

Year 12 Applied Science	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Knowledge	Unit 1 - Principles and Applications of Science I (exam unit) Unit 2 - Practical Scientific Procedures and Techniques (cwk)	Unit 1 - Principles and Applications of Science I (exam unit) Unit 2 - Practical Scientific Procedures and Techniques (cwk)	Unit 3 - Science Investigation Skills (exam unit) Unit 2 - Practical Scientific Procedures and Techniques (cwk) Unit 21 - Medical Physics Applications (cwk)	Unit 3 - Science Investigation Skills (exam unit) Unit 2 - Practical Scientific Procedures and Techniques (cwk) Unit 21 - Medical Physics Applications (cwk)	Unit 21 - Medical Physics Applications (cwk)	Unit 21 - Medical Physics Applications (cwk)
Numeracy in BTEC Applied Science	- Unit manipulation - Decimal and standard form - Significant figures - Magnification calculations - Percentage change - Uncertainty - Graphs - Concentration, moles, mass calculations - Balancing equations - Waves calculations - Mean calculations - Rf value calculations	- Unit manipulation - Decimal and standard form - Significant figures - Magnification calculations - Percentage change - Uncertainty - Graphs - Concentration, moles, mass calculations - Balancing equations - Waves calculations - Mean calculations - Rf value calculations	- Unit manipulation - Decimal and standard form - Significant figures - Magnification calculations - Percentage change - Uncertainty - Graphs - Concentration, moles, mass calculations - Balancing equations - Waves calculations - Mean and standard deviation - Specific heat capacity - Resistance, voltage, current, power - Rf value calculations	- Unit manipulation - Decimal and standard form - Significant figures - Magnification calculations - Percentage change - Uncertainty - Graphs - Concentration, moles, mass calculations - Balancing equations - Waves calculations - Mean and standard deviation - Specific heat capacity - Resistance, voltage, current, power calculations - Rf value calculations	- Unit manipulation - Decimal and standard form - Significant figures - Magnification calculations - Percentage change - Uncertainty - Graphs - Mean calculations	- Unit manipulation - Decimal and standard form - Significant figures - Magnification calculations - Percentage change - Uncertainty - Graphs - Mean calculations
Practical Skills	- Identifying and controlling variables - Safe experimental design - Graph plotting and interpretation - Drawing conclusions - Microscope use - Biological drawing - Colorimeter use - Carrying out a titration using a pipette and burette - pH meter use - TLC plate use - Use of different solvents for chromatography	- Identifying and controlling variables - Safe experimental design - Graph plotting and interpretation - Drawing conclusions - Colorimeter use - Carrying out a titration using a pipette and burette - pH meter use - TLC plate use - Use of different solvents for chromatography	- Identifying and controlling variables - Safe experimental design - Graph plotting and interpretation - Drawing conclusions - Colorimeter use - Carrying out a titration using a pipette and burette - pH meter use - TLC plate use - Use of different solvents for chromatography	- Identifying and controlling variables - Safe experimental design - Graph plotting and interpretation - Drawing conclusions - Colorimeter use - Carrying out a titration using a pipette and burette - pH meter use - TLC plate use - Use of different solvents for chromatography - Use of circuits and different components in circuits (voltmeter, ammeter)	- Identifying and controlling variables - Safe experimental design - Graph plotting and interpretation - Drawing conclusions	- Identifying and controlling variables - Safe experimental design - Graph plotting and interpretation - Drawing conclusions

Required Practicals	Unit 2: Titration pH curves Colorimetry Calorimetry Paper chromatography Thin-layer chromatography		Unit 3: Electrical circuits Diffusion Using quadrats	-	-
Independent Learning Link	BBC Bitesize - Biology GCSE BBC Bitesize - Chemistry GCSE BBC Bitesize - Physics GCSE	https://www.rsc.org/ https://www.chemguide.co.uk/ https://www.physicsclassroom.com/	https://www.saps.org.uk/ https://spark.iop.org/practical-physics	https://www.nhs.uk/ https://www.gov.uk/government/organisations/medicines-and-healthcare-products-regulatory-agency https://www.hse.gov.uk/ https://www.npl.co.uk/ https://www.physicsclassroom.com/	

