YEAR 9 A - F – PHYSICS

WEEK 41 (6th June to 10th June)

Work Sent to the students through Google classroom

Topic: 5c - Lenses

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

Date	Lesson	Lesson objectives & Learning outcomes	Mode of Teaching	
6th June Sunday **(Girls)** 6th June Sunday **(Boys)**	4 8	**Learning objectives:** Recall the important terms used in lens. Investigate the focus and focal length of converging lens **Learning Outcomes:** Be able to **s**tate the meaning of focal length, focus, and principal axis Describe the effects of convex lenses on parallel beams of light.	Zoom	Teacher uses power point presentation to familiarize the students with the terminology associated with the lens.
8th June Tuesday (Girls) 10th June Thursday (Boys)	3 5	**Learning objectives:** **C**onstruct ray diagrams to show the formation of images by converging lens. Relate the power of the lens to its focal length and shape. **Learning outcomes:** Draw ray diagrams to show the nature of the images formed by a converging lens when the object is at different distances from the lens.	Zoom	Teacher uses power point presentation or animation to show the formation of images
8th June Tuesday (Girls) 10th June Thursday (Boys)	4 6	**Learning objectives:** To solve the worksheet on lenses **Learning outcome:** Students will be able to reinforce the concepts learned in the previous lesson by solving the worksheet		Teacher will post the worksheet in GC

YEAR 10 A - F – PHYSICS

WEEK 41 (6th June to 10th June)

Topic: Particle Model

Lesson Objective: SP14 d Gas temperature and pressure
SP14 e Gas pressure and volume

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

Worksheets and Zoom link will be posted in google classroom

Date	Lesson	Lesson objectives & Learning outcome	Mode of Teaching	
6th June Sunday (Boys) **6th June** Sunday (girls)	1 2	**L.O:** Explain the effect of changing the temperature of a gas on the spread of its particles and hence on the pressure produced by a fixed mass of gas at constant volume (qualitative only) **Learning outcome:** • Interpret the temperature of a gas in terms of the motion of its molecules • Realise that higher the temperature, the faster the particles move in a gas. • Explain how the motion of the molecules in a gas is related both to its temperature and its pressure • Explain the relationship between the temperature of a gas and its pressure at constant volume (qualitative only)	**Zoom/ GM**	Teacher uses power point presentation that contains interactive questions
8th June Tuesday (Boys) **9th June** Wednesday (girls)	5 5	**L.O:** To investigate how the **temperature** of ice changes as it melts. **Learning outcome:** • Know the safety measures to do the experiment safely • Present results as a line graph and interpret it • Evaluate how well the experiment works.	**Zoom/ GM**	The teacher will provide the secondary data to plot the temperature and time graph

8th June Tuesday (Boys) **9th June** Wednesday (girls)	6 6	**L O :** To find specific heat capacity of water**.** **Learning outcome:** • Know the safety measures to do the experiment safely • Record the result by doing the experiment virtually • Identify the errors in the experiment	**Zoom/ GM**	Teacher gives instructions to record the required data using the online link .
10th June Thursday (Boys) **10th June** Thursday (girls)	4 1	**L.O** : Explain the effect of changing the volume of a gas on the rate at which its particles collide with the walls of its container and hence on the pressure produced by a fixed mass of gas at constant temperature **Learning outcome:** • Explain that gases can be compressed or expanded by pressure changes • Explain that the pressure of a gas produces a net force at right angles to any surface. • Use the equation $P_1 x V_1 = P_2 x V2$ to calculate pressure or volume for gases or fixed mass at constant temperature. • Explain why doing work on a gas can increase tits temperature, including a bicycle pump.	**GC**	Teacher uses power point presentation that contains interactive questions

YEAR 11 A - F – PHYSICS (GCSE)

WEEK 41 (6th June to 10th June)

Topic: Base units and derived units

Lesson Objective: Describe the concept base units and derived units.
Research on the topic Are Aliens Real?

