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| PHYSICS FORM 1 SCHEMES OF WORK – TERM 1 | | | | | | | | |
| WEEK | LESSON | TOPIC | SUB-TOPIC | LEARNING OBJECTIVES | TEACHING/LEARNINGACTIVITIES | TEACHING/LEARNINGRESOURCES | REFERENCES | REMARKS |
| **5** | **1-2** | INTRODUCTION TO PHYSICS | Physics as a science | By the end of the lesson, the learner should be able to   1. Explain what the study of physics involves 2. Relate physics to other subjects and to technology 3. Identify career opportunities related to physics | * Discussions of value and meaning of physics * Drawing flow charts of the braches of physics * Listing career opportunities related to physics | * Chart on definition of physics * Flow charts on branches of physics * Chart on scientific method * List of career related to physics | * Comprehensive secondary physics   Students Book 1 page 1-2  Teacher’s Book 1 pages 1-3   * Secondary Physics students Book 1 (KLB) pages 1-6 |  |
|  | **3-4** | INTRODUCTION TO PHYSICS | Basic laboratory rules | By the end of the lesson, the learner should be able to   1. State and explain the basic laboratory rules | * Discussions * Explanation of rules | * Chart on standard laboratory rules * Pictures showing dangers of not observing laboratory rules | * Comprehensive secondary physics   Students Book 1 page 1-2  Teacher’s Book 1 pages 1-3   * Secondary Physics students Book 1 (KLB) pages 6-7 |  |
| **6** | **1-2** | MEASUREMENTS | Measuring length, area volume and mass | By the end of the lesson, the learner should be able to:   1. Define length, area, volume, mass and state their symbols and SI units | * Conversions * Measuring * Experiment * Counting * Demonstrations | * Meter rule * Burette * Pipette * Measuring cylinder * Weighing balance * Rod * Shadow | * Comprehensive secondary physics   Students Book 1 page 4-8  Teacher’s Book 1 pages 4-6   * Secondary Physics students Book 1 (KLB) pages 8,22,14,33 * Golden tips physics pages 1-7 * Principles of Physics(M.Nelkon) pages 4-9 |  |
|  | **3-4** | MEASUREMENTS | Measuring instruments | By the end of the lesson, the learner should be able to:   1. Use measuring instrument accurately 2. Metre rule, tape measure, beam balance, stop clock, measuring cylinder, pipette and burette | * Demonstrations * Reading scales and correcting errors | * Meter rule * Pipettes * Burettes * Stop watches * Tape measure * Measuring cylinder, beam balance | * Comprehensive secondary physics   Students Book 1 page 6-7  Teacher’s Book 1 pages 5-6   * Secondary Physics students Book 1 (KLB) pages 10,28 * Golden tips physics pages 2 * Principles of Physics(M.Nelkon) pages 7-9 |  |
| **7** | **1-2** | MEASUREMENTS | Measuring density | By the end of the lesson, the learner should be able to:   1. Determine and mentally explain the density of substances 2. Work our density of mixtures 3. Solve numerical problems involving density | * Experiment * Working out answers to problems | * Measuring cylinder * Mass weighing balance * Density bottle | * Comprehensive secondary physics   Students Book 1 page 9-12  Teacher’s Book 1 pages 4-6   * Secondary Physics students Book 1 (KLB) pages 35-48 * Golden tips physics pages 7,10 |  |
|  | **3-4** | MEASUREMENTS | Measuring Time | By the end of the lesson, the learner should be able to   1. Determine experimentally, the measurement of time | * Experiments with pendulum * Timing events | * Pendulum * Clock * Watch | * Comprehensive secondary physics   Students Book 1 page 12-15  Teacher’s Book 1 pages 6   * Secondary Physics students Book 1 (KLB) pages 46-47 * Golden tips physics pages 8 * Principles of Physics(M.Nelkon) pages 23 |  |
