

YEAR 11 (A- F) – PHYSICS (GCSE)

WEEK 11 (8th November to 12th November)

Work Sent to the students through Google classroom

Topic:– SP 12a to 12c Magnetic fields and magnetic force

Resources: Text book, Worksheets, GCSE science free lesson video& power points.

Date	Lesson	Topic	Mode of Teaching	
8 th Nov Sunday (Girls)	3	<p>Learning Objective : Know the properties of magnets</p> <p>Describe the shape and direction of the magnetic field around bar magnets and for a uniform field, and relate the strength of the field to the concentration of lines..</p>	Zoom	Teacher uses power point presentation that contains interactive questions and online simulation to discuss the properties of magnets and magnetic field
9 th Nov. Monday (boys)	4	<p>Learning outcome : Describe how magnets affect each other. Explain the difference between permanent and induced magnets. Describe the uses of permanent and temporary magnetic materials. Describe the shapes of magnetic fields, including variations in strength. Describe how the shape of magnetic fields can be shown using plotting compasses. Explain how a magnetic compass can be used as evidence for the Earth's magnetic core.</p>		
9 th Nov Monday (Girls)	1	<p>Learning objectives To know that a current can create a magnetic effect and relate the shape and direction of the magnetic field around a long straight conductor to the direction of the current</p>	zoom	Teacher uses power point presentation that contains interactive questions and online simulation to discuss the factors affecting the strength of electromagnets
10 th Nov Tuesday (Boys)	1	<p>Recall that the strength of the field depends on the size of the current and the distance from the long straight conductor</p> <p>Learning outcomes Recall that a current can create a magnetic effect. Relate the shape and direction of the magnetic field around a straight wire to the direction of the current. Recall the factors that affect the strength of the magnetic field around a wire.</p>		

<p>9nd Nov. Monday – (girls)</p> <p>10th Nov Tuesday – (boys)</p>	<p>2</p> <p>2</p>	<p>Learning Objective : Explain how inside a solenoid the fields from individual coils</p> <p>a. add together to form a very strong almost uniform field along the centre of the solenoid (b) cancel to give a weaker field outside the solenoid.</p> <p>Learning outcome Describe the magnetic field inside and outside a coil of wire carrying a current. Explain the shape and strength of the magnetic field around a solenoid.</p>	<p>Zoom</p>	<p>Teacher uses power point presentation that contains interactive questions and online simulation understand the shape and strength of the magnetic field around a solenoid</p>
<p>11th Nov Wednesday – (girls)</p> <p>11th Nov. Wednesday – (boys)</p>	<p>1</p> <p>7</p>	<p>Learning Objective : Recall that a current carrying conductor placed near a magnet experiences a force and that an equal and opposite force acts on the magnet</p> <p>Explain that magnetic forces are due to interactions between magnetic fields</p> <p>Recall and use Fleming’s left-hand rule to represent the relative directions of the force, the current and the magnetic field for cases where they are mutually perpendicular</p> <p>Learning outcome Recall that forces are produced when a current flows in a magnetic field. Explain what causes the forces produced when a current flows in a magnetic field. Recall Fleming's left-hand rule. Use Fleming's left hand rule.</p>	<p>Zoom</p>	<p>Teacher uses power point presentation that contains interactive questions and online simulation understand magnetic force</p>
<p>12th Nov Thursday– (girls)</p> <p>12th Nov Thursday– (boys)</p>	<p>3</p> <p>7</p>	<p>Learning Objective: Explain that magnetic forces are due to interactions between magnetic fields</p> <p>Recall and use Fleming’s left-hand rule to represent the relative directions of the force, the current and the magnetic field for cases where they are mutually perpendicular</p> <p>Learning outcome : Explain what causes the forces produced when a current flows in a magnetic field. Use Fleming's left hand rule.</p>	<p>GC</p>	<p>Instruction will be given in GC to complete the given worksheet</p>

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YEAR 11 G/H – PHYSICS (IGCSE)

WEEK 11 (8th November to 12th November)

Work sent to the students through Google classroom

Topic: Unit 6.21 Electric motors and electromagnetic induction

Lesson Objective: Explain the term electromagnetic induction and the working of generator

Explain the structure of a transformer.

Resources: Text book, Worksheet file, interactive power point and online simulations.

Date	Lesson	Learning objective and Success Criteria	Mode of teaching	
8 th Nov Monday (boys & girls)	8	<p>LO- To explain the term electromagnetic induction.</p> <p>Learning outcome-</p> <ul style="list-style-type: none"> • able to know that a voltage is induced in a conductor or a coil when it moves through a magnetic field or when a magnetic field changes through it. • able to describe the factors that affect the size of the induced voltage 	Zoom	Teacher uses power point presentation to explain the term electromagnetic induction.
9 th Nov Tuesday (boys & girls)	7	<p>LO- To describe the generation of electricity by the rotation of a magnet within a coil of wire and of a coil of wire within a magnetic field.</p> <p>Learning Outcome-</p> <ul style="list-style-type: none"> • able to describe the generation of electricity by the rotation of a magnet within a coil of wire and of a coil of wire within a magnetic field. • able to describe the factors that affect the size of the induced voltage. 	Zoom	Teacher uses power point presentation to describe the generation of electricity by the rotation of a magnet within a coil of wire and of a coil of wire within a magnetic field.

10 th Nov Tuesday (boys & girls)	8	<p>LO- To solve the worksheet file questions</p> <p>Learning outcome-</p> <ul style="list-style-type: none"> able to reinforce the concepts electromagnetism by solving the questions. 	GC	Teacher gives the instructions to solve the worksheet file questions in GC.
11 th Nov Wednesd ay (boys & girls)	8	<p>LO- To explain the structure of a transformer</p> <p>Learning outcome -</p> <ul style="list-style-type: none"> able to describe the structure of a transformer able to understand that a transformer changes the size of an alternating voltage by having different numbers of turns on the input and output sides. able to know and use the relationship between input (primary) and output (secondary) voltages and the turns ratio for a transformer. 	Zoom	Teacher uses power point presentation to explain the structure of the transformer.
12 th Nov Thursday (boys & girls)	2	<p>LO- To know and use the relationship: input power = output power for 100% efficiency</p> <p>Learning outcome</p> <ul style="list-style-type: none"> able to know and use the relationship: <p style="text-align: center;">input power = output power for 100% efficiency</p>	Zoom	Teacher uses power point presentation to explain the energy in transformers.

