# Science Curriculum Journey: Trilogy (Year 10)

Curriculum Map 2026 - 2027

**Chemical analysis**

- Pure substances, mixtures and formulations
- Chromatography method and analysis
- Gas tests

**Organic Chemistry**

- Describe how crude oil was formed
- Describe the structure of alkanes
- Explain the properties fractions of crude oil
- Describe fractional distillation and cracking
- Combustion

**MOCKS**

**Paper 1 Biology & Chemistry & Physics**

**Electricity**

- Electricity in the home
- Electrical safety
- Power and equation practice
- The national grid

- **Chemical changes**
  - Extraction of metals
  - Reactions of metal compounds to make salts
- **Energy Changes**
  - Endothermic and exothermic
  - Bond energy calculations

- **Structure and Bonding**
  - Structure and properties of Ionic, covalent and metallic bonds
  - Alloys and polymers
- **Quantitative Chemistry**
  - Conservation of mass
  - Equations
  - Amounts of substance

**January Assessment**

**All content from paper 1 to date**

**Energy**

- Energy changes involving heating, work done by forces, work done when a current flows
- Efficiency

**Bioenergetics**

- Photosynthesis
- investigating rate of photosynthesis
- Respiration in plants

- **Cell biology**
  - Cell structure and functions
  - Stem cells
  - Mitosis
  - Microscopy
  - Transport
- **Organisation**
  - Digestive system
  - Circulatory system
  - Respiration
  - Effect of exercise

**Particle model**

- Apply the particle model to changes of state and temperature
- Determine latent heat
- Determine the specific heat capacity by investigation

**The atom**

- Size and mass of the atom and subatomic particles
- How the atomic model has developed
- isotopes & calculating Ar
- Radiation
- Describe types of radioactive decay
- **Periodic table**
- Metals/ non metals
- Comparing groups

**Covered in Year 9**

- **Electricity**
  - Models
  - V=IR
  - Required practical's
- **Infection and response**
  - Microbes
  - Diseases in animals and plants
  - Vaccinations
  - Drug development