

All Tuition Sessions start at 4pm and are REPEATED at 5pm, 6pm, 7pm and 8pm

Date	Subject	Tuition Session	What's Covered?
Mon 8th Sep	Bio	Enzymes	<ul style="list-style-type: none"> • Lock & Key Theory: lipase, amylase, protease • Effect of temp, substrate conc & pH • Enzymes required practical
Tue 9th Sep	Chem	Periodic Table	<ul style="list-style-type: none"> • Modern periodic table • History of the atom • Mendeleev & isotopes
Wed 10th Sep	Phys	Energy Stores & Transfers	<ul style="list-style-type: none"> • Renewable & Non-Renewable Resources • Kinetic & Gravitational Potential Energy • Elastic Potential Energy
Thu 11th Sep	Bio	Monday Bio Catch Up Replay	<ul style="list-style-type: none"> • Lock & Key Theory: lipase, amylase, protease • Effect of temp, substrate conc & pH • Enzymes required practical
Mon 15th Sep	Bio	Microscopes & Magnification	<ul style="list-style-type: none"> • Using microscopes (required practical) • Electron & light microscopes • Magnification calculations
Tue 16th Sep	Chem	Separation Techniques	<ul style="list-style-type: none"> • Filtration & Crystallisation • Distillation & Chromatography • Fractional Distillation
Wed 17th Sep	Phys	Energy	<ul style="list-style-type: none"> • Specific heat capacity • Work done • Power
Thu 18th Sep	Chem	Tuesday Chem Catch Up Replay	<ul style="list-style-type: none"> • Filtration & Crystallisation • Distillation & Chromatography • Fractional Distillation
Mon 22nd Sep	Bio	Diffusion, Osmosis, Active Transport	<ul style="list-style-type: none"> • Diffusion • Osmosis • Active transport • Osmosis in potatoes (required practical)
Tue 23rd Sep	Chem	Bonding	<ul style="list-style-type: none"> • Ionic Bonding: formation & properties • Simple molecules • Metals & alloys • Allotropes of carbon
Wed 24th Sep	Phys	Electricity 1	<ul style="list-style-type: none"> • Current • Potential difference • Resistance
Thu 25th Sep	Phys	Weds Physics Catch Up Replay	<ul style="list-style-type: none"> • Current • Potential difference • Resistance
Mon 29th Sep	Bio	Mitosis & Stem Cells	<ul style="list-style-type: none"> • Cell cycle & mitosis • Stem cells • Meristem in plants
Tue 30th Sep	Chem	Group 1 & 7	<ul style="list-style-type: none"> • Alkali Metals reacting with water • Explaining reactivity of Alkali Metals • Explaining reactivity of halogens • Displacement reactions of halogens • (H) halogens: redox
Wed 1st Oct	Phys	Electricity 2	<ul style="list-style-type: none"> • Resistance vs Current: LED, resistor & filament lamp • Alternating Vs Direct current • National Grid • Step-up + step-down transformers
Thu 2nd Oct	Bio	Monday Biology Catch Up Replay	<ul style="list-style-type: none"> • Cell cycle & mitosis • Stem cells • Meristem in plants

