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Enquiry Skills	EYFS		KS1		LKS2		UKS2	
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Asking Questions							
	I can ask questions starting with 'what', 'where' and 'why' *I can answer questions that start with 'why'* *I can use sentences with 4-6 words, and ask questions with 4-6 words* *I can use 'because', 'or' and 'and' when asking a question*	*I can ask questions to find out more* *I am able to articulate my ideas in well-formed sentences* *I am able to work out problems and organise thinking*	*I can ask questions based on my observations* *I can have my questions answered by people around me*	*I can ask simple questions and recognise they can be answered in different ways* *I can begin to use secondary sources to answer my questions*	*I can ask questions and use my observations to answer them* *I can use a variety of secondary sources to answer questions*	*I can ask questions and use different types of scientific enquiries and evidence to answer them* *I can use different types of scientific enquiries and evidence to support my findings* *I can use my data to help me think of new questions to ask*	*I can plan different types of scientific enquiries to answer questions*	*I can plan scientific enquiries where I have to recognise and control variables* *I can say which secondary sources will be most useful to research my ideas*
	Making Predictions							
	I can cooperate with other children	*I am able to articulate my ideas in well-formed sentences* *I am able to work out problems and organise thinking*	*I can make verbal predictions based on my observations with support*	*I can independently make predictions based on my observations*	*I can use my observations to make predictions for the next set of results*	*I can use my results to make predictions for my next set of results* *I can use key scientific vocabulary when making predictions*	*I can use my test results to make more accurate predictions* *I can explain my predictions with reasoning*	*I can use my test results and reasoning skills together to make accurate predictions* *I can use my results to create a more accurate follow-up experiment to test my predictions*
	Setting Up Tests							
	I can improve my manipulation and control (fine motor skills) *I can explore different materials and tools*	*I can continue to develop my fine motor skills* *I can use small and large pieces of equipment with some skill*	*I can use the equipment provided for me to perform simple tests that have been planned as a whole class*	*I can use the equipment provided to perform simple tests* *I can make changes of my own to tests that have been planned as a whole class*	*With support, and with the equipment provided, I can set up a simple, fair test* *I can recognise what a fair test is with support*	*I can set up my own practical enquiries, comparative tests, and fair tests*	*I can plan my own different types of scientific tests* *I can choose my own equipment to use* *I can recognise variables and, with support, decide how to control these variables*	*I can recognise variables, decide how to control them, and explain why they need controlling* *I can use my other scientific enquiry skills to perform tests, and to explain the reasons I am performing the tests*
	Observing and Measuring							
	I can talk about what I can see using new vocabulary I have learnt	*I can explore the natural world with my senses, songs, close observation and drawings*	*I can observe changes over time* *I can use my observations to identify, compare and group* *With support, I can use observations to answer questions*	*I can use my observations to identify, describe, compare and group and explain my reasons* *I can observe and comment on patterns and relationships* *I can use my observations to answer questions*	*I can suggest what observations to make* *I can use my observations to identify differences and similarities, using a range of equipment* *I can use my observations to help identify, classify, find similarities and differences, and identify changes*	*I can suggest what observations to make, how long to make them for, and what equipment to use to make them* *I can make careful and systematic observations using a range of equipment* *I can use my observations to identify differences, similarities and changes related to simple scientific ideas and processes e.g. naturally occurring patterns and relationships*	*I can make my own decisions about what observations and measurements to take, and what equipment I will use* *I can take measurements using a range of scientific equipment with accuracy and precision*	*I can make my own decisions about what observations and measurements to take* *I can choose the most appropriate equipment and explain why I have chosen it* *I can decide if I need to repeat my measurements and explain why*

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Enquiry Skills

EYFS		KS1		LKS2		UKS2	
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Recording Data							
I can explore natural materials and my own environment	*I can make collections of natural objects I am interested in*	*I can record simple data to answer questions*	*With support, I can record data in different ways to answer questions*	*I am beginning to use standard units of measurement when recording data*	*I can make decisions about how to record data using notes, tables, drawings, labelled diagrams, keys, bar charts and tables* *I can record data using standard units of measurement*	*I can examine familiar modelled options of recorded data and analyse these e.g. tables, charts, diagrams, labels, classification keys*	*I can decide how to record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs*
Interpreting and Communicating Results							
I can listen to simple stories and understand what is happening	*I can hold a back and forth conversation using new vocabulary*	*I can talk about what I found out and how I found it out* *I am beginning to use scientific language when talking about my results*	*I can use presentational talk to explain what I have found out and how I found it out* *With support, I can communicate my findings using speech or writing, and use scientific language*	*I can use results to draw simple conclusions and report on these using speech and writing* *I am beginning to use relevant scientific language to discuss my ideas and communicate my findings*	*I can report my results using detailed written or oral explanations* *I can use relevant scientific vocabulary to communicate my findings in ways that are appropriate for different audiences*	*I can report and present my findings and discuss conclusions and causal relationships orally and in writing* *I can use relevant scientific language and illustrations to discuss and communicate my findings*	*I can report and present my findings from enquiries including conclusions, causal relationships and the degree of trust in the results* *I can present my findings in a variety of ways* *I can use relevant scientific language and illustrations to discuss, communicate and justify my ideas* *I can talk about how scientific ideas have developed over time*
Evaluating							
I can begin to make sense of my own life story	*I can describe events in detail* *I can use connectives when I am describing events*	*I can check my results make sense using peer and self-assessment* *I can check if I have answered the question from the beginning of the test*	*I can check if my results answer my original question and think of follow up questions if I have not*	*I can help make decisions about how to analyse data* *With support, I can improve my own data analysis*	*I can make my own decisions about how to analyse data* *I can suggest improvements to a test and further questions to ask*	*I can set up further comparative and fair tests based on my previous test results*	*I can identify and use scientific evidence to support or refute ideas and arguments* *I can begin to sperate opinion from fact when using secondary sources*

