

2023-2024 Year 8 Curriculum and Assessment Plan for Science

The curriculum and assessment of pupils at this stage of education has been carefully designed to build on a love of Science and investigation, supporting the foundation in required skills and knowledge needed for progression to, and success at, GCSE and beyond.					
<p>Half Term 1:</p> <p>All pupils will know: Describing motion in terms of speed and acceleration, chemical reactions, illustrated by acids and alkalis and materials demonstrated by metals and non-metals and the structure and function of the respiratory system - as outlined in the National Curriculum Science Programme of Study. Science programmes of study: key stage 3 (publishing.service.gov.uk)</p> <p>All pupils will be assessed by: By short recall activities, electronic automatically marked homework and interleaved longer recall tests, focussed on several topics. There will also be a longer assessment, including descriptive, explanatory, analytical and data skills as part of the data gathering for the whole year group twice a year.</p> <p>Impact- Why do we teach this? Our programme of study is based on the National Curriculum and designed to provide our students with breadth and depth of topics and concepts which underpin scientific thought, processes and theory. We begin with units that introduce fundamental concepts that are then developed over the three years.</p>	<p>Subject specific skills being developed:</p> <ul style="list-style-type: none"> Investigative skills Reading skills Vocabulary terms How science works <p>Reading Skills needed for this unit: Skimming, scanning summarising, comprehension and retrieval, analysis, evaluation.</p> <p>Key Vocabulary: Can be found in student's knowledge organisers and core questions for the topics covered.</p> <p>Opportunity for cross-curricular skill development</p> <ul style="list-style-type: none"> Calculations Graph drawing Respiration and effect of exercise - PE 	<p>Half Term 2:</p> <p>All pupils will know: The respiration reactions and their importance, the periodic table, elements, compounds and mixtures and contact forces such as friction - as outlined in the National Curriculum Science Programme of Study. Science programmes of study: key stage 3 (publishing.service.gov.uk)</p> <p>All pupils will be assessed: By short recall activities, electronic automatically marked homework and interleaved longer recall tests, focussed on several topics. There will also be a longer assessment, including descriptive, explanatory, analytical and data skills as part of the data gathering for the whole year group twice a year.</p> <p>Impact - Why do we teach this? Our programme of study is based on the National Curriculum and designed to provide our students with breadth and depth of topics and concepts which underpin scientific thought, processes and theory. We begin with units that introduce fundamental concepts that are then developed over the three years.</p>	<p>Subject specific skills being developed:</p> <ul style="list-style-type: none"> Investigative skills Reading skills Vocabulary terms How science works <p>Reading Skills needed for this unit: Skimming, scanning summarising, comprehension and retrieval, analysis, evaluation.</p> <p>Key Vocabulary: Can be found in student's knowledge organisers and core questions for the topics covered.</p> <p>Opportunity for cross-curricular skill development</p> <ul style="list-style-type: none"> Calculations Graph drawing Respiration and effect of exercise - PE 	<p>Half Term 3:</p> <p>All pupils will know: Pressure and its behaviour in different substances, DNA, genetics, inheritance and evolution - as outlined in the National Curriculum Science Programme of Study. Science programmes of study: key stage 3 (publishing.service.gov.uk)</p> <p>All pupils will be assessed: By short recall activities, electronic automatically marked homework and interleaved longer recall tests, focussed on several topics. There will also be a longer assessment, including descriptive, explanatory, analytical and data skills as part of the data gathering for the whole year group twice a year.</p> <p>Impact - Why do we teach this? Our programme of study is based on the National Curriculum and designed to provide our students with breadth and depth of topics and concepts which underpin scientific thought, processes and theory. We begin with units that introduce fundamental concepts that are then developed over the three years.</p>	<p>Subject specific skills being developed:</p> <ul style="list-style-type: none"> Investigative skills Reading skills Vocabulary terms How science works <p>Reading Skills needed for this unit: Skimming, scanning summarising, comprehension and retrieval, analysis, evaluation.</p> <p>Key Vocabulary: Can be found in student's knowledge organisers and core questions for the topics covered.</p> <p>Opportunity for cross-curricular skill development</p> <ul style="list-style-type: none"> Calculations Graph drawing Conservation - Geography
<p>Half Term 4:</p> <p>All pupils will know: Types of reaction including combustion, Earth and our effect on it through climate change and extracting materials - as outlined in the National Curriculum Science Programme of Study. Science programmes of study: key stage 3 (publishing.service.gov.uk)</p> <p>All pupils will be assessed: By short recall activities, electronic automatically marked homework and interleaved longer recall tests, focussed on several topics. There will also be a longer assessment, including descriptive, explanatory, analytical and data skills as part of</p>	<p>Subject specific skills being developed:</p> <ul style="list-style-type: none"> Investigative skills Reading skills Vocabulary terms How science works <p>Reading Skills needed for this unit: Skimming, scanning summarising, comprehension and retrieval, analysis, evaluation.</p> <p>Key Vocabulary:</p>	<p>Half Term 5:</p> <p>All pupils will know: The significance of Photosynthesis as a process for our world and wave properties and effects as outlined in the National Curriculum Science Programme of Study. Science programmes of study: key stage 3 (publishing.service.gov.uk)</p> <p>All pupils will be assessed: By short recall activities, electronic automatically marked homework and interleaved longer recall tests, focussed on several topics. There will also be a longer assessment, including descriptive, explanatory, analytical and data skills as part of the data gathering for the whole year group twice a year.</p>	<p>Subject specific skills being developed:</p> <ul style="list-style-type: none"> Investigative skills Reading skills Vocabulary terms How science works <p>Reading Skills needed for this unit: Skimming, scanning summarising, comprehension and retrieval, analysis, evaluation.</p> <p>Key Vocabulary:</p>	<p>Half Term 6:</p> <p>All pupils will know: Heat transfer, comprising conduction, convection and radiation, and the effects and uses of magnets and electromagnets - as outlined in the National Curriculum Science Programme of Study. Science programmes of study: key stage 3 (publishing.service.gov.uk)</p> <p>All pupils will be assessed: By short recall activities, electronic automatically marked homework and interleaved longer recall tests, focussed on several topics. There will also be a longer assessment, including descriptive, explanatory, analytical and data skills as part of the data gathering for the whole year group twice a year.</p>	<p>Subject specific skills being developed:</p> <ul style="list-style-type: none"> Investigative skills Reading skills Vocabulary terms How science works <p>Reading Skills needed for this unit: Skimming, scanning summarising, comprehension and retrieval, analysis, evaluation.</p> <p>Key Vocabulary:</p>

