Science – Progression in Key Skills CYCLE A

	Nursery			Reception			Year One			Year Two		
Working Scientifically	Skills	Vocabulary	Experiences	Skills	Vocabulary	Experiences	Skills	Vocabulary	Experiences	Skills	Vocabulary	Experiences
Observing	Look closely.	look see		By observation notice similarities and differences.	describe same different		Refine observations using more description. Identify, classify and describe a variety of plants, animals and materials.	observe observing identify sort topic specific vocabulary e.g. carnivores omnivores herbivores		Refine observations made through use of equipment, magnifying glasses etc. Describe observations using scientific language.	observation classify compare contrast topic specific vocabulary e.g. protein carbohydrate dairy	
Researching	Show some interest in finding out about the world around them.			Show increasing interest in researching the world around them.	find		Use a variety of sources to aid research, internet, library etc.	research decide topic specific vocabulary e.g. property properties		Use research to inform discussion and decision making.	decision topic specific vocabulary e.g. producer consumer predator	
Questioning	Asks questions about the world around them.	why what		Ask appropriate questions about the world around them. Question why things happen.	who where why when which		Ask questions about the world around them. What I can see, smell, taste, touch etc Recognise that questions can be answered in different ways.	how question answer		Begin to ask their own relevant questions. Increasingly ask about unknown phenomena.		
Investigating	Try out ideas in a practical way.	try		Organise tools and equipment to test ideas by investigating.	test		Perform simple tests to answer a set question. Investigate using 4 steps.	equipment investigate investigation prediction tally chart results test		Perform simple comparative tests. Investigate using 6 steps	experiment method conclusion axis title	

Predicting	Say what might happen.			Say what they think will happen.			Make simple predictions of the outcome of an investigation.	predict prediction		Confidently consider known facts when making a prediction. Explain reasons for a prediction.		.
Measuring	Use language such as here and there to describe the world around them.			Use non-standard measurement.	full empty heavy light fast slow long tall high		Use standard units of measurement. Use simple equipment to measure length, time, capacity, weight.	temperature thermometer compass data information measure measurement container weigh length, width height metre centimetre comparative language e.g. short, shorter lighter lightest etc		Select most appropriate measurement and equipment. Use a variety of standard units of measurement.	gram kilogram millilitre litre degree	
Reporting	Make comments about the world around them.			Use increased vocabulary to comment about the world around them. Make simple representations.	picture draw		Use scientific vocabulary to describe an event. Complete pre-prepared tables and graphs and add simple labels for diagrams.	table tally chart block graph pictogram label		Use precise scientific vocabulary to describe an event. Create own charts and tables and clearly labelled diagrams.	data diagram record represent group set list title axis	
Interpreting and Evaluating	Say what happened.			Identify what happened and possible reasons			Consider what results show and why. Answer initial question using results. Notice anything that affected results.			Explain outcomes and how they were achieved. Relate results to initial question. Identify if the investigation was effective/ suggest how to improve it.	improve	

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	Skills	Vocabulary	Experiences	Skills	Vocabulary	Experiences	Skills	Vocabulary	Experiences	Skills	Vocabulary	Skills
Materials	Identify materials	metal plastic wood		Identify which materials sink and float	metal plastic wood paper sink float heavy light		Identify materials and some of their properties	metal plastic wood paper glass water rock		Identify and compare the suitability for purpose of a range of materials Find out how the shapes of objects can be changed	metal plastic wood glass water rock brick cardboard squashing bending twisting stretching	
Animals	Learn about the lifecycle of various creatures Learn about myself	butterflies minibeasts, dinosaurs frogs. head body legs arms		Describe the life cycle of a chick and butterfly. Begin to understand healthy eating. Learn what our 5 senses are	fish bird mammal insect fur hair blood bone feathers beak antenna chick chicken egg gill fin tail caterpillar butterfly chrysalis fruit vitamins hear see touch taste smell eyes ears nose		Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Identify and name a variety of common animals that are carnivores, herbivores and omnivores. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) Identify, name, draw and label the basic parts of the human body and say which part	fish amphibians reptiles birds mammals carnivores herbivores omnivores vertebrate invertebrate eyes see sight ears hear sound tongue mouth taste nose smell skin touch texture organs elbow foot knee hair head neck hand leg arm shoulder chest ankle stomach face teeth vegetables meat fish fat		Notice that animals, including humans, have offspring which grow into adults Describe the basic needs of animals for survival Describe the importance for humans of exercise, eating the right amounts of different food.	offspring adult water air food group energy carbohydrate fat protein dairy exercise survive survival	

					mouth bird beak wings		of the body is associated with each sense Learn about teeth	sugar nutrients tooth teeth primary secondary adult deciduous canine				
Habitats	Observe simple habitats around nursery	TBC		Habitats of different animals in the rainforest.	canopy forest floor river					Explore and compare the differences between things that are living, dead, and things that have never been alive. Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other Identify and name a variety of plants and animals in their habitats, including microhabitats Describe how animals obtain their food from plants and other animals,	habitat organism producer consumer predator prey food chain source mini-beast micro-habitat	

										using the idea of a simple food chain, and identify and name different sources of food.		
Seasons	Introduction to seasons	Spring Summer Winter Autumn weather sun rain snow		Recognise the seasons	Spring Summer Winter Autumn season year weather sun rain snow hail fog mist wind cloud		Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.	As Reception North East West South direction forecast temperature thermometer compass				
Plants	Introduction to nature and growing, Life cycle of a bean.	Plant leaf tree flower seed bean pod		Observing plants including trees.	Plant leaves leaf flower seed fruit root stem		Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Identify and describe the basic structure of a variety of common flowering plants, including trees.	deciduous coniferous evergreen trunk branch bulbs water		Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	warmth sunlight water soil grow fruit seed bulb germinate germination reproduce survive temperature reproduction disperse dispersal	

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