



Subject: Chemistry

Lead Teacher: Mr R Wright

Year: 8

Curriculum organisation

Students are taught in mixed groups of 30 for one hour per week. They are not grouped by ability.

Overview of Topics & Key Information					How will your child be learning?
Term	Unit(s) of Work	Key Enquiry Questions	Key Content/ Terminology	Skills developed	
Autumn Term	<ul style="list-style-type: none"> Atoms, molecules, elements, mixtures and compounds 	<ul style="list-style-type: none"> How are compounds named using their chemical formulae? How are these terms represented using particle diagrams? How do the properties of elements and compounds differ? 	<ul style="list-style-type: none"> Definitions Naming compounds using their chemical formula Name the elements present in compounds Represent each of the terms using particle diagrams Compare and contrast the properties of elements and compounds eg Fe, S and FeS Hoffman voltameter 	<ul style="list-style-type: none"> Use appropriate techniques, apparatus and materials during practical work Interpret observations and data to reach conclusions Make and record observations and measurements 	<ul style="list-style-type: none"> Whole class discussion Pair work Practical activities Problem-solving tasks Watching short video clips Research tasks
	<ul style="list-style-type: none"> Types of reaction 	<ul style="list-style-type: none"> What is the law of conservation of mass? How does the mass change when a reactant or product is a gas? What is a reversible reaction? 	<ul style="list-style-type: none"> Combustion Thermal decomposition Reactions and mass changes Conservation of mass Reversible reactions 	<ul style="list-style-type: none"> Use appropriate techniques, apparatus and materials during practical work Select, plan and carry out investigations to test predictions Present observations and data appropriately 	
Spring Term	<ul style="list-style-type: none"> Air and the atmosphere 	<ul style="list-style-type: none"> What are the gases in air? How has the atmosphere of the earth evolved? What are the causes of air pollution? Why do things rust and how can it be prevented? 	<ul style="list-style-type: none"> Proportion of gases in the atmosphere The earth's early atmosphere How oxygen increased How carbon dioxide decreased Greenhouse gases Global climate change Common atmospheric pollutants Corrosion and prevention 	<ul style="list-style-type: none"> Evaluate reliability of methods and suggest possible improvements Make and record observations and measurements Interpret observations and data to reach conclusions 	

Summer Term	<ul style="list-style-type: none"> The reactivity series 	<ul style="list-style-type: none"> How can metals be placed in order of reactivity? Is there a relationship between the position of a metal in the reactivity series and its method of extraction? 	<ul style="list-style-type: none"> Reaction of metals with oxygen Reaction of metals with water Reaction of metals with acids Displacement reactions Extraction of metals 	<ul style="list-style-type: none"> Use appropriate techniques, apparatus and materials during practical work Make predictions using scientific knowledge and understanding Select, plan and carry out investigations to test predictions 	
	<ul style="list-style-type: none"> Energy changes 	<ul style="list-style-type: none"> How are energy changes in chemical reactions measured? 	<ul style="list-style-type: none"> Endothermic reactions Exothermic reactions Reaction profiles 	<ul style="list-style-type: none"> Make and record observations and measurements Use appropriate scientific vocabulary correctly 	

Equipment needed for lessons	How will learning and progress be assessed?
<ul style="list-style-type: none"> Standard school stationery Exercise book Calculator 	<ul style="list-style-type: none"> End of unit tests (subject knowledge focus) Formal assessment week (May) Peer and self-assessment Homework tasks Retrieval practice activities

Extension & Enrichment opportunities	What can you do to support your child?
<ul style="list-style-type: none"> STEM Club Websites which can be used to extend knowledge and reading https://chemstuff.co.uk/academic-work/year8/ https://www.bbc.co.uk/bitesize/subjects/znxytrd https://www.footprints-science.co.uk/index.php?type=Periodic_table https://edu.rsc.org/resources 	<ul style="list-style-type: none"> Take an active interest in their learning

Inclusion	
In lessons	Subject specific
<ul style="list-style-type: none"> Teachers follow student passports to ensure that the needs of all students with SEND are met. Work is enlarged to the necessary size for visually impaired students. Teachers will ensure that classrooms are quiet learning environments where possible and will dim lights to support students with sensory needs. Students have the use of laptop if they have a SEND need whereby use of a laptop supports them. Hearing impaired students are supported through use a radio aid and teachers ensure 	<ul style="list-style-type: none"> For pupils with visual impairment, enlarged graph paper for plotting graphs during experiments Physical impairment – where possible we amend practical equipment or provide a magnifying glass to view instruments Hearing impaired – show videos with subtitles Some laboratories have height-adjustable benches for wheelchair access Cater for latex allergies by providing disposable gloves Colour blindness

that students can lip read at all times during lessons.

- Dyslexic students are encouraged to use coloured overlays when they are required to read long passages.
- Use of dyslexic friendly fonts and coloured backgrounds used in PowerPoints/resources.
- Students with ADHD are given movement breaks, fidget toys and lessons are 'chunked' to aid concentration.
- Students are seated according to their needs, students work with the SENDCo to decide upon this.

If you have any questions about this Learning Overview, please contact the named Teacher above.