

## YEAR 9 (A- F) – PHYSICS

WEEK 32 (25<sup>th</sup> April to 29<sup>th</sup> April)

Work Sent to the students through Google classroom

Topic: SP 5b – Colours & SP 4g – Infrasound

Resources: Student text book, Worksheet, GCSE science free lesson video, power point.

Date	Less on	Lesson objectives & Learning outcomes	Mode of Teaching	
25 <sup>th</sup> April Sunday (Girls)	4	<p><b><u>Learning objectives:</u></b></p> <p>Explain how colour of light is related to:</p> <p>a differential absorption at surfaces b transmission of light through filters.</p> <p><b><u>Learning Outcomes:</u></b></p> <ul style="list-style-type: none"> <li>• Recall white light is a mixture of different colors of light.</li> <li>• Explain why surfaces appear to have different colors in terms of differential absorption</li> <li>• Explain how filters make coloured light in terms of absorption and transmission.</li> <li>• Explain the effect of viewing coloured object in different colors of light.</li> </ul>	Zoom	Teacher uses power point presentation that contains interactive questions.
25 <sup>th</sup> April Sunday (Boys)	8	<p><b><u>Learning objectives:</u></b></p> <p>Analyse graphically the variation of speed of P and S waves with depth and to use the graph to identify boundaries of different layers of earth.</p> <p><b><u>Learning outcomes:</u></b></p> <p>Explain graphically the variation of speed of P and S waves with depth and to use the graph to identify boundaries of different layers of earth.</p>	Zoom	Teacher uses power point presentation that contains interactive questions.
27 <sup>th</sup> April Tuesday (Girls)	3	<p><b><u>Learning Objective :</u></b></p> <p>Complete the worksheet posted in GC</p> <p><b><u>Learning outcome:</u></b></p> <p>Students will be able to reinforce the concepts learned in the previous lesson by completing the worksheet.</p>	GC	Instruction will be given in GC to complete the worksheet.
29 <sup>th</sup> April Thursday (Boys)	6			

## YEAR 10 A-F -Physics

**WEEK 32 (25<sup>th</sup> April to 29<sup>th</sup> April)**

**Topic: CP6-** Investigating densities

**Lesson Objective:** To compare the densities of solids and liquids

**Resources:** Student text book, worksheet file, interactive power point from Board works and Online animations

<https://pbslm-contrib.s3.amazonaws.com/WGBH/arct15/SimBucket/Simulations/densitylab/content/index.html>

Worksheets and Zoom link will be posted in google classroom

Date	Lesson	Lesson objectives & Learning outcome	Mode of Teaching	
25 <sup>th</sup> April Sunday (Boys)	1	<b>L.O: Core practical 6- investigating densities-</b> density of solids	<b>Zoom/ GM</b>	Teacher gives instructions to record the required data using the online link
25 <sup>th</sup> April Sunday (girls)	2	<b>Learning outcome:</b> The students will collect the readings for mass and volume different solids using online simulation		
27 <sup>th</sup> April Tuesday (Boys)	5	<b>L O. Core practical 6- investigating densities-</b> density of liquids	<b>Zoom/ GM</b>	The teacher will post the secondary data to calculate the density of different liquids using the
28 <sup>th</sup> April Wednesday (girls)	5	<b>Learning outcome:</b> Students will calculate the density of different liquids using the secondary data given		
27 <sup>th</sup> April Tuesday (Boys)	6	<b>L.O:</b> Complete the data sheet posted in GC	<b>GC</b>	Teacher will post the datasheet in the google classroom. Students will solve and turn in the datasheet
28 <sup>th</sup> April Wednesday (girls)	6	<b>Learning outcome:</b> Students will complete the worksheet and turn in GC		
29 <sup>th</sup> April Thursday (Boys)	4	<b>L.O :</b> Complete the textbook questions page no.188 and 189	<b>Zoom/ GM</b>	Teacher discusses the answers from the textbook and worksheet
29 <sup>th</sup> April Thursday (Girls)	1	<b>.Learning outcome:</b> Students will work out the questions		

## YEAR 11 (A- F) – PHYSICS (GCSE)

WEEK 32 (25<sup>th</sup> April to 29<sup>th</sup> April)

