

## **We are following the AQA A level Physics syllabus**

### **Topics**

In Year 12, you will study the following topics:

- Particles: Structure of the atom, particles and anti-particles, Atomic forces and exchange particles, classification of particles and quarks
- Quantum Physics: The photon, the photoelectric effect, spectra and wave-particle duality
- Waves: Transverse and longitudinal waves, superposition, stationary waves, diffraction and refraction
- Mechanics: Scalars and vectors, forces, moments and centre of mass, motion graphs, acceleration due to gravity, Newtons laws of motion, momentum, work and power.
- Materials: Types of materials, stress, strain, youngs modulus and energy stored in materials.
- Electricity: DC circuits, resistivity, superconductivity, electromotive force and internal resistance, the potential divider and Kirchoff's laws.

In each of these topics you will carry out required practical work to develop your How Science Works skills which also contributes towards a separate practical skill qualification

### **Assessment**

At the end of each unit you will complete an end of unit assessment based on passed examination papers.

In the year 12 mock examinations you will sit two examinations which covers the topics studied in year 12 at AS standard.

### **Our expectations of you**

- ✓ bring all equipment to all lessons
- ✓ complete homework on time and to the best of your ability
- ✓ take responsibility for revising scientific language and concepts on a regular basis