Science Map

Year: 4

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Theme Links	Liverpool	The Transatlantic Slave Trade	Rainforests	Deforestation	Romans	Dewa
Science Unit	Sound	Light up Liverpool!	Where does all the rain go?	Why do we need to protect the rainforest?		Keeping ourselves healthy.
Area	**Sound** ▫ identify how sounds are made, associating some of them with something vibrating ▫ recognise that vibrations from sounds travel through a medium to the ear ▫ find patterns between the pitch of a sound and features of the object that produced it ▫ find patterns between the volume of a sound and the strength of the vibrations that produced it ▫ recognise that sounds get fainter as the distance from the sound source increases.	**Electricity** ▫ identify common appliances that run on electricity ▫ construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers ▫ 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 ▫ recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit ▫ recognise some common conductors and insulators, and associate metals with being good conductors	**States of matter (+ food chains)** compare and group materials together, according to whether they are solids, liquids or gases ▫ 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) ▫ identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. PLUS construct and interpret a variety of food chains, identifying producers, predators and prey.	**Living things and their habitats** ▫ recognise that living things can be grouped in a variety of ways ▫ explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment ▫ recognise that environments can change and that this can sometimes pose dangers to living things	• Fill any gaps • Children to lead their own investigation	**Animals including humans** ▫ describe the simple functions of the basic parts of the digestive system in humans ▫ identify the different types of teeth in humans and their simple functions

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Opportunities for Working Scientifically	• using straightforward scientific evidence to answer questions or to support their findings • using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and **data loggers**	• reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • setting up simple practical enquiries, comparative and fair tests	• identifying differences, similarities or changes related to simple scientific ideas and processes • 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	• gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	• asking relevant questions and using different types of scientific enquiries to answer them • setting up simple practical enquiries, comparative and fair tests • 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 • using straightforward scientific evidence to answer questions or to support their findings.	• asking relevant questions and using different types of scientific enquiries to answer them • ▫ setting up simple practical enquiries, comparative and fair tests • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
Opportunities for RWM	RW: letter to pop star about soundproofing Blues song lyrics M: Distance/volume graph	RW: How does it work? Explanation text	W: explanation text M: rainfall graph	W: discursive writing for and against deforestation		RW: Healthy recipes W: How do we digest our food? Explanation text Caring for teeth leaflet
Resources used (e.g- Kent Planning, HT,Twinkl)						