Work Sent to the students through Google classroom

Date	Lesson	Topic	Mode of Teaching	
26 <sup>th</sup> April Mon (Boys)	4	Weakening Earth's magnetic field  <a href="https://www.timesnownews.com/technology-science/article/earth-s-magnetic-field-weakening-what-does-it-mean-and-what-effect-will-it-have/596482">https://www.timesnownews.com/technology-science/article/earth-s-magnetic-field-weakening-what-does-it-mean-and-what-effect-will-it-have/596482</a>	Asy	Instruction will be given in the Google class room
25 <sup>th</sup> April. Sunday (Girls)	3	Read the article and write your opinion in 5-6 sentences		
27 <sup>th</sup> April Tuesday – (boys)	1&2	Are Aliens Real? <a href="https://bbc.in/2VKbcVB">https://bbc.in/2VKbcVB</a>	GC	Instruction will be given in the Google class room
26 <sup>th</sup> Monday – (girls)	1&2	Write a short note giving your opinion		
28 <sup>th</sup> April. Wednesda y – (boys)	7	<b>What is a Tokomak?</b> Describe the condition needed for fusion reaction to occur in Tokomak. Why haven't practical fusion Power Stations been developed yet?	GC	Instruction will be given in the Google class room
28 <sup>th</sup> April. Wednesda y– (girls)	1	Resources <a href="https://www.theregister.co.uk/2017/09/25/geeks_guide_jet/">https://www.theregister.co.uk/2017/09/25/geeks_guide_jet/</a> <a href="https://www.youtube.com/watch?v=IU7oMISRS2Y">https://www.youtube.com/watch?v=IU7oMISRS2Y</a> Write a short note on this topic( Less than 15 lines) and turn in		
29 <sup>th</sup> April. Thursday – (boys)	7	<b>Buoyancy</b>  Why do fluids exert an upward <b>buoyant force</b> on submerged objects?	Asy	Teacher will post a power point and instruction will be given in the Google class room
29 <sup>th</sup> April. Thursday – (girls)	3	Describe upthrust, floating and sinking.		

## YEAR 11 G/H (IGCSE) – PHYSICS

WEEK 32 (25<sup>th</sup> April to 29<sup>th</sup> April)

Work Sent to the students through Google classroom

Date	Lesson	Topic	Mode of Teaching	
26 <sup>th</sup> April Monday  (boys & girls)	8	<p>Weakening Earth's magnetic field</p> <p><a href="https://www.timesnownews.com/technology-science/article/earth-s-magnetic-field-weakening-what-does-it-mean-and-what-effect-will-it-have/596482">https://www.timesnownews.com/technology-science/article/earth-s-magnetic-field-weakening-what-does-it-mean-and-what-effect-will-it-have/596482</a></p> <p>Read the article and write your opinion in 5-6 sentences</p>	Asy	Instruction will be given in the Google class room
27 <sup>th</sup> April Tuesday (boys & girls)	7 & 8	<p>Are Aliens Real?</p> <p><a href="https://bbc.in/2VKbcVB">https://bbc.in/2VKbcVB</a></p> <p>Write a short note giving your opinion</p>	GC	Instruction will be given in the Google class room
28 <sup>th</sup> April Wednesday (boys & girls)	8	<p><b>What is a Tokomak?</b></p> <p>Describe the condition needed for fusion reaction to occur in Tokomak.</p> <p>Why haven't practical fusion Power Stations been developed yet?</p> <p>Resources</p> <p><a href="https://www.theregister.co.uk/2017/09/25/geeks_guide_jet/">https://www.theregister.co.uk/2017/09/25/geeks_guide_jet/</a></p> <p><a href="https://www.youtube.com/watch?v=IU7oMISRS2Y">https://www.youtube.com/watch?v=IU7oMISRS2Y</a></p> <p>Write a short note on this topic( Less than 15 lines) and turn in</p>	GC	Instruction will be given in the Google class room
29 <sup>th</sup> April Thursday (boys & girls)	2	<p><b>Buoyancy</b></p> <p>Why do fluids exert an upward <b>buoyant force</b> on submerged objects?</p> <p>Describe upthrust, floating and sinking.</p>	Asy	Teacher will post a power point and instruction will be given in the Google class room

