

Trilogy

Year 11

2020_2021

In year 11 you will learn: **Biology** - About the structure of DNA and how genes work. How and why cells divide and how characteristics are inherited from one generation to another; What causes variation and the effects on the individual, how variation and natural selection lead to evolution of new species and what causes extinctions. **Chemistry** - About structure, properties and reactions of organic molecules. How we can test and analyse substances to assess structure, identity and purity. How the Earth's atmosphere has changed over time, the effects and consequences of human activity on the atmosphere and how we can reduce our impact. **Physics** - Key concepts in electricity and the characteristics of some components; How magnetic fields can be used to produce electrical current, How motors and Transformers work.
Topic sections refer to Collins connect online textbook.

1	2	3	4	5	6	7	8	HALF TERM
Topic P2 Electricity								
Weekly Homework Tasks TASSOMAI REVISION			Mid Topic Assessment				End of Topic P2 Test	
Key Knowledge concept = The difference between Current and potential difference and how components affect them. Attitudes and Skills TENSILE: Numeracy, Solving Problems Numeracy = using formulae		Required Practical = Constructing circuits	Required Practical = Resistance					
Collins connect Topic and Page Please log into Collins Connect and complete the questions on the pages. Links are to resources that you may find helpful (BBC Bitesize notes, videos and tests / Oak Academy videos etc)								
2.1 Electric current Pg46 2.2 Series and Parallel circuits Pg48 Drawing circuits	2.3 Investigating circuits Pg50 Charge and current	2.4 Circuit components Pg52 2.7 Control circuits Pg58 Filament lamps	2.5 and 2.6 Required practicals Pgs 54-57 Resistance	2.8 Electricity in the home P60 2.9 Transmitting Electricity P62 Domestic electricity	2.10 Power and energy transfer P64 2.11 Calculating Power P66 Power part 1	2.12 Key Concepts p68 2.13 Maths skills p70 Calculations	2.14 checking progress pg 72 Revision	

series circuits	Potential difference	Diodes	Resistance of a wire required practical	National Grid	Power part 2			
Parallel circuits		LDR's	Mid topic revision					
Further circuits		Thermistors						
Topic B6 Genetics				Topic B7 Variation and Evolution				
Weekly Homework Tasks TASSOMAI REVISION	Mid Topic		End of Topic B6 Test			Mid Topic Assessment		
Key Knowledge concept = Genetic crosses and inheritance Attitudes and Skills TENSILE: Numeracy, Literacy Numeracy = Fraction, ratios, Probability and proportion				Key Knowledge concept = Attitudes and Skills TENSILE: Literacy, Enquiry Numeracy =				
	6.4 Meiosis Pg204 6.5 Asexual and sexual reproduction Pg206 Meiosis and fertilisation	6.6 Genetics Pg208 6.7 Genetic Crosses Pg210 6.8 Tracking gene disorders Pg212 Genes, DNA and chromosomes	6.9 Key concepts Pg214 6.10 Maths skills Pg216 Revision of topic	7.1 Variation Pg226 7.2 Theory of evolution Pg228 7.3 Origin of species by natural selection Pg230	7.4 Fossil evidence Pg232 7.5 how much have organisms changed? Pg234 7.6 Evidence for natural selection and evolution Pg 236	7.7 Antimicrobial resistance Pg238 7.8 Combatting resistance Pg240 7.9 Selective breeding Pg242 7.10 Producing new plant varieties Pg244	7.11 Genetic engineering Pg 246 7.12 Genetic modified crops Pg248 7.13 Is modification safe? Pg250	

	sexual Vs Asexual reproduction	Genetic Inheritance Inherited disorders part 1 Inherited disorders part 2		Variation and natural selection part 1 variation and natural selection part 2	evolution or extinction evidence for evolution part 1 Evidence for evolution part 2	Selective breeding	7.14 Ethically wrong or essential Pg252 Genetic Engineering Genetic Engineering part 2	
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9	10	11	12	13	14	15	XMAS	16
Topic C7 Hydrocarbons				Revision for Mock Exams		Mock Exam Paper 2		Mock Exam Paper 2
Weekly Homework Tasks TASSOMAI REVISION		Mid Topic Assessment	End of Topic C7 Test					
Key Knowledge concept = Intermolecular Forces Attitudes and Skills TENSILE: Numeracy, Literacy, Enquiry Numeracy = Visualise and represent 3D models								
7.1 Crude Oil, Hydrocarbons and Alkanes Pg210 7.2 Fractional Distillation Pg212	7.3 Properties of Hydrocarbons Pg214 7.4 Combustion Pg216	7.5 Cracking and Alkenes Pg 218 7.6 Key Concepts Pg220	7.7 Maths skills Pg 222 7.8 checking progress Pg 224 BBC Bitesize - Question Practice		BBC Bitesize - Practical Skills revision			

