

| TRIPLE SCIENCE – BIOLOGY | | | |
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| | Term 1 | Term 2 | Term 3 |
| Year 10 | <p>Biology</p> <p>Chapter B5 Communicable diseases</p> <p>5.1 Health and disease</p> <p>5.2 Pathogens and disease</p> <p>5.3 Growing bacteria in the lab</p> <p>5.4 Preventing bacterial growth</p> <p>5.5 Preventing infections</p> <p>5.6 Viral diseases</p> <p>5.7 Bacterial diseases</p> <p>5.8 Diseases caused by fungi and protists</p> <p>5.9 Human defence responses</p> <p>5.10 More about plant diseases</p> <p>5.11 Plant defence responses</p> <p>Biology</p> <p>Chapter B6 Communicable diseases</p> <p>6.1 Vaccinations</p> <p>6.2 Antibiotics and painkillers</p> <p>6.3 Discovering drugs</p> <p>6.4 Developing drugs</p> <p>6.5 Making monoclonal antibodies</p> <p>6.6 Uses of monoclonal antibodies</p> <p>Biology</p> <p>Chapter B7 Non-communicable diseases</p> <p>7.1 Non-communicable diseases</p> <p>7.2 Cancer</p> <p>7.3 Smoking, and the risk of disease</p> | <p>Biology</p> <p>Chapter B9 Respiration</p> <p>9.1 Aerobic respiration</p> <p>9.2 The response to exercise</p> <p>9.3 Anaerobic respiration</p> <p>9.4 Metabolism and the liver</p> <p>Biology</p> <p>Chapter B10 The human nervous system</p> <p>10.1 Principles of homeostasis</p> <p>10.2 The structure of the nervous system</p> <p>10.3 Reflex actions</p> <p>10.4 The brain</p> <p>10.5 The eye</p> <p>10.6 Common problems of the eye</p> <p>Biology</p> <p>Chapter B11 Hormonal coordination</p> <p>11.1 Principles of hormonal control</p> <p>11.2 The control of blood glucose levels</p> <p>11.3 Treating diabetes</p> <p>11.4 The role of negative feedback</p> <p>11.5 Human reproduction</p> <p>11.6 Hormones and the menstrual cycle</p> <p>11.7 The artificial control of fertility</p> <p>11.8 Infertility treatments</p> <p>11.9 Plant hormones and responses</p> <p>11.10 Using plant hormones</p> | <p>Biology</p> <p>Chapter B12 Homeostasis in action</p> <p>12.1 Controlling body temperature</p> <p>12.2 Removing waste products</p> <p>12.3 The human kidney</p> <p>12.4 Dialysis – an artificial kidney</p> <p>12.5 Kidney transplants</p> <p>Biology</p> <p>Chapter B13 Reproduction</p> <p>13.1 Types of reproduction</p> <p>13.2 Cell division in sexual reproduction</p> <p>13.3 The best of both worlds</p> <p>13.4 DNA and the genome</p> <p>13.5 DNA structure and protein synthesis</p> <p>13.6 Gene expression and mutation</p> <p>13.7 Inheritance in action</p> <p>13.8 More about genetics</p> <p>13.9 Inherited disorders</p> <p>13.10 Screening for genetic disorders</p> <p>Biology</p> <p>Chapter B14 Variation and evolution</p> <p>14.1 Variation</p> <p>14.2 Evolution by natural selection</p> <p>14.3 Selective breeding</p> <p>14.4 Genetic engineering</p> <p>14.5 Cloning</p> |

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| | <p>7.4 Diet, exercise and disease 7.5 Alcohol and other carcinogens</p> <p>Biology Chapter B8 Photosynthesis 8.1 Photosynthesis 8.2 The rate of photosynthesis 8.3 How plants use glucose 8.4 Making the most of photosynthesis</p> | | <p>14.6 Adult cell cloning 14.7 Ethics of genetic technologies</p> |
| Year 11 | <p>Biology Chapter B15 Genetics and evolution 15.1 The history of genetics 15.2 Theories of evolution 15.3 Accepting Darwin's ideas 15.4 Evolution and speciation 15.5 Evidence for evolution 15.6 Fossils and extinction 15.7 More about extinction 15.8 Antibiotic resistant bacteria 15.9 Classification 15.10 New systems of classification</p> <p>Biology Chapter B16 Adaptations, interdependence and competition 16.1 The importance of communities 16.2 Organisms in their environment 16.3 Distribution and abundance 16.4 Competition in animals</p> | <p>Biology Chapter B18 Biodiversity and ecosystems 18.1 The human population explosion 18.2 Land and water pollution 18.3 Air pollution 18.4 Deforestation and peat destruction 18.5 Global warming 18.6 The impact of change 18.7 Maintaining biodiversity 18.8 Trophic levels and biomass 18.9 Biomass transfers 18.10 Factors affecting food security 18.11 Making food production efficient 18.12 Sustainable food production</p> <p>Examination preparation</p> | GCSE Examinations |

