



Year 9 Chemistry

The GCSE Chemistry curriculum in Year 9 builds upon key ideas covered in Years 7 and 8.

The C6 topic builds upon aspects of 7 Matter by taking the idea of the particle model and using it to develop collision theory.

The C1 topic revisits and consolidates ideas on atom, elements, compounds and mixtures and also separation techniques from 7 Matter.

The C2 topic revisits and consolidates ideas on the states of matter from 7 Matter. This topic is a continuation of the atomic structure ideas covered in C1. It uses these ideas to introduce and explain the three types of bonding.

Investigative skills are developed by a number of required practical activities. There are also other practical activities that enrich learning, as well as practical demonstrations that do the same.

Methods of deepening and securing knowledge:

Retrieval practice	Almost all lessons have retrieval practice in them. This is usually as a starter activity.
Interleaving	Retrieval practice includes interleaved questions from previous topics, making connections between topics where possible. Many ideas from Key Stage 3 are revisited during Year 9 lessons.

	Autumn term 1	Autumn term 2	Spring term 1	Spring term 2	Summer term 1	Summer term 2
Topic(s)	C6 Rate and extent of chemical change <ul style="list-style-type: none">- Calculating rates of reaction- Factors which affect the rate of chemical reactions- Collision theory activation energy- Catalysts C1 Atomic structure and the periodic table <ul style="list-style-type: none">- Atoms elements and compounds- Mixtures- Development of the model of the atom- Relative electrical charges of subatomic particles- Size and mass of atoms- Relative atomic mass- Electronic structure		C1 continued C2 Bonding, structure and the properties of matter <ul style="list-style-type: none">- Chemical bonds- Ionic bonding- Ionic compounds- Covalent bonding- Metallic bonding- The three states of matter- State symbols- Properties of ionic compounds- Properties of small molecules- Polymers- Giant covalent structures- Properties of metals and alloys- Metals as conductors		C5 Energy changes <ul style="list-style-type: none">- Energy transfer during exothermic and endothermic reactions- Reaction profiles- The energy changes of reactions (Higher Tier only)- Cells and batteries- Fuel cells	

	<ul style="list-style-type: none"> - The Periodic Table - Development of the periodic table - Metal and non-metals - Group 0 - Group 1 - Group 7 - Comparison of transition elements with Group 1 elements 	<ul style="list-style-type: none"> - Diamond - Graphite - Graphene and fullerenes - Sizes of particles and their properties (nanoparticles) - Uses of nanoparticles 	
Assessment	Aiming High 1 test – covering C6 lessons taught up to that point		PPE exam – covering all topics taught up to that point in year 9

Homework:

Homework is a core part of learning and serves to support the learning in class, enrich the student experience and develop knowledge and skills. There are two types of homework set in chemistry e.g. Educake revision (an online platform that support retrieval of knowledge) and worksheets or past paper questions that develop exam literacy. Preparing for assessment is an essential part of each topic as each assessment allows teachers and students to see their progress. It is crucial that revision is completed so students can show what they know.