Petersgate Progression of Skills & Knowledge for Science

Key: N/C Knowledge & Hants Big Ideas Skills used in Problem Solving & Enquiries

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1 & 2	Summer 2
	Humans	**Pushes, Pulls and their effects**	**Materials - Space**	**Materials- lighthouse keeper**	**How do Plants Grow?**	**Animals**
Year 1	*Label and name correctly. *Use senses to answer questions. *Describe in order to classify. *Record data on simple block graphs – e.g. favourite flavour crisps in class. *Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	*Observing closely and describe what see. *Ask simple questions about the world around them – linked with forces. *Carry out simple tests. *Compare differences and changes. *Describe the effect of changing things – force. *Record results on a simple tables. *How things move – objects move in different ways (roll, slide, bounce etc.) *Forces change how things move by pushing and pulling. *Pushing and pulling sometimes slows things down, speeds them up or makes it change direction. *Bigger pushes and pulls have bigger effects. *Forces change shapes – by squashing, bending, twisting and stretching.	*Decide how to group and sort objects or materials. *Identify and describe materials. *Suggest how to answer questions. *Use observations and ideas to suggest answers to questions. *Compare materials *Perform a simple test (with Tchr input & support) *Talk about what they have found out and how they found it out. *Distinguish between an object and the material from which it is made. *Identify and name a variety of everyday materials, inc. wood, plastic, glass, metal, water and rock. *Describe the simple physical properties of a variety of everyday materials. *Compare and group together a variety of everyday materials on the basis of their simple properties.		*Ask simple questions about the world around them. *Observe closely in order to group and classify. *Carry out simple tests. *Gather and record simple data (plant height, number of leaves etc.) *Use their observations to answer questions. *Gather evidence to describe how plants change over time or as a result of something happening. *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. *Seeds produce roots to get water and shoots to produce leaves to collect sunlight. *Most plants start growing from a seed or bulb. *All Plants need warmth, light and water to grow and survive.	*Compare differences between animals. *Observe & describe in order to group and classify. *Identify patterns to support classification. *Use secondary sources including the internet and 'experts' (teacher) *Sort using Venn Diagrams. *Describe and compare. *Identify and name a variety of common animals inc. 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, retiles, birds and mammals, inc. pets)
Year 1 Longitudinal Study: Steve the Stick Insect wants to visit from Australia. Where in the school grounds will he find most friends (minibeasts) and will they be there all year?	*Observe closely, gather and record data in order to suggest answers to questions. *Gather evidence to describe how things change over time, noticing similarities, differences and patterns. (season & weather) **Seasonal Changes** *Observe changes across the 4 seasons. *Observe and describe weather associated with the seasons and how day length varies. *Identify and name a variety of minibeasts found in the different micro-habitats in the school grounds					

	Materials & their properties (castles)	Animals inc. Humans (Health & Hygiene)	Rainforest Animals – food chains	Animal life cycles/life time lines.	Living Things and their Habitats How Animals Survive?
Year 2	*Identify and describe in order to classify. *Perform a simple comparative test (fair testing with Tchr input) *Identify what to change and what to measure. *Suggest how to answer questions. *Use measurements when obtaining results. *Explain cause & effect (because…) using scientific vocabulary. (see MTP) *Different materials have different describable and measurable properties. *The properties of a material determine whether they are suitable for a purpose. *Investigate/carry out enquiries - absorbency, flexibility, stretchiness, strength, brittleness, slippiness.	*Perform a simple test (fair testing with Tchr input) *Use observations to suggest answers to questions. *Decide on own method for enquiry. *Describe the effects of changing things – impact of exercise on body. *Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. *(v.quick check!)* *Describe the importance for humans of exercise, eating the right amounts of different types of food (nutrition) and hygiene.	*Record evidence (animals) on Venn Diagrams. *Use secondary sources including the internet and 'experts' (teacher) *Explain how animals are suited/adapted to eat what they do. *Look for relationships/ patterns between similar groups of animals. *Identify and name a variety of rainforest animals including fish, amphibians, reptiles, birds and mammals. *Identify and name a variety of rainforest animals that are carnivores, herbivores and omnivores. *Animals feed, move and sense for survival. *Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain and identify and name different sources of food.	*Construct bar chart to record height against ages. *Use secondary sources including the internet and 'experts' (teacher) *Construct a time line to try to spot patterns. *Make predictions based on knowledge known. *Animals, including humans have offspring which grow into adults. *All animals are born which is when they can eat and breathe. *Different animals live to different ages. (When animals are no longer able to reproduce they usually die.) *Different animals reach different sizes and ages before they are able to reproduce.	*Gather evidence to describe habitats and support explanations. (because…….) *Predict what minibeasts may eat by observing the habitat *Use secondary sources including the internet and 'experts' (teacher) *Identify and classify plants and animals found. *Make comparisons between habitats offering explanations using prior/learnt knowledge. *Record evidence on tables and as graphs to help in answering questions. *Observe changes over time, noticing similarities, differences and patterns. *Identify and name a variety of British/common wild animals including fish, amphibians, reptiles, birds and mammals. *Identify and name a variety of British/common wild animals that are carnivores, herbivores and omnivores. *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, using the idea of a simple food chain, and identify and name different sources of food. **(using minibeasts found in the school ground or knowledge learnt at QE Park)** *Animals feed, move and sense for survival.
Year 2 Longitudinal Study: Do all plants produce flowers (include a bulb flower) and seeds and what happens to them after they have flowered?	*Observe closely, gather and record data in order to suggest answers to questions. *Gather evidence to describe how things change over time, noticing similarities, differences and patterns. (season, weather & temperature) *All flowering plants make seeds that can grow into new plants. *Sometimes the plants dies after it has produced its seed and sometimes the plant lives for many generations producing seeds each year. *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. *How plants get what they need to survive – use roots to get water & shoots to produce leaves to collect sunlight.				