**PHYSICS SCHEMES OF WORK**

**FORM TWO 2016**

**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** | **1-4** | **REPORTING AND REVISION OF LAST TERM’S EXAMS** | | | | | |  |
| 2 | 1-2 | Magnetism | Magnetism and magnetic materials | By the end of the lesson, the learner should be able to:  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  Principles of physics (M.Nelkom) pages 442-443  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  Describe the properties of magnets  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  Principles of physics (M.Nelkom) pages 149  Golden tips physics page 124 |  |
| 3 | 1-2 | Magnetism | The compass | By the end of the lesson, the learner should be able to  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  Principles of physics (M.Nelkom) pages 151  Golden tips physics page 127 |  |
|  | 3-4 | Magnetism | Magnetic field patterns | By the end of the lesson, the learner should be able to:  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  Principles of physics (M.Nelkom) pages 444  Golden tips physics page 124-125 |  |
| 4 | 1-2 | Magnetism | Making magnets by induction and stroking | By the end of the lesson, the learner should be able to make magnets by :  Induction  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  Principles of physics (M.Nelkom) pages 441-442  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:  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  Principles of physics (M.Nelkom) pages 440  Golden tips physics page 125-126 |  |
| 5 | 1-2 | Magnetism | Demagnetization and caring for magnets | By the end of the lesson, the learner should be able to  Describe the methods of demagnetizative  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  Principles of physics (M.Nelkom) pages 442  Golden tips physics page 126-127 |  |
|  | 3-4 | Magnetism | Uses of magnets | By the end of the lesson, the learner should be able to  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  Principles of physics (M.Nelkom) pages  Golden tips physics page 127 |  |
| 6 | 1-2 | Magnetism | The domain theory of magnetism | By the end of the lesson, the learner should be able to:  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  Principles of physics (M.Nelkom) pages  Golden tips physics page 127 |  |
|  | 3-4 | Magnetism | Revision | By the end of the lesson, the learner should be able to:  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  Principles of physics (M.Nelkom) pages  Golden tips physics page 131 |  |
| 7 | 1-2 | Measurement Ii | The vernire calipers | By the end of the lesson, the learner should be able to  Measure length using vernire calipers | Measuring length and diameter of various objects using a venire calipers | Vernire calipers  Circular containers  Nail  needles | Comprehensive secondary physics students book 2 pages 13-15  Comprehensive secondary physics teachers book 2 pages 6-11  Secondary physics KLB students book 2 page 31-36  Principles of physics (M.Nelkom) pages  Golden tips physics page 3-4 |  |
|  | 3-4 | Measurement Ii | The micrometer  Screw gauge | By the end of the lesson, the learner should be able to:  Measure length using the micrometer screw gauge | Measuring small diameters and thickness using the screw gauge | Micrometer screw gauge  Charts on how to read the scale of a screw gauge  Wires  paper | Comprehensive secondary physics students book 2 pages 15-17  Comprehensive secondary physics teachers book 2 pages 6-11  Secondary physics KLB students book 2 page 36-40  Principles of physics (M.Nelkom) pages  Golden tips physics page 4-5 |  |
| 8 | 1-2 | Measurement Ii | Decimal places, significant figures and standard form | By the end of the lesson, the learner should be able to:  State numbers in standard form, decimal places and significant figures | Working out problems in decimals  Identifying the significant figures of a number  Writing numbers in standard form |  | Comprehensive secondary physics students book 2 pages 17-19  Comprehensive secondary physics teachers book 2 pages 6-11  Secondary physics KLB students book 2 page 40-41  Principles of physics (M.Nelkom) pages  Golden tips physics page 8-9 |  |
