

The KS3 Mastery Sequence 2026–2027

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
7	The Scientific Method	Movement & Organisation	Matter & Mixtures	Forces & Motion	Genes & Reproduction	Reactions: Metals and non-metals / Acids and Alkalis
8	Respiration & Photosynthesis	Energy	Periodic table & Reactions	Electricity	Earth & The Universe	Waves

Science Fair Project
(2 weeks)
*Completed at any time in
term 2 to suit school*

The KS3 Mastery Sequence: Year 7

Unit 1 The Scientific Method	Unit 2 Movement & Organisation	Unit 3 Matter & Mixtures	Unit 4 Forces & Motion	Unit 5 Genes & Reproduction	Unit 6 Reactions: Metals & Non-metals / Acids & Alkalis
15 lessons 5 weeks	16 lessons 5 weeks 1 lesson	18 lessons 6 weeks	16 lessons 6 weeks	15 lessons 6 weeks	11 lessons 5 weeks
1. What is science? 2. <i>Observation, Hypothesis and Theory</i> 3. <i>Variables and Practical work</i> 4. Method, hazards and risks 5. <i>Practical- which tissue is strongest when wet?</i> 6. Recording results 7. <i>Practical- how does the volume of water affect how much energy is needed to heat</i> 8. Quality of Data 9. <i>Practical- do warmer layers keep you warm longer</i> 10. Communicating results- categoric and continuous 11. Communicating results- bar and line graphs 12. <i>Practical- how stretchy is a rubber band?</i> 13. Drawing conclusions 14. Test 15. Feedback	1. Animal & plant cells 2. Specialised cells 3. Development of the microscope 4. Biological drawing 5. Microscopy 6. <i>Onion cell Microscopy</i> 7. Unicellular organisms 8. Biological organisation 9. <i>DP lesson (opt)</i> 10. Skeletal system 11. Muscles & joints 12. <i>Antagonistic pairs dissection</i> 13. Orthopaedics 14. <i>DP lesson (opt)</i> 15. Test 16. Feedback	1. States of matter 2. Solids 3. Fluids 4. <i>Viscosity</i> 5. Diffusion 6. <i>Rate of diffusion</i> 7. Solubility 8. <i>Particle model DP</i> 9. Separating mixtures 10. <i>Filtration</i> 11. <i>Evaporation</i> 12. Distillation 13. Chromatography 14. <i>Chromatography</i> 15. <i>Separating mixtures challenge (opt)</i> 16. <i>Chromatography crime scene (opt)</i> 17. Test 18. Feedback	1. Speed 2. <i>Motion</i> 3. Distance-time 4. Acceleration & relative speed 5. Forces 6. Force Diagrams 7. <i>Friction & Air resistance</i> 8. <i>Forces & Motion DP (opt)</i> 9. Gravity 10. Mass & Weight 11. <i>Hooke's Law</i> 12. <i>Pressure</i> 13. Pressure in fluids 14. <i>Forces & motion DP (opt)</i> 15. Test 16. Feedback	1. Sexual and Asexual Reproduction 2. Puberty & Male repro system 3. Female repro system 4. <i>Plant reproduction</i> 5. Seed dispersal 6. <i>Reproduction DP (opt)</i> 7. Variation 8. Genetic Material 9. Modelling inheritance 10. Evolution by natural selection 11. Biodiversity 12. Extinction 13. <i>Genetics DP (opt)</i> 14. Test 15. Feedback	1. Metals & Non-metals 2. <i>Metals with acids</i> 3. Metals with acids 4. Displacement 5. <i>Displacement</i> 6. Oxidation 7. Acids 8. Alkalis 9. <i>Neutralisation</i> 10. Test 11. Feedback

The KS3 Mastery Sequence: Year 8

Unit 1 Respiration & Photosynthesis	Unit 2 Energy	Unit 3 Periodic Table & Reactions	Unit 4 Electricity & Magnetism	Unit 5 Earth & The Universe	Unit 6 Waves
12 lessons 3 weeks 1 lesson	15 lessons 5 weeks	17 lessons 6 weeks	14 lessons 5 weeks	17 lessons 6 weeks	16 lessons 6 weeks
1. Aerobic respiration 2. Gas Exchange 3. Ventilation 4. Glucose and the digestive system 5. Enzymes and absorption 6. Enzyme action 7. Photosynthesis 8. Transport in plants 9. Limiting factors 10. Limiting factors write-up 11. Test 12. Feedback	1. Energy stores 2. Energy transfers 3. Conservation of energy 4. Work done (practical) 5. Power 6. Energy in the home 7. Efficiency 8. Conduction 9. Convection 10. Radiation (practical) 11. Heating and cooling (practical) 12. Changing states (practical) 13. Optional DP lessons from booklet 14. Test 15. Feedback	1. Elements 2. Periodic Table, Groups & Periods 3. History of the Periodic Table 4. Metals and non-metals 5. Groups 1 & 2 6. Group 7 7. Group 0 8. Periodic Table DP (optional) 9. Compounds 10. Elements + Oxygen 11. Balancing Equations 12. Metals + Metal Oxides 13. Heating Carbonates 14. Precipitation 15. Endothermic and exothermic reactions 16. Test 17. Feedback	1. Charge 2. Drawing Circuits 3. Making circuits 4. Current 5. Potential difference 6. Measuring current in series and parallel circuits 7. Measuring potential difference in series and parallel circuits 8. Ohm's Law & Resistance 9. Resistance investigation 10. Resistance investigation cont. 11. Magnetism 12. Electromagnet investigation 13. Test 14. Feedback	1. Earth's Structure 2. Igneous Rocks 3. Sedimentary and Metamorphic rocks 4. Weathering, Erosion, Transportation & Deposition 5. The Rock Cycle 6. Extraction of Metal 7. Atmosphere & Greenhouse Effect 8. Carbon Cycle 9. Climate Change 10. Our place in the universe 11. Our Solar System 12. Days, Seasons & Years 13. The Moon & Eclipses 14. Crater Investigation (opt) 15. Space exploration (opt) 16. Test 17. Feedback	1. What are Waves? 2. Properties of wave 3. Wave speed 4. Wave speed (part 2) 5. What is sound? 6. Describing sound 7. Hearing sound 8. Reflection & Absorption of Sound (half lesson) and DP – Waves & Sound (half lesson) 9. Light 10. Colour and the Electromagnetic Spectrum 11. Reflection 12. Reflection 13. Refraction 14. Lenses and vision (optional) 15. Test 16. Feedback

Science Fair Project (6 lessons)