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| Week/dates | Topic | Homework |
| Week beginning:  22/4/19  29/4/19  6/5/19 | Energy  Energy  Energy | * Changes involved in the way energy is stored * Calculations to include work done by forces * Calculations to include kinetic energy, elastic potential energy and gravitational potential energy. * Equations for kinetic energy and gravitational potential energy * Specific heat capacity * Power * Conservation and dissipation of energy * Reducing unwanted energy transfers. * Calculating efficiency and describe the ways to increase the efficiency |
| Week beginning:  13/5/19  20/05/19  3/06/19 | Electricity  Electricity  Electricity | * Draw circuit symbols * Electric Current and equation for it * Electric current in series and parallel * How the resistance of a component affects the current through it. * Potential difference, current and resistance and how they all are linked. * Ohms law and conditions needed for it to apply * How the resistance of electrical components change with external conditions. * Current-potential difference graphs for electrical components * Series and parallel circuits/ properties and adding resistor in series * Resistance in series and parallel circuits * AC/DC * Mains electricity supply/ The name, colour and function of each wire in a three core electrical cable * Electrical power and how it is calculated. * Energy transfers in everyday appliances/Work done and Equations for energy transfer * National Grid and static charges/Electrostatic forces between objects * Electric fields and the forces exerted by objects placed into an electric field. |
| Week beginning:  10/06/19  17/06/19  24/06/19 | Particle model of Matter  Particle model of Matter  Particle model of matter | * Density and equation * Particle model of matter to explain density of materials * Changing the state of the substance * Physical and Chemical Changes * Internal energy of a system * Heating and temperature * Specific heat capacity/Specific latent heat * Using the particle model of matter explain motion of particles in a gas * Gas Laws and temperature and gas calculations * Gas thermal expansion |
| Week beginning:  1/07/19  8/07/19  15/07/19 | Atomic Structure  Atomic structure  Atomic structure | * History of atom * The size and structure of an atom. * Radioactivity, atomic number and atomic mass * Isotopes and early atomic models * Development of atomic theory/Rutherford’s experiment * Radioactive decay, stable and unstable nuclei * Different types of nuclear radiations and their nature * Alpha, beta and gamma radiations and their properties * Nuclear decay and equations * Properties of radiation/half life and rate of decay * Handling radioactive materials * Radioactivity and food * Uses of radioactivity and hazards of radioactive materials |
| Week beginning: | Forces | * Scalar and vector quantities * Contact and non-contact forces. * Weight and gravitational fields * Calculating the weight of an object+ Equation for calculating * Resultant Force and Free body diagrams * Calculating the work done when a force moves an object. * Definition of a Joule/Work done and energy transfer * Elastic and inelastic deformation * Hookes law/Work done in stretching a spring * Turning forces/simple lever and gear systems |
| Week beginning: | Waves  Waves  Waves | * Transverse and Longitudinal waves * Properties of waves/ Equation linking the wave speed, frequency and wavelength * Refraction * Human hearing and the speed of sound * How the ear works * Uses of waves in imaging, sonar and developing theories on the structure of the Earth * P waves and S waves/Waves in the spectrum * Reflection, Refraction and diffraction * Radiowaves and electrical circuits * The electromagnetic spectrum/Dangers of ionising radiations * Harmful effects of ultraviolet radiation and   Uses of electromagnetic waves.   * Concave and Convex lenses * Emission and absorption of infra-red radiation. * Black body radiation * 2nd Law of Thermodynamics/ global warming |
| Week beginning: | Magnetism and Electromagnetism | * Laws of magnetism * Permanent and induced magnets * Magnetic field and earth’s magnetic field * Motor effect / electromagnets and motor * Generator * Force on a current in a magnetic field * Calculating the force on a conductor in a magnetic field. * How do Headphones work/generator generates electricity * Electromagnetic induction * Dynamos and transformers and Microphones * Electrical power inputs and outputs of a transformer * Electricity distribution * Use of transformers in National Grid |
| Week beginning  13/05/19  Yr 11s only | Revision  Revision-  Revision -  Revision - | * Biology * Chemistry * Physics * Biology * Chemistry * Physics * Biology * Chemistry * Physics |