DOYEN PUBLISHERS

HIGH SCHOOL SCHEMES OF WORK

PHYSICS FORM 3

(Term 1, 2 & 3)

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PHYSICS FORM 3 SCHEMES OF WORK – TERM 1

WEEK	LESSON	TOPIC	SUB - TOPIC	OBJECTIVES	LEARNING/TEACHING ACTIVITIES	LEARNING/TEACHING RESOURCES	REFERENCES	REMARKS
1	1-3	LINEAR MOTION	Introduction of linear motion	By the end of the lesson, the learner should be able to: (i) Define distance, displacement, speed, velocity and acceleration	• Defining distance, speed, displacement, velocity and acceleration	• Charts on motion • Trolleys • Inclined planes	• Comprehensive secondary physics students book 3 pages 1 • Comprehensive secondary physics teachers book 3 pages 1-3 • Secondary physics KLB students book 2 page 1-7 • Physics made easier vol. 2 pages 1-2 • Secondary physics (M.N Patel) pages 5-8	
	4-5	LINEAR MOTION	Determining velocity	By the end of the lesson, the learner should be able to: (i) Describe experiments to determine velocity	• Describing experiments on velocity	• Trolleys • Stop watches • Graph paper • Ticker timer	• Comprehensive secondary physics students book 3 pages 2-3 • Comprehensive secondary physics teachers book 3 pages 1-3 • Secondary physics KLB students book 3 page 4-6 • Physics made easier vol. 2 pages 2	

							• Secondary physics (M.N Patel) pages 9-14	
2	**1-2**	LINEAR MOTION	Motion time graphs	By the end of the lesson, the learner should be able to (i) Plot and explain motion time graphs	• Plotting and interpreting motion-time graphs	• Appropriate charts on velocity time and distance graphs • Graph paper • Data showing different distance, velocity and time	• Comprehensive secondary physics students book 3 pages 5-9 • Comprehensive secondary physics teachers book 3 pages 8-18 • Secondary physics KLB students book 3 page 4-6 • Physics made easier vol. 2 pages 3-5 • Secondary physics (M.N Patel) pages 21-25	
	3-4	LINEAR MOTION	Measuring speed, velocity and acceleration	By the end of the lesson, the learner should be able to: (i) Describe experiments to measure speed, velocity and acceleration	• Describing experiments to measure speed, velocity and acceleration • Solving problems	• Trolleys • Tapes • Ticker timer • Graphs	• Comprehensive secondary physics students book 3 pages 2-3 • Comprehensive secondary physics teachers book 3 pages 1-3 • Secondary physics KLB students book 3 page 18-26 • Physics made easier vol. 2 pages 1-5 • Secondary physics (M.N Patel) pages 9-14	

	5	LINEAR MOTION	Acceleration	By the end of the lesson, the learner should be able to: (i) Describe acceleration	• Describing acceleration • Problem solving	• Charts on acceleration • Graphs • Data on velocity and time	• Comprehensive secondary physics students book 3 pages 2-3 • Comprehensive secondary physics teachers book 3 pages 1-3 • Secondary physics KLB students book 3 page 7-8 • Physics made easier vol. 2 pages 1-5 • Secondary physics (M.N Patel) pages 7-8	
3	**1-2**	LINEAR MOTION	Measuring speed, velocity and acceleration	By the end of the lesson, the learner should be able to: (i) Describe experiments to determine and measure speed, velocity and acceleration	• Describing experiments to determine and measure speed velocity & acceleration	• Graphs • Ticker timer • Tapes • Graphs	• Comprehensive secondary physics students book 3 pages 2-3 • Comprehensive secondary physics teachers book 3 pages 1-3 • Secondary physics KLB students book 3 page 18-25 • Physics made easier vol. 2 pages 1-5 • Secondary physics (M.N Patel) pages 9-14	
	3-4	LINEAR MOTION	Equations of motion	By the end of the lesson, the learner should be able to: (i) Derive and apply the	• Stating the equations of motion	• Graphs • Worked examples on motion	• Comprehensive secondary physics students book 3 pages 7-9	

				equations of uniform acceleration	• Deriving the equations of motion • Applying the equations of motion		• Comprehensive secondary physics teachers book 3 pages3-5 • Secondary physics KLB students book 3 page 26-29 • Physics made easier vol. 2 pages 6-7 • Secondary physics (M.N Patel) pages 25-27	
	5	LINEAR MOTION	Revision	By the end of the lesson, the learner should be able to: (i) Solve problems involving uniform acceleration	• Questions and answers • Exercises	• Test paper • Marking scheme	• Comprehensive secondary physics students book 3 pages 9-10 • Comprehensive secondary physics teachers book 3 pages4-5 • Secondary physics KLB students book 3 page 37-39 • Physics made easier vol. 2 pages 12-14 • Secondary physics (M.N Patel) pages 30-36	
4	**1-5**	LINEAR MOTION	Acceleration due to gravity	By the end of the lesson, the learner should be able to; (i) Determine acceleration due to gravity by free-fall and simple pendulum	• Determining acceleration by tree-fall and pendulum method	• Pendulum bob • String • Stop watches • Ticker-timer	• Comprehensive secondary physics students book 3 pages 3-5 • Comprehensive secondary physics teachers book 3 pages1-3	