| **8** | **1-2** | FORCES | Types of forces | By the end of the lesson, the learner should be able to   1. Define force and state its SI units 2. Describe types of forces 3. State the effects of force | * Discussions * Explaining * Demonstrations * Identifying effects of forces | * Charts of force * String * Elastic material * Magnets * Water * Greece * Oil spring balance | * Comprehensive secondary physics   Students Book 1 page 61-19  Teacher’s Book 1 pages 6-10   * Secondary Physics students Book 1 (KLB) pages 49-68 * Golden tips physics pages 11-12 * Principles of Physics(M.Nelkon) pages 64-65 |  |
|  | **3-4** | FORCES | Surface tension | By the end of the lesson, the learner should be able to:   1. Describe experiments to illustrate cohesion, adhesion and surface tension 2. State the factors affecting surface tension, its consequence and importance | * Discussions * Demonstrations * Explaining the effects of surface tensions | * Funnel * Water * Wire loop * Tap * Soap/detergent | * Comprehensive secondary physics   Students Book 1 page 19-22  Teacher’s Book 1 pages 6-10   * Secondary Physics students Book 1 (KLB) pages 63-70 * Golden tips physics pages 12 |  |
| **9** | **1-2** | FORCES | Mass and weight | By the end of the lesson, the learner should be able to:   1. State and explain the relationship between mass and weight 2. Define scalar and vector magnitude | * Demonstrations * Discussions * Problems solving on mass and weight | * Beam balance * Spring balance * Sponge * Store * Polythene | * Comprehensive secondary physics   Students Book 1 page 17-22  Teacher’s Book 1 pages 6-10   * Secondary Physics students Book 1 (KLB) pages 72-75 * Golden tips physics pages 7 * Principles of Physics(M.Nelkon) pages 40 |  |
|  | **3-4** | FORCES | Measuring Force | By the end of the lesson, the learner should be able to:   1. Measure weight using spring balance 2. Solve numerical problems on numerical forces | * Discussions * Experiments | * Spring balance * Chart on vectors and scalars | * Comprehensive secondary physics   Students Book 1 page 17-18  Teacher’s Book 1 pages 17-15 |  |
| **10** | **1-2** | FORCES | Pressure and force | By the end of the lesson, the learner should be able to:   1. Define pressure and state its SI units 2. Determine pressure exerted by solids | * Discussions * Demonstrations * Problem solving | * Block of wood * Spring balance * Meter rule | * Comprehensive secondary physics   Students Book 1 page 6-10  Teacher’s Book 1 pages 6-10   * Secondary Physics students Book 1 (KLB) pages 82-85 * Golden tips physics pages 44 * Principles of Physics(M.Nelkon) pages 119-121 |  |
|  | **3-4** | PRESSURE | Pressure in liquids | By the end of the lesson, the learner should be able to   1. Investigate experimentally the factors that affect pressure in liquids (Fluids) 2. Derive the formula for calculating pressure in fluids 3. State the principle of transmission of pressure in fluids | * Demonstrations * Working out problems * Discussions * Experiments | * Communication tubes * Tin with holes at different heights * Waters | * Comprehensive secondary physics   Students Book 1 page 27-30  Teacher’s Book 1 pages 12-15   * Secondary Physics students Book 1 (KLB) pages 49-68 * Golden tips physics pages 44-45 * Principles of Physics(M.Nelkom) pages 121-124 |  |
| **11** | **1-2** | PRESSURE | Pressure in gases | By the end of the lesson, the learner should be able to   1. Explain atmospheric pressure and its effects 2. State and explain how pressure is transmitted in fluids | * Demonstrations * Explanation of pressure transmission in fluids * discussions | * Water/oil * Syringe | * Comprehensive secondary physics   Students Book 1 page 25-26,30-32  Teacher’s Book 1 pages 12-15   * Secondary Physics students Book 1 (KLB) pages 115-116,93-100 * Golden tips physics pages 45-46 * Principles of Physics(M.Nelko) pages 124 |  |
