

Year 8 Science Planning Outline – Autumn Term

These are the subjects covered in the Autumn Term. The exact timing and order of them may be subject to change.

Area of curriculum	Pupils should be taught
Electricity & Magnetism (Physics)	<ul style="list-style-type: none"> • how to design and construct series and parallel circuits, and how to measure current and voltage • that the current in a series circuit depends on the number of cells and the number and nature of other components and that current is not ‘used up’ by components • <i>KS3 Science Revision Guide pages: 74, 75, 76, 77</i>
Electricity & Magnetism (Physics)	<ul style="list-style-type: none"> • that energy is transferred from batteries and other sources to other components in electrical circuits • about magnetic fields as regions of space where magnetic materials experience forces, and that like magnetic poles repel and unlike magnetic poles attract • <i>KS3 Science Revision Guide pages: 78</i>
Electricity & Magnetism (Physics)	<ul style="list-style-type: none"> • that a current in a coil produces a magnetic field pattern similar to that of a bar magnet • <i>KS3 Science Revision Guide pages: 79</i>
Electricity & Magnetism (Physics)	<ul style="list-style-type: none"> • how electromagnets are constructed and used in devices [e.g. <i>relays, lifting magnets, relays</i>]. • about parallel and series circuits, involving cells, lamps, switches (SPST, SPDT, reed) • <i>KS3 Science Revision Guide pages: 79</i>
Movement & health (Biology)	<ul style="list-style-type: none"> • the role of the skeleton and joints and the principle of antagonistic muscle pairs [e.g. <i>biceps and triceps</i>] in movement • that the abuse of alcohol, solvents and other drugs affects health • <i>KS3 Science Revision Guide pages: 11, 18</i>
Movement & health (Biology)	<ul style="list-style-type: none"> • that the abuse of alcohol, solvents and other drugs affects health • how the growth and reproduction of bacteria and the replication of viruses can affect health, and how the body’s natural defences may be enhanced by immunisation and medicines. • <i>KS3 Science Revision Guide pages: 18, 19</i>
Chemical reactions (Chemistry)	<ul style="list-style-type: none"> • how elements combine through chemical reactions to form compounds [e.g. <i>water, carbon dioxide, magnesium oxide, sodium chloride, most minerals</i>] with definite composition • <i>KS3 Science Revision Guide pages: 44, 45</i>
Chemical reactions (Chemistry)	<ul style="list-style-type: none"> • to represent compounds by formulae and to summarise reactions by word equations • <i>KS3 Science Revision Guide pages: 46</i>
Chemical reactions (Chemistry)	<ul style="list-style-type: none"> • that mixtures [e.g. <i>air, sea water and most rocks</i>] are composed of constituents that are not combined • <i>KS3 Science Revision Guide pages: 47, 48</i>
Chemical reactions (Chemistry)	<ul style="list-style-type: none"> • how mass is conserved when chemical reactions take place because the same atoms are present, although combined in different ways • <i>KS3 Science Revision Guide pages: 59, 60</i>
Chemical reactions (Chemistry)	<ul style="list-style-type: none"> • that virtually all materials, including those in living systems, are made through chemical reactions, and to recognise the importance of chemical change in everyday situations, [e.g. <i>ripening fruit, setting superglue, cooking food</i>] • about possible effects of burning fossil fuels on the environment [e.g. <i>production of acid rain, carbon dioxide and solid particles</i>] and how these effects can be minimised. • Revise reactivity of metals • to identify patterns in chemical reactions. • <i>KS3 Science Revision Guide pages: 50, 51, 52, 53, 59, 60, 61</i>