BBC Bitesize - Hydrocarbons	BBC Bitesize - Hydrocarbons and alkanes	BBC Bitesize - Question practice	Revision					
Crude Oil and Alkanes (HT)	Uses and reactions of Hydrocarbons	Cracking (HT)						
Fractional Distillation								
	C8 Chemical Analysis				Revision			
End of Topic B7 Test		Mid Topic Assessment		End of Topic C8 Test				
	Key Knowledge concept =Pure substances Attitudes and Skills TENSILE: Numeracy, Enquiry Numeracy = Using an appropriate number of significant figures		Required Practical = Chromatography					
7.15 Tree of life pg254 7.16 Extinction or survival Pg256 Classification Revision	8.1 Key concept Pure substances Pg230 8.2 Formulations Pg232 BBC Bitesize - Analysing and Identifying substances	8.3 Chromatography Pg234 8.4 Required practical Chromatography Pg236 Chromatography	8.5 Testing for gases Pg238 8.6 Maths skill Pg240 Testing gases	8.7 Checking progress Pg242 BBC Bitesize - Topic Question practice Revision				

	Pure and impure formulations	Interpreting chromatograms							
17	18	19	20	21	HALF TERM	22	23	24	
P7 Electromagnetism						P5 Forces			
		Mid Topic Assessment		End of Topic P7 Test		Weekly Homework Tasks		TASSOMAI REVISION	
Key Knowledge concept = The link between electricity and magnetism Attitudes and Skills TENSILE: Numeracy, Solving Problems Numeracy = Rearranging equations						Key Knowledge concept = Forces and acceleration Attitudes and Skills TENSILE: Numeracy, Independence Numeracy = Making estimates of calculations		Required Practical = Acceleration	
7.1 Magnetism and Magnetic Forces Pg 198 Magnetism	7.2 Compasses and Magnetic fields Pg 200 Magnetic fields	7.3 Magnetic effect of a solenoid Pg 202 7.4 Calculating the force on a conductor Pg204 Electromagnetism Equations intro (HT)	7.5 Electric Motors Pg206 Motor effect dc motors	7.6 Key concepts pg 208 7.7 Maths skills Pg 210 7.8 Checking progress Pg 212 Revision of topic	5.2 Speed 5.3 Acceleration Speed Acceleration	5.4 Velocity-Time graphs 5.5 Calculations of motion Distance Time graphs Velocity Time graphs	5.9 Forces and Acceleration 5.10 Required Practical Acceleration required practical part 1 Acceleration required practical part 2		

C9 Atmosphere				P5 Forces			
Weekly Homework Tasks TASSOMAI REVISION		Mid Topic Assessment		End of Topic C9 Test			
Key Knowledge concept = Greenhouse gases Attitudes and Skills TENSILE: Numeracy, Enquiry Numeracy = Ratio's, Fractions and Percentages							
9.1 Proportion of gases in atmosphere pg250 9.2 Earths early atmosphere Pg252 9.3 How O ₂ increased pg254 9.4 How CO ₂ decreased pg256 BBC Bitesize - Developing the atmosphere Earths atmosphere	9.5 Greenhouse gases Pg 258 9.6 Human activity Pg260 9.7 Global climate change Pg262 BBC Bitesize - Polluting the atmosphere Greenhouse effect climate change	9.8 Carbon footprint Pg264 9.9 Limitation of C footprint reduction Pg266	9.10 Atmospheric pollution from fuels Pg 268 9.11 Maths skills Pg270 Pollutants	9.12 Maths skills Pg272 BBC Bitesize - Topic Question Practice Maths skills Revision of topic part 1 Revision of topic part 2	5.1 Forces 5.6 Heavy or Massive Introduction Weight, Mass and Gravity	5.7 Forces and Motion 5.8 Resultant force Resultant force Resolving Forces (HT) Terminal Velocity (HT) Newtons Laws	5.11 Newtons 3 rd Law 5.12 Momentum Forces and Work done Momentum