|  | **3-4** | PRESSURE | Ganges and siphons | By the end of the lesson, the learner should be able to   1. Describe the working of siphon and pressure gauge | * Discussions * Explanations * Questions and answers | * Barometer * Bourdon gauge * Syringes | * Comprehensive secondary physics   Students Book 1 page 31-34  Teacher’s Book 1 pages 13-15   * Secondary Physics students Book 1 (KLB) pages 113,117 * Golden tips physics pages 44-45 * Principles of Physics(M.Nelko) pages 133 |  |
| **12** | **1-2** | PRESSURE | Application of pressure in liquids and gases | By the end of the lesson, the learner should be able to   1. Explain the working of a hydraulic, braking system of vehicle 2. Explain the working of mercury and forties barometer, bicycle pump and pressure gauges | * Explaining the application of pressure in liquids and gases * Class discussion on the principles of pressure in liquids * Experiments | * Chart showing the working of a hydraulic braking system * Model of hydraulic brake system * Barometer * Bicycle pump | * Comprehensive secondary physics   Students Book 1 page 30-39  Teacher’s Book 1 pages 13-15   * Secondary Physics students Book 1 (KLB) pages 96-112 * Golden tips physics pages 46-47 * Principles of Physics(M.Nelko) pages 124-132 |  |
|  | **3-4** | PRESSURE | Revision on question on the topic pressure | By the end of the lesson, the learner should be able to   1. Answer questions on pressure | * Questions and answers | Questions in students book 1 | * Comprehensive secondary physics   Students Book 1 page 39-41  Teacher’s Book 1 pages 13-15   * Secondary Physics students Book 1 (KLB) pages 119-123 * Golden tips physics pages 54-55 * Principles of Physics(M.Nelko) pages 138-140 |  |
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| **PHYSICS FORM 1 SCHEMES OF WORK – TERM 2** | | | | | | | | |
| WEEK | LESSON | TOPIC | SUB-TOPIC | LEARNING OBJECTIVES | TEACHING/LEARNINGACTIVITIES | TEACHING/LEARNINGRESOURCES | REFERENCES | REMARKS |
| **1** | **1-2** | PARTICULATE NATURE OF MATTER | States of matter | By the end of the lesson, the learner should be able   1. to show that matter is made of up tiny particles | * Demonstration * Discussions of kinetic theory | * Beaker * Crystals * Solutes * Solvent | * Comprehensive secondary physics   Students Book 1 page 42  Teacher’s Book 1 pages 15-18   * Secondary Physics students Book 1 (KLB) pages 124-128 * Golden tips physics pages 68 * Principles of Physics(M.Nelko) pages 142 |  |
|  | **3-4** | PARTICULATE NATURE OF MATTER | The Brownian motion | By the end of the lesson, the learner should be able to:   1. Give evidence that matter is made up of tiny particles 2. Demonstrate the Brownian motion in liquids & gases 3. Explain the arrangement of particles in matter 4. Explain the state on matter in terms of particle movement | * Experiments * Observations * Discussions | * Chalk dust * Transparent lid * Pollen grains * Lens * Beaker * Smoke cell * Source of light | * Comprehensive secondary physics   Students Book 1 page 43-48  Teacher’s Book 1 pages 15-18   * Secondary Physics students Book 1 (KLB) pages 127-130 * Golden tips physics pages 68 * Principles of Physics(M.Nelko) pages 148-150 |  |
| **2** | **1-2** | PARTICULATE NATURE OF MATTER | Diffusion in liquid, gases and solids | By the end of the lesson, the learner should be able to   1. Explain diffusion in gases/liquids and solids | * Experiments * Discussions | * Promise gas * Jars * Potassium permanganate * Solvent * Hydrochloric acid * Ammonia * Glass tube cotton wool | * Comprehensive secondary physics   Students Book 1 page 46-49  Teacher’s Book 1 pages 15-18   * Secondary Physics students Book 1 (KLB) pages 132-136 * Golden tips physics pages 69 * Principles of Physics(M.Nelko) pages 146-147 |  |
