Science KS4 Physics Learning Journey

Magnetism & Electromagnets:
Pole of magnets and magnetic fields
Magnetic fields of electric current
Solenoids

Magnetism & Electromagnets cont:
Electromagnets
Fleming's left hand rule
Triple – Loud speaker, microphones & transformers

Assessment

Waves:
Transvers & longitudinal
Wave equation, EM Spectrum
IR Absorption
UV, X-Ray & Gamma
Triple – Sound waves, seismic waves, light, lenses, black body radiation

Assessment

Space (triple only)
Solar systems
Life Cycle of a star
Motion and Satellites
Red Shift

Forces cont:
Acceleration
Velocity- time graphs
Motion
Newton's 3rd Law
Keeping roads safe

GCSE Exams: Triple or combined

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Particle model of matter:
Density of objects
States of matter
Particle motion in gases
Triple – Boyles law

Forces:
Contact & non-contact
Weight & mass, Resultant force
Force & Extension
Speed

Electricity cont:
IV Graphs
Series & Parallel circuits
AC/DC, plugs & Cables
Fuses & Power calculations

Electricity:
Circuit components
Triple – Static & electric fields
Potential difference & Resistance
Resistance of a wire

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Energy:
Stores & transfers
Calculations
Conduction & Insulation

Energy Cont:
Specific Heat capacity
Triple – Thermal Insulators
Non renewable
Renewable
Energy Issues

Assessment

Atomic Structure:
Atomic structure
Types of radiation
Half life
Background radiation
Triple – Fission, fusion & issues

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