Sets (s): Triple award

YEAR 10

SUBJECT Physics

Knowledge Focus: Electromagnetism

Ysgol Uwchradd Prestatyn High School

This half term : Skills, Knowledge and Understanding to be developed:
This topic introduces the concepts of magnetic fields and investigates the forces on current-carrying conductors in magnetic fields and how this effect is used in simple motors. It also explores the production of induced potential differences produced by changing magnetic fields and how this effect is used in generators and transformers.

Key Terms to be learned this half term:
Electromagnetic, magnetic fields, bar magnet, current, motor effect, Flemmings left-hand rule, electric motor, electrical energy, kinetic energy, conducting wire, electromagnetic induction, transformer, generator.

Week 1 and 2 Learning Objectives etc: Recall magnetic field patterns of bar magnets, straight wires and solenoids Know the 'motor effect' and use Fleming's left hand rule to predict outcomes Use the equation F=BIL Learn about the simple DC motor and make informed predictions of performance Electromagnetic induction concepts, simple DC generator and predictions thereof	**Objective assessments:** Carry out the specified practical 'investigation of the output of an iron-cored transformer'	**Homework:** Sams unit 1 (H) Q2
Week 3 and 4 Learning Objectives etc: Understand the operation of a transformer qualitatively by reference to electromagnetic induction and how the output of a 100% efficient transformer depends upon the number of turns on the coils. – 1.9 (h) Use the transformer equation. - 1.9(i).	**Objective assessments:** Learn magnetic field patterns and the motor effect	**Homework:** Revise external examination
Week 5 and 6 Learning Objectives etc: Practice ways to remember information by trying different revision techniques e.g. mind maps, revision cards, and complete past exam papers to improve your exam technique. **Physics exam 14th June.**	**Objective assessments:** SA GCSE external examination	**Homework:** Past papers and revision
Week 7 Learning Objectives etc: Draw distance time graphs and velocity-time graphs. Calculate the speed of an object from a distance-time graph. Calculate acceleration from velocity-time graphs.	**Objective assessments:** App question on Velocity-time graphs	**Homework:** Revise for App