|  | **3-4** | PARTICULATE NATURE OF MATTER | Revision on Particulate nature of matter | By the end of the lesson, the learner should be able to:   1. Answer questions in students Book 1 | * Discussion * Demonstrations * Asking questions * Answering questions |  | * Secondary Physics students Book 1 (KLB) pages 136-138 * Golden tips physics pages 69-70 * Principles of Physics(M.Nelko) pages 164 * Past Papers |  |
|  | **1-2** | THERMAL EXPANSION | Expansion of solids | By the end of the lesson, the learner should be able to:   1. Define temperature 2. Describe the functionally of various thermometers 3. Explain the expansion and contraction in solids 4. Explain forces due to expansion and contraction | * Experiments * Demonstration * Experiments | * Meter rule * Metal rods * Materials that conduct or do not conduct heat * Ball and ring apparatus * Bar gauge | * Comprehensive secondary physics   Students Book 1 page 50-52  Teacher’s Book 1 pages 18-21   * Secondary Physics students Book 1 (KLB) pages 139-144 * Golden tips physics pages 70-72 * Principles of Physics(M.Nelko) pages 168,175-176 |  |
|  | **3-4** | THERMAL EXPANSION | Applications of expansion in solids | By the end of the lesson, the learner should be able to:   1. Explain the application of expansion and contraction | * Demonstrations * Discussions * Experiments | * Charts on the application of expansion * Rivets * Bimetallic strips | * Comprehensive secondary physics   Students Book 1 page 52-54  Teacher’s Book 1 pages 18-21   * Secondary Physics students Book 1 (KLB) pages 145,151-153 * Golden tips physics pages 73 * Principles of Physics(M.Nelko) pages 177-179 |  |
| **4** | **1-2** | THERMAL EXPANSION | Expansion and contraction of liquid and gases | By the end of the lesson, the learner should be able to:   1. Explain the expansion of liquid 2. Describe the anomalous expansion of water and its effect | * Discussions * Experiments * Demonstrations | * Water * Spirit * Alcohol * thermometer | * Comprehensive secondary physics   Students Book 1 page 54-56  Teacher’s Book 1 pages 18-21   * Secondary Physics students Book 1 (KLB) pages 149-155 * Golden tips physics pages 72-73 * Principles of Physics(M.Nelko) pages 182 |  |
|  | **3-4** | THERMAL EXPANSION | Thermometers | By the end of the lesson, the learner should be able to:   1. Explain the functioning of various thermometers 2. Describe the functioning of various thermometers | * Demonstrations * Discussions | * Liquid in glass thermometers * Clinical thermometers * Maximum and minimum thermometers | * Comprehensive secondary physics   Students Book 1 page 56-59  Teacher’s Book 1 pages 18-21   * Secondary Physics students Book 1 (KLB) pages 155-161 * Golden tips physics pages 70-72 * Principles of Physics(M.Nelko) pages 168-173 |  |
| **5** | **1-2** | THERMAL EXPANSION | Molecules and heat | By the end of the lesson, the learner should be able to   1. Explain the effect of heat on the molecules of solid, liquid and gases | * Discussions * Experiments * Demonstrations | * Solids * Liquids * Air * Source of heat * Containers | * Comprehensive secondary physics   Students Book 1 page 60-61  Teacher’s Book 1 pages 18-21   * Secondary Physics students Book 1 (KLB) pages 139-162 |  |
|  | **3-4** | THERMAL EXPANSION | Revision on thermal expansion | By the end of the lesson, the learner should be able to:   1. Answer questions involving thermal expansions | * Questions * answers | * Set questions | * Comprehensive secondary physics   Students Book 1 page 61-62  Teacher’s Book 1 pages 21   * Secondary Physics students Book 1 (KLB) pages 161-162 * Golden tips physics pages 85-86 * Principles of Physics(M.Nelko) pages 185 |  |