							• Secondary physics KLB students book 3 page 29-36 • Physics made easier vol. 2 pages 7-10 • Secondary physics (M.N Patel) pages 15-21	
5	**1-2**	REFRACTION OF LIGHT	The meaning of refraction	By the end of the lesson, the learner should be able to (i) Describe simple experiments to illustrate refraction of light	• Experiments demonstrating refraction of light	• Beakers • Water • Stick or glass rod • Basins • Coins • Glass blocks • Pin	• Comprehensive secondary physics students book 3 pages 11-12 • Comprehensive secondary physics teachers book 3 pages6-9 • Secondary physics KLB students book 3 page 41-46 • Physics made easier vol. 2 pages 15-16 • Secondary physics (M.N Patel) pages 37-40	
	3-5	REFRACTION OF LIGHT	Laws of refraction	By the end of the lesson, the learner should be able to: (i) State the laws of refraction and define refractive index	• Discovering Snell's law of refraction through experiments • Defining refractive index • Stating the laws of refraction	• Glass blocks • Pins • Soft board • Plain paper • Geometric set	• Comprehensive secondary physics students book 3 pages 12-14 • Comprehensive secondary physics teachers book 3 pages6-9 • Secondary physics KLB students book 3 page 47-61	

							• Physics made easier vol. 2 pages 16-18 • Secondary physics (M.N Patel) pages 40-42	
6	**1-2**	REFRACTION OF LIGHT	Refractive index	By the end of the lesson, the learner should be able to: (i) Determine the refractive index of a given substance	• Experiments to determine the refractive index of rates and glass by real and apparent depth method	• Water • Pins • Plain papers • Coins • Beakers	• Comprehensive secondary physics students book 3 pages 14-15 • Comprehensive secondary physics teachers book 3 pages6-9 • Secondary physics KLB students book 3 page 61-68 • Physics made easier vol. 2 pages 17-19 • Secondary physics (M.N Patel) pages 42-45	
	3-5	REFRACTION OF LIGHT	• Total material reflection and its effect • Critical angle	By the end of the lesson, the learner should be able to (i) Describe an experiment to explain the total internal reflection and its effects (ii) Define critical angle	• Experiments to explain the total internal reflection and its effects • Defining critical angle • Observations and discussions on critical angle • Total internal reflection	• Glass blocks • Soft boards • Pins • Geometrical set • Source of light	• Comprehensive secondary physics students book 3 pages 16-17 • Comprehensive secondary physics teachers book 3 pages6-9 • Secondary physics KLB students book 3 page 68-76 • Physics made easier vol. 2 pages 19-20 • Secondary physics (M.N Patel) pages 46-49	

7	**1-3**	REFRACTION OF LIGHT	Application of a total internal reflection in a prism periscope, optical fibre	By the end of the lesson, the learner should be able to: (i) Explain the working of a prisms and optical fibres among other applications	• Making a periscope • Discussion on working of an optical fibre	• Charts on total internal reflection and applications	• Comprehensive secondary physics students book 3 pages 18-19 • Comprehensive secondary physics teachers book 3 pages6-9 • Secondary physics KLB students book 3 page 76-79 • Physics made easier vol. 2 pages 20-23 • Secondary physics (M.N Patel) pages 49-52	
	4-5	REFRACTION OF LIGHT	Dispersion of white light and recombination of colors of the spectrum	By the end of the lesson, the learner should be able to: (i) Describe an experiment to illustrate the dispersion of light	• Experiment on dispersion of light using glass prisms	• Triangular glass prisms • Source of light • Screen	• Comprehensive secondary physics students book 3 pages 19-20 • Comprehensive secondary physics teachers book 3 pages6-9 • Secondary physics KLB students book 3 page 79-89 • Physics made easier vol. 2 pages 21-22 • Secondary physics (M.N Patel) pages 45-46	
8	**1-5**	REFRACTION OF LIGHT	Problems of refractive index and critical angle	By the end of the lesson, the learner should be able to:	• Discussions and problem solving in critical angle using the formulae sin	Review questions Past exams	• Comprehensive secondary physics students book 3 pages 21-22	

				(i) Solve problems involving the refractive index and critical angle	C=^{i}/n and n=sin ^{i}/sin r	Examples in the topic	• Comprehensive secondary physics teachers book 3 pages6-9 • Secondary physics KLB students book 3 page 82-86 • Physics made easier vol. 2 pages 24-25 • Secondary physics (M.N Patel) pages 53-55	
9	**1-5**	NEWTON'S LAW'S OF MOTION	Newton's Laws of motion	By the end of the lesson, the learner should be able to (i) State the Newton's laws of motion (ii) State and explain the significance of a Newton's laws of motion (iii) Describe simple experiments to illustrate inertion	• Discussion on Newton's laws • Experiments to illustrate Newton's laws of motion	• Inclined plane • Trolley • Marbles • Spring balances	• Comprehensive secondary physics students book 3 pages 23-27 • Comprehensive secondary physics teachers book 3 pages 13-17 • Secondary physics KLB students book 3 page 87-102 • Physics made easier vol. 2 pages 26-27 • Secondary physics (M.N Patel) pages 56-65	
10	**1-3**	NEWTON'S LAW OF MOTION	• Conservation of linear momentum • Elastic collision • Inelastic collision	By the end of the lesson, the leaner should be able to: (i) State the law of conservation of momentum	• Discussions of the laws of conservation of linear momentum • Determining recoil velocity	• Marbles • Trolleys • Meter rules • Stop watches • Plasticine	• Comprehensive secondary physics students book 3 pages 28-30 • Comprehensive secondary physics teachers book 3 pages 13-17	