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Uses of Everyday Materials, States of Matter, Properties and Changes of Materials		EYFS		KS1		LKS2		UKS2	
		Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Statutory objectives			*I can distinguish between and object and the material it is made from* *I can identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock* *I can describe the physical properties of a variety of everyday materials* *I can compare and group everyday materials based on their physical properties*	*I can compare the suitability of everyday materials for particular uses* *I can find out how the shapes of objects made from the same materials can be changed*		*I can compare and group materials together according to whether they are solids, liquids or gases* *I can observe that some materials change state when they are heated or cooled* *I can research or measure the temperature at which some changes of state happen* *I can identify the parts played by evaporation and condensation in the water cycle and link this to temperature*	*I can compare and group together everyday materials on basis of their properties including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets* *I know that some materials with dissolve in a liquid to form a solution, and know how to recover a substance from a solution* *I can use my knowledge of states of matter to decide how mixtures might be separated through filtering, sieving and evaporating* *I can give reasons based on comparative and fair tests, for the particular uses of everyday materials* *I can demonstrate that dissolving, mixing and changes of state are reversible changes* *I can explain that some irreversible changes can result in the production of new materials, including changes like burning or acid and bicarbonate of soda*	
	Non-statutory – extra Whitmore objectives	*I can explore a range of materials in the environment* *I can use new vocabulary to describe materials*	*I can explore selections of materials and name them* *I can match materials to appropriate descriptions*			*I can compare and group materials together according to whether they are solids, liquids or gases (Yr 4 statutory)* *I can identify the properties of solids, liquids and gasses* *I can observe and identify the differences in solids, liquids and gasses* *I can name the main parts of the water cycle*			*I can give reasons based on comparative and fair tests, for the particular uses of everyday materials (Yr 5 statutory)* *I can demonstrate that dissolving, mixing and changes of state are reversible changes (Yr 5 statutory)* *I can explain that some irreversible changes can result in the production of new materials, including changes like burning or acid and bicarbonate of soda (Yr 5 statutory)*

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Animals, including humans		EYFS		KS1		LKS2		UKS2	
		Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Statutory objectives			*I can identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals* *I can identify and name a variety of common animals that are carnivores, herbivores and omnivores*	*I notice that animals, including humans, have offspring that grow into adults* *I can describe the basic needs of animals, including humans for survival (food, water, air)* *I can describe the importance of exercise, a balanced diet and hygiene for humans*	*I can discover that animals, including humans, need the right types and amounts of nutrition, and that they cannot make their own food* *I can explain that humans and some other animals have skeletons and muscles for support, protection and movement*	*I can describe the simple functions of the basic parts of the human digestive system* *I can identify different types of human teeth and their simple functions* *I can construct and interpret a variety of food chains and identify producers, predators and prey*	*I can describe the changes as humans develop to old age*	*I can identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood* *I recognise the importance of diet, exercise, drugs and lifestyle on the way bodies function* *I can describe the ways in which nutrients and water are transported within animals, including humans*
	Non-statutory – extra Whitmore objectives	*I can explore animals during small world play* *I can mimic the sounds of common farm animals*	*I can identify and name some common domestic and farm animals* *I can explore a wider selection of animals during small world play*				*I can explain how diet and exercise can affect the human digestive system*	*I can describe the simple functions of basic parts of the digestive system in other animals (not humans)* *I can describe the changes in a variety of animals as they develop to old age* *I can recognise the impact of diet and exercise on the way our bodies function (adapted from Yr 6 statutory)*	

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Living Things and Their Habitats

