Year 5 Curriculum

Autumn		Spring		Summer		
Ancient Egyptians (History)	**Eastern Europe (History)**	**Raging Rivers (Geography)**	**Off with her Head (History)**	**Stargazers**		
Properties and changes in materials Entitlement and experiences		**Living things and their habitats**	**Animals including Humans**	**Earth and Space**	**Forces**	
Science Objectives	**Key knowledge**	**Core Vocabulary**		**POP tasks**	**Links to Curriculum Drivers**	**Resources**
Throughout the year **Working Scientifically:** ~ Plan different types of scientific enquiries to answer questions. ~ Recording data and results of increasing complexity using graphs, diagrams etc. ~ Report and present findings, including conclusions, causal relationships and explanations		**Working Scientifically:** Plan, variables, measurements, accuracy, precision, repeat readings, predictions Reporting data: labels, diagrams, tables, line graphs Report and present: conclusions, explanations, presentation				
Autumn **Properties and changed in materials:** Year 4 ~ Compare and group materials based on solid, liquid, gas ~ Observe that some materials change state when heated or cooled	Materials have different uses depending on their properties and state (liquid, solid, gas). Properties include hardness, transparency, electrical and thermal conductivity and attraction to magnets. Some materials will dissolve in a liquid and	States of matter, solids, liquids, gases, water vapour, melt, freeze, evaporate, condense, precipitation **Year 5: Materials, solids, liquids, gases, melting, freezing, evaporating, condensing, conductor, insulator, transparency.**		**Basic:** Observe and describe how items may be separated through filtering,	**Possibilities - scientist**	

~ Identify the part played by evaporation and condensation in the water cycle **Year 5** **~ Compare and group materials based on properties** **~ Know that some materials will dissolve in liquid** **~ Use knowledge of solids, liquids and gases to decide how mixtures might be separated** **~ Give reasons, based on evidence, for the uses of everyday materials.** **~ Demonstrate reversible changes** **~ Explain that some changes are not reversible**	form a solution while others are insoluble and form sediment. Mixtures can be separated by filtering, sieving and evaporation. Some changes to materials such as dissolving, mixing and changes of state are reversible, but some changes such as burning wood, rusting and mixing vinegar with bicarbonate of soda result in the formation of new materials and these are not reversible.		sieving and evaporation. **Advancing:** Experiment with ways to separate pebbles and silt in a solution of salt. **Deep:** Is there a way to recover water after recovering a substance from a solution after evaporation? Prove it.		
Spring 1 **Living things and their Habitats:** Year 4 ~ Recognise that living things can be grouped in a variety of ways ~ Explore and use classification key to group, identify and name living things in their environment ~ Recognise that environments can change. **Year 5**	As part of their life cycle, plants and animals reproduce. Most animals reproduce sexually. This involves two parents where the sperm from the male fertilises the female egg. Animals, including humans, have offspring which grow into adults. In humans and some animals, these offspring will be born live, such as babies or kittens, and then grow into adults. In other animals, such as chickens or snakes, there may be	Organism, variation, classification, vertebrates, invertebrates, mammal, amphibian, bird, reptile, endangered, extinct, conservation, environment, habitat, key **Year 5: Sexual, asexual, reproduction, amphibian, reptile, bird, insect, fish, embryo, mammal, metamorphosis, Fertilisation, asexual reproduction, sexual reproduction, life cycle,**	**Basic:** Draw and describe the life cycle of an amphibian **Advancing:** Explain the similarities and differences in the life cycles of a mammal, an amphibian,	**Community – local environment** **Possibilities – David Attenborough**	