			• Recoil velocity	(ii) Define elastic and inelastic collisions (iii) Determine recoil velocity			• Secondary physics KLB students book 3 page 103-108 • Physics made easier vol. 2 pages 28-30 • Secondary physics (M.N Patel) pages 66-72	
	4-5	NEWTON'S LAW OF MOTION	Friction	By the end of the lesson, the learner should be able to: (i) Define friction (ii) State and explain types of frictions (iii) Describe and experiment to illustrate friction and state the applications of friction (iv) State laws of friction	• Defining friction • Stating and explaining types of frictions • Describing an experiment to illustrate friction • Stating the applications of the frictions • Stating laws of friction	• Block of wood • Spring balance • Pulley • Flat surface	• Comprehensive secondary physics students book 3 pages 28-39 • Comprehensive secondary physics teachers book 3 pages 13-17 • Secondary physics KLB students book 3 page 109-115 • Physics made easier vol. 2 pages 30-31 • Secondary physics (M.N Patel) pages 73-76	
11	**1-5**	NEWTON'S LAWS OF MOTION	Viscosity	By the end of the lesson, the leaner should be able to: (i) Define viscosity (ii) Explain the concept of terminal velocity	• Distinguishing viscous from- non-viscous liquids • Defining viscous liquids • Defining and explaining terminal viscosity	• Glycerin • Paraffin • Water • Ball bearings • Stat watches • Meter rule • Measuring cylinders	• Comprehensive secondary physics students book 3 pages33 • Comprehensive secondary physics teachers book 3 pages 13-17 • Secondary physics KLB students book 3 page 115-119 • Physics made easier vol. 2 pages 31-33	

							• Secondary physics (M.N Patel) pages 76-78	
12	**1-5**	NEWTON'S LAWS OF MOTION	Revision	By the end of the lesson, the learner should be able to: (i) Solve problems on Newton's law of motion and law of conservation of linear momentum	• Discussions and problem solving	• Quizzes • Assignment • Review questions	• Comprehensive secondary physics students book 3 pages34-35 • Comprehensive secondary physics teachers book 3 pages 17-18 • Secondary physics KLB students book 3 page 119-120 • Physics made easier vol. 2 pages 34-38 • Secondary physics (M.N Patel) pages 78-82	
END OF TERM ONE EXAMINATION								

PHYSICS FORM 3 SCHEMES OF WORK – TERM 2

WEEK	LESSON	TOPIC	SUB - TOPIC	OBJECTIVES	LEARNING/TEACHING ACTIVITIES	LEARNING/TEACHING RESOURCES	REFERENCES	REMARKS
2	1-3	ENERGY, WORK, POWER AND MACHINES	Energy	By the end of the lesson, the learner should be able to (i) Define energy (ii) Describe various forms of energy	• Defining energy • Stating the forms of energy • Identifying and describing energy transformation	• Chart on the forms of energy and transformation	• Comprehensive secondary physics students book 3 pages34-35 • Comprehensive secondary physics teachers book 3 pages 17-18 • Secondary physics KLB students book 3 page 121,122-125 • Physics made easier vol. 2 pages 39 • Secondary physics (M.N Patel) pages 83-86	
	4-5	ENERGY, WORK, POWER AND MACHINES	Sources of energy • Renewable • Non-renewable	By the end of the lesson, the learner should be able to: (i) Describe renewable and non-renewable sources of energy	• Discussion on the sources of energy • Descriptions of renewable and non-renewable sources of energy	Chart on the sources of energy	• Comprehensive secondary physics students book 3 pages41 • Comprehensive secondary physics teachers book 3 pages 19-21 • Secondary physics KLB students book 3 page 121,122-125 • Physics made easier vol. 2 pages 39	

							• Secondary physics (M.N Patel) pages 83,85-86	
3	**1-3**	ENERGY, WORK, POWER AND MACHINES	The law of conservation of energy	By the end of the lesson, the learner should be able to: (i) State the laws of conservation of energy (ii) Explain the applications of the laws of conservations of energy	• Discussion on the law of conservation of energy	• Chart on the laws of conservation of energy	• Comprehensive secondary physics students book 3 pages 41-42 • Comprehensive secondary physics teachers book 3 pages 20-21 • Secondary physics KLB students book 3 page 132-134 • Physics made easier vol. 2 pages 39 • Secondary physics (M.N Patel) pages 86-88	
	4-5	ENERGY, WORK, POWER AND MACHINES	Work	By the end of the lesson, the learner should be able to: (i) Define work (ii) Explain the concept of work and energy	• Experiment on work done by moving objects through a distance • Problem solving	• Masses • Wooden block • Spring balance	• Comprehensive secondary physics students book 3 pages 42-43 • Comprehensive secondary physics teachers book 3 pages 18-22 • Secondary physics KLB students book 3 page 125-132 • Physics made easier vol. 2 pages 39-40 • Secondary physics (M.N Patel) pages 88-90	

