YEAR 9 GCSE (A- F) – PHYSICS

WEEK 43 (20th June to 24th June)

Work Sent to the students through Google classroom

Topic: 5c – Lenses & 5a - Applications of Total internal reflection.

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

Date	Lesson	Lesson objectives & Learning outcomes	Mode of Teaching	
20th June Sunday **(Girls)** 20th June Sunday **(Boys)**	4 8	**Learning objectives:** Complete the textbook questions page no.72 and 73 **Learning Outcomes:** Students will work out the questions	Zoom	Teacher discusses the answers from the textbook and worksheet
22nd June Tuesday (Girls) 24th June Thursday (Boys)	3 5	**Learning objectives:** Explain the applications of total internal reflection. Periscope, Optical fiber and binocular. **Learning outcomes:** Draw and explain how total internal reflection is used in Periscope, Optical fiber and binoculars.	Zoom	Teacher uses power point presentation to explain the topic applications of TIR with examples.
22nd June Tuesday (Girls) 24th June Thursday (Boys)	4 6	**Learning objectives:** To solve the worksheet on applications of total internal reflection. **Learning outcome:** Students will be able to reinforce the concepts learned in the previous lesson by solving the worksheet	GC	Teacher will post the worksheet in the Google classroom.

YEAR 10 (A- F) – PHYSICS

WEEK 43 (20th June to 24th June)
Topic: Particle Model
Lesson Objective: 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	
20th June Sunday (Boys) **20th June** Sunday (girls)	1 2	**L.O** : Explain the effect of changing volume of a gas on the rate at which its particles collide with the walls of its container and hence on pressure produced by a fixed mass of gas at constant temperature **Learning outcome:** • Explain that the pressure of a gas produces a net force at right angles to any surface. • Use the equation $P, x V, = P_2 x V2$ 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. •	**Zoom/ GM**	Teacher uses power point presentation that contains interactive questions
22nd June Tuesday (Boys) **23rd June** Wednesday (girls)	5 5	**L.O:** Discuss the textbook questions SP14e *page 194* **Learning outcome:** • Students will be able to reinforce the concepts learned by discussing the answers	**Zoom/ GM**	Teacher will discuss and reinforce concepts
22nd June Tuesday (Boys) **23rd June** Wednesday (girls)	6 6	**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
24th June Thursday (Boys) **24th June** Thursday	4 1	**Learning Objective :** Core practical completion **Learning outcome:** Students will be able to complete the questions in practical sheet	**Zoom/ GM**	Instruction will be given to complete worksheet

YEAR 11 GCSE (A- F) – PHYSICS

WEEK 43 (20th June to 24th June)
Topic: Linear and nonlinear graph

Lesson Objective: Understand the importance of the graph

Date	Lesson	Topic	Mode of Teaching	
21st June Mon**(B)** 20th June Sunday**(G)**	4 3	**LO-** Analyse and interpret linear graph **Learning Outcome-** • Determine the slope of a line. • Identify a linear function using the slope and *y*-intercept. • Interpret a linear graph	Z	Teacher uses power point presentation to describe linear graph.
22nd June. Tuesday**(B)** 21st June Monday **(G)**	1 1	**LO**- Solve worksheet questions **Learning outcome** • Apply the knowledge of linear graph and solve the questions.	Asy	Instruction will be given to solve worksheet questions.
22nd June. Tuesday – **(boys)** 21st June Monday – **(girls)**	2 2	**LO**- Analyse and interpret the non-linear graph. **Learning outcome** • Find the gradient of a curve graph and the area under a non linear graph • Plot a linear graph of a curved graph and predict the slope of this graph	Z	Teacher uses power point presentation to describe non-linear graph.
23rd June. Wednesday – **(girls)**	1	**LO-** Explain how to draw graph **Learning outcome** • Read and understand how to draw graph	Asy	Instruction will be given to solve worksheet questions.
24th June. Thursday – (**Boys)** 24th June. Thursday – **(Girls)**	7 3	**LO-** Solve worksheet questions **Learning outcome** Apply the knowledge of non-linear graph and solve the questions.	Asy	Instruction will be given to solve worksheet questions.

YEAR 11 G/H IGCSE – PHYSICS

WEEK 43 (20th June to 24th June)
Topic: Linear and nonlinear graph

Lesson Objective: Understand the importance of the graph
Resources: Worksheets, interactive power point and online simulations

Date	Lesson	Topic	Mode of Teaching	
21st June Mon	8	**LO-** Analyse and interpret linear graph **Learning Outcome-** • Determine the slope of a line. • Identify a linear function using the slope and *y*-intercept. • Interpret a linear graph	Z	Teacher uses power point presentation to describe linear graph.
22nd June. Tuesday	7	**LO**- Solve worksheet questions **Learning outcome** Apply the knowledge of linear graph and solve the questions.	Asy	Instruction will be given to solve worksheet questions.
22nd June. Tuesday	8	**LO**- Analyse and interpret the non-linear graph. **Learning outcome** • Find the gradient of a curve graph and the area under a non linear graph • Plot a linear graph of a curved graph and predict the slope of this graph	Z	Teacher uses power point presentation to describe non-linear graph.
24th June. Thursday	8	**LO-** Solve worksheet questions **Learning outcome** Apply the knowledge of non-linear graph and solve the questions.	Asy	Instruction will be given to solve worksheet questions.