|  | 3-4 | Measurement Ii | Determining the size of a molecule | By the end of the lesson, the learner should be able to:  Estimate the diameter of a drop of oil | Measuring the diameter of an molecule | Oil  Burette  Wire  Trough  Water  Floor or pollen grain  strings | Comprehensive secondary physics students book 2 pages 6-11  Comprehensive secondary physics teachers book 2 pages 19-21  Secondary physics KLB students book 2 page 42-44  Principles of physics (M.Nelkom) pages  Golden tips physics page 9 |  |
| 9 | 1-2 | Measurement Ii | Revision | By the end of the lesson the learner should be able to:  Answer questions involving measurement | Problem solving  Identifying values on appropriate scale  Carrying out a project work | Questions and project the students book 2  Questions work sheet | Comprehensive secondary physics students book 2 pages 21-23  Comprehensive secondary physics teachers book 2 pages 11  Secondary physics KLB students book 2 page 46-49  Principles of physics (M.Nelkom) pages  Golden tips physics page 10 |  |
|  | 3-4 | The Turning Effects Of A Force | The moments of a force | By the end of the lesson, the learner should be able to:  Define moments of force about a point  State the SI units of moment of force | Defining moments of force  Calculating moment | Meter rule  Knife edge  Strings  Spring balance  Masses | Comprehensive secondary physics students book 2 pages 24  Comprehensive secondary physics teachers book 2 pages 12-14  Secondary physics KLB students book 2 page 50-52  Principles of physics (M.Nelkom) pages  Golden tips physics page 13 |  |
| 10 | 1-2 | The Turning Effects Of A Force | Principles of moments | By the end of the lesson, the learner should be able to:  State and verify the principle of moment | Stating the principle of moment of a force  Calculating moments | Meter rule  Knife edge  Strings  Spring balance  Masses | Comprehensive secondary physics students book 2 pages 24  Comprehensive secondary physics teachers book 2 pages 12-14  Secondary physics KLB students book 2 page 53-56  Principles of physics (M.Nelkom) pages  Golden tips physics page 14-15 |  |
|  | 3-4 | The Turning Effects Of A Force | Revision | By the end of the lesson, the learner should be able to  *© Education Plus Agencies*  Solve problems involving moments | Problems solving  Discussion of correct procedure  Questions and answers | The exercise in the student book | Comprehensive secondary physics students book 2 pages 27-28  Comprehensive secondary physics teachers book 2 pages 13-14  Secondary physics KLB students book 2 page 65-67  Principles of physics (M.Nelkom) pages  Golden tips physics page 14-15 |  |
| 11 | 1-2 | Turning Effects Of A Force | Revision | By the end of the lesson, the learner should be able to:  Answer questions on the covered topics | Answer questions in quiz or test form  Discussing answers | Moderate a review questions  Marking schemes | Comprehensive secondary physics students book 2 pages 1-28  Comprehensive secondary physics teachers book 2 pages 1-14  Secondary physics KLB students book 2 page 65-67  Principles of physics (M.Nelkom) pages  Golden tips physics page 14-15 |  |
|  | 3-4 | Equilibrium And Centre Of Gravity | Equilibrium | By the end of the lesson, the learner should be able to:  Identify and explain the states of equilibrium | Identifying the states of equilibrium  Explaining the conditions of equilibrium | Objects with stable, unstable and neutral equilibrium | Comprehensive secondary physics students book 2 pages 33  Comprehensive secondary physics teachers book 2 pages 15-17  Secondary physics KLB students book 2 page 17-18  Principles of physics (M.Nelkom) pages  Golden tips physics page 15-16 |  |
| 12 | 1-2 | Equilibrium And Centre Of Gravity | Centre of gravity | By the end of the lesson, the learner should be able to  Define centre of gravity  Determine centre of gravity of lamina objects | Defining centre of gravity  Determining centre of gravity of lamina objects | Lamina objects  Plumb line  pencils | Comprehensive secondary physics students book 2 pages 30  Comprehensive secondary physics teachers book 2 pages 15-17  Secondary physics KLB students book 2 page 68-76  Principles of physics (M.Nelkom) pages  Golden tips physics page 15 |  |