	1-2	ENERGY, WORK, POWER AND MACHINES	• Kinetic energy • Potential energy • power	By the end of the lesson, the learner should be able to (i) define power (ii) explain the meaning of power potential and kinetic energies (iii) distinguish between kinetic energy and potential energy	• Discussion and the meanings of kinetic energy and potential energy • Defining power • Distinguishing between kinetic energy and potential energy	• Object that can be lifted • Spring balance	• Comprehensive secondary physics students book 3 pages 43-45 • Comprehensive secondary physics teachers book 3 pages 18-22 • Secondary physics KLB students book 3 page 126-132,134-136 • Physics made easier vol. 2 pages 40-41 • Secondary physics (M.N Patel) pages 90-96	
	3-4	ENERGY, WORK, POWER AND MACHINES	Simple machines	By the end of the lesson, the bearer should be able to: (i) State the mechanical advantage (ii) State the velocity ratio (V.R) of different machines	• Discussions on the M.A and V.R of different machines • Experiments in illustrate M.A and V.R of machines • Problem solving	• Levers • Pulleys • Inclined planes • Strings • Masses	• Comprehensive secondary physics students book 3 pages 41-45 • Comprehensive secondary physics teachers book 3 pages 18-22 • Secondary physics KLB students book 3 page 126-132,134-136 • Physics made easier vol. 2 pages 40-441 • Secondary physics (M.N Patel) pages 96-97	
	5	ENERGY, WORK,	Simple machines	By the end of the lesson, the learner should be able to	• Discussion on efficiency of different machines	• Levers • Pulleys • Inclined planes	• Comprehensive secondary physics students book 3 pages 45-51	

		POWER AND MACHINES		(i) State and describe the efficiency of various machines	• Experiments to illustrate efficiency of various machines • Problem solving	• Strings • Masses	• Comprehensive secondary physics teachers book 3 pages 18-22 • Secondary physics KLB students book 3 page 137-159 • Physics made easier vol. 2 pages 44-50 • Secondary physics (M.N Patel) pages 97-111	
4	**1-5**	ENERGY, WORK, POWER AND MACHINES	Revision	By the end of the lesson, the learner should be able to (i) Solve problems involving work, energy, power and machines	• Problems solving • Questions and answers • Discussion on the problems involving work, power, energy and machines	• Quizzes • Exercises • Project work	• Comprehensive secondary physics students book 3 pages 52-53 • Comprehensive secondary physics teachers book 3 pages 23-24 • Secondary physics KLB students book 3 page 159-161 • Physics made easier vol. 2 pages 50-52 • Secondary physics (M.N Patel) pages 111-115	
5	**1-2**	CURRENT ELECTRICITY II	• Electric current • Scale reading	By the end of the lesson, the learner should be able to: (i) Define potential (ii) Differentiate and state its SI units (iii) Measure potential	• Defining potential difference • Measuring P.d • Discussion on p.d and current • Experiments to illustrate p.d and current	• Ammeter • Voltmeter • Battery • Connecting wires	• Comprehensive secondary physics students book 3 pages 54-55 • Comprehensive secondary physics teachers book 3 pages 24-28	

				difference and current in a circuit			• Secondary physics KLB students book 3 page 161-164 • Physics made easier vol. 2 pages 53 • Secondary physics (M.N Patel) pages 116-117	
	3-4	CURRENT ELECTRICITY	Ammeters and voltmeters	By the end of the lesson, the learner should be able to: (i) Measure potential difference and current in a circuit using the ammeters	• Scale reading • Converting units of measurements • Discussing simple electric circuits	• Ammeters • Voltmeters • Battery • Wires • Rheostat	• Comprehensive secondary physics students book 3 pages 54-55 • Comprehensive secondary physics teachers book 3 pages 24-28 • Secondary physics KLB students book 3 page 164-168 • Physics made easier vol. 2 pages 53 • Secondary physics (M.N Patel) pages 118-119	
	5	CURRENT ELECTRICITY II	Ohm's Law	By the end of the lesson, the learner should be able to: (i) Derive and verify ohm's law (ii) State ohm's law	• Experiments verifying ohm's law Stating ohm's law	• Ammeter • Voltmeter • Rheostat • Wires • Dry cells	• Comprehensive secondary physics students book 3 pages 55-57 • Comprehensive secondary physics teachers book 3 pages 24-28 • Secondary physics KLB students book 3 page 168-171 • Physics made easier vol. 2 pages 53-54	

