

### KS3 COURSE OPTIONS

Course Title	KS3 Science – Year 8
Course Description	<p>KS3 Science at Guilsborough is taught in termly topics that merge Biology, Chemistry and Physics.</p> <p>The course is designed and written by our teachers to address the needs of Guilsborough students in Year 8, with a direct aim to make science interesting for all students and to provide an opportunity to revisit some key principles of Science content taught in Year 7. The overlap provides time to develop a deeper understanding of this important content and concepts.</p> <p>We have embedded lessons that encourage students to think independently, investigating scientific phenomena, using electronic devices, textbooks and practicals. This approach allows students to ask their own questions, thereby stimulating curiosity in the subject</p>
Course Content (Term 1,2,3 etc.)	<p><b><u>Term 1</u></b>  <b><u>All Aboard</u></b>            Students will be introduced to the development of the electrification of our railways and within this theme will learn about and carry out investigate electrical current, including series and parallel circuits. They will be use calculations to work out resistance and consider why it may change.            Students will also take their knowledge further from Year 7 and begin to look at how atoms may rearrange during a chemical reactions like in combustion, thermal decomposition, oxidation and displacement reactions.</p> <p><b><u>Term 2</u></b>  <b><u>All the world's a stage</u></b>            Students will gain an insight into how Science can be used to create dramatic scenes in films and on the stage. They will continue to develop their previous knowledge on atoms and compounds from term 1 and look at neutralisation reactions, reactions with metals and the development of the Periodic Table.            Students will also learn about how light behaves during reflection and refraction and gases under pressure.</p> <p><b><u>Term 3</u></b>  <b><u>Life on Earth</u></b>            How did life begin?            During this topic students are taken on a journey around our Solar System and will educated in what life may have been like on the first day following the formation of our planet. Students will then compare the stages from formation through to the evolution of the planet on which we live on today and understand the changes that had to take place to make it habitable.</p> <p><b><u>Term 4</u></b>  <b><u>Opposites Attract</u></b></p>

	<p>Students will look at the power of magnetism and think about how this force could be used in technology.  Evolution of our species will be explored, looking at the importance of variation, inheritance and natural selection in the progression of mankind.</p> <p><b><u>Term 5</u></b>  <u>How does your garden grow?</u>  What are plants good for? A question that this topic will address.  The role of plants in our ecosystem and food chains and the impact of pesticides will be considered.  Students will also go onto develop thoughts from last term and consider the impact of lack of adaptation and the species that are close to extinction and why.</p> <p><b><u>Term 6</u></b>  <u>Sports Science</u>  Students will discover the role of the skeleton in support, protection, movement and making blood cells. Their understanding will be supported with practical sessions like chicken leg and chicken feet dissections.  They will explain how asthma, exercise and smoking can affect the human gas exchange system.  Students will also observe waves on water and explain how to balance a see-saw using calculations.</p>
Extra-Curricular Opportunities	
Useful Websites	We would recommend reliable websites like KS3 BBC Bitesize.
Important Information	

Provision For Most Able	<p>Our more able students will be working through the topics above, regularly referencing Science in the real world, looking at how the science we learn may apply to the latest discoveries.</p> <p>More able students will be asked to <b>suggest, evaluate</b> and <b>predict</b> how new technologies may impact our lives now and in the future.</p>
Assessment	<p>Students are assessed summatively each term on each topic.</p> <p>Students will be given a multiple choice test towards the end of the term to allow them and the teacher to diagnose the quality of their knowledge of the topic.</p> <p>From this students will be given support to improve any misconceptions or specific content areas before their end of topic test.</p> <p>Feedback from their end of topic test will be provided to students in the format of the pathway they have achieved and the skill in which they should continue to improve.</p>