|  | 3-4 | Equilibrium And Centre Of Gravity | Stability | By the end of the lesson, the learner should be able to:  Explain and state the factors affecting stability of an object | Identifying the factors affecting stability  Explaining how equilibrium is maintained | Chart showing factors of stability | Comprehensive secondary physics students book 2 pages 31-33  Comprehensive secondary physics teachers book 2 pages 15-17  Secondary physics KLB students book 2 page 78  Principles of physics (M.Nelkom) pages  Golden tips physics page 16 |  |
| 13 | 1-2 | Equilibrium And Centre Of Gravity | Stability | By the end of the lesson, the learner should be able to:  Explain where stability is applicable | Explaining the application of stability  Discussions | Pictures and charts showing applications of stability | Comprehensive secondary physics students book 2 pages 15-17  Comprehensive secondary physics teachers book 2 pages 33  Secondary physics KLB students book 2 page 79-80  Principles of physics (M.Nelkom) pages  Golden tips physics page 16 |  |
|  | 3-4 | Equilibrium And Centre Of Gravity | Revision | By the end of the lesson, the learner should be able to:  Solve problems involving centre of gravity and moment of a force | Problem solving  Discussion of solution  Questions and answers  Doing end of term examinations | Moderate review questions  Marking schemes  Exercises in the students book 2 | Comprehensive secondary physics students book 2 pages 34  Comprehensive secondary physics teachers book 2 pages 17  Secondary physics KLB students book 2 page 80-82  Principles of physics (M.Nelkom) pages  Golden tips physics page 16 |  |
| **14** |  | **END OF TERM EXERMINATIONS** | | | | | |  |
| **15** |  | **REPORT MAKING AND CLOSURE** | | | | | |  |

**PHYSICS SCHEMES OF WORK**

**FORM TWO 2016**

**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 | Reflection At Curved Surfaces | Spherical mirrors | By the end of the lesson, the learner should be able to:  Describe concave, convex and parabolic reflectors | Reflecting light at curved mirrors | Concave mirrors  Convex mirrors  parabolic mirrors  Plane papers  Soft board, pins | Comprehensive secondary physics students book 2 pages 35  Comprehensive secondary physics teachers book 2 pages 18-22  Secondary physics KLB students book 2 page 83  Principles of physics (M.Nelkom) pages  Golden tips physics page 102 |  |
|  | 3-4 | Reflection At Curved Surfaces | Parts of spherical mirrors and parabolic surfaces | By the end of the lesson, the learner should be able to:  Describe using any diagram, the principle axes, principle focus, centre of curvature, radius of curvature and related terms | Describing parts of a curved mirrors  Observing reflection at spherical mirrors | Variety of a curved mirrors  Graph papers  Rulers | Comprehensive secondary physics students book 2 pages 35-37  Comprehensive secondary physics teachers book 2 pages 18-22  Secondary physics KLB students book 2 page 85-87  Principles of physics (M.Nelkom) pages  Golden tips physics page 102 |  |
| 3 | 1-2 | Reflection At Curved Surfaces | Locating images in curved mirrors and parabolic surfaces | By the end of the lesson, the learner should be able to:  Use ray diagram to locate images formed by plane mirrors | Drawing ray diagrams  Describing image characteristics | Graph papers  Soft boards  Plane papers  Pins | Comprehensive secondary physics students book 2 pages 37-38  Comprehensive secondary physics teachers book 2 pages 18-22  Secondary physics KLB students book 2 page 86  Principles of physics (M.Nelkom) pages  Golden tips physics page 103 |  |
|  | 3-4 | Reflection At Curved Surfaces | Characteristics of images formed by concave mirrors | By the end of the lesson, the learner should be able to  Determine experimentally the characteristics of images formed by concave mirrors | Experimenting with concave mirrors  Describing the nature of images formed in concave mirror | Concave mirrors | Comprehensive secondary physics students book 2 pages 39-40  Comprehensive secondary physics teachers book 2 pages 19-22  Secondary physics KLB students book 2 page 95-100  Principles of physics (M.Nelkom) pages 439-440  Golden tips physics page 103 |  |