							• Secondary physics (M.N Patel) pages 120-124	
6	**1-2**	CURRENT ELECTRICITY	Voltage-current relationships	By the end of the lesson, the learner should be able to: (i) Define resistance and state its SI unit (ii) Determine experientially the voltage current (iii) Relationship for resistance in series and parallel	• Defining resistance • Experiments to determine the relationship between voltage-current	• Resistance wire • Rheostat • Battery • Voltmeter • Ammeter • Connecting wires	• Comprehensive secondary physics students book 3 pages 57-59 • Comprehensive secondary physics teachers book 3 pages 26-28 • Secondary physics KLB students book 3 page 171-177 • Physics made easier vol. 2 pages 53-54 • Secondary physics (M.N Patel) pages 122-124	
	3-5	CURRENT ELECTRICITY II	Measurement of resistance	By the end of the lesson, the learner should be able to: (i) Describe experiment to measure resistance using – voltmeter method - The Wheatstone bridge method - The meter bridge	• Experiments to measure resistance of materials	• Ammeters • Voltmeters • Rheostats • Connecting wires • Resistance wire • Dry cells • Switches • Meter bridge • Wheatstone bridge • Resisters with known resistance	• Comprehensive secondary physics students book 3 pages 57-59 • Comprehensive secondary physics teachers book 3 pages 26-28 • Secondary physics KLB students book 3 page 177-180 • Physics made easier vol. 2 pages 54-55 • Secondary physics (M.N Patel) pages 122-124	
						• Cells		

7	**1-3**	CURRENT ELECTRICITY	Effective resistance for registers in series and parallel	By the end of the lesson, the learner should be able to: (i) Derive effective resistance	• Discussions on deriving the effective resistance • Deriving effective resistance of registers in parallel and series	• Resistors • Ammeters • Voltmeters • wires	• Comprehensive secondary physics students book 3 pages 60-66 • Comprehensive secondary physics teachers book 3 pages 24-28 • Secondary physics KLB students book 3 page 180-189 • Physics made easier vol. 2 pages 56-57 • Secondary physics (M.N Patel) pages 124-131	
	4-5	CURRENT ELECTRICITY	E.m.f and internal resistance (E=V+1r)	By the end of the lesson, the learner should be able to (i) Determine e.m.f (ii) Explain the internal resistance of a cell	• Explanation on internal resistance • Demonstration on e.m.f and internal resistance • Discussion on e.m.f	• Voltmeters • Ammeter • Cells • Connecting wires	• Comprehensive secondary physics students book 3 pages 62-63 • Comprehensive secondary physics teachers book 3 pages 24-28 • Secondary physics KLB students book 3 page 190-195 • Physics made easier vol. 2 pages 56-59 • Secondary physics (M.N Patel) pages 124	
8	**1-5**	CURRENT ELECTRICITY	Revision	By the end of the lesson, the learner should be able to: (i) Solve numerical problems	• Problem solving • Questions and answers • Discussions on the questions asked	• Exercise in the students book 3 • Marking scheme • Past paper containing	• Comprehensive secondary physics students book 3 pages 64-66	

				involving the ohm's law (ii) Resistors in series and parallel	• Experiments to solve questions of sound	questions on current electricity	• Comprehensive secondary physics teachers book 3 pages 24-28 • Secondary physics KLB students book 3 page 195-197 • Physics made easier vol. 2 pages 60-63 • Secondary physics (M.N Patel) pages 131-133	
9	**1-2**	WAVES II	Properties of waves	By the end of the lesson, the learner should be able to: (i) State and explain the properties of waves experimentally (ii) Sketch wave fronts to illustrate the reflections	• Stating and explaining the properties of waves • Sketching wave fronts illustrate reflection	• Rope/wire • Various reflections	• Comprehensive secondary physics students book 3 pages 67-69 • Comprehensive secondary physics teachers book 3 pages 29-32 • Secondary physics KLB students book 3 page 198-203 • Physics made easier vol. 2 pages 64-65 • Secondary physics (M.N Patel) pages 134-142	
	3-5	WAVES II	Diffraction, refraction and interference of waves	By the end of the lesson, the learner should be able to: (i) Sketch various wave fonts to illustrate their diffraction, refraction and interference	• Sketching various wave fonts • Experiments to illustrate refraction, diffraction and interference	• Water • Basin • Ripple • Tank	• Comprehensive secondary physics students book 3 pages 70-73 • Comprehensive secondary physics teachers book 3 pages 29-32	

							• Secondary physics KLB students book 3 page 203-212 • Physics made easier vol. 2 pages 65-66 • Secondary physics (M.N Patel) pages 142-144	
10	**1-2**	WAVES II	Constructive and distractive waves	By the end of the lesson, the learner should be able to: (i) Explain constructive and destructive interference	• Discussion on constructive and destructive interference • Experiments constructive and destructive interference	• Ripple tank • Rope/wire	• Comprehensive secondary physics students book 3 pages 73-74 • Comprehensive secondary physics teachers book 3 pages 29-32 • Secondary physics KLB students book 3 page 203-212 • Physics made easier vol. 2 pages 65-66 • Secondary physics (M.N Patel) pages 144-147	
	3-5	WAVES II	Stationary waves	By the end of the lesson, the learner should be able to: (i) Describe experiments to illustrate stationary waves	• Demonstration and explaining ofstationery waves	• Wires under tension	• Comprehensive secondary physics students book 3 pages 74 • Comprehensive secondary physics teachers book 3 pages 29-32 • Secondary physics KLB students book 3 page 212-215 • Physics made easier vol. 2 pages 66-67	

