

Science – Physics

Road Map

Year 1

Seasonal Changes

Year 2

Materials:
* Pushing/pulling
* Changing shape
* Faster or slower

Year 3

Forces and magnets:
* Attract and repel

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

Forces:
* Types of forces
* Mechanisms

Electricity:
* Circuits
* Switches
* Conductors and insulators

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

Year 6

Year 5

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

Year 4

Light:
* How light travels
* Reflection
* How we see light

Sound:
* Describe the different types of waves

Electricity:
* Symbols for circuits and components
* Resistance

Year 7

Forces:
* Further development of forces, including calculations

Light:
* Reflection and refraction
* The eye

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

Energy:
* Energy transfers
* Energy resources

Year 8

Space:
* The Solar System at a greater depth

Year 9

Energy:
Further development of energy stores and transfers

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

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

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

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

Year 11

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

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

