

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

Year
5

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

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

Electricity:
* Symbols for circuits and components
* Resistance

Year
7

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

Year
8

Space:
* The Solar System at a greater depth

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

Year
10

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

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

