Science

	Content
Year 7 HT1	This half term students will study the skills needed to become good scientific investigators. They will carry out activities to become competent in working in a laboratory safely. In terms of content, they will study the main organs in the human body, an introduction to acids and alkalis, and introduction to forces and heat transfer.
Year 7 HT2	This half term students will study the process of reproduction, food and digestion, recap acids and alkalis, particle theory and solutions.
Year 7 HT3	This half term students will study the topic of sustainability looking at climate change, energy resources and interdependence of species.
Year 7 HT4	This half term students will study the topic of forensics in which they will recap particle theory and acids and alkalis in a real world context, study separating mixtures and reactions of metals.
Year 7 HT5	In this half term, students will complete the topic 'survival' in which they will study magnetism and electric circuits, and apply their prior knowledge of particle theory, heat transfer and separating mixtures in a new context.
Year 7 HT6	This half term, students will complete extended investigations to develop their investigative and data handling skills in consort with the application of their scientific knowledge.
Year 8 HT1	This half term students will study the topic of space including elements of: solar system, rock cycle, heat transfer, photosynthesis, respiration, atoms, elements and compounds, atmosphere, energy and electricity, speed, forces and gravity, variation and reactivity of metals
Year 8 HT2	This half term, the topics studied are set within the context of agriculture and include: limiting factors in photosynthesis, food webs and the effects of pesticides, plant and animal cells, plant reproduction, water cycle and carbon cycle, plus they will recap some key principles of earlier work.
Year 8 HT3	Students will study, in the context of Medicine - organs and organ systems, enzymes, pathogens and the immune system, immunisation, specialised cells , inheritance, respiration, fertilisation, circulation, development of medicines, antibiotics
Year 8 HT4	Students will study, in the context of engineering and construction: metals and non metals, reactivity series, rocks, reactions of carbonate rocks with acid, displacement reactions, energy and electricity, pressure, forces, energy transfers and efficiency
Year 8 HT5	This half term students study, in the context of theatre and film, the topics: Light , sound, forces, chemical reactions,
Year 8 HT6	Students begin the half term by addressing any weaknesses identified by the summative assessments, using BEST resources to do this. Following this, students carry out an extended investigation using the knowledge and skills they have learned and applying them to a real world problem.
Year 9 HT1	This half term students will study the topics 'metallurgist' and 'mechanical engineer': They will study core scientific ideas linked with careers in order to see how the science they learn in school is applied in the 'real world' Extraction and reactions of metals, forces, energy transfers, speed, momentum
Year 9 HT2	This half term students continue to study the mechanical engineer topic and then continue on to the topic 'Chef' looking at the science involved in cooking. Energy transfers, enzymes, decomposition reactions, saturated and unsaturated fats.
Year 9 HT3	Students will study the 'Sports Science' topic including the following knowledge areas: Respiration , circulation, nervous system including the effect of drugs, forces, moments, pressure.
Year 9 HT4	Students will study the Fashion and Design topic including : Colour theory, investigative skills. Followed by the 'environmental science' topic studying pollution and acid rain, food chains and webs, electricity transmission in order to apply knowledge and revise for assessment.
Year 9 HT5	Students study the topics of : cell division and growth, components and function of the nervous system (adding detail to the previous study), Atomic structure and the periodic table, Forces - Newton's laws, momentum, stopping distances and car safety. Which form a bridge between KS3 and KS4.
Year 9 HT6	Students will complete the topics : cell division and growth, components and function of the nervous system (adding detail to the previous study), Atomic structure and the periodic table, Forces - Newton's laws, momentum, stopping distances and car safety.