

MATTER Objects are made of particles with mass. Understanding particles helps us to design our world.	FORCES AND MOTION Forces make things change. Understanding forces helps us predict and control physical change.	SOUND, LIGHT AND WAVES Waves radiate information. Understanding waves helps us to communicate.	ELECTRICITY AND MAGNETISM The everyday world is largely a consequence of electrical charge. Understanding electricity and magnetism helps us develop technology to improve lives.	EARTH IN SPACE Understanding the uniqueness of the Earth and vastness of space gives us perspective and awe.
7P1: ENERGY = 11 • Energy Stores and energy pathways and conservation of energy • Fuels • Foods • Temperature and thermal energy • Heating and cooling • Insulation • Thermal store of energy • Energy Resources Renewable and non renewable • Energy and Power		7P2: Waves = 11 • Longitudinal and transverse waves • Production and transmission and features of sound waves • Structure of the ear • Characteristics of light • Reflection and refraction of light • Structure of the Eye • Colour and filters		7P3: SPACE = 11 • Planets and the solar system • Gravity—force varies with mass and distance • Structure of the Universe • Sun and Stars • The Big Bang • Days and seasons and eclipses and phases of the moon
		YEAR 7		

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7P1: ENERGY = 11 - Energy Stores and energy pathways and conservation of energy - Fuels - Foods - Temperature and thermal energy - Heating and cooling - Insulation - Thermal store of energy - Energy Resources Renewable and non renewable - Energy and Power	8P1: FORCES = 10 - What forces do - Describing forces - Balanced and unbalanced forces - Turning effects - Centre of mass - Stability / Toppling - Contact Forces - Non Contact forces - Mass and weight - Elasticity 8P3: MOTION AND PRESSURE = 10 - Describing speed - Relative motion - Motion graphs - Changing motion - Drag - Turning effects - Floating, sinking and density - Pressure in fluids - Convection	7P2: Waves = 11 - Longitudinal and transverse waves - Production and transmission and features of sound waves - Structure of the ear - Characteristics of light - Reflection and refraction of light - Structure of the Eye - Colour and filters	8P2: ELECTRICITY AND MAGNETISM = 12 - Static Charge - Making circuits - Electric current - Potential Difference - Static electricity - Resistance - Series and Parallel circuits - Magnetic fields - Electromagnets and uses	7P3: SPACE = 11 - Planets and the solar system - Gravity—force varies with mass and distance - Structure of the Universe - Sun and Stars - The Big Bang - Days and seasons and eclipses and phases of the moon
		YEAR 8		

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7P1: ENERGY = 11 - Energy Stores and energy pathways and conservation of energy - Fuels - Foods - Temperature and thermal energy - Heating and cooling - Insulation - Thermal store of energy - Energy Resources Renewable and non renewable - Energy and Power	8P1: FORCES = 13 - What forces do - Describing forces - Balanced and unbalanced forces - Friction - Energy stores and transfers - Work Done - Energy review	7P2: Waves = 11 - Longitudinal and transverse waves - Production and transmission and features of sound waves - Structure of the ear - Characteristics of light - Reflection and refraction of light - Structure of the Eye - Colour and filters	8P2: ELECTRICITY AND MAGNETISM = 12 - Making circuits - Electric current - Voltage - Static electricity - Resistance - Parallel circuits - Magnetic fields - Electromagnets	7P3: SPACE = 11 - Planets and the solar system - Gravity—force varies with mass and distance - Structure of the Universe - Sun and Stars - The Big Bang - Days and seasons and eclipses and phases of the moon
9P1: CONSERVATION AND DISSIPATION = 12 - Changes in energy stores - Conservation of energy - Energy and work - Gravitational potential energy stores - Kinetic energy and elastic energy stores - Energy dissipation - Energy and efficiency - Electrical appliances - Energy and power	8P3: MOTION AND PRESSURE = 11 - Describing speed - Motion graphs - Changing motion - Drag - Mass and weight - Hidden forces - Turning effects - Floating, sinking and density - Pressure in fluids - Convection			
9P2: ENERGY TRANSFER BY HEATING = 7/9 - Energy transfer by conduction <i>Infrared radiation</i> <i>More about infrared radiation</i> - Specific heat capacity - Heating and insulating buildings Link to P13				
9P3: ENERGY RESOURCES = 8 - Energy demands - Energy from wind and water - Power from the Sun and the Earth - Energy and the environment - Big energy issues Link to photosynthesis and combustion. Link to B8.2 and C				
9P6: MOLECULES AND MATTER = 11/12 - Density - States of matter - Changes of state - Internal energy - Specific latent heat - Gas pressure and temperature <i>Gas pressure and volume</i>				
		YEAR 9		