							• Secondary physics (M.N Patel) pages 147-148	
11	**1-5**	WAVES II	Vibrating air columns	By the end of the lesson, the learner should be able to: (i) Describe and explain closed pipe and open pipe	• Describing vibrations in close and open pipes	• Open and closed pipes	• Comprehensive secondary physics students book 3 pages 74 • Comprehensive secondary physics teachers book 3 pages 29-32 • Secondary physics KLB students book 3 page 218-220 • Physics made easier vol. 2 pages 67-73 • Secondary physics (M.N Patel) pages 148-149	
REVISION AND END TERM TWO EXAMINATIONS								

PHYSICS FORM 3 SCHEMES OF WORK – TERM 3

WEEK	LESSON	TOPIC	SUB - TOPIC	OBJECTIVES	LEARNING/TEACHING ACTIVITIES	LEARNING/TEACHING RESOURCES	REFERENCES	REMARKS
1	**1-2**	ELECTROSTATICS II	Electric field patterns	By the end of the lesson, the learner should be able to (i) Sketch electric field patterns around charged bodies	• Discussion on electric field patterns • Observing and plotting field patterns	• Charts on magnetic fields	• Comprehensive secondary physics students book 3 pages 76-77 • Comprehensive secondary physics teachers book 3 pages 34-39 • Secondary physics KLB students book 3 page 222-225 • Physics made easier vol. 2 pages 76-77 • Secondary physics (M.N Patel) pages 151-152	
	3-5	ELECTROSTATICS II	Charge distribution on conductors	By the end of the lesson, the learner should be able to (i) Describe charge distribution on conductors: (ii) Spherical and pear-shaped conductors	• Discussions on charge distribution on conductors • Experiment is demonstrated/illustrate charge distribution on conductors	• Vande Graaf generator • Chart showing charge distribution on different conductors • Gold leaf electroscope	• Comprehensive secondary physics students book 3 pages 77-78 • Comprehensive secondary physics teachers book 3 pages 34-39 • Secondary physics KLB students book 3 page 225-228 • Physics made easier vol. 2 pages 77-78	

							• Secondary physics (M.N Patel) pages 153-154	
2	**1-2**	ELECTROSTATICS II	Lighting arrestor	By the end of the lesson, the learner should be able to: (i) Explain how lightning arrestor works	• Discussions on the lighting arrestor • Explanations on the lighting arrestor	• Improvised lighting arrestor • Photographs of lightning arrestor	• Comprehensive secondary physics students book 3 pages 79-80 • Comprehensive secondary physics teachers book 3 pages 34-39 • Secondary physics KLB students book 3 page 229-230 • Physics made easier vol. 2 pages 79 • Secondary physics (M.N Patel) pages 155	
	3-5	ELECTROSTATICS II	Capacitance	By the end of the lesson, the learner should be able to: (i) Define capacitance and state its SI units (ii) Describe the charging and discharging of a capacitor (iii) State and explain the factors that affect the capacitance of a parallel plate capacitor	• Experiments on charging and discharging capacitor • Discussion on factors affecting capacitance • Defining capacitance	• Complete circuits • capacitors	• Comprehensive secondary physics students book 3 pages 80-82 • Comprehensive secondary physics teachers book 3 pages 34-39 • Secondary physics KLB students book 3 page 230-237 • Physics made easier vol. 2 pages 79-80 • Secondary physics (M.N Patel) pages 155-158	

3	**1-2**	ELECTROSTATICS II	Combinations of capacitors	By the end of the lesson, the learner should be able to: (i) Derive the effective capacitance of capacitors in series and parallel	• Deriving effective capacitance of capacitors in series and parallel • Solving problems • Discussion in the effective capacitance	• Capacitors in series and parallel connections • Charts showing complete circuits	• Comprehensive secondary physics students book 3 pages 80-82 • Comprehensive secondary physics teachers book 3 pages 34-39 • Secondary physics KLB students book 3 page 237-241 • Physics made easier vol. 2 pages 81-82 • Secondary physics (M.N Patel) pages 155-158	
	3	ELECTROSTATICS II	Energy stored in a charged capacitor	By the end of the lesson, the learner should be able to: (i) Describe the energy stored in a charged capacitor	• Describing the energy stored in a charged capacitor	• Capacitors • Dry cells • Charts on capacitors used	• Comprehensive secondary physics students book 3 pages 82 • Comprehensive secondary physics teachers book 3 pages 34-39 • Secondary physics KLB students book 3 page 244 • Physics made easier vol. 2 pages 82 • Secondary physics (M.N Patel) pages 159-160	
	4	ELECTROSTATICS	Application of capacitors	By the end of the lesson, the learner should be able to (i) State and explain the	• Discussions on applications of capacitors • Stating and explaining	• Charts on the use of capacitors • capacitors	• Comprehensive secondary physics students book 3 pages 82-84	

