Science Learning Journey Year 9

Understanding and Applying Scientific Skills

- Understanding variables
- Drawing graphs and analysing graphical data
- Writing methods
- Analysis of secondary data
- Assessing impact of scientific concepts
- Modelling scientific concepts
- Understanding relationships between science and society
- Drawing conclusions
- Identify, describe, explain, apply, link
- Applying maths to the scientific concepts
- Risk Assessments
- Describe patterns

YEAR 10

Teacher 2

- The heart
- Helping the heart
- Blood vessels
- Breathing and gas exchange
- Transport systems in plants
- Transport systems in animals

Animal and Plant Tissues, Organs, and Systems

- Transferring energy
- Power
- Wiring a plug
- AC/DC & electrical safety
- The National Grid

Electricity in the Home

Teacher 1

- Electricity in our homes
- Polymers
- Nanoparticles
- States
- Metallic
- Covalent
- Ionic
- Conservation of mass

Bonding

- Gas temperature & pressure
- Internal energy
- Specific heat capacity
- Specific latent heat
- Density
- Matter and state

Particles

Teacher 2

- Temperature in reactions
- Exothermic reactions
- Endothermic reactions
- Types of energy resources
- Renewable and non-renewable energy

Energy Changes

Energy Resources

Organisation

- Enzymes
- Organising animals and plants
- Tissues and organs in animals

Digestion

- Making digestion efficient
- Enzymes and digestion
- Chemicals and food

Teacher 1

- Resistance in circuits
- Resistance
- Potential difference
- Series and parallel
- Circuits & current

Electricity

Atomic Structure, and the Periodic Table

- Mendeleev
- Development of the periodic Table
- Group 0
- Group 1 and Group 7
- Metals and non-metals

Teacher 2

- Relative atomic mass
- Electronic configuration
- Elements in the periodic table
- Isotopes

Atomic Structure

Cell Division

- Cell division – mitosis, meiosis
- Growth and differentiation
- Stem cells and dilemmas

Cell Structure and Transport

- Animal and Plant cells
- Specialised cells
- Active Transport
- Exchanging materials
- Osmosis
- Diffusion
- Prokaryotes and Eukaryotes

Energy Conservation and Transfer

- Power/Work done relationship
- Calculating work done
- Calculating power
- Efficiency
- Energy transfers
- Kinetic energy
- Gravitational energy

YEAR 9

Teacher 1

Teacher 2