Curriculum Map: **Science** **Year 3**

Below outlines the learning focus for each term

Term	Learning Focus		Conceptual Development
	Knowledge	**Skills**	
Autumn 1	**Rocks and Soils** Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties Describe in simple terms how fossils are formed when things that have lived are trapped within rock Recognise that soils are made from rocks and organic matter Explore different kinds of rocks and soils, including those in the local environment.	Observing rocks, including those used in buildings and gravestones Exploring how and why rocks might have changed over time Identify and classify rocks according to whether they have grains or crystals, and whether they have fossils in them – use a hand lens or microscope Investigate what happens when rocks are rubbed together or what changes occur when they are in water. Research and discuss the different kinds of living things whose fossils are found in sedimentary rock and explore how fossils are formed Explore different soils and identify similarities and differences between them Raise and answer questions about the way soils are formed.	**Prepare for :** *To recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago-* ***Year 6***
Autumn 2	**Forces and Magnet** Notice that some forces need contact between two objects, but magnetic forces can act at a distance Learn the names of different magnets (for example, bar, ring, button and horseshoe Describe magnets as having two poles Identify how properties make magnets useful in everyday items Understand that magnetic forces can act without	Comparing how different things move on different surfaces and group them accordingly Explore the behaviour and everyday uses of different magnets Sorting materials into those that are magnetic and those that are not Raising questions and carrying out tests to find out how far things move on different surfaces	**Build upon:** To compare and group together a variety of everyday materials on the basis of their simple physical properties- **Year1** To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses – **Year 2** **Prepare for:** *To learn about magnetic poles, attraction and repulsion*

	direct contact, unlike most forces, where direct contact is necessary (for example, opening a door, pushing a swing).	Gather and record data to find answers their questions Explore the strengths of different magnets and finding a fair way to compare them Looking for patterns in the way that magnets behave in relation to each other and what might affect this, for example, the strength of the magnet or which pole faces another Predict whether two magnets will attract or repel each other, depending on which poles are facing Suggesting creative uses for different magnets.	*To understand magnetic fields by plotting with compass, representation by field lines Learn about Earth's magnetism, compass and navigation* ***KS3***
Spring 1	**Health and Movement** To identify that animals, including humans, need the right types and amount of nutrition, To understand that animals cannot make their own food; they get nutrition from what they eat To identify that humans and some other animals have skeletons and muscles for support, protection and movement. To know the main body parts associated with the skeleton and muscles To understand how different parts of the body have special functions. To to learn about the importance of nutrition	Grouping animals with and without skeletons and observing and comparing their movement Exploring ideas about what would happen if humans did not have skeletons. Research different food groups and how they keep us healthy Compare and contrast the diets of different animals (including their pets) Design meals based on what they find out.	**Build upon:** 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) – **Year 1** Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene – **Year 2** **Prepare for:** *To describe the simple functions of the basic parts of the digestive system in humans* *To construct and interpret a variety of food chains, identifying producers, predators and prey. –* ***Year 4*** *To recognise the impact of diet, exercise, drugs and lifestyle on the way bodies function.* *To describe the ways in which nutrients and water are transported within animals, including humans –* ***Year 6***

Summer 1	**How plants grow** Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) Understand the terms 'Pollination', 'seed formation', 'seed dispersal' Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal Explore questions that focus on the role of the roots and stem in nutrition and support, leaves for nutrition and flowers for reproduction Know the relationship between structure and function: the idea that every part has a job to do. . *Note: Pupils can be introduced to the idea that plants can make their own food, but at this stage they do not need to understand how this happens.*	**Comparing** the effect of different factors on plant growth, for example, the amount of light, the amount of fertiliser Discovering how seeds are formed by **observing** the different stages of plant life cycles over a period of time **Looking for patterns** in the structure of fruits that relate to how the seeds are dispersed. **Observe** how water is transported in plants, for example, by putting cut, white carnations into coloured water and observing how water travels up the stem to the flowers.	**Build upon**: To observe and describe how seeds and bulbs grow into mature plants.. To find out and describe how plants need water, light and a suitable temperature to grow and stay healthy – **Year 2** **Prepare for:** *Learn about photosynthesis.* *Learn about reproduction in plants, including flower structure, wind and insect pollination, fertilisation, seed and fruit formation and dispersal, including quantitative investigation of some dispersal mechanism* ***– KS3***
Summer 1	**Light and Shadow** Recognise that they need light in order to see things and that dark is the absence of light Notice that light is reflected from surfaces Recognise that shadows are formed when the light from a light source is blocked by an opaque object	Looking for patterns in what happens to shadows when the light source moves or the distance between the light source and the object changes. To find and measure shadows Explore what happens when light reflects off a	**Build on –** Prior experience in Early Years learning about light and dark and looking at shadows **Prepare for :** *To recognise that light appears to travel in straight lines* *To use the idea that light travels in straight lines to explain*

	Understand what causes shadows to change. Recognise that light from the sun can be dangerous and that there are ways to protect their eyes *Note: Pupils should be warned that it is not safe to look directly at the Sun, even when wearing dark glasses.*	mirror or other reflective surfaces, including playing mirror games to help them to answer questions about how light behaves	*that-* *--objects are seen because they give out or reflect light into the eye* *-why shadows have the same shape as the objects that cast them.* *To explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes* *To work scientifically by: deciding where to place rear-view mirrors on cars; designing and making a periscope and using the idea that light appears to travel in straight lines to explain how it works.* *To look at a range of phenomena including rainbows, colours on soap bubbles, objects looking bent in water and coloured filters (they do not need to explain why these phenomena occur).* ***KS3***