

## YEAR 9 A - F – PHYSICS

WEEK 42 (13<sup>th</sup> June to 17<sup>th</sup> June)

**Topic:** 5c - Lenses

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

Date	Lesson	Lesson objectives & Learning outcomes	Mode of Teaching	
13 <sup>th</sup> June Sunday (Girls)	4	<b><u>Learning objectives:</u></b> Relate the power of the lens to its focal length and shape.	Zoom	Teacher uses power point presentation to relate the power of the lens to its focal length and shape.
13 <sup>th</sup> June Sunday (Boys)	8	<b><u>Learning Outcomes:</u></b> Understand how the focal length and shape of a lens affect its power		
15 <sup>th</sup> June Tuesday (Girls)	3	<b><u>Learning objectives:</u></b> Explain the effects of different types of lens in producing real and virtual images. <b><u>Learning outcomes:</u></b> Students will be able to identify the main parts of the eye. Describe common eye defects ( long-sightedness, short-sightedness). Explain how long- and short-sightedness can be corrected.	Zoom	Teacher uses power point presentation that contains interactive questions.
15 <sup>th</sup> June Tuesday (Girls)	4	<b><u>Learning objectives:</u></b> To solve the worksheet on lenses <b><u>Learning outcome:</u></b> Students will be able to reinforce the concepts learned in the previous lesson by solving the worksheet.		Teacher will post the worksheet in Google classroom.

## YEAR 10 A - F – PHYSICS

**WEEK 42 (13<sup>th</sup> June to 17<sup>th</sup> June)**

**Topic:** Particle Model

**Lesson Objective:** SP14 d Gas temperature and pressure

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

Date	Lesson	Lesson objectives & Learning outcome	Mode of Teaching	
13 <sup>th</sup> June Sunday (Boys)	1	<b>L.O:</b> Discuss the worksheet SP14d	<b>Zoom/ GM</b>	Instruction will be given to complete the worksheet.
13 <sup>th</sup> June Sunday (girls)	2	<b>Learning outcome:</b> <ul style="list-style-type: none"> <li>Students will be able to reinforce the concepts learned in the previous lesson by completing the worksheet.</li> </ul>		
15 <sup>th</sup> June Tuesday (Boys)	5	<b>L.O:</b> <ul style="list-style-type: none"> <li>To investigate how light is affected when it travels from <b>air into glass</b> or from <b>glass into air</b>.</li> </ul>	<b>Zoom/ GM</b>	Teacher gives instructions to record the required data using the online simulation
16 <sup>th</sup> June Wednesday (girls)	5	<b>Learning outcome:</b> <ul style="list-style-type: none"> <li>To make accurate measurements using the online simulation link <a href="http://www.olabs.edu.in/?sub=74&amp;brch=9&amp;sim=37&amp;cnt=58">http://www.olabs.edu.in/?sub=74&amp;brch=9&amp;sim=37&amp;cnt=58</a></li> </ul>		
15 <sup>th</sup> June Tuesday (Boys)	6	<b>L O:</b> To investigate how light is affected when it travels from <b>air into glass</b> or from <b>glass into air</b> .	<b>Zoom/ GM</b>	Students will complete the practical sheet assigned for them in GC and turn in after completion
16 <sup>th</sup> June Wednesday (girls)	6	<b>Learning outcome:</b> <ul style="list-style-type: none"> <li>To present the results as a graph</li> <li>To draw conclusions from results</li> </ul>		

