



Science Curriculum Map Michaelmas Term 2023

Year 3	
Good Vibrations	In this unit pupils will build upon their understanding of hearing and senses. They will develop vocabulary for describing sounds and sound sources scientifically. They will explore ways to change the pitch and volume of sounds. When working scientifically pupils will look for patterns between the volume and the strength of vibrations the sound produces. They will also have the opportunity to set up comparative tests, take measurements, including using data loggers and report on their findings.
Who am I?	In this unit pupils will experience constructing keys, learning to ask yes / no questions about characteristic differences between animals. When working scientifically pupils will undertake some field studies, make detailed observations, and learn which features are useful for identification and classification.

Year 4	
Circle of life	Pupils will compare 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 prolonged period 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 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.
Body Health / Body Pump	<p>In this unit pupils will learn about the human circulatory system and how it enables bodies to function. They will find out how the heart works, the components of blood and the main vessels in the circulatory system. When working scientifically they will develop their laboratory skills and have their first experience of dissection, when they dissect a lamb's heart. They will also use secondary sources of information with increasing independence to answer questions related to the unit.</p> <p>In this unit pupils will learn about how to keep the human body healthy and how their bodies might be damaged. The focus on lifestyle choices humans makes, including diet, exercise, and drug use and how these are informed by scientific evidence.</p>

Year 7	
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 sound energy.
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.
Skeletons and muscles	In this unit pupils will investigate how the human body moves through modelling the skeleton and muscles looking at the relationship between form and function.

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.
Plants and photosynthesis	Pupils will continue to develop their knowledge of plants through learning how to keep plants healthy and then their role as producers in a food chain.

