**PHYSICS SCHEMES OF WORK**

**FORM ONE 2019**

**TERM I**

**REFERENCES:**

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

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| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **L/ACTIVITIES** | **L/T AIDS** | **REFERENCE** | **REMARKS** |
| **1-2** |  | **ADMISSION** | | | | | |  |
| 3 | 1-2 | Introduction To Physics | Physics as a science | By the end of the lesson, the learner should be able to  Explain what the study of physics involves  Relate physics to other subjects and to technology  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  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 |  |
| 4 | 1-2 | Measurements | Measuring length, area volume and mass | By the end of the lesson, the learner should be able to:  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:  Use measuring instrument accurately  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 |  |
| 5 | 1-2 | Measurements | Measuring density | By the end of the lesson, the learner should be able to:  Determine and mentally explain the density of substances  Work our density of mixtures  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  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 |  |
| 6 | 1-2 | Forces | Types of forces | By the end of the lesson, the learner should be able to  Define force and state its SI units  Describe types of forces  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:  Describe experiments to illustrate cohesion, adhesion and surface tension  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 physicsStudents 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 |  |
| 7 |  | MID TERM |  |  |  |  |  |  |
| 8 | 1-2 | Forces | Mass and weight | By the end of the lesson, the learner should be able to:  State and explain the relationship between mass and weight  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:  Measure weight using spring balance  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 |  |
| 9 | 1-2 | Forces | Pressure and force | By the end of the lesson, the learner should be able to:  Define pressure and state its SI units  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  Investigate experimentally the factors that affect pressure in liquids (Fluids)  Derive the formula for calculating pressure in fluids  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 |  |
| 10 | 1-2 | Pressure | Pressure in gases | By the end of the lesson, the learner should be able to  Explain atmospheric pressure and its effects  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  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 |  |
| 11 | 1-2 | Pressure | Application of pressure in liquids and gases | By the end of the lesson, the learner should be able to  Explain the working of a hydraulic, braking system of vehicle  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  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 |  |
| 12 |  | **TOPICAL REVISION** | | | | | |  |
| 13 |  | **END OF TERM EXAMS** | | | | | |  |
| 14 |  | **REPORTS MAKING AND CLOSURE** | | | | | |  |

**PHYSICS SCHEMES OF WORK**

**FORM ONE TERM II**

**REFERENCES:**

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

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| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **L/ACTIVITIES** | **L/T AIDS** | **REFERENCE** | **REMARKS** |
| **1** | **1-4** | **REPORTING AND REVISION OF LAST TERM’S EXAMS** | | | | | |  |
| **2** | **1-2** | Particulate Nature Of Matter | States of matter | By the end of the lesson, the learner should be able  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:  Give evidence that matter is made up of tiny particles  Demonstrate the Brownian motion in liquids & gases  Explain the arrangement of particles in matter  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 |  |
| **3** | **1-2** | Particulate Nature Of Matter | Diffusion in liquid, gases and solids | By the end of the lesson, the learner should be able to  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:  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:  Define temperature  Describe the functionally of various thermometers  Explain the expansion and contraction in solids  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:  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:  Explain the expansion of liquid  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:  Explain the functioning of various thermometers  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  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:  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  define heat  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:  State and explain modes of heat transfer  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  Demonstrate convection in liquids  Explain the working of hot water systems, car engine, cooling system and land sea breeze  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  Compare absorption and emission of radiant heat  Explain the working of solar concentrators, heat taps and solar heaters  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  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:  Define opaque, translucent and transparent objects  Describe the types of beams  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:  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:  Describe the formation of shadows  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:  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:  *© Education Plus Agencies*  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:  Explain the reflection of light on plane surfaces at an angle  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  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** | **TOPICAL REVISION** | | | | | | | |
| **13** | **END OF TERM EXAMINATIONS** | | | | | | | |
| **14** | **REPORTS MAKING AND CLOSURE** | | | | | | | |

**PHYSICS SCHEMES OF WORK**

**FORM ONE**

**TERM III**

**REFERENCES:**

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

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| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **L/ACTIVITIES** | **L/T AIDS** | **REFERENCE** | **REMARKS** |
| **1** | **1-4** | **REPORTING AND REVISION OF LAST TERM’S EXAMS** | | | | | |  |
| **2** | **1-2** | Electrostatics | Charging materials by induction and contact | By the end of the lesson, the learner should be able to:  Explain the charging of materials by induction and contact  Describe origin of charge  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:  Describe the electrostatic charge  Explain the electrostatic charge  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 |  |
| **3** | **1-2** | Electrostatics | The leaf electroscope | By the end of the lesson, the learner should be able to  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  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 |  |
| **4** | **1-2** | Electrostatics | Charging an electroscope by induction | By the end of the lesson, the learner should be able to  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  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 |  |
| **5** | **1-2** | Electrostatics | Charging an electroscope by EHT source | By the end of the lesson, the learner should be able to  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  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 |  |
| **6** | **1-2** | Cells And Simple Circuits | Sources of continuous current | By the end of the lesson, the learner should be able to  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  Draw and set up a simple electric circuit  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 |  |
| **7** | **1-2** | Cells And Simple Circuit | Connecting and electric circuit | By the end of the lesson the learner should be able to  Define electric current  Explain the working of a cell  Connect cells in series and parallel  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 |  |
| **8** | **1-2** | Cells And Simple Circuit | Conductivity of materials | By the end of the lesson, the learner should be able to  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 |  |
| **9** | **1-2** | Cells And Simple Circuits | Primary cells | By the end of the lesson, the learner should be able to:  Describe the working of primary cells  Explain the defect s of primary cells  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:  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 |  |
| **10** | **1-2** | Cells And Simple Circuits | Secondary cells | By the end of the the lesson the learner should be able to:  Charge a secondary cell  Discharge a secondary cell  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  Answer questions on cells  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 |  |
| **11** |  | **END OF TERM EXAMS** | | | | | |  |
| **12** |  | **REPORTS MAKING AND CLOSURE** | | | | | |  |