Resources: Worksheets, interactive power point and online simulations

Date	Lesson	Topic	Mode of Teaching	
7th June Monday **(Boys)** 6th June Sunday **(Girls)**	4 3	**LO-** Describe the concept base units and derived units. **Learning Outcome-** Understand the concept base units and derived units with examples. Use and apply the concept.	**Z**	Teacher uses power point presentation to describe the concept base units and derived units.
8th June Tuesday – **(boys)** 7th June Monday – **(girls)**	1&2 1&2	**LO**- Solve worksheet questions based on the topic base units and derived units. **Learning outcome** Apply the concept by solving the questions.	**Asy**	Instruction will be given to solve worksheet questions
9th June Wednesday – **(boys)** 9th June Wednesday– **(girls)**	7 1	**LO-** Discuss worksheet questions based on the topic base and derived units. **Learning outcome** Apply the concept of base and derived units	**Z**	Teacher uses power point presentation to discuss the worksheet questions.
10th June Thursday – **(boys)** 10th June Thursday – **(girls)**	7 3	**LO-** Research on the topic Are Aliens Real? **Learning outcome** Collect the information by researching the topic.	**Asy**	Instruction will be given in the Google class room https://bbc.in/2VKbcVB Write a short note on your opinion and submit it in GC

YEAR 11 G/H – PHYSICS (IGCSE)

WEEK 41 (6th June to 10th June)

Topic: Base units and derived units

Lesson Objective: Describe the concept base units and derived units
Research on the topic Are Aliens Real?

Resources: Worksheets, interactive power point and online simulations

Date	Lesson	Learning objective and Success Criteria	Mode of teaching	
7th June Monday (boys &girls)	8	**LO-** Describe the concept base units and derived units. **Learning Outcome-** Understand the concept base units and derived units with examples. Use and apply the concept	Zoom/GM	Teacher uses power point presentation to describe the concept base units and derived units.
8th June Tuesday (boys & girls)	7 & 8	**LO-** Solve worksheet questions based on the topic base units and derived units. **Learning outcome** Apply the concept by solving the questions.	Asy	Instruction will be given to solve worksheet questions.
9th June Wednesday (boys & girls)	8	**LO-** Discuss worksheet questions based on the topic base units and derived units. **Learning outcome** Apply the concept of base units and derived units.	Zoom/GM	Teacher uses power point presentation to discuss the worksheet questions.
10th June Thursday (boys & girls)	2	**LO-** Research on the topic Are Aliens Real? **Learning outcome** Collect the information by researching the topic.	Asy	Instruction will be given in the Google class room https://bbc.in/2VKbcVB Write a short note on your opinion and submit it in GC

YEAR 12 A/B – PHYSICS

WEEK 41 (6th June to 10th 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 6th Sunday	12 A	8	**Learning objectives:** Describe and explain inverse square law of radiation. Define a quantum of energy as photon. **Learning Outcomes :** Define Intensity &Use I = P/A in numerical problems. Use the equation $\Phi=P/4\pi r^2$ &Use $I_1d_1^2 = I_2d_2^2$ in numerical problems Identify a photon as a quantum of energy of electromagnetic radiation. Use the equationE = hf and E = hc/ λ to calculate the photon energy. States that E = hf or E = hc/ λ connects both wave and particle theory.	Zoom	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives
June 7th Monday June 8th Tuesday	12 A 12B	1,2 6	**Learning objectives:** Describe and explain photoelectric effect. Construct and use Einstein's photoelectric equation. Relate K.E of photoelectrons and frequency of incident radiation Describe the variation of photocurrent with both positive and negative applied voltage.	Zoom	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives

			Learning Outcomes : Predict the effect of increasing the frequency of incident light or using different metals Predict the effect of varying incident intensity at constant frequency and varying incident frequency at constant intensity and explain why. Use the photo electric equation to calculate the velocity of photo electrons.		
June 10th Thursday	12 B	Lesson 3	**Learning objectives:** Describe the variation of photocurrent with both positive and negative applied voltage.(contd) Predict the effect of varying incident intensity at constant frequency and varying incident frequency at constant intensity and explain why.(contd) **Learning Outcomes :** Use the photo electric equation to calculate the velocity of photo electrons.(contd)		
June 10th Thursday	12B	Lesson 4	**Learning objectives:** Define stopping potential and relate stopping potential with maximum kinetic energy **Learning Outcomes :** Investigate photoelectric effect using photocell. Realise that greater the K.E greater the stopping potential. Use eV_s = K.E in numerical problems. Identify the features of stopping potential against frequency graph and interpret its gradient.		

