Physics

Skipton Girls' High School

Year	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
7	Forces and Motion: *Why does the motion of objects change?*	Waves and Sound: *How does sound travel? How do we use ultrasound?* The Solar System: *What things exist in our solar system?* *What things exist outside our solar system?*	Energy and Power *How can we understand changes in terms of the ways that energy is stored and transferred?*	Electrostatics: *Why are sparks sometimes produced when objects are rubbed together?*	Electric Circuits: *How can we understand what happens in a circuit, using the ideas of Voltage, Current and Resistance?*	Investigative Skills: *How are we to plan and carry out an investigation that will allow us to accurately answer a question?*
8	Light and Colour: *How do we see things? Why are objects different colours?*	Nuclear Physics and Stars: *What is going on inside stars and inside nuclear power stations?*	Motion and Forces at Work *How can we calculate and represent speed?* *How can we use our knowledge of turning forces to make jobs easier?*	Energy in the Home *How is electricity generated? How does it travel from power station to our homes?*	Magnets and Electromagnetism *How can we create magnets using electricity? What uses do we make of electromagnets?*	Investigating Forces *What factors affect the speed of a toy car?*
9	Forces, Motion and Springs *Newton's 3 laws of motion used to explain scenarios.* *Hooke's Law* *Stopping distances*	Development of Atomic Model and Space Exploration *Rutherford, Bohr and Chadwick* *Solar system; colonising space; ethics of space exploration*	Electrical Circuits *Investigating resistance of circuits, ohmic and non-ohmic conductors.* *Series and Parallel Circuits*	Mains Electricity *Safe use of mains electricity* *National Grid*	Energy resources and Efficiency *Electricity generation* *Improving efficiency.*	Waves and the Electromagnetic Spectrum *Waves key definitions* *Uses of EM spectrum*

Physics

Skipton Girls' High School

10	Waves and Sound *Reflection and seeing with sound*	Heat Transfer and Radioactivity *Reducing heat transfer* *3 types of radiatioactivity and their uses*	Magnetism *Understanding and representing magnetic fields*	Electrostatics *Understanding and representing electric fields*	Motion Graphs and Moments *Representing the motion of objects on distance-time and speed-time graphs.* *Moments calculations.*	Resultant Forces and Satellites *Resultant force diagrams involving scale drawings.* *Satellite orbits and circular motion*
11	Lenses, Momentum and Pressure *How light is manipulated with lenses.* *Momentum Calculations* *Understanding the use of gases in order to power engines etc.*	Electromagnetism *Electromagnetic induction, generators and dynamos*	Life Cycle of Stars and Big Bang Theory *Changes within Stars and formation of elements.* *Evidence for Big Bang as origin of Universe*	Revision		
12	(All A-level codes for AQA specification) Progressive Waves: 3.3.1.1 and 2 Particle Physics: 3.2.1	Stationary Waves: 3.3.1.3 Quantum Physics: 3.2.2	Reflection and Refraction: 3.3.2 Mechanics: 3.4.1 to 6	Electrical Circuits: 3.5.1 to 4 Energy and Momentum: 3.4.7 and 8	Applications of Electrical Circuits: 3.5.1.5 and 6 Materials: 3.4.2	Thermal Physics: 3.6.2.1 Further Mechanics:3.6.1
13	Thermal Physics: 3.6.2.2 and 3 Gravitational Fields: 3.7.2	Radioactive Decay: 3.8.1.1 to 5 Electric Fields: 3.7.3 and 4	Fission and Fusion: 3.8.1.6 to 8 Magnetic Fields: 3.7.5.1 to 3	Astrophysics 3.9 Magnetic Fields: 3.7.5.4 to 6		