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| | <p>16.5 Competition in plants 16.6 Adapt and survive 16.7 Adaptation in animals 16.8 Adaptations in plants</p> <p>Biology Chapter B17 Organising an ecosystem 17.1 Feeding relationships 17.2 Materials cycling 17.3 The carbon cycle 17.4 Rates of decomposition</p> | | |
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| TRIPLE SCIENCE – CHEMISTRY | | | |
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| | Term 1 | Term 2 | Term 3 |
| Year 10 | <p>Chemistry Chapter C2 The Periodic Table 2.1 Development of the periodic table 2.2 Electronic structures and the periodic table 2.3 Group 1 the alkali metals 2.4 Group 7 the halogens 2.5 Explaining trends 2.6 The transition elements</p> <p>Chapter C3 Structure and bonding 3.1 States of Matter 3.2 Atoms into ions 3.3 Ionic bonding 3.4 Giant ionic structures</p> | <p>Chemistry Chapter C5 Chemical changes 5.1 The reactivity series 5.2 Displacement reactions 5.3 Extracting metals 5.4 Salts from metals 5.5 Salts from insoluble bases 5.6 Making more salts 5.7 Neutralisation and the pH scale 5.8 Strong and weak acids</p> <p>Chemistry Chapter C6 Electrolysis 6.1 Introduction to electrolysis 6.2 Changes at the electrodes</p> | <p>Chemistry Chapter C9 Crude oils and fuels 9.1 Hydrocarbons 9.2 Fractional distillation of oil 9.3 Burning hydrocarbon fuels 9.4 Cracking hydrocarbon fuels</p> <p>Chemistry Chapter C10 Organic reactions 10.1 Reactions of the alkenes 10.2 Structures of alcohols, carboxylic acids and esters 10.3 Reactions and uses of alcohols 10.4 Carboxylic acids and esters</p> |

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| | <p>3.5 Covalent bonding 3.6 Structure of simple molecules 3.7 Giant covalent structures 3.8 Fullerenes and graphene 3.9 Bonding in metals 3.10 Giant metallic structures 3.11 Nanoparticles 3.12 Applications of nanoparticles</p> <p>Chemistry Chapter C4 Chemical analysis 4.1 Relative masses and moles 4.2 Equations and calculations 4.3 From masses to balanced equations 4.4 The yield of a chemical reaction 4.5 Atom economy 4.6 Expressing concentrations 4.7 Titrations 4.8 Titration calculations 4.9 Volumes of gases</p> | <p>6.3 The extraction of aluminium 6.4 Electrolysis of aqueous solutions</p> <p>Chemistry Chapter C7 Energy changes 7.1 Exothermic and endothermic reactions 7.2 Using energy transfers from reactions 7.3 Reaction profiles 7.4 Bond energies 7.5 Chemical cells and batteries 7.6 Fuel cells</p> <p>Chemistry Chapter C8 Rates and equilibrium 8.1 Rate of reaction 8.2 Collision theory and surface area 8.3 The effect of temperature 8.4 The effect of concentration and pressure 8.5 The effect of catalysts 8.6 Reversible reactions 8.7 Energy and reversible reactions 8.8 Dynamic equilibrium 8.9 Altering conditions</p> | <p>Chemistry Chapter C11 Polymers 11.1 Addition polymerisation 11.2 Condensation polymerisation 11.3 Natural polymers 11.4 DNA</p> <p>Chemistry Chapter C12 Chemical analysis 12.1 Pure substances and mixtures 12.2 Analysing chromatograms 12.3 Testing for gases 12.4 Tests for positive ions 12.5 Tests for negative ions 12.6 Instrumental analysis</p> |
| <p>Year 11</p> | <p>Chemistry Chapter C13 The Earth's atmosphere 13.1 History of our atmosphere 13.2 Our evolving atmosphere 13.3 Greenhouse gases 13.4 Global climate change 13.5 Atmospheric pollutants</p> | <p>Examination preparation</p> | <p>GCSE Examinations</p> |