| **6** | **1-2** | HEAT TRANSFER | Heat and temperature | By the end of the lesson, the learner should be able to   1. define heat 2. State the difference between heat and temperature | * Definitions * Discussions * Experiments | * Materials that conduct heat and materials that do not conduct heat | * Comprehensive secondary physics   Students Book 1 page 63  Teacher’s Book 1 pages 22-24   * Secondary Physics students Book 1 (KLB) pages 163 * Golden tips physics pages 774 * Principles of Physics(M.Nelko) pages 168 |  |
|  | **3-4** | HEAT TRANSFER | Conduction of heat | By the end of the lesson, the learner should be able to:   1. State and explain modes of heat transfer 2. Explain factors affecting conduction |  | * Metal rods * Source of heat * Test tube * Water * Ice in gauge | * Comprehensive secondary physics   Students Book 1 page 63-67  Teacher’s Book 1 pages 22-24   * Secondary Physics students Book 1 (KLB) pages 163-186 * Golden tips physics pages 74-77 * Principles of Physics(M.Nelko) pages 234-242 |  |
| **7** | **1-2** | HEAT TRANSFER | Convection | By the end of the lesson, the learner should be able to   1. Demonstrate convection in liquids 2. Explain the working of hot water systems, car engine, cooling system and land sea breeze 3. Explain the molecular application of convection in fluids | * Experiments * Discussion | * Water * Potassium permanganate * Source of heat * Smoke cell apparatus * Chart on hot water system * Car engine | * Comprehensive secondary physics   Students Book 1 page 67-69  Teacher’s Book 1 pages 23   * Secondary Physics students Book 1 (KLB) pages 177-188 * Principles of Physics(M.Nelko) pages 238-2433 |  |
|  | **3-4** | HEAT TRANSFER | Radiation | By the end of the lesson, the learner should be able to   1. Compare absorption and emission of radiant heat 2. Explain the working of solar concentrators, heat taps and solar heaters 3. Explain the working of a thermos flask |  | * Experiments * Making comparisons * Discussions * Explanations | * Comprehensive secondary physics   Students Book 1 page 70-74  Teacher’s Book 1 pages 18-24   * Secondary Physics students Book 1 (KLB) pages 187-195 * Golden tips physics pages 75 * Principles of Physics(M.Nelko) pages 246 |  |
| **8** | **1-2** |  | REVISION | By the end of the lesson, the learner should be able to   1. Answer questions on heat transfer | * Questions * Answers | Set questions |  |  |
|  | **3-4** | RECTI-LINEAR PROPAGATION AND REFLECTION OF LIGHT ON PLANE SURFACES | Propagation of light | By the end of the lesson, the learner should be able to:   1. Define opaque, translucent and transparent objects 2. Describe the types of beams 3. Perform and describe experiments to show rectilinear propagation of light | * Discussions * Experiments * Descriptions * Explanations | * Opaque objects * Glass * Greased paper * Card board * Source of light * Screens | * Comprehensive secondary physics   Students Book 1 page 76-77  Teacher’s Book 1 pages 25-27   * Secondary Physics students Book 1 (KLB) pages 199-204 * Golden tips physics pages 75 * Principles of Physics(M.Nelko) pages 251-252 |  |
| **9** | **1-2** | RECTI-LINEAR PROPAGATION AND REFLECTION OF LIGHT ON PLANE SURFACES | The pin-hole camera | By the end of the lesson, the learner should be able to:   1. Explain the functions and principles involved in working of a pin-hole camera | * Experiments * Drawing * Discussion | * Pin hole camera * Source of light (candle) | * Comprehensive secondary physics   Students Book 1 page 77  Teacher’s Book 1 pages 25-27   * Secondary Physics students Book 1 (KLB) pages 211-219 * Golden tips physics pages 99 * Principles of Physics(M.Nelko) pages 252-255 |  |
|  | **3-4** | RECTI-LINEAR PROPAGATION AND REFLECTION OF LIGHT ON PLANE SURFACES | Shadows | By the end of the lesson, the learner should be able to:   1. Describe the formation of shadows 2. Describe the solar and linear eclipses | * Experiments * Discussions * Demonstrations * Explanations * Descriptions | * Opaque objects * Chart of the eclipse of earth and moon * Source of light * Screen | * Comprehensive secondary physics   Students Book 1 page 78-79  Teacher’s Book 1 pages 25-27   * Secondary Physics students Book 1 (KLB) pages 203-219 * Principles of Physics(M.Nelko) pages 254-257 |  |
