YEAR 9 (A- F) – PHYSICS

WEEK 28 (7th March to 11th March)

Work Sent to the students through Google classroom

Topic: SP 5e – Electromagnetic Spectrum

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

Date	Lesson	Lesson objectives & Learning outcomes	Mode of Teaching	
7th March Sunday **(Girls)** 7th March Sunday **(Boys)**	4 8	**Learning objective:** Explainthat the electromagnetic spectrum is continuous from radio waves to gamma rays and that the radiations within it can be grouped in order of decreasing wavelength and increasing frequency. **Learning Outcomes:** Recall the groups of waves in the electromagnetic spectrum in order. Identify the different regions of the electromagnetic spectrum in terms of wavelength or frequency. Describe how the waves in the electromagnetic spectrum are grouped.	Zoom	Teacher uses power point presentation that contains interactive questions.
9th March Tuesday **(Girls)** 11th March Thursday **(Boys)**	3 5	**Learning objective:** Explain the absorption of electromagnetic radiation by the atmosphere. **Learning Outcomes:** Explain why Astronomers need different kinds of telescope to study different wavelengths. Describe some differences in the ways that different parts of the electromagnetic spectrum are absorbed and transmitted.	Zoom	Teacher uses power point presentation that contains interactive questions.
9th March Tuesday **(Girls)** 11th March Thursday **(Boys)**	4 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 in GC to complete the worksheet.

YEAR 10 A-F - PHYSICS

WEEK 28 (7th March to 11th March)

Topic: Stopping distance

Lesson Objective: SP 2g Stopping distances

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	
7th March Sunday (Boys) **7th March** Sunday (girls)	1 2	**L.O:** Recall that the stopping distance of a vehicle is made up of the sum of the thinking distance and the braking distance. Explain that the stopping distance of a vehicle is affected by a range of factors Describe the factors affecting a driver's reaction time including drugs and distractions **Learning outcome:** • Describe the link between stopping distance, thinking distance and braking distance. • Describe how different factors affect stopping distances.	**Zoom/ GM**	Teacher uses a ppt presentation to discuss stopping distance and various factors affecting it. Use a graph to compare how thinking distance and braking distance is related to speed
9th March Tuesday (Boys) **10th March** Wednesday (girls)	5 5	**L.O:** Revision **Learning outcome:** Students revises the velocity time graph	**Zoom/ GM**	Teacher provides a worksheet to analyse velocity time graph to describe the motion and to calculate acceleration and distance travelled
9th March Tuesday (Boys) **10th March** Wednesday (girls)	6 6	**L.O:** Revision **Learning outcome:** Students will revise acceleration and work out numerical problems	**GC**	Teacher provides a worksheet to work out numerical using the equation $v = u + at$ $v^2 - u^2 = 2ax$
11th March Thursday (Boys) **11th March** Thursday (Girls)	4 1	**L.O** : Assessment **Learning outcome:** The students will be assessed on the topics • 1c- Acceleration, 1d- velocity-time graph 2f- Momentum, 2i-Crash hazards	**Zoom/ GM**	Teacher will post the question paper in the google classroom and students will turn in their scanned answer sheets.

YEAR 11 (A- F) – PHYSICS (GCSE)

WEEK 28 (7th March to 11th March)

Work Sent to the students through Google classroom
Topic:– Revision on paper 2
Resources: Text book, Worksheets, GCSE science free lesson video& power points.

Date	Lesson	Topic	Mode of Teaching	
7th March Sunday **(Girls)** 8th March Monday **(boys)**	3 4	**Learning Objective :** Revise paper 1 topics Forces and motion and waves **Learning outcome:** Recall the contents by using flash cards or mind map Answer different leveled exam style questions and do self evaluation.	**Zoom**	Teacher uses power point presentation that contains interactive questions
8th March Monday (Girls) 9th March Tuesday (Boys	1 1	**Learning Objective :** Revise paper 2 topics Electricity **Learning outcome:** Recall the contents by using flash cards or mind map Answer different leveled exam style questions and do self evaluation.	**Zoom**	Teacher uses a handout that contains productive questions
8th March Monday (Girls) 9th March Tuesday (Boys	2 2	**Learning Objective :** Revise paper 2 topics Electromagnetism **Learning outcome:** Recall the contents by using flash cards or mind map Answer different leveled exam style questions and do self evaluation.	**GC**	Teacher uses power point presentation that contains interactive questions
10thMarch Wednesday – **(girls)** 10thMarch Wednesday – **(boys)**	1 7	**Learning Objective :** Revise paper 2 topics Particle theory **Learning outcome:** Recall the contents by using flash cards or mind map Answer different leveled exam style questions and do self evaluation.	**Zoom**	Teacher uses worksheet that contains productive questions
11thMarch Thursday – **(girls)**	3	**Learning Objective :** Revise paper 1 topics Forces and its effects	**Zoom**	Teacher uses worksheet that contains

