SCHEMES OF WORK 2021

PHYSICS FORM 3

TERM 2

REFERENCES:

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

PHYSICS SCHEMES OF WORK

FORM THREE

TERM II

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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	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	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	
	3	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	Secondary physics KLB students book 3 page 190-195 Physics made easier vol. 2 pages 56-59 Secondary physics (M.N Patel) pages 124	
	4	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	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	
	5	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 illustrate the reflections	Stating and explaining the properties of waves Sketching wave fronts illustrate reflection	Rope/wire Various 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	1-2	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	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	

	3	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	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	
	4	Waves II	Stationary waves	By the end of the lesson, the learner should be able to: Describe experiments to illustrate stationary waves	Demonstration and explaining of stationery waves	Wires under tension	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	
	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	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	

4	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	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	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	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	
	4	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	Secondary physics KLB students book 3 page 229-230 Physics made easier vol. 2 pages 79 Secondary physics (M.N Patel) pages 155	
	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	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	
5	1	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	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	

	2	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	Secondary physics KLB students book 3 page 244 Physics made easier vol. 2 pages 82 Secondary physics (M.N Patel) pages 159-160	
	3	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	Secondary physics KLB students book 3 page 244 Physics made easier vol. 2 pages 82-83 Secondary physics (M.N Patel) pages 161	
	4	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	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	**HALF**		**TERM**		**BREAK**		
6	1-2	The Heating Effect Of Electric Current	Electric current heating effect	By the end of the lesson, the learner should be able to: 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	Secondary physics KLB students book 3 page 246-247 Physics made easier vol. 2 pages 89 Secondary physics (M.N Patel) pages 162-165	
	3	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	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	

	4	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	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	
	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	Secondary physics KLB students book 3 page 246-258-259 Physics made easier vol. 2 pages 92 Secondary physics (M.N Patel) pages 171	
7-8		**REVISION**						
9-10		**END OF TERM EXAMS & CLOSURE OF SCHOOLS**						