Science Learning Objectives and Enquiries, Year 4, 2024-25

Year 4 Asia								
Autumn Term		Spring Term		Summer Terms				
Roman Britain	Electricity	Rivers	The Indus Valley	India	Sound			
Animals Including Humans	Electricity	States of	Matter	Living Things and their Habitats	Sound			
Lesson 1 LO: Identify the organs in the digestive system WS: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables <i>Enquiry Question:</i> What are the different organs in the digestive system, and how can we represent them in diagrams and charts?	Lesson 1 LO: Identify common appliances that run on electricity and their safety WS: Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions <i>Enquiry Question:</i> Which common appliances use electricity, and what safety precautions should we take when using them?	Lesson 1 LO: Identify the 3 states of madescribe their properties WS: Gathering, recording, of and presenting data in a var to help in answering questio <i>Enquiry Question:</i> What are to and how do their properties di	atter and classifying iety of ways ns the three states of matter, ffer?	Lesson 1 LO: Understand that living things are suited to different environments WS: Identifying differences, similarities or changes related to simple scientific ideas and processes <i>Enquiry Question</i> : How are different living things suited to the environments they live in?	Lesson 1 LO: Explain how sound is created and how it travels from an object to the ear WS: Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions <i>Enquiry Questions</i> How is sound created, and how does it travel from an object to our ears?			
Lesson 2 LO: Describe the functions of the organs in the digestive system WS: Making systematic and careful observations; Reporting on findings from enquiries, including oral and written explanations <i>Enquiry Question:</i> How do the different organs in the digestive system work together to help us digest food?	Lesson 2 LO: Identify electrical components and create a simple electrical circuit WS: Using straightforward scientific evidence to answer questions or to support their findings <i>Enquiry Question:</i> What are the key components of an electrical circuit, and how can we use them to create a simple working circuit?	Lesson 2 LO: Explore how particles bel solids, liquids, and gases WS: Using straightforward a evidence to answer question support their findings <u>Enquiry Question</u> : How do p in solids, liquids, and gases?	have in scientific s or to articles behave differently	Lesson 2 LO: Describe habitats that are found in the UK WS: Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions <i>Enquiry Question</i> : What habitats can be found in the UK, and what types of living things are found in each?	Lesson 2 LO: Compare and explain how sound waves travel through air, liquids and solids WS: Identifying differences, similarities or changes related to simple scientific ideas and processes <i>Enquiry Question:</i> How do sound waves travel through air, liquids, and solids, and what are the differences in how they travel?			
Lesson 3 LO: Identify the different types of human teeth and describe their functions WS: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables <i>Enquiry Question:</i> What are the different types of human teeth, and how do their shapes help them perform their functions?	Lesson 3 LO: Predict if a simple electrical circuit will work and know the difference between a complete and an incomplete circuit WS: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables <i>Enquiry Question</i> : How can we predict whether a circuit will work, and what is the difference between a complete and an incomplete circuit?	Lesson 3 LO: Investigate melting point: WS: Making systematic and observations and, where app taking accurate measurements standard units Using a range of equipment, and data loggers Enguiry Question: At what ter substances melt, and how car their melting points? Lesson 4 LO: Investigate melting (use Hexamples) Enguiry: Have you ever held chocolate tightly in your hand	S careful propriate, nts using for the second secon	Lesson 3 LO: Identify different ways to classify animals into groups WS: Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions Enquiry Question: How can we classify animals into different groups based on their characteristics?	Lesson 3 LO: Understand that some materials absorb sound and some materials reflect sound WS: Setting up simple practical enquiries and comparative and fair tests Enquiry Question: How do different materials absorb or reflect sound, and how can we test this?			