| 4 | 1-2 | Reflection At Curved Surfaces | Applications of curved reflecting surfaces and magnification | By the end of the lesson, the learner should be able to  Define magnification  State and explain the applications of curved mirrors  State the defects of spherical mirrors | Explaining magnification and formula in curved mirrors  Describing the uses of curved mirrors  Asking questions | Curved mirrors  Exercise in students book 2 | Comprehensive secondary physics students book 2 pages 40-43  Comprehensive secondary physics teachers book 2 pages 19-24  Secondary physics KLB students book 2 page 104-120  Principles of physics (M.Nelkom) pages  Golden tips physics page 105 |  |
|  | 3-4 | The Magnetic Effect Of Electric Current | Magnetic field due to current | By the end of the lesson, the learner should be able to  Perform and describe an experiment to determine the direction of a magnetic field round a current carrying conductor | Observing and describing the direction of magnetic field round a current carrying a conductor  Carrying out experiments | Compass  Wires  Battery  Ammeter  Compass needle  Cardboard  Screws  Iron fillings | Comprehensive secondary physics students book 2 pages 44-47  Comprehensive secondary physics teachers book 2 pages 25-28  Secondary physics KLB students book 2 page 123-128  Principles of physics (M.Nelkom) pages 439-440  Golden tips physics page 128 |  |
| 5 | 1-2 | Magnetic Effect Of Electric Current | Magnetic field pattern | By the end of the lesson, the learner should be able to:  Determining the magnetic field patterns on straight conductors and solenoid | Constructing a simple electromagnetic | Soft iron  Nails  Compass  Solenoid | Comprehensive secondary physics students book 2 pages 47-48  Comprehensive secondary physics teachers book 2 pages 25-28  Secondary physics KLB students book 2 page 128  Principles of physics (M.Nelkom) pages 439-440  Golden tips physics page 129 |  |
|  | 3-4 | Magnetic Field Of Electric Current | Electromagnetic field pattern | By the end of the lesson, the learner should be able to:  Construct a simple electromagnet | Constructing a simple electromagnets | Solenoid  Soft iron  Nails compass | Comprehensive secondary physics students book 2 pages 47-48  Comprehensive secondary physics teachers book 2 pages 25-28  Secondary physics KLB students book 2 page 143  Principles of physics (M.Nelkom) pages 439-440  Golden tips physics page 130 |  |
| 6 | 1-2 | Magnetic Effects Of Electric Current | Strength of an electron-magnets | By the end of the lesson, the learner should be able to:  Explain the working of simple electronic motor and an electric bell | Investigating the factors that affect the strength of an electromagnet | Battery  Ammeter  Different magnetic materials | Comprehensive secondary physics students book 2 pages 48-49  Comprehensive secondary physics teachers book 2 pages 25-28  Secondary physics KLB students book 2 page 131  Principles of physics (M.Nelkom) pages  Golden tips physics page 130 |  |
|  | 3-4 | Magnetic Effects Of Electric Current | Applications of electromagnets | By the end of the lesson, the learner should be able to:  Explain the working of a simple electric motor and an electric bell | Discussing the use of an electric bell  Discussing the use of electric motor | An electric bell  An electric motor | Comprehensive secondary physics students book 2 pages 49-58  Comprehensive secondary physics teachers book 2 pages 23-28  Secondary physics KLB students book 2 page 143-151  Principles of physics (M.Nelkom) pages  Golden tips physics page 130 |  |
| 7 | 1-2 | Magnetic Effects Of Electric Current | Construction of an electric bell | By the end of the lesson, the learner should be able to  Construct a simple electric bell | Constructing an electric bell | Materials for constructing an electric bell  Chart in electric bell | Comprehensive secondary physics students book 2 pages 48-49  Comprehensive secondary physics teachers book 2 pages 25-28  Secondary physics KLB students book 2 page 131  Principles of physics (M.Nelkom) pages  Golden tips physics page 131 |  |
|  | 3-4 | Magnetic Effects Of Electric Current | Motor effect | By the end of the lesson, the learner should be able to  Experimentally determine direction of a force on a conductor carrying current in a magnetic field | Experiments on motor effects  Flemings rules illustrated | Magnets  Wires  Battery  Pins | Comprehensive secondary physics students book 2 pages 52-53  Comprehensive secondary physics teachers book 2 pages 25-28  Secondary physics KLB students book 2 page 150-151  Principles of physics (M.Nelkom) pages  Golden tips physics page 130 |  |
