

KS3 Topic Checklist: Year 8

Topic	Content
Rocks	<ul style="list-style-type: none"> • Label the structure of the Earth (inner core, outer core, mantle, crust, atmosphere) and describe the properties of each • Give examples of sedimentary, metamorphic and igneous rocks • Describe how sedimentary, metamorphic and igneous rocks are formed • Link the formation of the three types of rock together to explain the rock cycle
Sound	<ul style="list-style-type: none"> • Label a sound wave (peak, trough, wavelength, amplitude) • Define: frequency, echo and ultrasound • Describe how sound waves are formed due to vibrations • Explain why particles are needed for sound waves to be produced • Describe how our ears work to hear sounds • Explain the applications of ultrasound
Food and digestion	<ul style="list-style-type: none"> • State the functions of the 7 nutrients in our bodies • Describe the effects of having an unbalanced diet (Obesity, malnourishment, scurvy, anaemia) • Describe the functions of different organs in our digestive system • Explain how the small intestines are adapted to increase the absorption of nutrients • Explain how enzymes are used to speed up the rate of digestion
Electricity	<ul style="list-style-type: none"> • Draw a range of circuit symbols and recognise where they belong in a circuit • Draw circuit diagrams • Describe the difference between conductors and insulators • Define: current voltage, resistance and describe how to measure each. • Describe applications of resistance in a fuse
Working scientifically	<ul style="list-style-type: none"> • Define: control variables, independent variables and dependent variables • Describe the difference between categorical and continuous data and how they are represented in a graph
Respiration	<ul style="list-style-type: none"> • Write the equation for respiration • Describe where the reactants of respiration come from and how the products are used in the body. • Describe the difference between aerobic respiration and anaerobic respiration • Describe how the circulatory system is adapted to its function • Explain how the lungs are adapted to maximise gaseous exchange
Light	<ul style="list-style-type: none"> • Describe how light travels • Draw a diagram to show how the angle of incidence is equal to the angle of reflection on a plane mirror • Define refraction • Explain why refraction occurs • Describe why we see different colours using the words reflection and absorption • Explain why we see different colours when we have different colour filters
Photosynthesis	<ul style="list-style-type: none"> • State the equation for photosynthesis • Describe how the plant obtain the reactants for photosynthesis and the uses of the products • Describe the role of the stomata in the leaves • Describe how fertilisers are used to speed up the growth of plants • Explain how plants are adapted to carry out photosynthesis
Reactivity Series	<ul style="list-style-type: none"> • Describe how the reactivity series can be used to estimate if a reaction will occur • State the general equations for metal + oxygen, metal + acid, metal + water, metal carbonate + acid and metal oxide + acid • Define what a displacement reaction is
Reactions	<ul style="list-style-type: none"> • Describe what happens in term of the particles in a reaction • Write a balanced symbol equation for different reactions • Describe different types of reaction: combustion, thermal decomposition, oxidation, reduction and displacement reactions • Explain some of the uses of combustion, thermal decomposition, oxidation, reduction and displacement reactions • Describe different ways to speed up the rate of reaction • Describe the difference between endothermic and exothermic reactions and explain how they relate to energy transfers
Magnetism	<ul style="list-style-type: none"> • Draw a diagram to represent the magnetic field on a bar magnet and of earth • Describe the difference between magnetic and geographical north • Describe how temporary magnet can be made and how the strength of a magnet can decrease • Describe how electromagnets are made and how the strength of an electromagnet can be altered.