Our Lady of Perpetual Succour Catholic Primary School

Science Progression

Topic	Year 3		Year 4		Year 5		Year 6	
	I can Statements	Lesson Objectives	I can Statements	Lesson Objectives	I can Statements	Lesson Objectives	I can Statements	Lesson Objectives
Plants	I can describe what the parts of a plant do. (roots, stem, leaves, flowers) I can describe why different plants need different amounts of water, light and heat to grow and stay healthy. I can say how water is transported in plants. I can describe the lifecycle of a flowering plant. I can describe ways of pollination and seed dispersal.	I can describe what the parts of a plant do. (roots, stem, leaves, flowers) I can investigate by **comparing** what conditions plants need to germinate and grow healthily. (Big Question) I can say how water is transported in plants. I can describe the lifecycle of a flowering plant. I can **research** different ways plants use pollination and seed dispersal. (Big Question) I can **observe** flowers in a vase and say how and why they have changed. (Big Question)	*From Living things and their habitats: I can sort plants into flowering and non-flowering.* *I can describe how human influence affects animal's habitats, and environments.*		*From Living things and their habitats: I can describe how plants reproduce sexually and asexually.*		*From Living things and their habitats: I can classify plants into groups*	

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Animals, including humans	I can identify a healthy diet I know the food groups and can give examples I can describe the skeleton and name some bones. I can identify animals from their skeletons. I can describe the function of the skeleton and of muscles.	I know the food groups and can give examples of them in a healthy diet I can describe the skeleton and name some bones. I can **identify** animals from their skeletons and **compare them**. (Big Question) I can describe the function of the skeleton and of muscles. I can **complete a fair tes**t about the function of muscles and bones **using measurements** and **recording in a table**. (Big Question)	I can describe the parts of the digestive system and their functions (mouth, tongue, teeth, oesophagus, stomach and small and large intestine) I can describe teeth and their functions. I can create and explain food chains.	I can **identify** and describe the parts of the digestive system and their functions (mouth, tongue, teeth, oesophagus, stomach and small and large intestine) (Big Question) I can describe teeth and their functions. I can **group** teeth due to their functions. (Big Question) I can **compare** the effect of different liquids on our teeth and record my results. (Big Question) I can create and explain food chains.	I can describe how humans change as they grow old I can compare gestation periods of other animals to humans. *From Living things and their habitats:* *I can describe how plants reproduce sexually and asexually.* *I can describe the differences in lifecycles of: a mammal, an amphibian, an insect and a bird.* *I can describe some processes of reproduction in animals.*	I can describe how humans change as they grow old I can **find patterns** in the gestation periods of other animals and record my findings in a **scatter graph**. (Big Questions) I can **compare** who grows faster - boys or girls. (Big Question) I can **research** why people get grey hairs when they age. (Big Question) I can **create a fair test** to find how a person's age affects their reactions and **discuss the validity of my results**. (Big Question) I can **find patterns** between height and age and choose **how to show my results**,	I can identify and name the main parts of the circulatory system and their functions. I can describe how nutrients are transported in animals. I can discuss the impact of diet, exercise and lifestyle on the human body. *From Living things and their Habitats:* *I can describe how living things are classified based on their characteristics.*	I can **identify** and name the main parts of the circulatory system (Big Question) I can describe the functions of the heart, lungs, blood vessels and blood. I can **compare** the most common eye colours in our class and **choose how to show my results**. (Big Question) I can **plan a fair test** about the effect of exercise on heart rate, **choosing how to record results** and **making scientific conclusions**. (Big Question) I can describe how nutrients and water are transported in animals. I can discuss the impact of diet, exercise and lifestyle on the human body

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						explaining what they mean. (Big Question)		
Living things and their Habitats	*From Plants:* *I can describe the lifecycle of a flowering plant.* *I can describe ways of pollination and seed dispersal.*		I can describe how living things can be grouped together. I can use a classification key to sort vertebrates. I can sort plants into flowering and non-flowering. I can describe how human influence affects animal's habitats, and environments. *From Animals Including Humans:* *I can create and explain food chains.*	I can describe how living things can be grouped together and use **Carroll Diagrams to group them.** I can **classify** vertebrates into families using a **classification key.** (Big Question) I can **use a classification key** to identify unknown animals. I can **sort** plants into flowering and non-flowering **using Venn Diagrams**. I can **research** how human influence affects animal's habitats, and environments. (Big Question) I can **research** how seasons	I can describe the differences in lifecycles of: a mammal, an amphibian, an insect and a bird. I can describe how plants reproduce sexually and asexually. I can describe some processes of reproduction in animals.		I can describe how living things are classified based on their characteristics. I can classify animals into groups I can classify plants into groups I can classify micro-organisms into groups. I can use and create classification keys. *From Evolution and Inheritance:* *I can explain how animals are adapted to suit their environment* *I can show how offspring vary from their parents*	I can **research** Carl Linnaeus and how he changed how we group animals. (Big Question) I can describe how living things are classified based on their characteristics. I can **make classification keys** for animals, plants and microorganisms using a variety of methods.. (Big Question) I can **observe** how bread changes **over time** (Big Question)

