YEAR GROUP ENDPOINT EXPECTATIONS FOR SCIENCE					
R		Explore the natural world around them: freezing and melting, vibration, light and shadow, floating and sinking, magnets describe what they see, hear and feel whilst outside understand the effect of changing seasons on the natural world around them			
Y1		Plants • To be able to name basic wild and garden plants, and different types of trees. • To be able to name the simple parts of a flower and a tree	Animals • Name common animals from all categories and know what they eat • Know distinguishing body features of different types of animals, start to compare them • basic parts of the human body and senses	Everyday Materials • Distinguish between an object and the material from which it is made. • name and identify common materials • how are materials different	Seasonal Changes • Observe changes across the four seasons. • day length • weather types
		Simple Questions *comparison - how are the same/different Observing *make verbal observations and drawings *magnifying glasses, tape measures, Simple tests *observations over time - plant growth diary Identify and Classify *identify tree leaves	Simple Questions *changes with age *teacher led questions *comparison - how are the same/different *adult supported planning Observing *rulers, hand lenses *compare - body measurements *noticing change -removal of senses Simple tests	Simple Questions *alternatives, which is better? *suggest amendments to a test *adult supported planning Observing *through senses *magnets *making notes Simple tests *comparative tests	Simple Questions *what is typical Observing *making notes *symbols to represent Simple tests *observations over time - weather/seasons diary *pattern seeking - time of day/wind Identify and Classify *sorting typical weather Gathering and recording data

		<u>Gathering and recording data</u> *photos, simple labels, cm measurements (tape measure), non-standard units of measurements <u>Use observations and ideas</u> *age of tree related to girth	*pattern seeking - body measurements, where living things grow/live *observations over time <u>Identify and Classify</u> *sort and group with own criteria *sort and group against given criteria <u>Gathering and recording data</u> *cm measurements (ruler), non-standard units of measurements *prepared table *photos *drawings and labels *writing <u>Use observations and ideas</u> *oldest, youngest from photos *verbal suggestions to create 'tips for' *guided explanations from observations *conclusions	*observations over time - ice, puddles *classify - magnets <u>Identify and Classify</u> *sort and group with own criteria *sort and group against given criteria <u>Gathering and recording data</u> *video *photographs *pipettes, ribbons - non standard measurements *drawing, model making <u>Use observations and ideas</u> *make guided, verbal predictions based on previous knowledge *guided, verbal explanations from observations *bigger or smaller, puddles after rain - making connections	*video *photographs *ml measurements (jug) *thermometer *collage *wind sock, non-standard measurements <u>Use observations and ideas</u> *make verbal predictions based on previous knowledge
2		<u>Plants</u> • that seeds and bulbs become plants • how to grow healthy plants	<u>Animals</u> • that young animals grow in adult animals • what is needed for survival	<u>Everyday Materials</u> • suitability of materials • how to change the shape of a material in different ways	<u>Living things</u> • what makes something 'living'

			• how to be healthy		• habitats – why do different animals survive in different types of places • match animals to habitats and micro-habitats • food chains
		Simple Questions *how do plants survive *plan how to record what we see *what is different, does that matter Observing *magnifying glasses, rulers *drawing *representing *cutting implements Simple tests *observations over time - plant growth *comparative tests Identify and Classify *compare using observations Gathering and recording data *mm, cm -standard measurements Use observations and ideas *make verbal predictions based on previous knowledge	Simple Questions *answering questions with design and creation *want vs need for survival Observing *senses *videos *cameras *making notes *drawing *representing Simple tests *observations over time - chick growth *pattern seeking - heart rate and exercises Identify and Classify *grouping *tests to classify - taste Gathering and recording data *tables *photos - matching *tables	Simple Questions *way things work *plan a test to answer question *comparison - how are the same/different *how definitions can change answers (bounciest - longest or highest?) Observing *making notes *using senses *printing/texture *role play Simple tests *comparative tests *pattern seeking - water drops, ball, fabric Identify and Classify *sorting against criteria Gathering and recording data *pipettes - non standard measurements	Simple Questions *comparison - how are the same/different *use of locality *create questions from stems Observing *magnifying glasses *making notes *drawing *photos *using senses *representing *microscopes *torches *specimen pots Simple tests *tests to classify Identify and Classify *sorting against criteria *food chains Gathering and recording data *photos

		*verbal explanations from observations	*multiple records of same event <u>Use observations and ideas</u> * evaluations based against criteria *faster or slower? *design an alternative against criteria	*syringes, rulers, weights - standard measurements *timers *making notes *scaffolded notes *voice notes *select own way to record data *bar chart <u>Use observations and ideas</u> *plan a simple test to compare materials *stronger or weaker? *Most/least *design an alternative against criteria	<u>Use observations and ideas</u> *create presentations *info from secondary sources *drama	
3		<u>Plants</u> • name more complex features of plants and know their function • that different plants need different things to thrive • how water is transported in a plant • plant life cycles	<u>Animals</u> • nutrition • different types of skeletons • the function of muscles	<u>Forces</u> • movement on different surfaces • magnetic forces • attract/repel depending on the pole	<u>Light</u> • what is light and dark • simple reflection • dangers of sun • how shadows form and change	<u>Rocks</u> • to be able to identify different types of rocks • what soil is made of • simple understanding of how a fossil is made
		<u>Relevant Questions</u> *plan an enquiry to test prior knowledge	<u>Relevant Questions</u> *ask questions and make predictions on	<u>Relevant Questions</u> *use previous knowledge to ask	<u>Relevant Questions</u> <u>Observe and Measure</u>	<u>Relevant Questions</u> *use observations to create questions