				applications of capacitors	applications of capacitors		• Comprehensive secondary physics teachers book 3 pages 34-39 • Secondary physics KLB students book 3 page 244 • Physics made easier vol. 2 pages 82-83 • Secondary physics (M.N Patel) pages 161	
	5	ELECTROSTATICS II	Revision	By the end of the lesson, the learner should be able to solve numerical problems involving capacitors using the formulae • Q= CV • $C_1=C_1+C_1$ • $^1/C_{1=}\ ^1/C_1+1/C_2$	• Problem solving	• Questions in the students Book 3	• Comprehensive secondary physics students book 3 pages 84-87 • Comprehensive secondary physics teachers book 3 pages 38-39 • Secondary physics KLB students book 3 page 244-245 • Physics made easier vol. 2 pages 85-88 • Secondary physics (M.N Patel) pages 161	
4	**1-3**	THE HEATING EFFECT OF ELECTRIC CURRENT	Electric current heating effect	By the end of the lesson, the learner should be able to: (i) Perform and describe experiments to illustrate the heating effect of electric current	• Experiments to illustrate heating effect of electric current • Discussions on heating effect of electric current	• Complete circuit • Water in a beaker • Metallic rod • Thermometer	• Comprehensive secondary physics students book 3 pages 88 • Comprehensive secondary physics teachers book 3 pages 39-41	

							• Secondary physics KLB students book 3 page 246-247 • Physics made easier vol. 2 pages 89 • Secondary physics (M.N Patel) pages 162-165	
	4-5	THE HEATING EFFECT OF AN ELECTRIC CURRENT	Factors affecting electric current	By the end of the lesson, the learner should be able to: (i) State and explain the factors affecting electrical energy	• Discussions on the factors affecting electrical energy • Experiments on electrical energy • Stating and explaining factors affecting the electrical energy	• Complete circuit • Wires • Rheostat • Ammeter • battery	• Comprehensive secondary physics students book 3 pages 88-90 • Comprehensive secondary physics teachers book 3 pages 39-41 • Secondary physics KLB students book 3 page 247-255 • Physics made easier vol. 2 pages 89-90 • Secondary physics (M.N Patel) pages 165-166	
5	**1-2**	THE HEATING EFFECT OF ELECTRIC CURRENT	• Heating devices • fuses	By the end of the lesson, the learner should be able to: (i) describe the working of electric iron, bulb filament and an electric water	• discussion on electric devices • observations and experiments on heating devices	• electric irons • electric bulb • electric kettle • electric heater • fuses	• Comprehensive secondary physics students book 3 pages 90-91 • Comprehensive secondary physics teachers book 3 pages 39-41 • Secondary physics KLB students book 3 page 255-258 • Physics made easier vol. 2 pages 90-91	

							• Secondary physics (M.N Patel) pages 166-170	
	3-5	THE HEATING EFFECT OF ELECTRIC CURRENT	Revision	By the end of the lesson, the learner should be able to (i) Solve problems involving electrical energy and electric power	• Problem solving • Exercises assignment • Discussion on problems involving electrical energy and electrical power	• Set questions • Marking scheme	• Comprehensive secondary physics students book 3 pages 90-92 • Comprehensive secondary physics teachers book 3 pages 41 • Secondary physics KLB students book 3 page 246-258-259 • Physics made easier vol. 2 pages 92 • Secondary physics (M.N Patel) pages 171	
6	**1-2**	QUANTITY OF HEAT	• Heat capacity • Specific heat capacity • Units of heat capacity	By the end of the lesson the learner should be able to (i) Define heat capacity and specific heat capacity and derive their SI units	• Experiments on heat capacity and specific heat capacity • Discussion on heat capacity and specific h eat capacity • Defining heat capacity and heat specific heat capacity	• Source of heat • Water • Lagged can • Thermometer	• Comprehensive secondary physics students book 3 pages 93-96 • Comprehensive secondary physics teachers book 3 pages 42-46 • Secondary physics KLB students book 3 page 246-260-271 • Physics made easier vol. 2 pages 93-94 • Secondary physics (M.N Patel) pages 172-174	
						• File		

	3-4	QUANTITY OF HEAT	Change of state	By the end of the lesson the learner should be able to define and explain latent heat of fusion, specific latent heat of fusion Define and explain latent heat of vaporization, specific latent heat of vaporization State the SI units of latent heat of fusion and latent heat of vaporization	• Experiments on latent heat of fusion and latent heat of vaporization • Discussion on latent heat of fusion and latent heat of vaporization	• Water • Thermometer • Weighing balance • Source of heat	• Comprehensive secondary physics students book 3 pages 96-97 • Comprehensive secondary physics teachers book 3 pages 42-46 • Secondary physics KLB students book 3 page 246-271-281 • Physics made easier vol. 2 pages 95-96 • Secondary physics (M.N Patel) pages 188-199	
	5	QUANTITY OF HEAT	Boiling and melting	By the end of the lesson, the learner should be able to: (i) Distinguish between boiling and melting (ii) State the factors affecting melting points and boiling points of a substance (iii) Describe the working of a pressure cooker and a refrigerator	• Distinguishing between boiling and melting points • Stating factors affecting boiling and melting points • Experiments to illustrate boiling and melting point	• Pressure cooker • Refrigerator • Charts on melting and boiling points • Ice • Heat • Sufuria • water	• Comprehensive secondary physics students book 3 pages 97-101 • Comprehensive secondary physics teachers book 3 pages 42-46 • Secondary physics KLB students book 3 page 246-282-288 • Physics made easier vol. 2 pages 96-98 • Secondary physics (M.N Patel) pages 186-187	
7	**1-5**	QUANTITY OF HEAT	Revision	By the end of the lesson, the learner should be able to:	• Problem solving	• Quizzes • Past exams • Exercises • Calculators	• Comprehensive secondary physics students book 3 pages 101-102	