Mon 6th Oct	Bio	Enzymes	<ul style="list-style-type: none"> • Lock & Key Theory: lipase, amylase, protease • Effect of temp, substrate conc & pH • Enzymes required practical
Tue 7th Oct	Chem	Key Calculations	<ul style="list-style-type: none"> • Calculating concentration • Percentage by mass • (H) Calculate mass of reactants • (H) Limiting reactant • (H) Determine balanced equation
Wed 8th Oct	Phys	Particle Model	<ul style="list-style-type: none"> • States of matter changes • Specific latent heat • Density + core practical
Thu 9th Oct	Chem	Tuesday Chem Catch Up Replay	<ul style="list-style-type: none"> • Calculating concentration • Percentage by mass • (H) Calculate mass of reactants • (H) Limiting reactant • (H) Determine balanced equation
Mon 13th Oct	Bio	Digestive System	<ul style="list-style-type: none"> • Digestive system • Stomach • Small intestine • Bile
Tue 14th Oct	Chem	Acids + Alkalis	<ul style="list-style-type: none"> • Neutralisation reactions • Indicators • Limiting and excess reactant • (H) Strong and weak acids
Wed 15th Oct	Phys	Radiation & Decay	<ul style="list-style-type: none"> • Alpha, beta & gamma decay • Radioactive decay equations • Half-lives
Thu 16th Oct	Phys	Weds Physics Catch Up Replay	<ul style="list-style-type: none"> • Alpha, beta & gamma decay • Radioactive decay equations • Half-lives
Mon 20th Oct	Bio	Paper 1 Exam Walkthrough (Part 1)	<ul style="list-style-type: none"> • We will go through key exam questions • Using real exam questions • Instant feedback on the exam questions
Tue 21st Oct	Chem	Paper 1 Exam Walkthrough (Part 1)	<ul style="list-style-type: none"> • We will go through key exam questions • Using real exam questions • Instant feedback on the exam questions
Wed 22nd Oct	Phys	Paper 1 Exam Walkthrough (Part 1)	<ul style="list-style-type: none"> • We will go through key exam questions • Using real exam questions • Instant feedback on the exam questions
Thu 23rd Oct	Bio	Monday Biology Catch Up Replay	<ul style="list-style-type: none"> • We will go through key exam questions • Using real exam questions • Instant feedback on the exam questions
Mon 27th Oct	Bio	Paper 1 Exam Walkthrough (Part 2)	<ul style="list-style-type: none"> • We will go through key exam questions • Using real exam questions • Instant feedback on the exam questions
Tue 28th Oct	Chem	Paper 1 Exam Walkthrough (Part 2)	<ul style="list-style-type: none"> • We will go through key exam questions • Using real exam questions • Instant feedback on the exam questions
Wed 29th Oct	Phys	Paper 1 Exam Walkthrough (Part 2)	<ul style="list-style-type: none"> • We will go through key exam questions • Using real exam questions • Instant feedback on the exam questions
Thu 30th Oct	Chem	Tuesday Chem Catch Up Replay	<ul style="list-style-type: none"> • We will go through key exam questions • Using real exam questions • Instant feedback on the exam questions
Mon 3rd Nov	Bio	Plants	<ul style="list-style-type: none"> • Structure of Leaf • Stomata • Xylem and Phloem

Tue 4th Nov	Chem	Electrolysis	<ul style="list-style-type: none"> • How to do electrolysis and key diagram • Electrolysis of molten compounds • Electrolysis of aluminium oxide • Electrolysis of aqueous compounds • (H) Half-equations
Wed 5th Nov	Phys	Forces & Motion	<ul style="list-style-type: none"> • Resultant Forces • $F=ma$ • Acceleration • Velocity/Time graphs • Momentum
Thu 6th Nov	Bio (Sep)	Bacteria & Aseptic Technique	<ul style="list-style-type: none"> • Aseptic technique • Antibiotic disks practical • Binary fission
Mon 10th Nov	Bio	Heart & Blood Vessels	<ul style="list-style-type: none"> • Structure of the heart • Comparing the left and right side of the heart • Comparing arteries and veins • Adaptations of capillaries
Tue 11th Nov	Chem	Reactivity & Equilibrium	<ul style="list-style-type: none"> • Reactivity series • Displacement • Dynamic equilibrium • (H) Factors affecting equilibrium • (H) Redox reactions
Wed 12th Nov	Phys	Springs & Hooke's Law	<ul style="list-style-type: none"> • Elastic Potential Energy • Hooke's Law: Limit of Proportionality • Hooke's Law: $F = k e$ • Required practical
Thu 13th Nov	Chem (Sep)	Key Calculations	<ul style="list-style-type: none"> • Percentage yield • Molar volume of gases • Titration calculations
Mon 17th Nov	Bio	Photosynthesis	<ul style="list-style-type: none"> • Limiting factors of photosynthesis • Photosynthesis required practical • How plants use glucose
Tue 18th Nov	Chem	Energy Changes	<ul style="list-style-type: none"> • Exothermic and endothermic reactions • Why a reaction is exothermic or endothermic • Reaction profiles • (H) Bond energy calculations
Wed 19th Nov	Phys	Forces	<ul style="list-style-type: none"> • $w = m \times g$ • Stopping distances • Factors affecting stopping distances • Vector diagrams
Thu 20th Nov	Phys (Sep)	Electrical Charges & Fields	<ul style="list-style-type: none"> • How insulators become charged • Electric fields of charged objects
Mon 24th Nov	Bio	Paper 1 Exam Walkthrough (Part 1)	<ul style="list-style-type: none"> • We will go through key exam questions • Using real exam questions • Instant feedback on the exam questions
Tue 25th Nov	Chem	Paper 1 Exam Walkthrough (Part 1)	<ul style="list-style-type: none"> • We will go through key exam questions • Using real exam questions • Instant feedback on the exam questions
Wed 26th Nov	Phys	Paper 1 Exam Walkthrough (Part 1)	<ul style="list-style-type: none"> • We will go through key exam questions • Using real exam questions • Instant feedback on the exam questions
Thu 27th Nov	Bio (Sep)	Paper 1 Exam Walkthrough (Part 1)	<ul style="list-style-type: none"> • We will go through key exam questions • Using real exam questions • Instant feedback on the exam questions
Mon 1st Dec	Bio	Paper 1 Exam Walkthrough (Part 2)	<ul style="list-style-type: none"> • We will go through key exam questions • Using real exam questions • Instant feedback on the exam questions