| **10** | **1-2** | RECTI-LINEAR PROPAGATION AND REFLECTION OF LIGHT ON PLANE SURFACES | Reflection of light on plane surfaces | By the end of the lesson, the learner should be able to:   1. Verify experimentally the law of reflection | * Experiments * Descriptions * Explanations * Discussions | * Plane mirrors * Pins * White sheets of paper * Soft boards | * Comprehensive secondary physics   Students Book 1 page 80-82  Teacher’s Book 1 pages 25-27   * Secondary Physics students Book 1 (KLB) pages 222-228 * Golden tips physics pages 100 * Principles of Physics(M.Nelko) pages 260 |  |
|  | **3-4** | RECTI-LINEAR PROPAGATION AND REFLECTION OF LIGHT ON PLANE SURFACES | Image formation | By the end of the lesson, the learner should be able to:   1. Locate images in place mirrors and state their characteristics | * Experiments * Descriptions * Discussions | * Pins * Boards * Protractor * Mirror | * Comprehensive secondary physics   Students Book 1 page 83-84  Teacher’s Book 1 pages 25-27   * Secondary Physics students Book 1 (KLB) pages 228-230 * Golden tips physics pages 100-101 * Principles of Physics(M.Nelko) pages 264 |  |
| **11** | **1-2** | RECTI-LINEAR PROPAGATION AND REFLECTION OF LIGHT ON PLANE SURFACES | The application of plane mirrors | By the end of the lesson, the learner should be able to:   1. Explain the reflection of light on plane surfaces at an angle 2. Explain the working of a periscope and kaleidoscope | * Experiments * Explanations * Descriptions * Discussions | * Plane mirrors * Objects such as candles * Pipe * Card board | * Comprehensive secondary physics   Students Book 1 page 84-86  Teacher’s Book 1 pages 25-27   * Secondary Physics students Book 1 (KLB) pages 235-240 * Golden tips physics pages 101 |  |
|  | **3-4** | RECTI-LINEAR PROPAGATION AND REFLECTION OF LIGHT ON PLANE SURFACES | Revision | By the end of the lesson, the learner should be able to   1. solve problems involving the propagation and reflection of light on plane surfaces | * Problem solving * Questions and answers * Discussion | Set questions | * Comprehensive secondary physics   Students Book 1 page 87-88  Teacher’s Book 1 pages 28-29   * Secondary Physics students Book 1 (KLB) pages 241-244 * Golden tips physics pages 101-102 * Principles of Physics(M.Nelko) pages 266-267 |  |
| **12** | **END OF TERM EXAMINATIONS** | | | | | | | |
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| **PHYSICS FORM 1 SCHEMES OF WORK – TERM 3** | | | | | | | | |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** | **1-2** | ELECTROSTATICS | Charging materials by induction and contact | By the end of the lesson, the learner should be able to:   1. Explain the charging of materials by induction and contact 2. Describe origin of charge 3. State the law of charges | * Demonstrations * Discussions * Experiments | * Polythene bags * Thrust * Glass rod | * Comprehensive secondary physics   Students Book 1 page 89  Teacher’s Book 1 pages 29-32   * Secondary Physics students Book 1 (KLB) pages 245-250 * Golden tips physics pages 133-134 * Principles of Physics(M.Nelko) pages 264 |  |
|  | **3-4** | ELECTROSTATICS | Laws of charge | By the end of the lesson the learner should be able to:   1. Describe the electrostatic charge 2. Explain the electrostatic charge 3. State types of charge | * Experiments * Discussion * Observations | * Rubber * Piece of paper * Glass * Amber * Silk material * Fur * Electroscope | * Comprehensive secondary physics   Students Book 1 page 89-91  Teacher’s Book 1 pages 29-32   * Secondary Physics students Book 1 (KLB) pages 245-248 * Golden tips physics pages 133 * Principles of Physics(M.Nelko) pages 509-510 |  |