				(i) Solve problems involving quantity of heat		• Mathematical tables	• Comprehensive secondary physics teachers book 3 pages 42-46 • Secondary physics KLB students book 3 page 288-289 • Physics made easier vol. 2 pages 100-104 • Secondary physics (M.N Patel) pages 183-185, 200-202	
8	**1-2**	THE GAS LAWS	Pressure law	By the end of the lesson, the learner should be able to: (i) State and verify the gas laws for an ideal gas experimentally	• Experiments to verify pressure law • Demonstrations on pressure law • Discussion on pressure law	• Water • Thermometer • Measuring cylinder • Syringe • Narrow glass tube	• Comprehensive secondary physics students book 3 pages 103-104 • Comprehensive secondary physics teachers book 3 pages 47-50 • Secondary physics KLB students book 3 page 299-302 • Physics made easier vol. 2 pages 106 • Secondary physics (M.N Patel) pages 203-207	
	3-4	THE GAS LAWS	Charles's law	By the end of the lesson, the learner should be able to: (i) State and verify Charles's law experimentally	• Experiments to verify Charles's law • Discussion on Charles's law	• Water • Thermometer • Measuring cylinder • Syringe • Narrow glass tube	• Comprehensive secondary physics students book 3 pages 105-106 • Comprehensive secondary physics teachers book 3 pages 47-50	

							• Secondary physics KLB students book 3 page 295-298 • Physics made easier vol. 2 pages 107 • Secondary physics (M.N Patel) pages 203	
	5	THE GAS LAWS	Boyle's law	By the end of the lesson, the learner should be able to: (i) State and verify Boyle's law experimentally	• Experiments verifying and explain Boyle's law • Discussion on Boyle's law	• Water • Thermometer • Syringe • Measuring cylinder • Narrow glass tube	• Comprehensive secondary physics students book 3 pages 106-107 • Comprehensive secondary physics teachers book 3 pages 47-50 • Secondary physics KLB students book 3 page 290-294 • Physics made easier vol. 2 pages 107 • Secondary physics (M.N Patel) pages 203	
9	**1-2**	THE GAS LAW'S	The kinetic theory of gases	By the end of the lesson, the learner should be able to: • Explain law absolute zero temperature may be obtained from pressure and temp. graphs	• Discussions on the absolute zero temperature from pressure using kinetic theory of gases	• Graph paper • Clinical thermometer • Working out sums	• Comprehensive secondary physics students book 3 pages 108-110 • Comprehensive secondary physics teachers book 3 pages 47-50 • Secondary physics KLB students book 3 page 303 • Physics made easier vol. 2 pages 107	

							• Secondary physics (M.N Patel) pages 207-209	
	3-4	THE GAS LAWS	The kinetic theory of gases	By the end of the lesson, the learner should be able to (i) Explain the gas laws using the kinetic theory of gases	• Discussion on gas laws using kinetic theory of gases • Working out sums	• Graph papers • Clinical thermometers	• Comprehensive secondary physics students book 3 pages 68-110 • Comprehensive secondary physics teachers book 3 pages 49 • Secondary physics KLB students book 3 page 303 • Physics made easier vol. 2 pages 107 • Secondary physics (M.N Patel) pages 209-210	
	5	THE GAS LAWS	The kinetic theory of gases	By the end of the lesson, the learner should be able to: (i) Convert Celsius scales to Kelvin scale of temperature and state basic assumptions of kinetic theory of gases	• Discussion on basic assumptions of kinetic theory of gases • Conversion of Celsius to Kelvin scales	• Graph paper • Clinical thermometer	• Comprehensive secondary physics students book 3 pages 110-111 • Comprehensive secondary physics teachers book 3 pages 50-51 • Secondary physics KLB students book 3 page 107 • Physics made easier vol. 2 pages 107 • Secondary physics (M.N Patel) pages 214	
						• Quizzes • Past examination		

10	**1-5**	THE GAS LAWS	Revision	By the end of the lesson, the learner should be able to: (i) Solve numerical problems involving gas laws	• Solving problems involving gas laws • Discussion on the problems involving gas laws	• Exercise in the Book 3	• Comprehensive secondary physics students book 3 pages 110-111 • Comprehensive secondary physics teachers book 3 pages 50-51 • Secondary physics KLB students book 3 page 303-305 • Physics made easier vol. 2 pages 109-110 • Secondary physics (M.N Patel) pages 215-217	
REVISION AND END OF TERM THREE EXAMINATIONS								