**Physics**

**Forces and their effects**

* Forces and their interactions
* Motion
* Resultant forces
* Momentum
* Safety in public transport
* Forces and terminal velocity
* Centre of mass
* Moments & levers

**Energy**

* Forces and energy
* Energy transfers, conservation and dissipation of energy
* Energy resources

**Waves**

* General properties of waves
* The electromagnetic spectrum
* Sound and ultrasound
* Reflection
* Refraction and total internal reflection
* Lenses and the eye

**Particle model of matter**

* Kinetic theory
* Energy transfers and particle motion

**Electricity and magnetism**

* Electrical circuits
* Magnetism and electromagnetism

**Generating and distributing electricity and household use**

* Generating electricity
* Electricity transmission and distribution
* Using electricity in the home
* The motor effect
* Transferring electrical energy

**Nuclear physics**

* Atomic structure
* Ionizing radiation from the nucleus
* Nuclear fission
* Nuclear fusion

**Space physics**

* Life cycle of a star
* Solar system and orbital motion
* Red shift and the expanding universe