		Observe and Measure *rulers, mm, cm, standard measurements *magnifying lenses *drawing *timers *light and temperature data loggers *detailed paintings *sequences Practical enquiry *observations over time *pattern seeking *fair testing Data and findings *labelled diagrams *scaffolded tables *classification by use *tables and graphs created by data logger Using evidence *use provided sources *use measurements to inform Identifying diff, sim and changes *pollination	existing data and knowledge Observe and Measure *non-standard units of measurement *systematic data collection Practical enquiry *pattern seeking *comparative testing Data and findings *bar charts *classify info *scattergram *scaffolded tables *pictorial representation Using evidence *answer the question from data collected (scattergram) Identifying diff, sim and changes *compare and identify the data set that was most/least effective in showing change Using results *suggest improvements	questions about what could happen *generate further questions on a topic they have some existing knowledge of Observe and Measure *standard measurements, cm Practical enquiry *fair testing *plan own investigation to answer the question Data and findings *use scaffolded tables Using evidence *create further questions to ask from findings Identifying diff, sim and changes *identify materials that are/are not magnetic Using results *was the test truly fair? What could be done differently?	*standard measurements (cm) Practical enquiry *set up and complete a simple practical enquiry Data and findings *create two criteria sorting table Using evidence *answer question from observations Identifying diff, sim and changes *which materials reflect and why? *which materials form the best shadows and why? Using results Reporting *verbal presentation	Observe and Measure *labelled diagrams *detailed descriptions *magnifying glasses *microscopes *non-standard measurements *standard measurements (ml) Practical enquiry *fair testing Data and findings *drawings Using evidence *answer question from observations Identifying diff, sim and changes *investigate and compare Using results *use a identification key to identify names Reporting *verbal presentation *written report

		Using results *make conclusions *make predictions Reporting *verbal presentation *written report *design within requirements *exhibition of understanding (self selected)	*identify patterns in data *make conclusions *confirm or refute predictions Reporting *illustrated presentation - pupils present their data in a way that they choose	*use secondary sources to back up findings with explanations Reporting *verbal explanations *photographic evidence		
4		Electricity • what needs electricity • simple circuits, make and name • identify if a circuit will work • switches • common insulators and conductors	Animals • human digestive system • human teeth • construct and interpret food chains	States of Matter • liquids, solids, gases • changing states with hot/cold – measure or research different materials temps • the water cycle	Sound • how sound is made • vibration is how sound travels • pitch/volume/ distance	Living things • grouping in different ways • classification keys • changing environments and dangers
		Relevant Questions Observe and Measure Practical enquiry Data and findings	Relevant Questions Observe and Measure Practical enquiry Data and findings	Relevant Questions Observe and Measure Practical enquiry Data and findings	Relevant Questions Observe and Measure Practical enquiry Data and findings	Relevant Questions Observe and Measure Practical enquiry Data and findings

		Using evidence Identifying diff, sim and changes Using results Reporting	Using evidence Identifying diff, sim and changes Using results Reporting	Using evidence Identifying diff, sim and changes Using results Reporting	Using evidence Identifying diff, sim and changes Using results Reporting	Using evidence Identifying diff, sim and changes Using results Reporting
5		Earth and Space • movement in the solar system • movement of the moon • how rotation links to day/night	Animals • changes as humans get old	Properties and Changes of Materials • more complex differences between materials, compare and group • dissolving and recovery • how to separate mixtures • reversible and irreversible changes	Forces • gravity • air resistance • mechanisms	Living things • different life cycles of different types of animals • reproduction in different animals and plants
		Relevant Questions Observe and Measure Practical enquiry Data and findings	Relevant Questions Observe and Measure Practical enquiry Data and findings	Relevant Questions Observe and Measure Practical enquiry Data and findings	Relevant Questions Observe and Measure Practical enquiry Data and findings	Relevant Questions Observe and Measure Practical enquiry Data and findings

		Using evidence Identifying diff, sim and changes Using results Reporting	Using evidence Identifying diff, sim and changes Using results Reporting	Using evidence Identifying diff, sim and changes Using results Reporting	Using evidence Identifying diff, sim and changes Using results Reporting	Using evidence Identifying diff, sim and changes Using results Reporting
6		Electricity • how the number and voltage of cells affects bulb brightness • give reasons for variations in a circuit • circuit symbols	Animals • human circulatory system • impact of chosen lifestyle on body function • how water and nutrients are transported in human body	Evolution and Inheritance • recognise that living things have changed over millions of years • fossils give information about change • adaptation	Light • how light travels • how the eye 'sees' • how the travelling light influences shadows shapes	Living things • specific characteristics of animal groups • how all living things are classified
		Relevant Questions Observe and Measure Practical enquiry Data and findings Using evidence	Relevant Questions Observe and Measure Practical enquiry Data and findings Using evidence	Relevant Questions Observe and Measure Practical enquiry Data and findings Using evidence	Relevant Questions Observe and Measure Practical enquiry Data and findings Using evidence	Relevant Questions Observe and Measure Practical enquiry Data and findings Using evidence

		Identifying diff, sim and changes Using results Reporting	Identifying diff, sim and changes Using results Reporting	Identifying diff, sim and changes Using results Reporting	Identifying diff, sim and changes Using results Reporting	Identifying diff, sim and changes Using results Reporting