



Science Curriculum Overview - Year 7

Unit	Details
Acids and Alkali (Teacher 1)	This unit uses ideas developed in the Key Stage 2 properties of materials topics. Pupils develop these ideas by describing a chemical reaction as the rearrangement of atoms. They represent reactions using formulae and equations. Pupils build their practical skill using the pH scale and indicators. Finally they describe acids and alkalis in terms of neutralisation reactions, in the laboratory, and in the natural world.
Forces and Spaces (Teacher 2)	This unit uses ideas developed in the Key Stage 2 on friction and forces as well as ideas about space. Pupils develop these ideas by considering the overall effect of forces on objects and how this may make an object change direction or speed. Pupils move onto discovering Hooke's law experimentally, and to calculate moments. In space pupils consider how the earth's tilt gives rise to seasons and our sun's position within the galaxy and universe as well as the concept of a light year.
Sound (Teacher 1)	This unit uses ideas developed in the Key Stage 2 waves topics, where they investigate light and shadows. Pupils develop these ideas by considering sound and how it travels. They then investigate sound waves and how they behave. Pupils move onto considering how to alter a sound wave's frequency, wavelength and amplitude. Finally they discover what ultrasound is, its uses and explain how it is used.
Cells, Muscles and Bones (Teacher 2)	This unit uses ideas developed in the Key Stage 1 & 2 where they discovered skeletons, the circulatory system and the impact of lifestyle or drugs on health. Pupils develop these ideas by considering the key organelles in cells and specialised cells. Pupils explore how cells scaffold an organism and describe diffusion. Pupils go on to explore the human skeleton, and examine the interaction between skeleton and muscles. Finally pupils explore the effects of recreational drugs on behaviour, health and life processes.
Reproduction (Teacher 1)	This unit uses ideas developed in the Key Stage 2 where they investigate life cycles. Pupils develop these ideas by considering the structure and function of reproductive organs They go on to explore the processes of fertilisation and development of the foetus. Finally, they look into the development and growth in humans by considering the changes in boys and girls during puberty.
The World Around Us (Teacher 2)	This unit uses ideas developed in the Key Stage 2 on; materials, living things, and evolution. Pupils develop these ideas by considering the role of variation. They move on to creating food webs and describe interdependence. They then explore materials science as they learn about the structure of the Earth. Finally pupils consider the geology of earth including the formation of rocks and describe their properties.