TOTTINGTON HIGH SCHOOL

	COMBINED SCIENCE		
	Term 1	**Term 2**	**Term 3**
Year 10	Biology Chapter B5 Communicable diseases 5.1 Health and disease 5.2 Pathogens and disease 5.3 Preventing infections 5.4 Viral diseases 5.5 Bacterial diseases 5.6 Diseases caused by fungi and protists 5.7 Human defence responses 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 Expressing concentrations Physics Chapter P5 Electricity in the home 5.1 Alternating current 5.2 Cables and plugs 5.3 Electrical power and potential difference 5.4 Electrical currents and energy transfer 5.5 Appliances and efficiency Biology Chapter B6 Communicable diseases 6.1 Vaccinations	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 Biology Chapter B9 Respiration 9.1 Aerobic respiration 9.2 The response to exercise 9.3 Anaerobic respiration 9.4 Metabolism and the liver 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 Physics Chapter P7 Radioactivity 7.1 Atoms and radiation 7.2 The discovery of the nucleus 7.3 Changes in the nucleus 7.4 More about alpha, beta and gamma radiation	Biology Chapter B12 Reproduction 12.1 Types of reproduction 12.2 Cell division in sexual reproduction 12.3 DNA and the genome 12.4 Inheritance in action 12.5 More about genetics 12.6 Inherited disorders 12.7 Screening for genetic disorders 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 Physics Chapter P9 Motion 9.1 Speed and distance-time graphs 9.2 Velocity and acceleration 9.3 More about velocity-time graphs 9.4 Analysing motion graphs Biology Chapter B13 Variation and evolution 13.1 Variation 13.2 Evolution by natural selection

TOTTINGTON HIGH SCHOOL

	6.2 Antibiotics and painkillers 6.3 Discovering drugs 6.4 Developing drugs 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 Physics Chapter P6 Molecules and matter 6.1 Density 6.2 States of matter 6.3 Changes of state 6.4 Internal energy 6.5 Specific latent heat 6.6 Gas pressure and temperature Biology Chapter B7 Non-communicable diseases 7.1 Non-communicable diseases 7.2 Cancer 7.3 Smoking, and the risk of disease 7.4 Diet, exercise and disease 7.5 Alcohol and other carcinogens	7.5 Activity and half-life Biology Chapter B10 The human nervous system 10.1 Principles of homeostasis 10.2 The structure of the nervous system 10.3 Reflex actions Biology Chapter B11 Hormonal coordination 11.1 Principles of hormonal control 11.2 The control of blood glucose levels 11.3 Treating diabetes 11.4 The role of negative feedback 11.5 Human reproduction 11.6 Hormones and the menstrual cycle 11.7 The artificial control of fertility 11.8 Infertility treatments 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	13.3 Selective breeding 13.4 Genetic engineering 13.5 Ethics of genetic technologies Chemistry Chapter C10 Chemical analysis 10.1 Pure substances and mixtures 10.2 Analysing chromatograms 10.3 Testing for gases Physics Chapter P10 Force and Motion 10.1 Forces and acceleration 10.2 Weight and terminal velocity 10.3 Forces and braking 10.4 Momentum 10.5 Forces and elasticity

TOTTINGTON HIGH SCHOOL

	Chemistry Chapter C6 Electrolysis 6.1 Introduction to electrolysis 6.2 Changes at the electrodes 6.3 The extraction of aluminium 6.4 Electrolysis of aqueous solutions	Physics Chapter P8 Forces in balance 8.1 Vectors and scalars 8.2 Forces between objects 8.3 Resultant forces 8.4 Centre of mass 8.5 The parallelogram of forces 8.6 Resolution of forces	
Year 11	Biology Chapter B14 Genetics and evolution 14.1 Evidence for evolution 14.2 Fossils and extinction 14.3 More about extinction 14.4 Antibiotic resistant bacteria 14.5 Classification Chemistry Chapter C11 The Earth's atmosphere 11.1 History of our atmosphere 11.2 Our evolving atmosphere 11.3 Greenhouse gases 11.4 Global climate change 11.5 Atmospheric pollutants Physics Chapter P11 Wave properties 11.1 The nature of waves 11.2 The properties of waves 11.3 Reflection and refraction 11.4 More about waves	**Examination preparation**	**GCSE Examinations**

TOTTINGTON HIGH SCHOOL

	Biology Chapter B15 Adaptations, interdependence and competition 15.1 The importance of communities 15.2 Organisms in their environment 15.3 Distribution and abundance 15.4 Competition in animals 15.5 Competition in plants 15.6 Adapt and survive 15.7 Adaptation in animals 15.8 Adaptations in plants Chemistry Chapter C12 The Earth's Resources 12.1 Finite and renewable resources 12.2 Water safe to drink 12.3 Treating waste water 12.4 Extracting metals from ores 12.5 Life cycle assessments 12.6 Reduce, reuse and recycle Physics Chapter P12 Electromagnetic spectrum 12.1 The electromagnetic spectrum 12.2 Light, infrared, microwaves and radio waves 12.3 Communications 12.4 Ultraviolet waves, X-rays and gamma waves 12.5 X-rays in medicine		

TOTTINGTON HIGH SCHOOL

	Physics Chapter P13 Electromagnetism 13.1 Magnetic fields 13.2 Magnetic fields of electric currents 13.3 The motor effect Biology Chapter B16 Organising an ecosystem 16.1 Feeding relationships 16.2 Materials cycling 16.3 The carbon cycle Biology Chapter B17 Biodiversity and ecosystems 17.1 The human population explosion 17.2 Land and water pollution 17.3 Air pollution 17.4 Deforestation and peat destruction 17.5 Global warming 17.6 Maintaining biodiversity		