## YEAR 11 A - F – PHYSICS (GCSE)

**WEEK 42 (13<sup>th</sup> June to 17<sup>th</sup> June)**

**Topic: Homogeneity**

**Lesson Objective:** Demonstrate and apply your knowledge and understanding of checking the homogeneity

**Resources:** Worksheets, interactive power point and online simulations

Date	Lesson	Topic	Mode of Teaching																			
14 <sup>th</sup> June Mon <b>(Boys)</b>	4	<b>LO-</b> Demonstrate your knowledge understanding of checking the homogeneity of physical equations using S.I. base units <b>Learning Outcome-</b> <ul style="list-style-type: none"> <li>• Define homogeneous equations</li> <li>• Demonstrate the knowledge of of checking the homogeneity of physical equations using S.I. base units.</li> </ul>	<b>Z</b>	Teacher uses power point presentation to describe the topic homogeneity.																		
13 <sup>th</sup> June Sunday <b>(Girls)</b>	3				15 <sup>th</sup> June. Tuesday – <b>(boys)</b>	1	<b>LO-</b> Apply the knowledge of checking the homogeneity of physical equations using S.I. base units. <b>Learning outcome</b> <ul style="list-style-type: none"> <li>• Apply the knowledge of checking the homogeneity of physical equations using S.I. base units.</li> </ul>	<b>Z</b>	Teacher uses power point presentation to explain the topic homogeneity with examples.	14 <sup>th</sup> June Monday – <b>(girls)</b>	1	15 <sup>th</sup> June. Tuesday – <b>(boys)</b>	2	<b>LO-</b> Solve worksheet questions based on the topic homogeneity. <b>Learning outcome</b> <ul style="list-style-type: none"> <li>• Apply the concept by solving the questions.</li> </ul>	<b>Asy</b>	Instruction will be given to solve worksheet questions	14 <sup>th</sup> June Monday – <b>(girls)</b>	2	16 <sup>th</sup> June. Wednesda y – <b>(boys)</b>	7	<b>LO-</b> Comprehend the reading passage based on the limitations of space travel. <b>Learning outcome</b> <ul style="list-style-type: none"> <li>• Read and interpret the information</li> <li>• Answer the questions</li> </ul>	<b>Asy</b>
15 <sup>th</sup> June. Tuesday – <b>(boys)</b>	1	<b>LO-</b> Apply the knowledge of checking the homogeneity of physical equations using S.I. base units. <b>Learning outcome</b> <ul style="list-style-type: none"> <li>• Apply the knowledge of checking the homogeneity of physical equations using S.I. base units.</li> </ul>	<b>Z</b>	Teacher uses power point presentation to explain the topic homogeneity with examples.																		
14 <sup>th</sup> June Monday – <b>(girls)</b>	1				15 <sup>th</sup> June. Tuesday – <b>(boys)</b>	2	<b>LO-</b> Solve worksheet questions based on the topic homogeneity. <b>Learning outcome</b> <ul style="list-style-type: none"> <li>• Apply the concept by solving the questions.</li> </ul>	<b>Asy</b>	Instruction will be given to solve worksheet questions	14 <sup>th</sup> June Monday – <b>(girls)</b>	2	16 <sup>th</sup> June. Wednesda y – <b>(boys)</b>	7	<b>LO-</b> Comprehend the reading passage based on the limitations of space travel. <b>Learning outcome</b> <ul style="list-style-type: none"> <li>• Read and interpret the information</li> <li>• Answer the questions</li> </ul>	<b>Asy</b>	Instruction will be given in GC.	16 <sup>th</sup> June. Wednesda y– <b>(girls)</b>	1				
15 <sup>th</sup> June. Tuesday – <b>(boys)</b>	2	<b>LO-</b> Solve worksheet questions based on the topic homogeneity. <b>Learning outcome</b> <ul style="list-style-type: none"> <li>• Apply the concept by solving the questions.</li> </ul>	<b>Asy</b>	Instruction will be given to solve worksheet questions																		
14 <sup>th</sup> June Monday – <b>(girls)</b>	2				16 <sup>th</sup> June. Wednesda y – <b>(boys)</b>	7	<b>LO-</b> Comprehend the reading passage based on the limitations of space travel. <b>Learning outcome</b> <ul style="list-style-type: none"> <li>• Read and interpret the information</li> <li>• Answer the questions</li> </ul>	<b>Asy</b>	Instruction will be given in GC.	16 <sup>th</sup> June. Wednesda y– <b>(girls)</b>	1											
16 <sup>th</sup> June. Wednesda y – <b>(boys)</b>	7	<b>LO-</b> Comprehend the reading passage based on the limitations of space travel. <b>Learning outcome</b> <ul style="list-style-type: none"> <li>• Read and interpret the information</li> <li>• Answer the questions</li> </ul>	<b>Asy</b>	Instruction will be given in GC.																		
16 <sup>th</sup> June. Wednesda y– <b>(girls)</b>	1																					

