

Subject Science KS3 Y7

<p>Half term 1</p>	<p><u>Animal cells; Structure and Function of the Human Body</u> Students start their scientific studies by exploring what makes us who we are. They gain an insight into different human cells and how these then link to form the structure of the human body. Knowledge is then extended by exploring the function of different parts of the body including biomechanics and gas exchange.</p> <p><u>Forces</u> Students then move on to explaining forces as interactions between objects. They explore contact and non-contact forces both on Earth and further afield! They also have the opportunity to investigate the different effects of applying forces.</p>
<p>Half term 2</p>	<p>Students continue to examine the effects of forces on objects. They then move onto another key area in Physics, waves. Students study in particular how energy is transferred in both sound and light. They are introduced to key terminology as they investigate the behaviour of these waves. Students then learn about the applications of wave behaviour by bats and elephants to medical scanning.</p> <p><u>Human Reproduction</u> This half term also sees a return to animal biology and in particular to human/mammal reproduction. From changes that happen during adolescence, through to fertilisation and the stages of pregnancy, students will gain a better understanding of how our species continues. It is of course important that we also explore other issues such as sexually transmitted infections and good health during pregnancy.</p>
<p>Half term 3</p>	<p><u>Plant Reproduction</u> Following on from last half term, it is now time to consider reproduction in plants. Firstly, students learn about different types of plant cells and their functions; then they are introduced to how substances move in and out of cells. Following this, students learn how plants reproduce and how seeds and fruit are formed.</p> <p><u>Health and Disease</u> It is then time to consider health and disease. Again, key terminology is introduced and students learn about different types of pathogens and how they are spread. By understanding their transmission, students are then able to consider how to reduce/prevent transmission. They learn about what vaccinations are, how they work and the use of antibiotics.</p>

Half term 4	<p><u>Particles and their Behaviour</u></p> <p>Students now enter the world of Chemistry. We start off by considering really small things, the fundamentals of Chemistry. We work up from atoms to molecules and compounds. We explore what substances are made of and how they behave. Then the fun really starts, with chemical reactions. The experiments continue and so does their knowledge and understanding of the science behind it all. We encourage our students to be able to write chemical formulae and make predictions from a young age.</p>
Half term 5	<p><u>Acids and Alkalis</u></p> <p>Chemistry continues by exploring the reactions of acids and alkalis in further detail. We continue to develop scientific practical skills, together with a deeper understanding of how to represent chemical reactions. Whenever we can find a good excuse, the students get the opportunity to heat substances up; we all know they love using Bunsen burners! In addition, they will investigate other types of chemical reaction.</p>
Half term 6	<p><u>Space</u></p> <p>To complete their first year, students will reach out into Space; we have already looked at the really small and now it is the turn of the really large! We investigate the structure of the solar system and beyond; the causes of night/day; and the seasons. Students will also start to gain an understanding of the size and age of the universe.</p> <p>Having sat 'end of topic' tests during the course of the year, during this half term, students will sit an 'end of year' exam. It is important that our students start from an early stage to practice revision skills for both small and large bodies of work.</p>
Homework expectations	<p>Homework is set approximately once a fortnight, but this depends on the type of homework involved. Students will also sit end of topic tests so they will be required to revise/prepare for this outside of lesson time.</p>
By the time you finish key stage 3 you'll be...	<p>.....comfortable and confident with the fundamental principles of the main aspects of Science. Your interest has been piqued, you will be thinking like a scientist and you will still have an enquiring mind! These foundation years will enable you to reach upwards and outwards to achieve those highest grades at GCSE.</p>