

We use the Engaging Science scheme of work to support our teaching of the science National Curriculum.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Y1/2	<u>Everyday Materials</u> Pupils develop vocabulary to describe material properties. They carry out a range of simple tests on materials and investigate the best material to make a particular object.	<u>The Animal Kingdom</u> Pupils will become familiar with common British vertebrates and invertebrates. They will learn about the different groups of vertebrates and be able to describe the main external features of each group. They will look at what animals eat and will understand that different animals have different diets. They will describe the external human body in detail.	<u>Weather</u> Pupils will observe changes across the four seasons. They will observe and describe weather associated with the seasons and how day length varies.	<u>Plants</u> Pupils learn the names of some common native flowering plants and trees. They plant bulbs and/or seeds and observe their growth over a period of weeks. They go outside to study flowers and trees in wild and cultivated areas, making sketches and notes.	<u>Our Environment & Seasonal Change Review</u> Pupils study the same natural area during the course of the year, looking at how the area as a whole changes and at how individual aspects such as a single tree change during the different seasons. They use their senses to observe the area and find common animals and plants within the area. They learn how to show respect for the area and for the living things in it.	
Y2/3	<u>Local Habitats – Animal Homes</u> Pupils spend time learning about familiar and unfamiliar habitats such as woodland and the seashore. They work in the classroom and outdoors to look at animals and plants and further their knowledge of the variety of life in different places and they go pond dipping. They extend their knowledge of the diets of different animals to understand about food chains. Pupils look at the "homes" that insects and birds need and make the school friendlier towards these creatures. They evaluate the success of the measures they have taken.	<u>Living Things – Animals and Skeletons</u> Pupils classify things as living, once alive and never alive. They learn about the characteristics of living things and building and observing a wormery and going outside to hunt for examples of living and non-living things. They look for characteristic of life in plants and establish that plants are living things. Pupils classify animals according to diet as carnivores, herbivores or omnivores, researching the diets of animals in more detail. Pupils learn about external and internal skeletons, making a life size skeleton cut-out and studying the names and functions of the major bones and muscles in the human body.	<u>Animals and their needs</u> In this unit pupils begin by learning about the stages of human growth. They learn that animals grow until they are adult and that that different animals start life in different forms, some as eggs and some as live births and they look at the needs of the young of different species. Throughout the unit they observe some animals as they grow, both in the classroom, and through webcams on the Internet.	<u>Plants</u> Pupils think about the difference between seeds and other objects and work out what a seed is. They plant beans and monitor them weekly, observing, measuring, sketching and photographing them to provide a record of growth. They investigate the basic needs of plants for healthy growth and explore the way that plants change through the seasons. Pupils also observe plants over time to explore the development of seeds and the life cycle of plants. Pupils will carry out a long-term investigation of the factors that affect the growth of plants, observing and measuring their plants for the course of the unit. They will learn about the main functions of the different parts of a plant and will study the life cycle of a flowering plant, including studying the structure of a flower and the different methods of seed dispersal.	<u>Materials and Magnets</u> Pupils identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Pupils find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. Pupils explore magnetism and non-contact forces, suspending magnetic items in mid-air under the influence of magnetic forces. They test materials for magnetic properties and think about what materials are magnetic. They describe the properties of a magnet in simple terms and learn about the uses of magnets.	<u>Rocks</u> Pupils will carry out a long-term investigation of the factors that affect the growth of plants, observing and measuring their plants for the course of the unit. They will learn about the main functions of the different parts of a plant and will study the life cycle of a flowering plant, including studying the structure of a flower and the different methods of seed dispersal.
Y4/5	<u>Plant Life cycles</u>	<u>Animal Life Cycles</u>	<u>Earth in Space</u>	<u>Mixtures and Reactions</u>	<u>Forces</u>	<u>Decay and recycling</u> Pupils

		Pupils revisit the life cycle of plants, and learn about pollination. They compare the life cycles of birds, mammals, insects and amphibians and learn that insects and amphibians undergo metamorphosis.	Pupils study our solar system, learning about the relative movements of the planets and the Moon and relating these to the way we experience the Sun and the Moon on Earth. They carry out some research into planets and investigate the way meteorites have shaped the surface of the Moon.	Pupils study dissolving and learn how to recover materials from a solution. They look at other methods of separating mixtures. They investigate chemical reactions including burning and use a key and a series of simple tests to identify some mystery powders. They learn about reversible and irreversible changes.	Pupils learn more about the forces of gravity and friction and investigate the friction of different surfaces. They study air resistance, investigate paper spinners falling, look at floating and sinking and build a self-righting boat. Learning about simple forces includes activities to study pulleys, gears and other simple machines and gives pupils the chance to use their knowledge of machines to build a catapult.	will carry out a number of visits in and around the school to look for evidence of decay. They will create a compost heap and observe it over time. Natural and man-made materials will be left in different places to see how well they break down. Pupils will also carry out a litter survey in the local area.
Y6	<u>Classification</u> Pupils learn about the variety of living things and how they can be grouped according to shared characteristics. They use and construct keys to identify unfamiliar animals and plants. Pupils build on their knowledge of classification and look at the classification of invertebrates and microorganisms in more detail. They study yeast, observing its growth, using it to make bread.	<u>Evolution</u> Pupils learn about the life and work of Charles Darwin and what is meant by the terms evolution and survival of the fittest. They learn how animals and plants are adapted to their environment. They investigate camouflage and find out how humans evolved. They carry out a simple experiment to model evolution and selective breeding.	<u>Electricity</u> Pupils learn about circuits, including how to use recognised symbols to represent circuits. They investigate how to change the amount of electricity flowing round a circuit, looking at how different components affect the flow of electricity and at the difference that the length and thickness of wires can make. They learn about series and parallel circuits and they use their knowledge of electricity to build games that use electric circuits.	<u>Light & Sound</u> Pupils listen to and identify sounds and learn how our ears work to detect sounds. They carry out experiments to help them learn about loudness and pitch and investigate the best material for muffling sound. Pupils learn to distinguish a light source from reflected light. They learn that light travels in straight lines, study how we see and are taught how to protect their eyes. They carry out some experiments to find out about shadow formation.	<u>Human Systems</u> Pupils study the circulatory system, learning about the basic components that make up blood, how the heart works and how blood circulates round the body. They learn about the lungs and the process of breathing and investigate the effect of exercise on the heart and breathing rates. They learn about the effects of smoking and alcohol. Pupils learn about the structure of the mouth and about how to care for their teeth. They learn about the structure of the digestive	<u>States of Matter</u> Pupils learn that materials come in three states of matter: solid, liquid or gas. They identify materials as solids, liquids or gases, including some that are harder to classify such as sand or sponge. They learn how to use a thermometer and investigate changes of state.