11th march Thursday – **(boys)**	7	**Learning outcome:** Recall the contents by using flash cards or mind map Answer different leveled exam style questions and do self evaluation.		productive questions

YEAR 11 G/H (IGCSE) – PHYSICS

WEEK 28 (7th March to 11th March)

Work sent to the students through Google classroom

Topic: Revision

Lesson Objective: Revise the concepts forces and motion, electricity, radioactivity and particles

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

Date	Lesson	Learning objective and Success Criteria	Mode of teaching	
8thMarch Monday (boys &girls)	8	**LO-** Revise paper 1 topics Forces and motion, electricity **Learning Outcome-** • Reinforce the concepts forces and motion , electricity • Apply the concept by solving the questions.	Zoom/GM	Teacher uses power point presentation that contains application level questions.
9thMarch Tuesday (boys & girls)	7	**LO**- Revise paper 1 topics Radioactivity and particles **Learning outcome** • Reinforce the concept radioactivity and particles • Apply the concepts.	Zoom/GM	Teacher uses power point presentation that contains interactive questions.
9thMarch Tuesday (boys & girls)	8	**LO-** Reinforce the concepts forces and motion, electricity, waves, radioactivity and particles(paper 1 topics) **Learning outcome** • Reinforce the concepts forces and motion, electricity, waves, radioactivity and particles(paper 1 topics) • Solve the questions.	GC	Instruction will be given to solve different level exam style questions

10th March Wednesday (boys & girls)	8	**LO-** Revise paper 2 topics Forces and motion , electricity **Learning Outcome-** • Recall the concepts forces and motion , electricity. • Apply the concept by solving the questions.	Zoom/GM	Teacher uses power point presentation that contains different level exam style questions.
11th March Thursday (boys& girls)	2	**LO-** Revise paper 2 topics Radioactivity and particles **Learning Outcome-** • Recall the concepts radioactivity and particles • Apply the concept by solving the questions	Zoom/GM	Teacher uses power point presentation that contains different level exam style questions.

YEAR 12 A/ B –PHYSICS

WEEK 28 (7th March to 11th March)- (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	
March 7th Sunday March 9th Tuesday	12 A 12 B	8 6	**Learning objectives:** Plan and carry out an investigation on refraction in a glass block **Learning Outcomes :** Create an instruction set to investigate refraction of light through a glass block Use an online link to complete the investigation Collect data and submit	GC	Teacher uses GC platform to collaborate and attain the objectives https://faraday.physics.utoronto.ca/PVB/Harrison/Flash/Optics/Refraction/Refraction.html

March 8th Monday March 11th Thursday	12 A 12B	1 3	**<u>Learning objectives</u>:** Analyse the data collected in investigation on refraction in a glass block **<u>Learning Outcomes :</u>** Construct the graph of sin I against sin r Identifies the relation between the sin I and sin r Be able to predict the path changes for light travelling across the boundaries by analysing angles and speeds	Zoom	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives
March 8th Monday March 11th Thursday	12 A 12B	2 4	**<u>Learning objectives:</u>** Find the relationship between the angle of incidence and the angle of refraction for light crossing boundaries from one transparent material to another. **<u>Learning Outcomes:</u>** Quantify the relationship using formula • $n_1 \sin \theta_1 = n_2 \sin \theta_2$ solve numerical questions using Snell's law	Zoom	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives Lesson carried over.