Lesson 4 LO: Explain how the teeth in animal skulls show they are carnivores, herbivorous, or omnivorous WS: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables <i>Enquiry Question</i> : How can the shape and structure of an animal's teeth help us determine if it is a carnivore, herbivore, or omnivore?	Lesson 4 LO: Investigate which objects are conductors and which are insulators WS: Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions <i>Enquiry Question:</i> Which materials are electrical conductors and which are insulators, and how can we test them?	Lesson 5 LO: Research and describe freezing and boiling points; create a bar chart WS: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables <i>Enquiry Question</i> : What are the freezing and boiling points of different substances, and how can we present this information in a bar chart?	Lesson 4 LO: Create a classification key using a series of questions WS: Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions Enquiry Question: How can we create a classification key to identify different animals using a series of questions?	Lesson 4 LO: Understand that the volume of a sound is dependent on how much energy or power the sound source is given WS: • Setting up simple practical enquiries and comparative and fair tests. Using a range of equipment, including thermometers and data loggers Enquiry Question: How does the amount of energy or power given to a sound source affect its volume?
Lesson 5 LO: Explain how are teeth damaged by sugar WS: Setting up simple practical enquiries and comparative and fair tests • Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions <i>Enquiry Question</i> : How does sugar damage our teeth, and what can we do to protect them?	Lesson 5 LO: Explain how an electrical switch works WS: • Setting up simple practical enquiries and 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 Enquiry Question. How does an electrical switch work, and how can we investigate its effect on a circuit?	Lesson 6 LO: Investigate the effect of temperature on the rate of evaporation WS: Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions <i>Enquiry Question</i> : How does temperature affect the rate of evaporation, and what patterns can we observe? Lesson 7 LO: Explorify (Where is the water? Odd one out) or any other activity link to evaporation and condensation	 Lesson 5 LO: recognise that environments can change and that this can sometimes pose dangers to living things WS: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables Enquiry Question: How do changes in the environment affect living things, and what dangers can these changes pose? 	 Lesson 5 LO: Understand that pitch is caused by the speed of the sound source's vibrations WS: Identifying differences, similarities or changes related to simple scientific ideas and processes Enquiry Question: What causes pitch in sound, and how is it related to the speed of vibrations?
Lesson 6 LO: Identify key parts of food chains; investigate features of producers, prey and predators WS: Recording findings using simple scientific language, drawings, labeled diagrams, keys, bar charts and tables <i>Enquiry Question</i> : What roles do producers, prey, and predators play in a food chain, and how can we identify them? Lesson 7 LO: Construct and interpret variety of food chains WS: Recording	Lesson 6 LO: Set up an investigation to prove or disprove a prediction and provide a detailed conclusion WS: Asking relevant questions and using different types of scientific enquiries to answer them <i>Enquiry Question</i> . How can we design and conduct an investigation to test a prediction about electricity, and what conclusions can we draw from our findings?	Lesson 8 LO: Order the stages and describe the water cycle in detail WS: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables <i>Enquiry Question:</i> What are the stages of the water cycle, and how do they work together? Lesson 9 LO: Identify the part played by evapouration and condensation in the water cycle WS: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables <i>Enquiry Question:</i> How do evaporation and condensation help drive the water cycle? Lesson 10 LO: Explorify (What is going on – film; Liquid of life) WS: Recording findings using simple scientific language, drawings, labelled	Lesson 6 LO: Classify plants that live in a pond habitat (school grounds) WS: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables <i>Enquiry Question:</i> How can we classify different plants found in a pond habitat, and what features help us identify them?	Lesson 6 LO: Explain the relationship between distance and volume WS: • Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables Enquiry Question: How does the distance from a sound source affect its volume?

language, drawings, labelled diagrams, keys, bar charts and tables Enquiry Question: How can we construct and interpret food chains to understand the relationships between different organisms?		Enquiry Question: How does water move through different stages in nature, and why is it essential for life?		
SDG 13 - Climate Action: Studying animal behaviour and diet through scat analysis can help scientists understand the impact of climate change on different species' food sources and behaviours. Correction of the species of th	VHATIF. What if all transport was electric? Base Mark as dow? Classroom view T ATREMARKS AND ELAK ENRON CASSROOM VIEW	Image: Constraint of the source of the so	SDG 15: Life on Land Connection: Protecting and preserving natural habitats like hedges and creating safe passages for wildlife under roads contribute to conserving biodiversity and promoting sustainable land use. THE BIG OUESTION What impact do our choices have on habitats? Mark as done? Classroom view	What if you could hear every sound at equal volume? Sure © Merk as don? Classroom view SDG 3 - Good Health and Well-being: Understanding the impact of loud noises on hearing can contribute to efforts to promote good health and well-being. It highlights the importance of protecting our hearing, especially in noisy environments.
Assessment Test from Developing Experts	Assessment Test from Developing Experts	Assessment Test from Developing Experts	Assessment Test from Developing Experts	Assessment Test from Developing Experts