Combined Science Learning Journey Year 10

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 11

Teacher 2

- Nature of waves
- Properties of waves
- Wave calculations
- Reflection & refraction

Waves

Organisation of an Ecosystem

- Feeding relationships
- Material recycling

Biodiversity

- Human populations
- Water land and air pollution
- Deforestation and global warming

Teacher 1

- Adaptations
- Competition
- Distribution of organisms
- Abiotic and biotic factors
- Communities

Adaptations, Interdependence & Competition

- Half life
- Inside the nucleus
- Alpha, beta and gamma
- Atoms and radiation

Radioactivity

- Cracking
- Carbon as fuel and feedstock
- Fractional Distillation
- Crude oil
- Hydrocarbons

Organic Chemistry

The Rate and Extent of Chemical Change

- Equilibrium
- Catalysts
- Surface area
- Temperature
- Concentration
- Factors affecting rate of reaction
- Calculating rate of reaction
- Infertility treatments

The Human Nervous System

- Structure and function of the nervous system
- Homeostasis
- Reflex action
- Negative feedback
- Thermoregulation
- Endocrine system
- Diabetes
- Contraception
- Hormones in human reproduction

Hormonal Coordination

Non-communicable Diseases

- Cancer
- Smoking and risk of disease
- Alcohol and other carcinogens
- Antibiotics and painkillers
- Discovery and development of drugs

Chemical Changes

- Reactivity of Metals
- Metals and acids
- Reactions of acids
- Soluble Salts
- Electrolysis

Health and Disease

- Vaccinations
- Human defense responses

Quantitative Chemistry

- Concentrations
- Limiting reactants
- Moles
- Relative molecular mass
- Conservation of mass

Forces and Motion

- Elasticity
- Momentum
- Force and braking
- Weight and terminal velocity
- Force and acceleration
- Equations of motion
- Velocity and acceleration

Motion

- Distance and velocity time graphs
- Speed, distance, time
- Metabolism

Photosynthesis

- Photosynthesis
- Using photosynthesis
- Rate of photosynthesis

Respiration

- Aerobic respiration
- Anaerobic respiration
- Response to exercise

Communicable Diseases

- Bacterial diseases
- Diseases caused by fungi and protists
- Viral infections

Bonding

- Ionic bonding
- Covalent bonding
- Metallic bonding
- Polymers
- Allotropes

Electricity in the Home

- AC/DC & electrical safety
- Wiring a plug
- Power
- Transferring energy
- Electricity in our homes

Forces in Balance

- Resolution of forces
- Parallelogram of forces
- Centre of mass
- Resultant forces
- Forces and quantities
- Forces between objects
- Vectors and scalars

Energy Changes

- Bond making and breaking
- Endothermic reactions
- Exothermic reactions
- Temperature in reactions

Teacher 1

Teacher 2

YEAR 10