YEAR 12 A/ B – PHYSICS

WEEK 28 (7th March to 11th March) - 3 lessons for both batches

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

Topic: 5.21 Wave phase and superposition

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	
7th March Sunday **- 12 B** 9th March Tuesday **- 12 A**	6 4	**L.O –** Describe an experiment to determine the speed of sound in air. **CORE PRACTICAL 6:** ***Determine the speed of sound in air using a 2-beam oscilloscope, signal generator, speaker and microphone.*** **Learning outcomes-** • Design an experiment to investigate the speed of sound in air. • Identify the appropriate apparatus. • Plan the procedure. • State how the results will be used. • Consider the uncertainties involved.	**Zoom**	*(Carried forward from last week)* Teacher explains the use of oscilloscope to measure the time period of a wave. Breakout session in groups to plan the experiment to measure the speed of sound in air.
7th March Sunday **- 12 B** 11th March Thursday **- 12 A**	7 1	**L.Objective -** Explain and use the concepts of wave fronts, and phase. **Learning outcome:** • Understand what is meant by the terms wavefront, phase and phase difference. • Identify the different types of waves - circular and plane, continuous, trains and pulses. • Draw and interpret wave front diagrams - straight, planar and circular. • Differentiate between wave fronts and rays • Convert degrees to radians and vice versa. • Realise that 2π radian is equal to 360^0. • Identify particles in phase and out of phase during a wave motion.	**Zoom**	Teacher explains the concept of phase angle and phase difference using simulation. Students work out the phase difference/phase
10th March Wednesday **- 12 B** 11th March Thursday **- 12 A**	3 2	**L.Objective –** Understand the terms interference and coherence. **Learning outcome:** • State the principle of superposition. • Understand that total displacement is the sum when the waves are in phase and it is the difference between values when they are out of phase.	**Zoom**	Teacher explains the concept of interference using simulation/video of ripple tank. Teacher use a diagram showing two sets of overlapping semi-

		• Predict the net displacement at a point when two waves cross using a displacement graph. • Define coherent sources - discuss what would happen if the phase difference is not zero and then if the phase difference changes in order to understand the term coherence.		circular wavefronts and the principle of superposition to understand the formation of the interference pattern.

HOMEWORK: Complete TB ques: Pg 156

YEAR 13 A/ B –PHYSICS

WEEK 28 (7th March to 11th March) - 3 lessons for both batches

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

Topic: - Revision: Topic 2 –Mechanics and Topic 5 - Waves

Resources: Student text book, interactive power point, Board works, worksheet file and online videos/animations

Date	Lesson	Lesson objectives & Learning outcome	Mode of teaching	
8thMarch Monday **- 13 A** 9th March Tuesday **- 13 B**	1 6	**Learning Objective:** Revise the topics in Mechanics. **Learning Outcome:** • Interpret d-t, v-t and a-t graphs and make calculations fron these graphs • Understand the graphical representation of accelerated motion. • Apply the pinciple of moments to solve numericals • Recall Newton's laws of motion and use them to explain the acceleration of objects.	**Zoom**	Teacher discuss with students and uses past papers to reinforce the concept of motion graphs, moments and Newton's laws.
8th March Monday **- 13 A** 11thMarch Thursday **- 13 B**	2 3	**Learning Objective:** Revise the topics:- Kinematics equations, projectile, work,energy and power in Mechanics. **Learning outcomes-** • Recall and use kinematic equations to calculate unknown variables. • Combine the horizontal and vertical motion to calculate the movements of projectiles. • Calculate the energy transferred as work done and power of an energy transfer.	**Zoom**	Teacher explains the concepts and students use past papers to reinforce the concept of Kinematics equations, projectile, work,energy and power

9th March Tuesday **- 13 A** 11thMarch Thursday **- 13 B**	5 4	**Learning Objective:** Revise the topics:- phase diffeence and path difference, superposition, coherent sources. **Learning outcomes-** • Explain and use the principle of Superposition. • Show an understanding of experiments that demonstrate two-source interference using water ripples, light and microwaves	**Zoom**	Teacher uses power point presentation to explains the concepts and students use past papers to reinforce the concepts learnt.

HOMEWORK: Worksheet file – exam style questions

YEAR 13A/ B –PHYSICS

WEEK 28 (7th March to 11th March) - (3 lessons)

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

Topic: - Revision on Oscillations, Solid and Fluid mechanics and Quantum Physics

Date	Class	Lesson	Lesson objectives & Learning outcome	Mode of teaching	
March 8th Monday **March 9th Tuesday**	**13 B** **13A**	**6** **4**	**Learning objectives**: Revise SHM **Learning Outcomes** : Recall the contents by using flash cards or mind map Answer different levelled exam style questions and do self evaluation	**Zoom**	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives.
March 8th Monday **March 11th Thursday**	**13 B** **13A**	**7** **1**	**Learning objectives**: Revise solid materials Fluid dynamics **Learning Outcomes** : Recall the contents by using flash cards or mind map Answer different leveled exam style questions and do self evaluation	**zoom**	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives.

March 10th Wednesday **March 11th Thursday**	**13 B** **13 A**	**3** **2**	**Learning objectives**: Revise Quantum Physics **Learning Outcomes** : Recall the contents by using flash cards or mind map Answer different leveled exam style questions and do self evaluation.	**zoom**	Teacher uses GC and breakout sessions for students to collaborate and attain the objectives.