| **2** | **1-2** | ELECTROSTATICS | The leaf electroscope | By the end of the lesson, the learner should be able to   1. State the unit of charges and construct leaf electroscope | * Discussions * Constructing an electroscope * Experiment | * Leaf electroscope * Glass rod | * Comprehensive secondary physics   Students Book 1 page 91-92  Teacher’s Book 1 pages 29-32   * Secondary Physics students Book 1 (KLB) pages 251-252 * Golden tips physics pages 133 * Principles of Physics(M.Nelko) pages 511 |  |
|  | **3-4** | ELECTROSTATICS | Charging an electroscope by contract | By the end of the lesson, the learner should be able to   1. charge an electroscope by contact | * Demonstration * Discussions * Experiments | * Electroscope * Glass rod * Ebonite rod | * Comprehensive secondary physics   Students Book 1 page 94-96  Teacher’s Book 1 pages 29-32   * Secondary Physics students Book 1 (KLB) pages 249-250 * Golden tips physics pages 134 * Principles of Physics(M.Nelko) pages 512 |  |
| **3** | **1-2** | ELECTROSTATICS | Charging an electroscope by induction | By the end of the lesson, the learner should be able to   1. charge an electroscope by induction | * Demonstrations * Discussions * Experiments | * Electroscope * Glass rod * Ebonite rod | * Comprehensive secondary physics   Students Book 1 page 94-96  Teacher’s Book 1 pages 29-32   * Secondary Physics students Book 1 (KLB) pages 248-249 * Principles of Physics(M.Nelko) pages 513-515 |  |
|  | **3-4** | ELECTROSTATICS | Charging an electroscope by separation | By the end of the lesson, the learner should be able to   1. charge an electroscope by separation | * Discussions * Experiments * Descriptions | * Rods of conductors and no-conductors * Electroscope * Tiles | * Comprehensive secondary physics   Students Book 1 page 96-97  Teacher’s Book 1 pages 29-32   * Secondary Physics students Book 1 (KLB) pages 250-251 |  |
| **4** | **1-2** | ELECTROSTATICS | Charging an electroscope by EHT source | By the end of the lesson, the learner should be able to   1. Charge electroscope by an EHT source | * Descriptions * Experiments * Discussions | * Rods of conductors and non-conductors * Electroscope * Tiles | * Comprehensive secondary physics   Students Book 1 page 97  Teacher’s Book 1 pages 29-32 |  |
|  | **3-4** | ELECTROSTATICS | Revision | By the end of the lesson, the learner should be able to   1. answer questions on electrostatics | * Questions and answers | Chalkboard  Text books | * Secondary Physics students Book 1 (KLB) pages 259-260 * Principles of Physics(M.Nelko) pages 527-530 * Golden tips physics pages 138-139 |  |
| **5** | **1-2** | CELLS AND SIMPLE CIRCUITS | Sources of continuous current | By the end of the lesson, the learner should be able to   1. state sources of continuous current | * Experiments * Discussions * Demonstration | * Cells * Acids * Fruits * Solar panels * Petroleum products | * Comprehensive secondary physics   Students Book 1 page 99-100  Teacher’s Book 1 pages 34-37   * Secondary Physics students Book 1 (KLB) pages 261-265 * Golden tips physics pages 140 * Principles of Physics(M.Nelko) pages 408-409 |  |
|  | **3-4** | CELLS AND SIMPLE CIRCUITS | Connecting an electric circuit | By the end of the lesson, the learner should be able to   1. Draw and set up a simple electric circuit 2. Identify circuit symbols | * Identifying circuit symbols * Discussions * Demonstrations * Experiments | * Cells * Wires * Bulbs * Charts on circuit symbols | * Comprehensive secondary physics   Students Book 1 page 99-101  Teacher’s Book 1 pages 34-37   * Secondary Physics students Book 1 (KLB) pages 266-273 * Golden tips physics pages 140 * Principles of Physics(M.Nelko) pages 408-409 |  |