~ Describe the differences in the life cycles of mammals, amphibians, insects and birds **~ Describe life process of reproduction in plants and animals**	eggs laid that hatch to young which then grow to adults. Some young undergo a further change before becoming adults e.g. caterpillars to butterflies. This is called a metamorphosis. Plants reproduce both sexually and asexually. Bulbs, tubers, runners and plantlets are examples of asexual plant reproduction which involves only one parent. Gardeners may force plants to reproduce asexually by taking cuttings. Sexual reproduction occurs through pollination, usually involving wind or insects.		an insect and a bird. **Deep:** True or false? All young offspring look like smaller versions of their parents.		
Spring 2 Year 4 ~ Describe the simple functions of the digestive system ~ Identify teeth and their functions ~ Construct and interpret food chains **Year 5** **Animals Including Humans:** **~ Describe changes as humans develop to old age**	When babies are young, they grow rapidly. They are very dependent on their parents. As they develop, they learn many skills. At puberty, a child's body changes and develops primary and secondary sexual characteristics. This enables the adult to reproduce.	Digest, oesophagus, stomach, small intestine, large intestine, rectum, herbivore, carnivore, omnivore, producer, predator, prey **Year 5: Prenatal, gestation, reproduce, adolescence, puberty, menstruation, adulthood, life expectancy**	**Basic:** Describe the main changes in the human body from childhood to adulthood to old age. **Advancing:** Compare and contrast the physical appearance of children and adults. **Deep:** Make generalisations about the	**Wellbeing-Puberty**	

			relationship between age and changes in humans.		
Summer1 **Earth and Space:** ~ describe movements of the Earth and other planets ~ Describe movements of the moon ~ Describe the sun, Earth and Moon as approximately spherical ~ describe day and night based on Earth's rotation	The Sun is a star. It is at the centre of our solar system. There are 8 planets (can choose to name them, but not essential). These travel around the Sun in fixed orbits. Earth takes 365¼ days to complete its orbit around the Sun. The Earth rotates (spins) on its axis every 24 hours. As Earth rotates half faces the Sun (day) and half is facing away from the Sun (night). As the Earth rotates, the Sun appears to move across the sky. The Moon orbits the Earth. It takes about 28 days to complete its orbit. The Sun, Earth and Moon are approximately spherical.	**Earth and Space:** Sun, star, moon, planet, sphere, spherical bodies, satellite, orbit, rotate, axis, geocentric model, heliocentric model, astronomer	**Basic:** Describe the moons movement relative to the Earth. **Advancing:** Explain why the Moon's movement affects the tides of the oceans and seas on Earth. **Deep:** Explain the concept of a leap year.	**Possibilities ~ Astronauts - Tim Peake**	
Summer 2 **Forces** Year 4: Compare how things move on different surfaces ~ Notice some forces needs contact ~Observe how magnets attract or repel ~Compare and group together everyday materials based on magnetism ~ Describe magnets as having two poles ~ Describe whether two magnets will attract or repel. **Year 5**	A force causes an object to start moving, stop moving, speed up, slow down or change direction. Gravity is a force that acts at a distance. Everything is pulled to the Earth by gravity. This causes unsupported objects to fall. Air resistance, water resistance and friction are contact forces that act between moving surfaces. The object may be moving through the air or water, or the air and water may be moving over a stationary object.	magnet, magnetic, magnetic field, poles, repel, attract, forces, friction, surface **Year 5: Forces, gravity, Earth's gravitational pull, weight, mass, friction, air resistance, water resistance, buoyancy, streamlined, mechanism**	**Basic:** Observe and describe the effect of the force of gravity. **Advancing:** Interpret data about the rate that different materials fall towards Earth. Summarise your findings.	**Possibilities – scientists – Sir Isaac Newton**	

~ Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. **~ identify the effects of air resistance, water resistance and friction, that act between moving surfaces.** **~ Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.**	A mechanism is a device that allows a small force to be increased to a larger force. The pay back is that it requires a greater movement. The small force moves a long distance and the resulting large force moves a small distance, e.g. a crowbar or bottle top remover. Pulleys, levers and gears are all mechanisms, also known as simple machines		**Deep:** Which will reach Earth first if dropped from the same height: 1kg of feathers or 1kg of steel? Explain concepts.		