YEAR 12 A/ B – PHYSICS

WEEK 41 (6th June to 10th June) - 3 lessons for both batches

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

Topic: 5.23 Diffraction

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	
6th June Sunday **- 12 B** 8th June Tuesday **- 12 A**	6 4	**L.Objective** – Describe the principle of a diffraction grating. Able to use $n\lambda = d\sin\theta$ for a diffraction grating **Learning outcomes-** • Describe the effect of passing coherent light through a grating. • Derive the grating equation $n\lambda = d \sin \theta$.	**Zoom**	Teacher use simulations and video to explain the the principle of diffraction grating
6th June Sunday **- 12 B** 10th June Thursday **- 12 A**	7 1	**L.Objective – *CORE PRACTICAL 8:* Determine the wavelength of light from a laser or other light source using a diffraction grating.** **Learning outcome:** • Plan an experiment with grating to determine the wavelength of light. • Explain what limits the number of orders of diffraction that will be visible • Realise that a grating can show the range of wavelengths in white light. • Identify the significance of diffraction experiments in establishing the wave model of light and other electromagnetic waves.	**Zoom**	Teacher uses power point presentation and simulations to explain the expt using diffraction grating and helps students to attain the objectives.
9th June Wednesday **- 12 B** 10th June Thursday **- 12 A**	3 2	**Learning Objective :** Complete the worksheet posted in GC **Learning outcome:** Students will be able to reinforce the concepts learned in the previous lesson by completing the worksheet.	**GC**	Instruction will be given to complete the worksheet.

HOMEWORK: Complete the exam style questions from worksheet.

YEAR 13A/ B –PHYSICS

WEEK 41 - 6th June to 10th 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

Date	Class	Lesson	Lesson objectives & Learning outcome	Mode of teaching	
8th June Tuesday	**13 A** **13 B**	5 6	**L.O –** Appreciate how Particle physics has revolutionized the way we look at the universe and made a significant impact on various fields of science **Learning Outcome:** Students present their work on the research done last week on how Particle physics technologies are applied in various fields: medical science; information technology and electronics; life sciences and engineering.	**Zoom**	Students present report or prepare a PowerPoint presentation.
7th June Monday 10th June Thursday	**13 A** **13 B**	1, 2 3,4	**L.O –** Understand that misconceptions are beliefs which contradict accepted scientific theories **Learning Outcome:** Explore on the Structure of knowledge and Students' misconceptions in Physics. Group work given to describes misconceptions from all areas of physics, from mechanics, thermodynamics, optics, to the theory of relativity, quantum-physics and astronomy.	**Zoom**	Guidelines will be provided through Google classroom Discuss the students misconception in various areas of physics

YEAR 13 A/B – PHYSICS

WEEK 41 (6th June to 10th June)

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

Topic: Resonance

Date	Class	Lesson	Lesson objectives & Learning outcome	Mode of teaching	
June 7th Monday June 8th Tuesday	**13 B** **13 A**	**6** **4**	**Learning objectives**: Describe, qualitatively, how damping affects resonance. **Learning Outcomes** : Explain how damping and the plastic deformation of ductile materials reduce the amplitude of oscillation	**Zoom**	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives
June 7th Monday June 10th Thursday	**13 B** 13 A	7 1	**Learning objectives**: Differentiate between light, heavy, critical and over damping **Learning Outcomes** : **Construct** graphs to differentiate between the light, heavy, critical and over damping	GC	Students turn in the graphs at the end of the lesson.
June 9th Wednesday June 10th Thursday	**13 B** 13 A	3 2	**Learning objectives**: Read the passage on *The Millennium Bridge opened on 10 June 2000* **Learning Outcomes** : Answer the questions to discuss how the tuned mass dampers reduce the amplitude of the oscillations of the bridge and explain why they must be very heavily damped.	Asynchronous	Students turn in the worksheet in GC