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10P3 (P7): RADIOACTIVITY = 9/12 (need to be secure in 9C1 and 9C2) - Atoms and radiation - The discovery of the nucleus - More about alpha, beta and gamma radiation - Activity and half-life <i>Nuclear radiation in medicine</i> <i>Nuclear fission</i> <i>Nuclear fusion</i>	10P4 (P8): FORCES IN BALANCE = 9/11 - Vectors and scalars - Forces between objects - Resultant forces <i>Moments at work</i> <i>More about levers and gears</i> - Centre of mass <i>Moments and equilibrium</i> - The parallelogram forces - Resolution of forces 10P5 (9): MOTION = 7 - Speed and distance-time graphs - Velocity and acceleration - More about velocity-time graphs - Analysing motion graphs 10P6 (10): FORCE AND MOTION = 12/14 - Force and acceleration - Weight and terminal velocity - Forces braking - Momentum <i>Using conservation of momentum</i> <i>Impact forces</i> <i>Safety first</i> - Forces and elasticity 10P 7 (P15 SEP:)SPACE = 7 <i>Formation of the solar system</i> <i>The life history of a star</i> <i>Planets, satellites, and orbits</i> <i>The expanding universe</i> <i>The beginning and future of the Universe</i>		10P1 (P4): ELECTRIC CIRCUITS = 13 / 14 <i>Electric charges and fields</i> - Current and charge - Potential difference and resistance - Component characteristics - Series circuits - Parallel circuits 10P2 (P5): ELECTRICITY IN THE HOME =9 - Alternating current - Cables and plugs - Electrical power and potential difference - Electrical currents and energy transfer - Appliances and efficiency	
YEAR 10				

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			YEAR 11	

HOW SCIENCE WORKS

SCIENTIFIC ATTITUDES

1. Show concern for accuracy, precision, repeatability and reproducibility
2. Understand that scientific ideas develop over time with new evidence and ideas
3. Evaluate risks

1. Understand how scientific methods and theories develop over time
2. Use of a range of models—representational, mathematical, spatial, descriptive
3. Appreciate the power and limitations of science and ethical issues
4. Explain everyday and technological applications of science
5. Risk assess practical science tasks
6. Recognise importance of peer review

EXPREIMENTAL SKILLS AND INVESTIGATION

1. Make predictions
2. Plan investigations to answer questions considering safety
3. Take reliable results using a range of equipment, considering reliability of method and suggesting possible improvement
4. Record data gathered using more than one technique

1. Use theories and explanations to develop hypotheses
2. Plan experiments
3. Select appropriate procedures, equipment and use accurately
4. Record accurately
5. Evaluate methods and suggest improvements

MEASUREMENT

1. Understand the use of SI units and IUPAC chemical nomenclature
2. Use and derive simple equations to carry out equations
3. Data analysis

ANALYSIS AND EVALUATION

1. Present data choosing appropriate method
2. Draw conclusions based on data giving reasoned explanations in relation to prediction
3. Identify further questions arising from their results
4. Evaluate data taking into account potential sources of error
5. Apply mathematical concepts and calculate results

1. Translate data from graphical to numerical and vice versa
2. Represent distributions of results and estimate uncertainty
3. Interpret data and make reasoned explanations
4. Objective evaluation of accuracy, precision, repeatability, sources of random and systemic error
5. Communicate scientific rationale for methods and reasoned findings