

- Physics Learning Journey in Units from Exploring Science:

Year 7

- 7I Energy
- 7J Current Electricity
- 7K Forces + 9Ic Calculating Speed.
- 7L Sound

Year 8

- 8J Light
- 8K Energy Transfers
- 8L Earth and Space + 8Ic Pressure in Fluids, 8Id (to include 8Ia Calculations with Density), 8Ie Drag.
- 9J Force Fields and Electromagnets + 9Id Turning Forces, 9Ie More Machines.

Year 9

- SP1 Motion
- SP2 Motion and Forces

Year 10

- SP3 Conservation of Energy
- SP4 Waves
- SP5 Light and the Electromagnetic Spectrum
- SP6 Radioactivity

Year 11

- SP7 Astronomy
- SP8 Energy – Forces Doing Work
- SP9 Forces and Their Effects.
- SP10 Electricity and Circuits
- SP11 Static Electricity
- SP12 Magnetism and the Motor Effect
- SP13 Electromagnetic Induction
- SP 14 Particle Model
- SP 15 Forces and Matter.

Chemistry Big Ideas

- **BIG IDEA: SUBSTANCES AND PROPERTIES -** Materials are either made of a single chemical substance or a mixture of substances which each have distinctive properties.
- **BIG IDEA: PARTICLES AND STRUCTURE -** All matter is made up of atoms. The behaviour and structural arrangement of atoms explains the properties of different materials.
- **BIG IDEA: CHEMICAL REACTIONS -** During a chemical reaction, atoms are rearranged forming new substances.
- **BIG IDEA: EARTH'S ATMOSPHERE -** The composition of the Earth's atmosphere depends upon the balance of substances that are continually entering and leaving it. This affects the Earth's climate.
- **BIG IDEA: DYNAMIC EARTH -** The Earth's crust is constantly changing as new rocks are formed and older rock is worn away.

Physics Big Ideas

- **BIG IDEA: MATTER** - Objects are made of particles with mass. Understanding particles helps us to design our world.
- **BIG IDEA: FORCES AND MOTION** - Forces make things change. Understanding forces helps us to predict and control physical change.
- **BIG IDEA: SOUND, LIGHT AND WAVES** - Waves radiate information. Understanding waves helps us to communicate.
- **BIG IDEA: ELECTRICITY AND MAGNETISM** - The everyday world is largely a consequence of electrical charge. Understanding electricity and magnetism helps us develop technology to improve lives.
- **BIG IDEA: EARTH IN SPACE** - Understanding the uniqueness of the Earth and the vastness of space gives us perspective and awe.

Biology – Big Ideas

- **BIG IDEA: THE CELLULAR BASIS OF LIFE** - Organisms are made of one or more cells, which need a supply of energy and molecules to carry out life processes.
- **BIG IDEA: HEREDITY AND LIFE CYCLES** - Genetic information is passed from each generation to the next; this information and the environment affect the features, growth and development of organisms.
- **BIG IDEA: ORGANISMS AND THEIR ENVIRONMENTS** - All organisms, including humans, depend on, interact with and affect the environments in which they live and other organisms that live there.
- **BIG IDEA: VARIATION, ADAPTATION AND EVOLUTION** - Differences between organisms cause species to evolve by natural selection of better adapted individuals. The great diversity of organisms is the result of evolution.
- **BIG IDEA: HEALTH AND DISEASE** - Organisms must stay in good health to survive and thrive; the health of an individual results from interactions between its body, behaviour, environment and other organisms.