<p>the data gathering for the whole year group twice a year.</p> <p>Impact - Why do we teach this? Our programme of study is based on the National Curriculum and designed to provide our students with breadth and depth of topics and concepts which underpin scientific thought, processes and theory. We begin with units that introduce fundamental concepts that are then developed over the three years.</p>	<p>Can be found in student's knowledge organisers and core questions for the topics covered.</p> <p>Opportunity for cross-curricular skill development</p> <ul style="list-style-type: none"> • Calculations • Graph drawing • Climate change - Geography 	<p>Impact - Why do we teach this? Our programme of study is based on the National Curriculum and designed to provide our students with breadth and depth of topics and concepts which underpin scientific thought, processes and theory. We begin with units that introduce fundamental concepts that are then developed over the three years.</p>	<p>Can be found in student's knowledge organisers and core questions for the topics covered.</p> <p>Opportunity for cross-curricular skill development</p> <ul style="list-style-type: none"> • Calculations • Graph drawing • 	<p>Impact- Why do we teach this? Our programme of study is based on the National Curriculum and designed to provide our students with breadth and depth of topics and concepts which underpin scientific thought, processes and theory. We begin with units that introduce fundamental concepts that are then developed over the three years.</p>	<p>Can be found in student's knowledge organisers and core questions for the topics covered.</p> <p>Opportunity for cross-curricular skill development</p> <ul style="list-style-type: none"> • Calculations • Graph drawing •
<p>Ensuring this curriculum meets the needs of all pupils: this curriculum has been designed to ensure pupils from all starting points will develop the key curriculum skills and knowledge identified. The curriculum design ensures that each unit forms part of the overall learning journey and there are opportunities for revisiting skills and linking together key pieces of knowledge. Whole Academy policies and practices are followed to tailor the delivery of the curriculum for individuals and groups of students. For example SEND students have individual learning profiles that outline needs/strategies to be used, Whole group RIPs are in place to identify key teaching strategies that will be used with individual teaching groups. Ongoing formative assessment and clear summative assessment points allow individual staff and departments to identify misconception and adjust curriculum appropriately.</p>					
<p>Enrichment opportunities:</p> <ul style="list-style-type: none"> • 					
<p>Career opportunities/ links:</p>					