the world? LC3- How can water be a solid, liquid and gas? LC4- Which other materials change when they are heated or cooled? LC5- Why do windows steam up? LC6- Reflection: Can you put together a presentation to show how water is our life line?</p>	<p>- Compare and group materials according to whether they are solids, liquids or gases.</p> <p>- Know that some materials change state when they are heated or cooled.</p> <p>- Know the temperature at which materials change state.</p> <p>- Know the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>	
Summer	Biology <i>Animals, including humans</i>	<i>How can Usain Bolt run so fast?</i>	<p>LC1- How long will it take you to run 100m? LC2- How does the arm joint work and can you make a similar joint? LC3- What role does the muscle have in helping the arm move? LC4- How does the food we eat get transported around the body? LC5- Reflection: Explain how the skeleton and muscles link to support you.</p>	<p>- Know that animals, including humans, need the right types and amount of nutrition.</p> <p>- Know animals, including humans cannot make their own food and that they get nutrition from what they eat.</p> <p>- Know about the importance of a nutritious, balanced diet.</p> <p>- Know how nutrients, water and oxygen are transported within animals and humans.</p> <p>- Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p>	

GDS Opportunities	<ul style="list-style-type: none"> • Can they record and present what they have found using scientific language, drawings, labelled diagrams, bar charts and tables? • Can they explain their findings in different ways (display, presentation, writing)? • Can they use their findings to draw a simple conclusion? • Can they suggest improvements and predictions for further tests? • Can they suggest how to improve their work if they did it again? • Can they explain how the muscular and skeletal systems work together to create movement? • Can they classify living things and non-living things by a number of characteristics that they have thought of? • Can they explain how people, weather and the environment can affect living things? • Can they explain how certain living things depend on one another to survive? • Can they classify a range of common plants according to many criteria (environment found, size, climate required, etc.)? • Can they classify igneous and sedimentary rocks? • Can they begin to relate the properties of rocks with their uses? • Can they investigate the strengths of different magnets and find fair ways to compare them?
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