

YEAR TEN

	Unit title	Learning objectives	Assessment and Assignments
TERM 1	B1.1 Keeping Healthy	<ul style="list-style-type: none"> ■ evaluate information about the effect of food on health ■ evaluate information about the effect of lifestyle on development of disease ■ analyse and evaluate claims made by slimming programmes, and slimming products. relate the contribution of Semmelweis in controlling infection to solving modern problems with the spread of infection in hospitals ■ explain how the treatment of disease has changed as a result of increased understanding of the action of antibiotics and immunity ■ evaluate the consequences of mutations of bacteria and viruses in relation to epidemics and pandemics ■ evaluate the advantages and disadvantages of being vaccinated against a particular disease. 	End of Unit modules Tests. ISAs. Mock exam. GCSE exams.
	B1.2 Nerves and Hormones	<ul style="list-style-type: none"> ■ evaluate the benefits of, and the problems that may arise from, the use of hormones to control fertility, including In Vitro Fertilisation (IVF) ■ evaluate the use of plant hormones in horticulture as weedkillers and to encourage the rooting of plant cuttings. 	
	B1.3 The use and Abuse of drugs	<ul style="list-style-type: none"> ■ evaluate the effect of statins in cardiovascular disease ■ evaluate different types of drugs and why some people use illegal drugs for recreation ■ evaluate claims made about the effect of prescribed and non-prescribed drugs on health ■ consider the possible progression from recreational drugs to hard drugs ■ evaluate the use of drugs to enhance performance in sport and to consider the ethical implications of their use. 	
	B1.4 Interdependence and Adaptation	<ul style="list-style-type: none"> ■ suggest how organisms are adapted to the conditions in which they live ■ observe the adaptations, eg body shape, of a range 	

		<p>of organisms from different habitats</p> <ul style="list-style-type: none"> ■ develop an understanding of the ways in which adaptations enable organisms to survive ■ suggest the factors for which organisms are competing in a given habitat ■ evaluate data concerned with the effect of environmental changes on the distribution and behaviour of living organisms. 	
	B1.5 Energy and Food Chains	<ul style="list-style-type: none"> ■ interpret pyramids of biomass and construct them from appropriate information. 	
	B1.6 Waste materials from plants and Animals	<ul style="list-style-type: none"> ■ evaluate the necessity and effectiveness of schemes for recycling organic kitchen or garden waste. 	
	B1.7 Genetic Variation and it's control	<ul style="list-style-type: none"> ■ interpret information about cloning techniques and genetic engineering techniques ■ make informed judgements about the economic, social and ethical issues concerning cloning and genetic engineering, including genetically modified (GM) crops. 	
	B1.8 Evolution	<ul style="list-style-type: none"> ■ interpret evidence relating to evolutionary theory ■ suggest reasons why Darwin's theory of natural selection was only gradually accepted ■ identify the differences between Darwin's theory of evolution and conflicting theories, such as that of Lamarck ■ suggest reasons for the different theories. 	
TERM 2	C1.1 The fundamental ideas in Chemistry	<ul style="list-style-type: none"> ■ Atoms and elements are the building blocks of chemistry ■ Atoms contain protons, neutrons and electrons ■ When elements react they produce compounds. 	
	C1.2 Limestone and Building Materials	<ul style="list-style-type: none"> ■ consider and evaluate the environmental, social and economic effects of exploiting limestone and producing building materials from it ■ evaluate the developments in using limestone, cement and concrete as building materials, and their advantages and disadvantages over other materials. 	
	C1.3 Metals	<ul style="list-style-type: none"> ■ consider and evaluate the social, economic and environmental impacts of exploiting metal ores, of using metals and of recycling metals ■ evaluate the benefits, drawbacks and risks of using metals as structural materials. 	

	C1.4 Crude oil and Fuels	<ul style="list-style-type: none"> ■ evaluate the impact on the environment of burning hydrocarbon fuels ■ consider and evaluate the social, economic and environmental impacts of the uses of fuels ■ evaluate developments in the production and uses of better fuels, for example ethanol and hydrogen ■ evaluate the benefits, drawbacks and risks of using plant materials to produce fuels. 	
	C1.5 Other useful substances from crude oil	<ul style="list-style-type: none"> ■ evaluate the social and economic advantages and disadvantages of using products from crude oil as fuels or as raw materials for plastics and other chemicals ■ evaluate the social, economic and environmental impacts of the uses, disposal and recycling of polymers ■ evaluate the advantages and disadvantages of making ethanol from renewable and non-renewable sources. 	
	C1.6 Plant oils and their uses	<ul style="list-style-type: none"> ■ evaluate the effects of using vegetable oils in foods and the impacts on diet and health ■ evaluate the use, benefits, drawbacks and risks of emulsifiers in foods. 	
	C1.7 Changes in the Earth and it's Atmosphere	<ul style="list-style-type: none"> ■ recognise that the Earth's crust, the atmosphere and the oceans are the only source of minerals and other resources that humans need ■ explain why Wegener's theory of crustal movement (continental drift) was not generally accepted for many years ■ explain why scientists cannot accurately predict when earthquakes and volcanic eruptions will occur ■ explain and evaluate theories of the changes that have occurred and are occurring in the Earth's atmosphere ■ explain and evaluate the effects of human activities on the atmosphere ■ describe why we do not know how life was first formed. 	
TERM 3	P1.1 The transfer of energy by heating processes and the factors that affect the rate at which that energy is transferred	<ul style="list-style-type: none"> ■ compare ways in which energy is transferred in and out of objects by heating and ways in which the rates of these transfers can be varied ■ evaluate the design of everyday appliances that transfer energy by heating, including economic considerations 	

		<ul style="list-style-type: none"> ■ evaluate the effectiveness of different types of material used for insulation, including U-values and economic factors including payback time ■ evaluate different materials according to their specific heat capacities. 	
	P1.2 Energy and Efficiency	<ul style="list-style-type: none"> ■ compare the efficiency and cost effectiveness of methods used to reduce 'energy consumption' ■ describe the energy transfers and the main energy wastages that occur with a range of appliances ■ interpret and draw a Sankey diagram. 	
	P1.3 The usefulness of electrical appliances	<ul style="list-style-type: none"> ■ compare the advantages and disadvantages of using different electrical appliances for a particular application ■ consider the implications of instances when electricity is not available. 	
	P1.4 Methods we use to generate electricity	<ul style="list-style-type: none"> ■ evaluate different methods of generating electricity ■ evaluate ways of matching supply with demand, either by increasing supply or decreasing demand ■ compare the advantages and disadvantages of overhead power lines and underground cables. 	
	P1.5 The use of waves for communication and to provide evidence that the universe is expanding	<ul style="list-style-type: none"> ■ compare the use of different types of waves for communication ■ evaluate the possible risks involving the use of mobile phones ■ consider the limitations of the model that scientists use to explain how the universe began and why the universe continues to expand. 	