PHYSICS SCHEMES OF WORK

FORM THREE 2019

TERM I

REFERENCES:

1. Secondary Physics KLB
2. Comprehensive Secondary Physics
3. Principles of Physics
4. Golden Tips
5. Teacher's Book

WK	LSN	TOPIC	SUB-TOPIC	OBJECTIVES	L/ACTIVITIES	L/T AIDS	REFERENCE	REMARK
1	1-5	REPORTING AND REVISION OF LAST TERM'S EXAMS						
2	1-3	Linear Motion	Introduction of linear motion	By the end of the lesson, the learner should be able to: Define distance, displacement, speed, velocity and acceleration	Defining distance, speed, displacement, velocity and acceleration	Charts on motion Trolleys Inclined planes	Comprehensive secondary physics 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: Describe experiments to determine velocity	Describing experiments on velocity	Trolleys Stop watches Graph paper Ticker timer	Comprehensive secondary physics 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	
3	1-2	Linear Motion	Motion time graphs	By the end of the lesson, the learner should be able to 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 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: Describe experiments to measure speed, velocity and acceleration Solving problems	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: 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	
4	1-2	Linear Motion	Measuring speed, velocity and acceleration	By the end of the lesson, the learner should be able to: 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: Derive and apply the equations of uniform acceleration	Stating the equations of motion Deriving the equations of motion Applying the equations of motion	Graphs Worked examples on motion	Comprehensive secondary physics students book 3 pages 7-9 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: 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	
5	1-5	Linear Motion	Acceleration due to gravity	By the end of the lesson, the learner should be able to; 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	
6	1-2	Refraction Of Light	The meaning of refraction	By the end of the lesson, the learner should be able to 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: 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	
7	1-2	Refraction Of Light	Refractive index	By the end of the lesson, the learner should be able to: Determine the refractive	Experiments to determine the refractive index of rates and glass by real and apparent	Water Pins Plain papers	Comprehensive secondary physics students book 3 pages 14-15 Comprehensive secondary	

				index of a given substance	depth method	Coins Beakers	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 Describe an experiment to explain the total internal reflection and its effects 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	
8	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: 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	Dispersion of white	By the end of the lesson, the	Experiment on dispersion of	Triangular glass prisms	Comprehensive secondary physics students book 3 pages	

		Light	light and recombination of colors of the spectrum	learner should be able to: Describe an experiment to illustrate the dispersion of light	light using glass prisms	Source of light Screen	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	
9	1-5	Refraction Of Light	Problems of refractive index and critical angle	By the end of the lesson, the learner should be able to: Solve problems involving the refractive index and critical angle	Discussions and problem solving in critical angle using the formulae sin $C=^{i}/n$ and $n=\sin {}^{i}/\sin r$	Review questions Past exams Examples in the topic	Comprehensive secondary physics book 3 pages 21-22 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	
10	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 State the Newton's laws of motion State and explain the significance of a Newton's laws of motion Describe simple experiments to illustrate inertion	Discussion on Newton's laws Experiments to illustrate *© Education Plus Agencies* 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	

11	1-3	Newton's Law Of Motion	Conservation of linear momentum Elastic collision Inelastic collision Recoil velocity	By the end of the lesson, the leaner should be able to: State the law of conservation of momentum Define elastic and inelastic collisions Determine recoil velocity	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 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: Define friction State and explain types of frictions Describe and experiment to illustrate friction and state the applications of friction 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	
12	1-5	Newton's Laws Of Motion	Viscosity	By the end of the lesson, the leaner should be able to: Define viscosity 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	
13	1-5	Newton's Laws Of Motion	Revision	By the end of the lesson, the learner should be able to: 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	
14		**END OF TERM EXAMS**						
15		**PREPARATION OF REPORTS AND CLOSING**						

PHYSICS SCHEMES OF WORK

FORM THREE

TERM II

REFERENCES:

1. Secondary Physics KLB
2. Comprehensive Secondary Physics
3. Principles of Physics
4. Golden Tips
5. Teacher's Book

WK	LSN	TOPIC	SUB-TOPIC	OBJECTIVES	L/ACTIVITIES	L/T AIDS	REFERENCE	REMARK
1	1-5	REPORTING AND REVISION OF LAST TERM'S EXAMS						
2	1-3	Energy, Work, Power And Machines	Energy	By the end of the lesson, the learner should be able to Define energy 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: 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: State the laws of conservation of energy 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: Define work 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 define power explain the meaning of power potential and kinetic energies 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: State the mechanical	Discussions on the M.A and V.R of different machines Experiments in illustrate M.A	Levers Pulleys Inclined planes	Comprehensive secondary physics students book 3 pages 41-45 Comprehensive secondary	