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| | <p>Chemistry Chapter C14 The Earth's Resources</p> <p>14.1 Finite and renewable resources 14.2 Water safe to drink 14.3 Treating waste water 14.4 Extracting metals from ores 14.5 Life cycle assessments 14.6 Reduce, reuse and recycle</p> <p>Chemistry Chapter C15 Using our resources</p> <p>15.1 Rusting 15.2 Useful alloys 15.3 The properties of polymers 15.4 Glass, ceramics and composites 15.5 Making ammonia – the haber process 15.6 The economics of the haber process 15.7 Making fertilisers in the lab 15.8 Making fertilisers in industry</p> | | |
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| TRIPLE SCIENCE – PHYSICS | | | |
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| | Term 1 | Term 2 | Term 3 |
| Year 10 | <p>Physics Chapter P2 Energy transfer by heating</p> <p>2.1 Energy transfer by conduction 2.2 Infrared radiation 2.3 More about infrared radiation 2.4 Specific heat capacity</p> | <p>Physics Chapter P7 Radioactivity</p> <p>7.1 Atoms and radiation 7.2 The discovery of the nucleus 7.3 Changes in the nucleus</p> | <p>Physics Chapter P10 Force and Motion</p> <p>10.1 Forces and acceleration 10.2 Weight and terminal velocity 10.3 Forces and braking 10.4 Momentum</p> |

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| | <p>2.5 heating and insulating buildings</p> <p>Physics</p> <p>Chapter P4 Electric circuits</p> <p>4.1 Electrical charges and fields</p> <p>4.2 Current and charge</p> <p>4.3 Potential difference and resistance</p> <p>4.4 Component characteristics</p> <p>4.5 Series circuits</p> <p>4.6 Parallel circuits</p> <p>Physics</p> <p>Chapter P5 Electricity in the home</p> <p>5.1 Alternating current</p> <p>5.2 Cables and plugs</p> <p>5.3 Electrical power and potential difference</p> <p>5.4 Electrical currents and energy transfer</p> <p>5.5 Appliances and efficiency</p> <p>Physics</p> <p>Chapter P6 Molecules and matter</p> <p>6.1 Density</p> <p>6.2 States of matter</p> <p>6.3 Changes of state</p> <p>6.4 Internal energy</p> <p>6.5 Specific latent heat</p> <p>6.6 Gas pressure and temperature</p> <p>6.7 Gas pressure and volume</p> | <p>7.4 More about alpha, beta and gamma radiation</p> <p>7.5 Activity and half-life</p> <p>7.6 Nuclear radiation in medicine</p> <p>7.7 Nuclear fission</p> <p>7.8 Nuclear fusion</p> <p>7.9 Nuclear issues</p> <p>Physics</p> <p>Chapter P8 Forces in balance</p> <p>8.1 Vectors and scalars</p> <p>8.2 Forces between objects</p> <p>8.3 Resultant forces</p> <p>8.4 Moments at work</p> <p>8.5 More about levers and gears</p> <p>8.6 Centre of mass</p> <p>8.7 The parallelogram of forces</p> <p>8.8 Resolution of forces</p> <p>Physics</p> <p>Chapter P9 Motion</p> <p>9.1 Speed and distance-time graphs</p> <p>9.2 Velocity and acceleration</p> <p>9.3 More about velocity-time graphs</p> <p>9.4 Analysing motion graphs</p> | <p>10.5 Using conservation of momentum</p> <p>10.6 Impact forces</p> <p>10.7 Safety first</p> <p>10.8 Forces and elasticity</p> <p>Physics</p> <p>Chapter P11 Force and pressure</p> <p>11.1 Pressure and surfaces</p> <p>11.2 Pressure in a liquid at rest</p> <p>11.3 Atmospheric pressure</p> <p>11.4 Upthrust and flotation</p> <p>Physics</p> <p>Chapter P12 Wave properties</p> <p>12.1 The nature of waves</p> <p>12.2 The properties of waves</p> <p>12.3 Reflection and refraction</p> <p>12.4 More about waves</p> <p>12.5 Sound waves</p> <p>12.6 The uses of ultrasound</p> <p>12.7 Seismic waves</p> <p>Physics</p> <p>Chapter P13 Electromagnetic spectrum</p> <p>13.1 The electromagnetic spectrum</p> <p>13.2 Light, infrared, microwaves and radio waves</p> <p>13.3 Communications</p> <p>13.4 Ultraviolet waves, X-rays and gamma waves</p> <p>13.5 X-rays in medicine</p> |
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| Year 11 | | Examination preparation | GCSE Examinations |
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| | <p>Physics Chapter P14 Light</p> <ul style="list-style-type: none">14.1 Reflection of light14.2 Refraction of light14.3 Light and colour14.4 Lenses14.5 Using lenses <p>Physics Chapter P15 Electromagnetism</p> <ul style="list-style-type: none">15.1 Magnetic fields15.2 Magnetic fields of electric currents15.3 Electromagnetics in devices15.4 The motor effect15.5 The generator effect15.6 The alternating-current generator15.7 Transformers15.8 Transformers in action <p>Physics Chapter P16 Space</p> <ul style="list-style-type: none">16.1 Formation of the solar system16.2 The life cycles of a star16.3 Planets, satellites and orbits16.4 The expanding universe16.5 The beginning and future of the universe | | |