## YEAR 11 G/H – PHYSICS (IGCSE)

**WEEK 42 (13<sup>th</sup> June to 17<sup>th</sup> June)**

**Topic: Homogeneity**

**Lesson Objective:** Demonstrate and apply your knowledge and understanding of checking the homogeneity

**Resources:** Worksheets, interactive power point and online simulations

Date	Lesson	Topic	Mode of Teaching	
14 <sup>th</sup> June Mon	8	<p><b>LO-</b> Demonstrate your knowledge understanding of checking the homogeneity of physical equations using S.I. base units</p> <p><b>Learning Outcome-</b></p> <ul style="list-style-type: none"> <li>• Define homogeneous equations</li> <li>• Demonstrate the knowledge of of checking the homogeneity of physical equations using S.I. base units.</li> </ul>	<b>Z</b>	Teacher uses power point presentation to describe the topic homogeneity .
15 <sup>th</sup> June. Tuesday	7	<p><b>LO-</b> Apply the knowledge of checking the homogeneity of physical equations using S.I. base units.</p> <p><b>Learning outcome</b></p> <ul style="list-style-type: none"> <li>• Apply the knowledge of checking the homogeneity of physical equations using S.I. base units.</li> </ul>	<b>Z</b>	Teacher uses ppt to explain the topic homogeneity with examples.
15 <sup>th</sup> June. Tuesday	8	<p><b>LO-</b> Solve worksheet questions based on the topic homogeneity.</p> <p><b>Learning outcome</b></p> <ul style="list-style-type: none"> <li>• Apply the concept by solving the questions.</li> </ul>	<b>Asy</b>	Instruction will be given to solve worksheet questions
16 <sup>th</sup> June. Wednesday	8	<p><b>LO-</b> Comprehend the reading passage based on the limitations of space travel.</p> <p><b>Learning outcome</b></p> <p>Read and interpret the information</p> <p>Answer the questions</p>	<b>Asy</b>	Instruction will be given in GC.

## YEAR 12 A/B – PHYSICS

**WEEK 42 (13<sup>th</sup> June to 17<sup>th</sup> June)**

**Topic: QUANTUM PHYSICS**

**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	
June 13 <sup>th</sup> Sunday	12 A	8	<p><b><u>Learning objectives:</u></b></p> <p>Express work function in terms of threshold frequency. And Solve the worksheet file questions</p> <p><b><u>Learning Outcomes :</u></b></p> <p>Recognize that a metal of higher work function releases photo electrons with less K.E for the same incident radiation.</p> <p>Realise that K. E can vary slightly from one metal itself. Use <math>hf = hf_0 + \frac{1}{2}mv^2</math> in numerical problems.</p>	Zoom	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives
June 14 <sup>th</sup> Monday	12 A	1,2	<p><b><u>Learning objectives:</u></b></p> <p>Explain how diffraction experiments provide evidence for the wave nature of electrons</p>	Zoom	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives
June 15 <sup>th</sup> Tuesday	12 B	6	<p>Be able to use the de- Broglie equation <math>\lambda = h/P</math></p> <p>Explain Davisson-Germer experiment</p> <p><b><u>Learning Outcomes :</u></b></p> <p>Be able to give examples of electron behaving as a wave and explain why this can occur only for waves</p> <p>Calculate the wavelength of electrons accelerated through a given p.d</p> <p>Realise the application of wave nature of electrons in Electron Microscopy.</p>		