				change habitats and how that affects which animals are found there. (Big Question)				
Evolution and Inheritance	*From Rocks: I can describe how fossils are formed* *From Plants: I can describe ways of pollination and seed dispersal.*		*From Living things and their Habitats: I can describe how human influence affects animal's habitats, and environments*		*From Living things and their Habitats:* *I can describe how plants reproduce sexually and asexually.* *I can describe some processes of reproduction in animals.*		I can explain how animals are adapted to suit their environment I can show how offspring vary from their parents. I can describe how living things have changed over time. I can show how fossils provide information about prehistoric living things.	I can explain how animals are adapted to suit their environment I can show how offspring vary from their parents. I can describe how living things have changed over time. I can show how fossils provide information about prehistoric living things. I can **find patterns** in bird's beaks and the food they eat and **explain what this suggests**. (Big Question) I can **research** Charles Darwin and what he found on the Galapagos Islands. **(Big Question)**

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Seasonal Changes	*From Light: I can say why the sun is dangerous to the eyes.*				*From Earth and Space: I can describe why day turns to night.*			
Earth and Space					I can describe the movements of the Earth and other planets. I can describe the movement of the moon. I can describe the shape of the Earth Sun and Moon. I can describe why day turns to night. I can explain the phases of the moon.	I can describe the movements of the Moon, Earth and Sun. I can describe the shape of the Earth Sun and Moon. I can describe why day turns to night. I can **identify** the phases of the moon. (Big Question) I can **find patterns** in the orbit length of the planets (Big Question) I can **research** how our Sara Seager is changing how we understand planets. (Big Question)		

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Forces and Magnetism	I can explain what friction is I can describe magnetism and how magnets repel and attract each other. I can sort materials into magnetic and non-magnetic I can describe the poles of a magnet I can predict if magnets will repel or attract.	I can describe magnetism and how magnets repel and attract each other at the poles and **predict** when this will happen.. I can **sort materials** into magnetic and non-magnetic **using venn diagrams** (Big Question) I can **find patterns** between the shape/size of a magnet and its strength. (Big Question) I can show simple push and pull forces on a diagram. I can investigate how different surfaces change how far a car moves and **use my results to describe what friction is.** I can **plan a fair test** to find how an object's mass affects the force needed to move it. (Big Question)			I can explain what gravity is and its effect. I can describe water resistance, air resistance, and friction. I can describe how pulleys, levers and gears work.	I can explain what gravity is and its effect. I can describe water resistance, air resistance, and friction. I can describe how pulleys, levers and gears work. I can **identify** all the forces acting on objects in different situations. (Big Question) I can **predict** which shoe will be the slippiest **based on my scientific knowledge** and **carry out a comparative test** to find out. (Big Question) I can **plan a fair test** about air resistance **choosing how to record my results** and **explaining my findings scientifically**. (Big Question)		

						I can **find patterns** in how different shaped objects fall through water, **predicting results** and **explaining findings scientifically.** (Big Question)		
Rocks	I can sort rocks based on their appearance and physical properties I can describe how fossils are formed I can explain what soil is made from.	I can make **careful observations to sort** rocks based on their appearance and physical properties. I can describe how fossils are formed I can explain what soil is made from. I can **find patterns** in how volcanoes are dispersed around the globe. (Big Question) I can **research** who Mary Anning was and what she discovered. (Big Question) I can **compare** which soils absorb the most water and **choose how to**					*From Evolution and Inheritance: I can show how fossils provide information about prehistoric living things.*	

