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| PHYSICS FORM 2 SCHEMES OF WORK – TERM 1 | | | | | | | | |
| WEEK | LESSON | TOPIC | SUB-TOPIC | LEARNING OBJECTIVES | TEACHING/LEARNINGACTIVITIES | TEACHING/LEARNINGRESOURCES | 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 |  |
|  | **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 |  |
| **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 |  |
|  | **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 |  |
| **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 |  |
|  | **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 * 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 |  |
|  | **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 |  |
| **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 |  |
| **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 |  |
|  | **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 |  |
|  | **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 |  |
| **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 |  |
| **10** | **1-2** | MAGNETISM | Magnetism and magnetic materials | By the end of the lesson, the learner should be able to:   1. Identify magnetic and non-magnetic materials | * Observing attraction and repulsion of magnets * Identifying the test for magnetic materials * Describing natural and artificial materials * Carrying out experiments to identify magnetic and non-magnetic materials | * Magnets * Nails * Pins * Wood * Plastics * Tins * Spoons * Strings * Razor blade * Stand | * Comprehensive secondary physics students book 2 pages 1-2 * Comprehensive secondary physics teachers book 2 pages 1-5 * Secondary physics KLB students book 2 page * Golden tips physics page 124 |  |
|  | **3-4** | MAGNETISM | Properties of magnets and the law of magnetism | By the end of the lesson, the learner should be able to   1. Describe the properties of magnets 2. State the logic law of magnetism | * Investigating properties of magnets * Stating the laws of magnetism | * Magnets * Charts on properties * Iron fillings * Strings * Stand | * Comprehensive secondary physics students book 2 pages 1-2 * Comprehensive secondary physics teachers book 2 pages 1-5 * Secondary physics KLB students book 2 page 1-4 * Golden tips physics page 124 |  |
| **11** | **1-2** | MAGNETISM | The compass | By the end of the lesson, the learner should be able to   1. Construct simple compass | * Constructing a simple compass | * Pin/screw * Magnet * Cork * Glass top * Water trough * Piece of stiff paper * Razor blade * Glue | * Comprehensive secondary physics students book 2 pages 3-5 * Comprehensive secondary physics teachers book 2 pages 1-5 * Secondary physics KLB students book 2 page 5 * Golden tips physics page 127 |  |
|  | **3-4** | MAGNETISM | Magnetic field patterns | By the end of the lesson, the learner should be able to:   1. Describe magnet field patterns | * Plotting the field of a bar magnet using a compass and iron filings | * A compass * Iron fillings * Bar magnets * Can with lid * Card board * Sheet of papers | * Comprehensive secondary physics students book 2 pages 3-5 * Comprehensive secondary physics teachers book 2 pages 1-5 * Secondary physics KLB students book 2 page 6-7 * Golden tips physics page 124-125 |  |
| **12** | **1-2** | MAGNETISM | Making magnets by induction and stroking | By the end of the lesson, the learner should be able to make magnets by :   1. Induction 2. Stroking | * Demonstrating induction * Magnetizing a steel bar by stroking single and double strikes * Defining hard and soft magnets | * Bar magnets * Steel bars * Nails * Iron bars | * Comprehensive secondary physics students book 2 pages 6-7 * Comprehensive secondary physics teachers book 2 pages 1-5 * Secondary physics KLB students book 2 page 19-22 * Golden tips physics page 125-126 |  |
|  | **3-4** | MAGNETISM | Making magnets by an electric current | By the end of the lesson, the learner should be able to:   1. Magnetize a material by an electric current | * Magnetizing a steel bar by an electric current | * Insulated wire * Battery cell * Steel bar | * Comprehensive secondary physics students book 2 pages 8 * Comprehensive secondary physics teachers book 2 pages 1-5 * Secondary physics KLB students book 2 page 23-24 * Golden tips physics page 125-126 |  |
| **13** | **1-2** | MAGNETISM | Demagnetization and caring for magnets | By the end of the lesson, the learner should be able to   1. Describe the methods of demagnetization 2. Describe how to care for magnets | * Describing ways of demagnetizing of magnet * Explaining how to care for magnets * Carrying out experiments to demagnetize and care for magnets | * Battery/cell * Keepers * Bar magnets * Chart on demagnetization and care for magnets | * Comprehensive secondary physics students book 2 pages 8-9 * Comprehensive secondary physics teachers book 2 pages 1-5 * Secondary physics KLB students book 2 page 25-26 * Golden tips physics page 126-127 |  |
|  | **3-4** | MAGNETISM | Uses of magnets | By the end of the lesson, the learner should be able to   1. Describe the uses of magnets | * Describing uses of magnets * Discussions * Using magnets | * Magnets * Metallic bars * Non-metallic bars | * Comprehensive secondary physics students book 2 pages 9 * Comprehensive secondary physics teachers book 2 pages 1-5 * Secondary physics KLB students book 2 page 27 * Golden tips physics page 127 |  |
| **14** | **1-2** | MAGNETISM | The domain theory of magnetism | By the end of the lesson, the learner should be able to:   1. Explain the domain theory | * Describing the domain theory of magnetism * Explaining the application of the domain theory of magnetism | * Charts on domain theory * Bar magnets * Iron fillings * Test tubes * Cork | * Comprehensive secondary physics students book 2 pages 9-10 * Comprehensive secondary physics teachers book 2 pages 1-5 * Secondary physics KLB students book 2 page 17 * Golden tips physics page 127 |  |
|  | **3-4** | MAGNETISM | Revision | By the end of the lesson, the learner should be able to:   1. Answer questions on magnetism | * Questions and answers * Read more on magnetism | * Questions and project to the students book 2 | * Comprehensive secondary physics students book 2 pages 11-12 * Comprehensive secondary physics teachers book 2 pages 5-6 * Secondary physics KLB students book 2 page 27 * Golden tips physics page 131 |  |