

## **Biology foundation**

### ***Cells and organisation -***

Chapter B1 Cell structure and transport – Animal and plant cells, specialised cells.

Chapter B3 Organisation and the digestive system – Enzymes and digestion

Chapter B4 Organising animals and plants – Blood.

### ***Disease and bioenergetics -***

Chapter B5 Communicable disease – Animal and plant pathogens

Chapter B6 Preventing and treating disease – Developing drugs.

Chapter B7 Non-communicable disease – Cancer.

Chapter B8 Photosynthesis – Factors affecting rates and equation.

Chapter B9 Respiration – Types and uses, exercise.

## **Biology higher**

### ***Cells and organisation -***

Chapter B1 Cell structure and transport – Animal and plant cells, specialised cells, magnification.

Chapter B3 Organisation and the digestive system – Enzymes and digestion

Chapter B4 Organising animals and plants – Blood and the heart/helping the heart.

Chapter B5 Communicable disease – Animal pathogens

### ***Disease and bioenergetics -***

Chapter B6 Preventing and treating disease – Developing drugs.

Chapter B7 Non-communicable disease – Cancer.

Chapter B8 Photosynthesis – Factors affecting rates and equation.

Chapter B9 Respiration – Types and applications.

## **Chemistry foundation**

### ***Atoms, bonding and moles -***

Chapter C1 Atomic structure – History, electronic structure

Chapter C2 The periodic table – Development.

Chapter C3 Structure and Bonding – bonding types and properties, covalent and ionic.

Chapter C4 Chemical Calculations - Calculating masses and expressing concentrations

### ***Chemical reactions and energy changes -***

Chapter C5 Chemical changes – Acids and alkalis, pH scale, reactivity/displacement and making salts.

Chapter C6 Electrolysis – Intro, changes and aqueous solutions.

Chapter C7 Energy changes – Reaction profiles, endo/exothermic reactions.

## **Chemistry higher**

### ***Atoms, bonding and moles -***

Chapter C1 Atomic structure – Electronic structure, radii.

Chapter C2 The periodic table – Using the periodic table, trends.

Chapter C3 Structure and Bonding – bonding types and properties, covalent and ionic.

Chapter C4 Chemical Calculations - Calculating masses and expressing concentrations

### ***Chemical reactions and energy changes -***

Chapter C5 Chemical changes – Reactivity/displacement, making salts and strong/weak acids.

Chapter C6 Electrolysis – Intro, changes and aqueous solutions.

Chapter C7 Energy changes – Reaction profiles, endo/exothermic reactions/bond energies.

## **Physics foundation**

### ***Energy and energy resources -***

Chapter P1 Conservation and dissipation of energy – Energy stores, Kinetic energy equation.

Chapter P2 Energy transfer by heating – Investigating specific heat capacity.

### ***Particles at work -***

Chapter P4 Electric circuits – Series and parallel circuits, resistance + equations, V/I component graphs.

Chapter P5 Electricity in the home – Cables and plugs, national grid.

Chapter P6 Molecules and matter – States/changes in state, specific latent heat.

Chapter P7 Radioactivity – Types, changes in the nucleus, half-life, uses.

## **Physics higher**

### ***Energy and energy resources -***

Chapter P1 Conservation and dissipation of energy – Energy stores, Kinetic energy equation.

Chapter P2 Energy transfer by heating – Investigating specific heat capacity.

### ***Particles at work -***

Chapter P4 Electric circuits – Series and parallel circuits, resistance + equations, V/I component graphs.

Chapter P6 Molecules and matter – States/changes in state, specific latent heat, internal energy.

Chapter P7 Radioactivity – Atoms, types of radiation, changes in the nucleus, half-life, uses, hazards.

## **Triple Biology**

### ***Cells and organisation -***

Chapter B1 Cell structure and transport – Osmosis, animal and plant cells, specialised cells, magnification.

Chapter B2 Cell division – Mitosis and cell division

Chapter B3 Organisation and the digestive system – Enzymes and digestion

Chapter B4 Organising animals and plants – Circulatory system.

### ***Disease and bioenergetics -***

Chapter B5 Communicable disease – Animal and plant pathogens, plant deficiencies,

Chapter B6 Preventing and treating disease – Making and using monoclonal antibodies.

Chapter B7 Non-communicable disease – Cancer.

Chapter B9 Respiration – Types and applications.

## **Triple Chemistry**

### ***Atoms, bonding and moles -***

Chapter C1 Atomic structure – Electronic structure.

Chapter C2 The periodic table – Development, using the periodic table, trends, alkali metals, reactions of halogens. .

Chapter C4 Chemical Calculations - Calculating masses, moles and concentrations.

### ***Chemical reactions and energy changes -***

Chapter C5 Chemical changes – Reactivity/displacement, making salts and strong/weak acids, titrations.

Chapter C6 Electrolysis – Intro, changes and aqueous solutions.

Chapter C7 Energy changes – Reaction profiles, endo/exothermic reactions/bond energies, fuel cells.

## **Triple Physics**

### ***Energy and energy resources -***

Chapter P1 Conservation and dissipation of energy – Gravitational potential energy equation, Kinetic energy equation, elastic potential energy equation.

Chapter P2 Energy transfer by heating – Specific heat capacity equation.

Chapter P3 Energy resources – Nuclear power and chain reactions, using gradients on a graph.

### ***Particles at work -***

Chapter P4 Electric circuits – Electric charges and fields, potential difference and resistance (+ equations), V/I component graphs, current and charge + equations.

Chapter P5 Electricity in the home – Electrical power and potential difference.

Chapter P6 Molecules and matter – Calculating densities experimentally, States/changes in state, specific latent heat, internal energy.

Chapter P7 Radioactivity – Atoms, types of radiation, changes in the nucleus (+ equations), half-life and decay, hazards.