		record my results. (Big Question) I can **observe carefully** and **use an identification tree** to find the name of some rocks. (Big Question)						
Materials	*From Rocks:* *I can sort rocks based on their appearance and physical properties* *I can describe how fossils are formed* *From Forces and Magnets:* *I can sort materials into magnetic and non-magnetic*		I can group materials into solid liquid and gas. I can describe what happens to water when it is heated and cooled. I can describe the water cycle. *From Electricity:* *I can group conductors and insulators.*	I can describe the properties of solid liquids and gases. I can **group** materials into solid liquid and gas and show this in **Venn Diagrams**. (Big Question) I can describe the physical processes that occur when water is heated and cooled. I can **use a thermometer to investigate** the temperature that water melts at. I can **plan and carry out a fair test** to see how mass affects melting time and			I can classify materials by their: hardness, conductivity, magnetism, solubility. I know which substances dissolve and how to recover them. I know how to separate mixtures in different ways. I can explain using evidence why some materials are best suited to different uses. I can explain why some state changes are reversible, and some	I can **classify** materials by their: hardness, conductivity, magnetism, solubility I can **plan a fair test** to find how temperature affects the rate of solubility and **choose how to show my results, commenting on their accuracy.** I can **observe** how a container of salt water **changes over time** and explain why this means we can retrieve some solutes. (Big Question) I can **compare** which materials are soluble. (Big Question)

				draw conclusions based on the results. . (Big Question) I can **compare** the evaporation time of fresh and sea water. (Big Question) I can find **patterns** in how long it takes different size objects to melt. (Big Question) I can **measure the changes in volume** of water **over time** and **explain my results using scientific vocabulary**. (Big Question) I can **plan and carry out a fair test** to find out how surface area affects evaporation time. (Big Question) I can **use scientific vocabulary** to			state changes aren't.	I know how to separate mixtures in different ways. I can explain using evidence why some materials are best suited to different uses. I can explain why some state changes are reversible, and some state changes aren't.

				describe the water cycle.				
Sound			I can describe how sounds are made I can describe how sound travels to the ear I can show how pitch changes with the object. I can describe volume in terms of vibrations I understand what happens to a sound when you get further away from it.					
Electricity			I know some appliances that run on electricity. I can build a working circuit and identify the components. I can use different switches in a circuit.	I know some appliances that run on electricity. I can build a working circuit and identify the components. I can use different switches in a circuit.			I can draw circuit diagrams. I can recognise and use symbols for components I can explain how the brightness of a lamp is	I can draw circuit diagrams and use circuit symbols for components.. I can carry out **fair tests**, **choosing variables** to find how the brightness of a lamp is affected by voltage **explaining my findings**

			I can tell if a circuit will work or not. I can group conductors and insulators.	I can **predict** if a circuit will work or not. I can **group** conductors and insulators. I can **compare** which metal is the best conductor. (Big Question) I can **observe over time** to see how long a battery will last. (Big Question)			affected by voltage. I can compare and give reasons for the function of components in a circuit. I can investigate how components function in a circuit	**scientifically.(**Big Question) I can **ask a question based on my previous investigations** and p**lan an investigation** to find the answer. I can investigate how components function in a circuit I can **observe** the temperature of a bulb **over time** and **find patterns in it**, showing my results in a **line graph**. (Big Question) I can **compare** which brand of battery lasts the longest. (Big Question)
Light	I can explain why we need light to see things I can explain that dark is an absence of light I can describe how shadows	I can explain why we need light to see things and why some light sources are dangerous to our eyes. I can explain that dark is an absence of light and describe how shadows and reflections are formed.			I can describe how light travels. I can explain how objects reflect light in order to be visible I can describe	I can describe how light travels. I can explain how objects reflect light in order to be visible and how we see things I can explain why shadows are the		

	and reflections are formed I can describe why shadows change shape. I can investigate why shadows change I can say why the sun is dangerous to the eyes.	I can **plan a fair test** to find out how a shadow changes, **show my results in a bar chart** and **make a conclusion**. (Big Question) I can **sort** light sources in to natural and artificial (Big Question) I can **observe over time** the amount of light in our classroom and **record my results in a table**. (Big Question).			how we see things. I can explain why shadows are the same shape as the objects. I can show a pattern in the size of a shadow and the distance from the light source.	same shape as the objects. I can **plan a fair test** to determine the effect of distance of light source on shadow size and **explain my results scientifically.** (Big Question) I can **predict** which material is the most reflective and carry out a **comparison** to find out, **using bar charts** to show my results. (Big Question) I can **observe changes** to my shadow length **over time** and record my results in a **line graph.** (Big Question)		