Tue 2nd Dec	Chem	Paper 1 Exam Walkthrough (Part 2)	<ul style="list-style-type: none"> • We will go through key exam questions • Using real exam questions • Instant feedback on the exam questions
Wed 3rd Dec	Phys	Paper 1 Exam Walkthrough (Part 2)	<ul style="list-style-type: none"> • We will go through key exam questions • Using real exam questions • Instant feedback on the exam questions
Thu 4th Dec	Chem (Sep)	Paper 1 Exam Walkthrough (Part 2)	<ul style="list-style-type: none"> • We will go through key exam questions • Using real exam questions • Instant feedback on the exam questions
Mon 8th Dec	Bio	Respiration	<ul style="list-style-type: none"> • Aerobic and anaerobic respiration • Effect of exercise on rates of respiration • Oxygen debt • Why exercise affects heart rate and breathing rate • Fermentation
Tue 9th Dec	Chem	Rates of Reaction	<ul style="list-style-type: none"> • Concentration • Temperature • Surface area • Catalyst • Rates of reaction practical - volume of a gas • Rates of reaction practical - colour change
Wed 10th Dec	Phys	Waves	<ul style="list-style-type: none"> • Transverse & longitudinal waves • Waves properties • Calculating frequency & wavelength, and period • Ripple tanks
Thu 11th Dec	Bio (Sep)	Plant Disease	<ul style="list-style-type: none"> • Plant Diseases • Detecting Plant Diseases • Plant Defences
Mon 15th Dec	Bio	Immunity & Drug Testing	<ul style="list-style-type: none"> • Immunity • Vaccines • Drug testing • Clinical trials & Placebo Effect
Tue 16th Dec	Chem	Acids + Alkalis	<ul style="list-style-type: none"> • Neutralisation reactions • Indicators • Limiting and excess reactant • (H) Strong and weak acids
Wed 17th Dec	Phys	Electricity	<ul style="list-style-type: none"> • Resistance vs Current: LED, resistor & filament lamp • Alternating Vs Direct current • National Grid • Step-up + step-down transformers
Thu 18th Dec	Bio	Monday Biology Catch Up	<ul style="list-style-type: none"> • Immunity • Vaccines • Drug testing • Clinical trials & Placebo Effect
Mon 22nd Dec	Holiday Bio	Respiration (Replay)	<ul style="list-style-type: none"> • Aerobic and anaerobic respiration • Effect of exercise on rates of respiration • Oxygen debt • Why exercise affects heart rate and breathing rate • Fermentation
Tue 23rd Dec	Holiday Chem	Rates of Reaction (Replay)	<ul style="list-style-type: none"> • Concentration • Temperature • Surface area • Catalyst • Rates of reaction practical - volume of a gas • Rates of reaction practical - colour change
Wed 24th Dec	Christmas Eve	Christmas Eve - Have a rest :)	No tuition today. I think you or your child needs a rest
Thu 25th Dec	Christmas Day	Merry Christmas - Have a Rest :)	No tuition today. I think you or your child needs a rest

Mon 29th Dec	Holiday Bio	Heart & Blood Vessels (Replay)	<ul style="list-style-type: none"> • Structure of the heart • Comparing the left and right side of the heart • Comparing arteries and veins • Adaptations of capillaries
Tue 30th Dec	Holiday Chem	Electrolysis (Replay)	<ul style="list-style-type: none"> • How to do electrolysis and key diagram • Electrolysis of molten compounds • Electrolysis of aluminium oxide • Electrolysis of aqueous compounds • (H) Half-equations
Wed 31st Dec	Holiday Phys	Forces & Motion (Replay)	<ul style="list-style-type: none"> • Resultant Forces • $F=ma$ • Acceleration • Velocity/Time graphs • Momentum