| **6** | **1-2** | CELLS AND SIMPLE CIRCUIT | Connecting and electric circuit | By the end of the lesson the learner should be able to   1. Define electric current 2. Explain the working of a cell 3. Connect cells in series and parallel 4. Measure the effective e.m.f | * Measuring * Demonstrations * Discussions * Experiments | * Cells * Connecting wires * Bulbs | * Comprehensive secondary physics   Students Book 1 page 100-101  Teacher’s Book 1 pages 34-37   * Secondary Physics students Book 1 (KLB) pages 241-273 * Golden tips physics pages 140-143 |  |
|  | **3-4** | CELLS AND SIMPLE CIRCUITS | The measuring of E.M.F | By the end of the lesson, the learner should be able to measure e.m.f | * Experiments * Discussions * Measuring * Demonstrations | * Ammeter * Voltmeter * Switch | * Comprehensive secondary physics   Students Book 1 page 101-102  Teacher’s Book 1 pages 34-37   * Secondary Physics students Book 1 (KLB) pages 264 * Golden tips physics pages 143 * Principles of Physics(M.Nelko) pages 409 |  |
| **7** | **1-2** | CELLS AND SIMPLE CIRCUIT | Conductivity of materials | By the end of the lesson, the learner should be able to   1. Investigate the electrical conductivity of materials | * Calculating * Testing * Conductivity * Experiments | * Conductors * Non-conductors | * Comprehensive secondary physics   Students Book 1 page 101-103  Teacher’s Book 1 pages 34-37   * Secondary Physics students Book 1 (KLB) pages 273-275 * Principles of Physics(M.Nelko) pages |  |
|  | **3-4** | CELLS AND SIMPLE CIRCUITS | Measuring current in a circuit | By the end of the lesson, the learner should be able to measure current in a circuit | * Measuring * Experiments * Calculating | * Voltmeter * Ammeter * Switch | * Comprehensive secondary physics   Students Book 1 page 101-103  Teacher’s Book 1 pages 34-37   * Secondary Physics students Book 1 (KLB) pages 266-269 * Golden tips physics pages 142 |  |
| **8** | **1-2** | CELLS AND SIMPLE CIRCUITS | Primary cells | By the end of the lesson, the learner should be able to:   1. Describe the working of primary cells 2. Explain the defect s of primary cells 3. Explain how to care for a primary cell | * Discussions * Experiments * Explaining the defects of primary cells | * Primary cells | * Comprehensive secondary physics   Students Book 1 page 104-106  Teacher’s Book 1 pages 34-37   * Secondary Physics students Book 1 (KLB) pages 276-280 * Principles of Physics(M.Nelko) pages 409-414 |  |
|  | **3-4** | CELLS AND SIMPLE CIRCUITS | Measuring e.m.f in a primary cell | By the end of the lesson, the learner should be able to:   1. Measure e.m.f in a primary | * Experiments * Discussions * Demonstrations * Measuring | * Primary cells * Voltmeter * Switch | * Comprehensive secondary physics   Students Book 1 page 106  Teacher’s Book 1 pages 34-37   * Secondary Physics students Book 1 (KLB) pages 276-280 * Principles of Physics(M.Nelko) pages 409-414 |  |
| **9** | **1-2** | CELLS AND SIMPLE CIRCUITS | Secondary cells | By the end of the the lesson the learner should be able to:   1. Charge a secondary cell 2. Discharge a secondary cell 3. Take care of a secondary cell | * Explanation on charging and maintenance of simple cells | Secondary cells | * Comprehensive secondary physics   Students Book 1 page 106-109  Teacher’s Book 1 pages 34-37   * Secondary Physics students Book 1 (KLB) pages 280-284 * Golden tips physics pages 140 |  |
|  | **3-4** | REVISION |  | By the end of the lesson, the learner should be able to   1. Answer questions on cells 2. Answer questions on circuits | * Discussions * Demonstrations * Asking questions * Answering questions |  | * Secondary Physics students Book 1 (KLB) pages 287-288 * Golden tips physics pages 150-151 * Principles of Physics(M.Nelkon) pages 422-423 |  |
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