



Science Curriculum Map Michaelmas Term 2022

Year 3	
Human Impact	Pupils will investigate the positive and negative ways that humans change the environment, locally and globally with a focus on how this affects other living things. When working scientifically pupils will carry out surveys and collate data. They will then make their data manageable and present findings in bar charts, pictograms and written reports.
In a state	This unit introduces the concept of the states of matter. Pupils will learn the characteristic properties of solids, liquids and gases through physical investigation and by classification. When working scientifically pupils will make careful observations and explain what they show. They will observe and measure changes over time, first-hand and also using secondary sources of information.
Year 4	
Circle of life	Pupils will compare and contrast different life cycles, identifying common features as well as the key differences. When working scientifically pupils will use secondary sources of information when carrying out investigations to answer a variety of science questions with increasing independence.
Get sorted	Pupils will identify, compare and classify a variety of materials according to properties and uses. When working scientifically, pupils will plan and carry out different enquiry types to answer scientific questions about materials and their uses.

Year 5	
The nature library	This is a challenging unit where pupils will build on their previous knowledge of living things and deepen their knowledge of why and how organisms are classified. They will explore the process of classification and how it differs from identifying things. When working scientifically pupils will use observations and secondary sources of information to help classify organisms and use evidence to support or refute ideas.
Everything changes	Pupils will use their knowledge of living things and apply it to a new scenario of variation in a species will make it better adapted to its environment and that over a long period of time the process of natural selection will lead to evolution of a species. They will also look at ideas around selective breeding and the ethical ideas surrounding the process. When working scientifically pupils will take measurements of plants to record variations and use scientific models to describe complex processes such as selective breeding.
Danger! Low voltage	In this unit pupils will develop their understanding of electrical circuits and build on the work in the year 3 unit Switched on. They will construct circuits with increased complexity and role play the flow of electricity in a circuit. When working scientifically pupils will carry out practical work building circuits, using scientific language and recording the circuits using scientific drawings.
Light up your world	In this unit pupils will develop their learning on how light enables us to see things and how objects reflect different amounts of light and shadows. Then they will develop an understanding of mirrors and the reflections that they form in order to build a periscope. When working scientifically, pupils will ask and propose questions about shadow formations as well as exploring quantitatively the formation of shadows.

Year 6	
Food webs and ecosystems	Pupils will look at the how organisms interact within an ecosystem and how this fragile balance is sustained.
Energy Resources and Fuels	In this unit pupils will explore the energy resources we rely on in our everyday lives and how we need to change and adapt. They will explore different types of fuel and their efficiencies in the laboratory.

Year 7	
Magnetism and electricity	In this unit pupils will deepen their knowledge of magnetism and be introduced to the phenomena of temporary magnets via electromagnetism. They will then go on to develop their thinking on electrical circuits which they met in year 3 and year 5 and be introduced to different applications of circuits such as circuit breakers and Christmas lights.
Atoms, elements and compounds	Pupils will learn about the chemist's dictionary - the Periodic Table and the elements that make it up. They will use simple models to explain the chemical reactions performed in experiments completed in lessons.
Plants and photosynthesis	Pupils will be introduced to how plants use light to generate their own glucose to use as an energy source plus how plants adapt to survive and go onto reproduce.

Year 8	
Cells - the building blocks of life	In this unit pupils will look at how cells will work for an organism through organisation. Following on from prior learning in year 4 pupils extend their knowledge on life cycles and reproduction in plants and animals (humans)
Complex chemical reactions	Pupils will revisit ideas about chemical reactions previously taught in years 4,6 and 7 then develop these to understand the more complex chemical reaction within the reactivity series, acid reactions and thermal decomposition.
Light and sound	In this unit, pupils will look at energy transfers and focus in on energy in the home. They will then focus in on two forms of wave energy, light and sound energy.
Breathing and respiration	In this unit pupils will discover that breathing and respiration are not the same thing, they will work on the function and mechanism of breathing and the role of respiration in every cell in the body.