				advantage State the velocity ratio (V.R) of different machines	and V.R of machines Problem solving	Strings Masses	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, Power And Machines	Simple machines	By the end of the lesson, the learner should be able to State and describe the efficiency of various machines	Discussion on efficiency of different machines Experiments to illustrate efficiency of various machines Problem solving	Levers Pulleys Inclined planes Strings Masses	Comprehensive secondary physics students book 3 pages 45-51 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 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: Define potential Differentiate and state its SI units Measure potential difference and current in a circuit	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 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: 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: Derive and verify ohm's law 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: Define resistance and state its SI unit Determine experientially the voltage current 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: 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	
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: Derive effective resistance	Discussions on deriving the effective resistance Deriving effective resistance of registers in parallel and series	Cells 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 Determine e.m.f 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: Solve numerical problems involving the ohm's law Resistors in series and parallel	Problem solving Questions and answers Discussions on the questions asked Experiments to solve questions of sound	Exercise in the students book 3 Marking scheme Past paper containing questions on current electricity	Comprehensive secondary physics students book 3 pages 64-66 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: State and explain the properties of waves experimentally Sketch wave fronts to	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	

				illustrate the reflections			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: 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: 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: Describe experiments to	Demonstration and explaining of stationery waves	Wires under tension	Comprehensive secondary physics students book 3 pages 74 Comprehensive secondary	

				illustrate stationary waves			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: 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	
12		**TOPICAL REVISION**						
13		**END OF TERM EXAMS**						
14		**PREPARATION OF REPORTS AND CLOSING**						

PHYSICS SCHEMES OF WORK

FORM THREE

TERM III

REFERENCES:

1. Secondary Physics KLB
2. Comprehensive Secondary Physics
3. Principles of Physics
4. Golden Tips
5. Teacher's Book

WK	LSN	TOPIC	SUB-TOPIC	OBJECTIVES	L/ACTIVITIES	L/T AIDS	REFERENCE	REMARK
1	1-5	REPORTING AND REVISION OF LAST TERM'S EXAMS						
2	1-2	Electrostatics Ii	Electric field patterns	By the end of the lesson, the learner should be able to 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 Describe charge distribution on conductors: 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	
3	1-2	Electrostatics Ii	Lighting arrestor	By the end of the lesson, the learner should be able to: 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: Define capacitance and state its SI units Describe the charging and discharging of a capacitor 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	
4	1-2	Electrostatics Ii	Combinations of capacitors	By the end of the lesson, the learner should be able to: 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: 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 State and explain the applications of capacitors	Discussions on applications of capacitors Stating and explaining applications of capacitors	Charts on the use of capacitors capacitors	Comprehensive secondary physics students book 3 pages 82-84 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	
5	1-3	The Heating Effect Of Electric	Electric current heating effect	By the end of the lesson, the learner should be able to:	Experiments to illustrate heating effect of electric	Complete circuit Water in a beaker	Comprehensive secondary physics students book 3 pages	

		Current		Perform and describe experiments to illustrate the heating effect of electric current	current Discussions on heating effect of electric current	Metallic rod Thermometer	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: 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	
6	1-2	The Heating Effect Of Electric Current	Heating devices fuses	By the end of the lesson, the learner should be able to: 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 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	
7	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 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	
	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	Experiments on latent heat of fusion and latent heat of vaporization Discussion on latent heat of fusion and latent heat of vaporization	File 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	

				latent heat of vaporization State the SI units of latent heat of fusion and latent heat of vaporization			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: Distinguish between boiling and melting State the factors affecting melting points and boiling points of a substance 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	
8	1-5	Quantity Of Heat	Revision	By the end of the lesson, the learner should be able to: Solve problems involving quantity of heat	Problem solving	Quizzes Past exams Exercises Calculators Mathematical tables	Comprehensive secondary physics students book 3 pages 101-102 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	
9	1-2	The Gas Laws	Pressure law	By the end of the lesson, the learner should be able to:	Experiments to verify pressure law	Water Thermometer	Comprehensive secondary physics students book 3 pages 103-104	

				State and verify the gas laws for an ideal gas experimentally	Demonstrations on pressure law Discussion on pressure law	Measuring cylinder Syringe Narrow glass tube	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: 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: 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	

10	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 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: 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	
11	1-5	The Gas Laws	Revision	By the end of the lesson, the learner should be able to: Solve numerical problems involving gas laws	Solving problems involving gas laws Discussion on the problems involving gas laws	Quizzes Past examination 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	
12		**END OF YEAR EXAMS**						