## YEAR 12 A/ B – PHYSICS

**WEEK 32 (25<sup>th</sup> April to 29<sup>th</sup> April) - 3 lessons for both batches**

**Work sent to the students through:** Whatsapp group / Google classroom / Zoom Learning Platform

**Topic: 5.22 Stationary waves**

**Resources:** Student text book, worksheet file, interactive power point from Board works and Online animations

Date & Class	Lesson	Lesson objectives & Learning outcomes	Mode of teaching	
25 <sup>th</sup> April Sunday - 12 B	6	<b>L.Objective – <u>CORE PRACTICAL 7:</u></b> Investigate the effects of length, tension and mass per unit length on the frequency of a vibrating string or wire. <b>Learning outcome:</b>	<b>Zoom</b>	Breakout session in groups to plan the experiment to investigate the effects of length, tension and mass per unit length on the frequency of a vibrating string or wire.
27 <sup>th</sup> April Tuesday - 12 A	4	<ul style="list-style-type: none"> <li>• Identify the factors affect the frequency of standing waves on a string.</li> <li>• <b>Plan how to investigate the effects of length, tension and mass per unit length on the frequency of a vibrating string or wire.</b></li> <li>• State how the results will be used.</li> <li>• Consider the uncertainties involved.</li> </ul>		
25 <sup>th</sup> April Sunday - 12 B	7	<b>L.Objective –</b> Show an understanding of experiments that demonstrate the formation of stationary waves using microwaves.	<b>Zoom</b>	Teacher uses power point presentation and simulations to explain the expt using microwaves and helps students to attain the objectives.
29 <sup>th</sup> April Thursday - 12 A	1	<b>Learning outcome:</b> <ul style="list-style-type: none"> <li>• Discuss the experimental setup required for the formation of stationary waves using microwaves.</li> <li>• Discuss the conditions needed for the formation of a stationary wave.</li> <li>• Explain how measurements could be taken and used later to find the wavelength.</li> <li>• <a href="https://www.youtube.com/watch?v=7_ZsPltGLUQ">https://www.youtube.com/watch?v=7_ZsPltGLUQ</a></li> </ul>		
28 <sup>th</sup> April Wednesday - 12 B	3	<b>L.Objective –</b> Describe the formation of stationary waves in open and closed end pipes.	<b>Zoom</b>	Teacher use simulations and video to explain the the formation of stationary waves in
29 <sup>th</sup> April Thursday	2	<b>Learning outcomes-</b> <ul style="list-style-type: none"> <li>• Realise that stationary waves can be produced in open and closed pipes.</li> </ul>		

- 12 A		<ul style="list-style-type: none"> <li>Identify the different modes of vibration in open and closed end pipes.</li> <li>Derive equations for the frequency of wave in open and closed pipes</li> <li>Realise that only odd harmonics are possible in closed pipe and all harmonics are possible for open pipes.</li> </ul>		open and closed end pipes.
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**HOMEWORK:** Complete the exam style questions from worksheet.

## YEAR 12A/ B –PHYSICS

**WEEK 32 (25<sup>th</sup> April to 29<sup>th</sup> April) - (3 lessons)**

**Work sent to the students through:** Google classroom / Zoom Learning Platform

**Topic:** Optics

**Resources:** Student text book, worksheet file, interactive power point from Board works and Online PHET simulations

Date	Class	Lesson	Lesson objectives & Learning outcomes	Mode of teaching	
April 25 <sup>th</sup> Sunday	12 A	8	<p><b><u>Learning objectives:</u></b> Analyse the Investigation of the lens formula</p> <p>Revisit the formation of a virtual image by a concave lens</p>	Zoom	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives
April 27 <sup>th</sup> Tuesday	12 B	6	<p><b><u>Learning Outcomes :</u></b> Carry out a virtual experiment to measure the position of the real image formed on a screen as a bright object is moved from a great distance toward a convex lens.</p> <p>Once students have completed this exercise they should plot a graph of <math>1/v</math> against <math>1/u</math></p> <p>Complete numerical questions on Lens equation with concave lenses</p>		
April 26 <sup>th</sup> Monday	12 A	1	<p><b><u>Learning objectives:</u></b> Use the lens formula to calculate image magnification.</p>	Zoom	Teacher uses power point

April 29 <sup>th</sup> Thursday	12B	3	<p><b><u>Learning Outcomes :</u></b></p> <p>Define magnification and complete related problems to solve by drawing ray diagrams.</p> <p>Solve numerical to locate image positions and to calculate magnifications.</p> <p>Be able to use the lens equation to find the third value where two of <math>u</math>, <math>v</math> or <math>f</math> are given</p>		presentation and breakout sessions for students to collaborate and attain the objectives
April 26 <sup>th</sup> Monday	12 A	2	<p><b><u>Learning objectives:</u></b></p> <p>explain the terms focal length and power of a lens</p> <ul style="list-style-type: none"> <li>● use the equation for the power of a lens.</li> </ul>	Zoom	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives
April 29 <sup>th</sup> Thursday	12B	4	<p><b><u>Learning Outcomes:</u></b></p> <p>Define the power of a lens and introduce the diopetre.</p> <p>Ask students to work out how to calculate the effective focal length and power of compound lenses.</p> <p>Students work in pairs to measure the focal lengths and powers of a range of different convex lenses.</p> <p>Students can research how laser eye surgery and contact lenses work to correct defects of vision.</p>		