Heath Mount School

Science Curriculum Map Summer 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	
Where does all the food go?	In this module the children will learn about the human digestive system. This module also explores what animals eat and how this information can be used to build food chains. There are opportunities to explore how the teeth of animals are adapted to the type of food that they eat. When working scientifically children will ask and answer questions about teeth, digestion and food chains by carrying out research using secondary sources.
Switched on	All pupils have an experience of electricity in their everyday lives and this unit will give them the opportunity to experience making simple circuits and distinguish between appliances powered by mains or battery sources. Working scientifically pupils will learn how to communicate using circuit diagrams and scientific language as well as planning and carrying out scientific investigations using the circuit equipment.

Year 4	
Reproduction in plants and animals	In this unit pupils will learn about the plant reproduction looking at flowering plants and asexual reproduction. In animal reproduction pupils will look at specific life cycle examples in mammals, birds, insects and amphibians and how they reproduce. When working scientifically pupils carry out observations of flowering plants and use secondary sources of information. They will report and present findings in a variety of ways including posters, fact cards and guides.
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. There 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.
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.
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 makes, including diet, exercise, and drug use and how these are informed by scientific evidence.
Everything Changes	This is a challenging module in which children build on their knowledge of living things and how they are adapted to environments. They are introduced to the idea that variation in organisms can result in the species becoming better adapted to its environment and that the process of natural selection, over a long period of time, leads to evolution. When working scientifically, children take measurements to record variation in plants and animals; they use scientific models to describe complex processes such as selective breeding and natural selection, they question themselves and their peers on aspects of adaptation, and they develop their skills for evaluating evidence. Throughout the module children present their work in a variety of ways and have several opportunities for peer assessment and feedback on the work of other children.
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.

Year 6	
Cells	In this unit pupils will look at how cells will work for an organism through organisation. We will look at how a cell is organised and how it can be specialised to do a job.
Particles	In this unit pupils will use the particle model to explain the phenomena of state of matter and to explain the properties of different materials. Pupils will conduct a series of practical investigations to decipher if a reaction is a physical or chemical change.
Forces and speed.	In this unit pupils will gain an understanding of different types of forces and the things that they do. Pupils will be able to explain the impact of useful and unwanted friction and why these are important to everyday life. Levers and turning forces are the final set of forces to be explored by pupils along with their associated calculations.

Year 7	
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).
Circuits	Pupils will 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.
Breathing and Respiration	Pupils will continue to develop their knowledge and understanding of the human body this time focussing on the respiratory system learning that breathing and respiration are not the same thing.
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.
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.
Ceramics, Polymers and Composites	Pupils will examine how different materials are used and exploited to benefit the way we live today, the cost they have on the environment and how we are engaging with making materials better for the future

Year 8	
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.