

Science Curriculum Map Lent 2024

It should be noted that the curriculum is taught in rotation so pupils are able to access the laboratories for practical work

Year 3	
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, using first-hand as well as secondary sources of information.
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.

Year 4	
Marvelous Mixtures	In this unit pupils develop their conceptual knowledge and understanding of how to separate different mixtures and the rate of dissolving a solute in a solution. Their use of scientific experience will require them to apply their knowledge to an unusual context and solve a mystery of separating a solution. When working scientifically pupils plan different types of enquiries to answer key questions, identifying key variables as needed. They will use a variety of scientific equipment with increasing accuracy and precision and use different ways to present their findings.
Feel the force	In this unit pupils will learn how levers, pulleys and gears allow a smaller force to have a greater effect. When working scientifically pupils will look at scientific ideas from the past and carry out investigations to support or refute famous scientists' ideas. They make predictions as a result of carrying out activities and go on to plan new investigations.

Year 5	
Everything changes	Pupils will use their knowledge of living things and apply it to a new scenario of variation in a species that 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. 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 explore quantitatively the formation of shadows.
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.
Body pump	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.
Body health	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 make, including diet, exercise and drug use and how these are informed by scientific evidence.

Year 7	
Breathing, respiration and digestion	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. We will develop our knowledge of diet and digestion from prior learning in Year 3 and 5 looking at diet deficient diseases and the impact of diet on our general health
Simple chemical reactions	Pupils will be introduced to acids, alkalis and indicators and how they are used in the home and industry. They will then look at combustion and air pollution, and its impact on our planet.
Magnetism and electromagnets	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 that use electromagnets (such as electric bells).
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.
Health and Animal Reproduction	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). We will build on our prior learning on health from Year 5, looking at the impact of disease on the human body and how we are able to treat and prevent disease.

Year 8	
Variation, Inheritance	In this unit, the pupils will look at how genes are passed on through the generations and the impact of both environmental and genetic variation. They will follow the HMS Beagle and how

and Classification	Darwin's discoveries have given us an insight into the evolution of many species including flatworms and finches.
Motion on Earth and in space	Pupils will investigate the impact of forces in equilibrium, gravitational fields and the motion of the Earth. They will also look at motion in the form of distance-time graphs and calculating speed. Finally, the unit will have the pupils looking at the stars and galaxies.
Environmental Chemistry	In this unit the pupils will look at how the Earth's atmosphere has evolved over time and how humans have made an impact on it. They will also focus in on the rock cycle
Review & revise	Pupils will revisit the units taught in Years 6-8 and review their learning, identify the learning gaps to close them and look in detail how to answer questions to be able to gain the maximum marks possible.