	EYFS		KS1		LKS2		UKS2	
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Statutory objectives				*I can explore and compare the differences between things that are living, dead, or have never been alive* *I can identify that most living things live in habitats to which they are suited* *I can explain how different habitats provide the basic needs of plants and animals* *I can explain how plants and animals can depend on each other* *I can identify and name a variety of plants and animals in their habitats, including microhabitats* *I can explain how animals obtain their food from plants and other animals, using the idea of a simple food chain*		*I know that living things can be grouped in a variety of ways* *I can explore and use classification leys to name living things in the local, and wider, environment* *I recognise that environments can change and the dangers this can pose to living things*	*I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird* *I can describe the life process of reproduction in some plants and animals*	*I can describe how living things are classified into groups based on their observable characteristics, including microorganisms, plants and animals* *I can give reasons for classifying plants and animals based on their characteristics*
Non-statutory – extra Whitmore objectives	*I know that there are other countries in the world* *I can name a selection of animals from different countries*	*I can discuss contrasting environments to the one that I live in and name some animals that might be found there* *I can name some foods that animals may eat*	*I can identify things that are living, dead, and have never been alive (Yr 2 statutory)* *I can name a variety of different habitats and match animals to their habitats* *I can identify where some animals get their food*		*I can recognise that living things can be grouped in different ways (Yr 4 statutory)* *I can explore and use classification keys to help group, name and identify living things in my local and wider environment (Yr 4 statutory)*	*I can identify and sort animals into mammals, amphibians, insects and birds* *I can use classification keys to sort animals* *I can explain how some animals have adapted to their environments (adapted from Yr 6 statutory – Evolution and Inheritance)*		

Earth and Space

EYFS		KS1		LKS2		UKS2	
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
						I can describe the movements of the Earth, and other planets, relative to the Sun *I can describe the movement of the Moon relative to the Earth* *I can describe the shapes of the Earth, Sun and Moon* *I can use the Earth's movement to explain why we have night and day, and why the Sun appears to move in the sky*	

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	EYFS		KS1		LKS2		UKS2	
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Plants			*I can identify and name a variety of common wild and garden plants, including types of tree* *I can identify and describe the basic structure of a variety of common flowering plants, including trees*	*I can observe and describe how seeds and bulbs grow into mature plants* *I can find out and describe how plants need water, light and a suitable temperature to grow and stay healthy*	*I can identify and describe the functions of different parts of flowering plants, including roots, stems/trunks, leaves and flowers* *I can describe how the requirements of plants for life and growth (air, light, water, nutrients from soil and room to grow) can vary from plant to plant* *I can investigate the way in which water is transported within plants* *I can explain the role that flowers play in the lifecycle of flowering plants, including pollination, seed formation and seed dispersal*			
	EYFS		KS1		LKS2		UKS2	
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Seasonal Changes			*I can observe changes across the four seasons* *I can observe and describe weather associated with the seasons* *I can say how the length of days changes at different times of the year*					
	EYFS		KS1		LKS2		UKS2	
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Rocks					*I can compare and group together different kinds of rocks based on their appearances and physical properties* *I can describe how fossils are formed in simple terms* *I can explain what soils are made from*			

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	EYFS		KS1		LKS2		UKS2	
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Light					*I know that I need light in order to see things and that dark is the absence of light* *I notice that light is reflected from surfaces* *I can explain how light can be dangerous and know how to protect my eyes* *I can explain how shadows are formed* *I can find patterns in the ways that shadows change*			*I can describe how light travels* *I can explain how the way light travels helps us see objects* *I can explain why shadows have the shapes that they do*
	EYFS		KS1		LKS2		UKS2	
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Forces and Magnets					*I can compare how things move on different surfaces* *I notice that some forces need contact between two objects, but magnetic forces can act at a distance* *I can observe how magnets can attract or repel each other, and how they interact with different materials* *I can compare and group materials using magnetism* *I know how many poles magnets have* *I can make predictions if magnets will attract or repel, based on their poles*		*I can explain how gravity causes objects to fall towards the Earth* *I can identify the effects of air resistance, water resistance, and friction that act between moving surfaces* *I can recognise that some mechanisms allow a smaller force to have a greater effect*	

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	EYFS		KS1		LKS2		UKS2	
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Sound						*I can explain how sounds are made* *I can describe how sounds travel through a medium to my ear* *I can find patterns between the pitch of a sound and the object that produced the sound* *I can find patterns between the volume of a sound and the strength of vibrations* *I can explain how sounds change as the distance from the object increases*		
	EYFS		KS1		LKS2		UKS2	
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Electricity						*I can identify common appliances that use electricity* *I can construct a simple circuit and names its parts* *I can say if a lamp in a circuit will light up or not and explain why* *I can explain the role of a switch in a circuit* *I can recognise common conductors and insulators*		*I can explain how to change the brightness of a lamp in a circuit* *I can explain variations in how circuit components function* *I can use the correct symbols when drawing circuit diagrams*
	EYFS		KS1		LKS2		UKS2	
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Evolution and Inheritance								*I can recognise that living things have changed over the time and how fossils help us understand this* *I know that offspring may not be identical to their parents* *I can describe how plants and animals have adapted to their environments and how this can lead to evolution*