Year 13 Applied Science	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Knowledge	Unit 4 - Laboratory Techniques and their Application (cwk) Unit 5 - Principles and Applications of Science II (exam unit) Unit 6 - Investigative Project (cwk)	Unit 5 - Principles and Applications of Science II (exam unit)	Unit 4 - Laboratory Techniques and their Application (cwk) Unit 5 - Principles and Applications of Science II (exam unit) Unit 6 - Investigative Project (cwk)	Unit 4 - Laboratory Techniques and their Application (cwk) Unit 5 - Principles and Applications of Science II (exam unit) Unit 6 - Investigative Project (cwk)	Unit 8 - Physiology of Human Body Systems (cwk) OR Unit 23 - Forensic Evidence, Collection and Analysis (cwk)	Unit 8 - Physiology of Human Body Systems (cwk) OR Unit 23 - Forensic Evidence, Collection and Analysis (cwk) Revision for retakes for unit 1, 3 and 6
Numeracy in BTEC Applied Science	- Unit manipulation - Decimal and standard form - Significant figures - Magnification calculations - Uncertainty - Graphs - Concentration, moles, mass calculations - Balancing equations - Mean calculations - Balancing equations - Measurement of enthalpy changes - Calculating gas uptake - Efficiency calculations - Theoretical coefficient performance (CoP) - Hooke's Law - Rate of fluid flow and pressure	- Unit manipulation - Decimal and standard form - Significant figures - Magnification calculations - Uncertainty - Graphs - Concentration, moles, mass calculations - Mean calculations - Balancing equations - Measurement of enthalpy changes - Calculating gas uptake - Efficiency calculations - Theoretical coefficient performance (CoP) - Hooke's Law - Rate of fluid flow and pressure	- Unit manipulation - Decimal and standard form - Significant figures - Magnification calculations - Uncertainty - Graphs - Concentration, moles, mass calculations - Mean calculations - Balancing equations - Measurement of enthalpy changes - Calculating gas uptake - Efficiency calculations - Theoretical coefficient performance (CoP) - Hooke's Law - Rate of fluid flow and pressure	- Unit manipulation - Decimal and standard form - Significant figures - Magnification calculations - Uncertainty - Graphs - Concentration, moles, mass calculations - Mean calculations - Balancing equations - Measurement of enthalpy changes - Calculating gas uptake - Efficiency calculations - Theoretical coefficient performance (CoP) - Hooke's Law - Rate of fluid flow and pressure	- Unit manipulation - Decimal and standard form - Significant figures - Magnification calculations - Uncertainty - Graphs - Mean calculations - Rf value calculations	- Unit manipulation - Decimal and standard form - Significant figures - Magnification calculations - Uncertainty - Graphs - Mean calculations - Rf value calculations
Practical Skills	- Identifying and controlling variables - Safe experimental design - Graph plotting and interpretation - Drawing conclusions - Distillation - Solvent extraction - Preparing esters - Determination of boiling point	- Identifying and controlling variables - Safe experimental design - Graph plotting and interpretation - Drawing conclusions - Distillation - Solvent extraction - Preparing esters - Determination of boiling point	- Identifying and controlling variables - Safe experimental design - Graph plotting and interpretation - Drawing conclusions - Distillation - Solvent extraction - Preparing esters - Determination of boiling point	- Identifying and controlling variables - Safe experimental design - Graph plotting and interpretation - Drawing conclusions - Distillation - Solvent extraction - Preparing esters - Determination of boiling point	- Identifying and controlling variables - Safe experimental design - Graph plotting and interpretation - Drawing conclusions - Testing for vitamin C	- Identifying and controlling variables - Safe experimental design - Graph plotting and interpretation - Drawing conclusions

Required Practicals	Unit 4: - Solvent extraction - Preparing an impure ester - Making ethyl ethanoate - Preparation of 3-methylbut-1-yl-ethanoate - Determining boiling point - Recrystallisation - Making aspirin Unit 6: - Planning and carrying out an investigation planned by the students			Unit 8: Testing for vitamin C	Unit 8: Testing for vitamin C
Independent Learning Link	https://www.hse.gov.uk/ https://www.npl.co.uk/ https://www.physicsclassroom.com/	BBC Bitesize - Biology GCSE BBC Bitesize - Chemistry GCSE BBC Bitesize - Physics GCSE	https://www.cleapss.org.uk/ Health Careers - NHS https://www.hse.gov.uk/coshh/	innerbody https://www.livescience.com/37009-human-body.html https://www.irri.org/golden-rice https://www.nhs.uk/	