## YEAR 12 A/ B – PHYSICS

**WEEK 42 (13<sup>th</sup> June to 17<sup>th</sup> June) - 3 lessons for both batches**

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

**Topic: 5.35 Polarisation**

**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	
13 <sup>th</sup> June Sunday - 12 B  13 <sup>th</sup> June Sunday - 12 A	6,7   3 (extra class)	<p><b>L.Objective</b> – Explain what is meant by <i>plane polarised light</i></p> <p><b>Learning outcomes-</b></p> <ul style="list-style-type: none"> <li>• Understand what is meant by <i>plane polarised light</i></li> <li>• Show an understanding that polarisation is a phenomenon associated with transverse waves.</li> <li>• <b>Plan experiments to demonstrate polarisation using a metal grill for microwave and polarising filter for light.</b></li> </ul>	<b>Zoom</b>	Teacher use simulations and video to explain the the polarisation,
16 <sup>th</sup> June Wednesda y - 12 B  15 <sup>th</sup> June Tuesday - 12 A	7   4	<p><b>L.Objective</b> – Discuss various applications of polarization.</p> <p><b>Learning outcome:</b></p> <ul style="list-style-type: none"> <li>• <b>Explain</b> how Polaroid sunglasses reduce glare.</li> <li>• <b>Explore</b> the role of polarimetry in finding the sugar concentration.</li> </ul>	<b>Zoom</b>	Teacher uses power point presentation and simulations to explain how polarisation helps to reduce glare so that students are able to attain the objectives.

## YEAR 13 A/ B –PHYSICS

**WEEK 42 (13<sup>th</sup> June to 17<sup>th</sup> June)**

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

**Topic:** - Research work on application of various topics covered during the course of study.

**Resources:** Student text book, interactive power point, and online

<b>Date</b>	<b>Class</b>	<b>Lesson</b>	<b>Lesson objectives &amp; Learning outcome</b>	<b>Mode of teaching</b>	
14 <sup>th</sup> June Monday	<b>13 A</b>	1, 2	<p><b>L.O</b> – Understand that misconceptions are beliefs which contradict accepted scientific theories</p> <p><b>Learning Outcome:</b> Explore on the structure of knowledge and Students’ misconceptions in Physics. Group work given to describe misconceptions from all areas of physics, from mechanics, thermodynamics, optics, to the theory of relativity, quantum-physics and astronomy.</p>	<b>Zoom</b>	Guidelines will be provided through Google classroom Discuss the students misconception in various areas of physics.
15 <sup>th</sup> June Tuesday	<b>13 A</b> <b>13 B</b>	5 6	<p><b>L.O</b> – Discuss misconceptions as barriers to understanding Science.</p> <p><b>Learning Outcome:</b> Students present their work on the research done on the misconceptions from all areas of physics.</p>	<b>Zoom</b>	Students present report or prepare a PowerPoint presentation.

## YEAR 13 A/B – PHYSICS

WEEK 42 (13<sup>th</sup> June to 17<sup>th</sup> June)

Work sent to the students through: Zoom Platform and Google classroom

Topic: **Resonance**

Date	Classes	Lessons	Lesson objectives & Learning outcome	Mode of teaching	
<p><b>June 14<sup>th</sup></b> Monday</p> <p>June 15<sup>th</sup> Tuesday</p>	<p><b>13 B</b></p> <p><b>13 A</b></p>	<p><b>6</b></p> <p><b>4</b></p>	<p><b>Learning objectives:</b> Discuss the passage on <i>The Millennium Bridge opened on 10 June 2000</i></p> <p><b>Learning Outcomes :</b> Discuss the answers to the questions on tuned mass dampers.</p>	<b>Zoom &amp; GC</b>	Students turn in the corrected answers at the end of the lesson.
<b>June 14<sup>th</sup></b> Monday	<b>13 B</b>	7	<p><b>Learning objectives:</b> Recognize what are coupled oscillators</p> <p>Extend the understanding to explore the Barton's pendulum.</p> <p><b>Learning Outcomes :</b></p> <p>Describe how coupled oscillators work. Watch a video on Barton's pendulum and describe how it works based on resonance.</p>	<b>Zoom</b>	Teacher uses power point presentation
June 16 <sup>th</sup> Wednesday	<b>13 B</b>	3	<p><b>Learning objectives:</b> Read the passage on <i>Two identical pendulums A and B connected by a rubber band</i></p> <p><b>Learning Outcomes :</b> Explain how As pendulum A oscillates, B starts oscillating at same T ,why pendulum B has maximum oscillation when pendulum A is stopped.</p>	Asynchronous	Students turn in the worksheet in GC