YEAR 12 A/B – PHYSICS

WEEK 43 (20th June to 24th 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 20th Sunday June 22nd Tuesday	12 A 12 B	8 6	**Learning objectives:** Understand atomic line spectra in terms of energy level transitions **Learning Outcomes :** Recap the various energy levels in an atomic structure. Recognize what is excitation and de-excitation of electrons Discuss the energy changes that are involved in excitation and de-excitation of electrons.	Zoom	Teacher uses power point presentation and attain the objectives
June 21st Monday June 24th Thursday	12 A 12 B	1 3	**Learning objectives:** ● calculate the frequency of radiation emitted or absorbed in an electron energy transition. **Learning Outcomes :** Use the equation $E = hc$ to calculate the wavelengths associated with particular energy jumps and link this to the idea of absorption and emission of radiation.	Zoom	Teacher uses power point presentation and attain the objectives
June 21st Monday June 24th Thursday	12 A 12B	2 4	**Learning objectives:** Complete the worksheet file questions based on all objectives **Learning Outcomes :** Solve problems involving the calculation of wavelengths for excitation and de-excitation inside the hydrogen atom Extend the learning by researching the use of spectroscopy in astronomy, in the classification of stars or the search for molecules of life, for example.	GC	Students uses GC to turn in their completed work

YEAR 12 A/ B – PHYSICS

WEEK 43 (20th June to 24th 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	
23rd June Wednesday **- 12 B** 22nd June Tuesday **- 12 A**	7 4	**L.Objective** – Describe how polarisation can be used with models to investigate stresses in structure. **Learning outcomes-** • Investigate structural stresses. • Expalin the use of crossed polaroids to observe stress concentrations. • Explain the benefits of using polarisation to analyse stress concentrations in engineering models.	**Zoom**	Teacher use simulations and video to explain the Stress analysis using polaroids.
20th June Sunday **- 12 B** 24th June Thursday **- 12 A**	6,7 1,2	**L.Objective –** Students research on the uses of polarisers. (group work) **Learning outcome:** • Students research on the uses of polarisers. (group work) • Students present their work on the research done on various applications of polarisation – sun glasses, polarisation by reflection and refraction, polarisation by chemical solutions, sound wave polariser	**Zoom**	Students present report or prepare a PowerPoint presentation on the various applications of polarisation.

YEAR 13A/ B –PHYSICS

WEEK 43 (20th June to 24th 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	
22nd June Tuesday	**13 A** **13 B**	5 6	**L.Objective –** Appreciate the use of t**ransistors** as one of the basic building blocks of modern electronics. **Learning Outcome:** Explore on transistors, the semiconductor device used for amplifying, controlling, and generating electrical signals. Transistors are the active components of integrated circuits, or "microchips," which often contain billions of these minuscule devices etched into their shiny surfaces.	**Zoom**	Group work given to research on the working of transistors.
21st June Monday 24th June Thursday	**13 A** **13 B**	1, 2 3,4	**L.Objective –** Students research on the working and uses of transistors. (group work) **Learning Outcome:** • Students present their work on the research done on working, types and uses of transistors as amplifiers, FET, memory chips etc	**Zoom**	Students present report or prepare a PowerPoint presentation on their research work to the class.

YEAR 13 A/B – PHYSICS

WEEK 43 (20th June to 24th June)

Topic: Applications of elasticity, viscosity and phase changes

Date	Class	Lesson	Lesson objectives & Learning outcome	Mode of teaching	
June 21st Monday June 22nd Tuesday	**13 B** **13 A**	**6** **4**	**Learning objectives**: Discuss how the topics on elasticity, viscosity and phase changes come together in any popular cooking technique **Learning Outcomes** : Realise how science makes it possible to make delicious Cakes, cookies, pies, and bread. Identify the role of each ingredient and relate to the scientific concepts.	**Zoom & GC**	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives.
June 21st Monday June 24th Thursday	**13 B** 13 A	7 1	**Learning objectives**: Write a recipe in which at least ONE cooking techniques is there; where the physics principles are used. **Learning Outcomes** : Be able to develop independent learning and critical thinking skills by group discussion	**Zoom& GC**	Students uses GC to turn in their work
June 16th Wednesday June 24th Thursday	**13 B** 13 A	3 2	**Learning objectives**: Practice to become an experimental scientist in your very own laboratory —kitchen **Learning Outcomes** : Conduct a cooking session at home .Record your video explaining physics behind it.	Asynchronous	Students turn in the video*(Take care and be safe…have an adult supervising you)* in their GC