

Science – Physics

Road Map

Year 1

Seasonal Changes

Year 2

Forces and Magnets:
 * Pushing/pulling
 * Changing shape
 * Faster or slower

Year 3

Forces and magnets:
 * Attract and repel
 * Friction

Earth and Space:
 * Solar System
 * Earth, Sun and Moon

Forces:
 * Gravity
 * Resisting movement

Electricity:
 * Circuits
 * Switches
 * Conductors and insulators

Year 4

Light:
 * Shadows
 * Size of shadow changes with size of object and distance from light source

Year 6

Light:
 * Travels in straight lines
 * Eye

Sound:
 * Volume and pitch can change
 * Caused by vibration

Year 7

Electricity:
 * Symbols for circuits and components
 * Resistance

Sound:
 * Describe the different types of waves

Motion and Pressure:
 * Introduction to speed calculations and distance-time graphs

Forces:
 * Further development of forces, including calculations

Light:
 * Reflection and refraction
 * The eye

Year 9

Energy:
 * Energy transfers
 * Energy resources

Electricity and Magnetism:
 * Further knowledge of circuits including current and potential difference
 * Magnets and electromagnets

Year 8

Space:
 * The Solar System at a greater depth

Energy:
 Further development of energy stores and transfers

Atomic Structure:
 * The atom and atomic structure (chemistry link)
 * Radiation

Electricity:
 * Circuits at a greater depth including resistance.
 * Energy transfers

Year 10

Particle Model of Matter:
 * Matter at a greater depth
 * Specific heat capacity and latent heat

Earth and Space
Sound and Light
Force, Movement and Energy
Electricity
Matter

Waves:
 * Waves at a greater depth, including wavelength, frequency and period
 * Electromagnetic spectrum

Year 11

Forces:
 * Extended knowledge of forces, including calculating spring constant

Magnetism and Electromagnetism:
 * Extended knowledge of permanent and induced magnets

Space (Separate Science Only):
 * Life cycle of a star
 * Evidence for an expanding universe