| 8 | 1-2 | The Magnetic Effect Of Electric Current | Factors affecting force on a current carrying conductor | By the end of the lesson, the learner should be able to:  State and explain factors affecting force on a current carrying conductors in a magnetic fields | Rotation between current magnetism and force | Battery  Magnets  Wires  Ferromagnetic materials | Comprehensive secondary physics students book 2 pages 49-51  Comprehensive secondary physics teachers book 2 pages 27  Secondary physics KLB students book 2 page 131  Principles of physics (M.Nelkom) pages  Golden tips physics page 130 |  |
|  | 3-4 | The Magnetic Effect Of Electric Current | Construction of a simple electric motor | By the end of the lesson, the learner should be able to;  Construct a simple electric motor | Constructing an electronic motor | Source of current  Wire  magnets | Comprehensive secondary physics students book 2 pages 49-51  Comprehensive secondary physics teachers book 2 pages 25-28  Secondary physics KLB students book 2 page 150-151  Principles of physics (M.Nelkom) pages  Golden tips physics page 130 |  |
| 9 | 1-2 | The Magnetic Effect Of Electro-Current | Revision | By the end of the lesson, the learner should be able to  Answer questions on magnetic effects of an electric current | Questions and answers  Doing research/projects | Information and exercise in the students book 2 | Comprehensive secondary physics students book 2 pages 58-59  Comprehensive secondary physics teachers book 2 pages 28-29  Secondary physics KLB students book 2 page 152-153  Principles of physics (M.Nelkom) pages  Golden tips physics page 131-132 |  |
| 10 | 1-2 | Hook’s Law | Hook’s law | By the end of the lesson, the learner should be able to:  State and derive the Hook’s law | Defining Hook’s law  Deriving Hook’s law | Wire springs  Masses  Spring balance  Graph paper | Comprehensive secondary physics students book 2 pages 60-61  Comprehensive secondary physics teachers book 2 pages 30-32  Secondary physics KLB students book 2 page 158  Principles of physics (M.Nelkom) pages 439-440  Golden tips physics page 17 |  |
|  | 3-4 | Hook’s Law | Spring constant | By the end of the lesson, the learner should be able to:  Determine spring constant of a given spring | Determining the spring constant of a given spring  Suspending masses of springs | Springs  Meter rule  Graph papers  Masses | Comprehensive secondary physics students book 2 pages 61-63  Comprehensive secondary physics teachers book 2 pages 30-31  Secondary physics KLB students book 2 page 158-164  Principles of physics (M.Nelkom) pages  Golden tips physics page 18 |  |
| 11 | 1-2 | Hook’s Law | The spring balance | By the end of the lesson, the learner should be able to:  Construct and calibrate a spring balance | Making and calibrating a spring balance | Wires  Wood  Meter rule  Masses | Comprehensive secondary physics students book 2 pages 63-65  Comprehensive secondary physics teachers book 2 pages 30-32  Secondary physics KLB students book 2 page 165  Principles of physics (M.Nelkom) pages  Golden tips physics page 18 |  |
|  | 3-4 | Hook’s Law | Revision | By the end of the lesson, the learner should be able to:  Solve problems on Hook’s law | Questions and answers  Problem solving | Questions in the students book 2 | Comprehensive secondary physics students book 2 pages 65-66  Comprehensive secondary physics teachers book 2 pages 32-33  Secondary physics KLB students book 2 page 166-169  Principles of physics (M.Nelkom) pages  Golden tips physics page 19-20 |  |
| 12 | 1-2 | Waves I | Pulses and waves | By the end of the lesson, the learner should be able to  Describe the information of pulses and waves | Describing the formation of pulses and waves | Strings/ropes  Ripple frank  Water  Stones  Basins | Comprehensive secondary physics students book 2 pages 67  Comprehensive secondary physics teachers book 2 pages 34-35  Secondary physics KLB students book 2 page 173-176  Principles of physics (M.Nelkom) pages  Golden tips physics page 87 |  |
|  | 3-4 | Waves I | Transverse and longitudinal pulse and waves | By the end of the lesson, the learner should be able to  Describe transverse and longitudinal pulses and waves | Distinguishing between transverse and longitudinal pulses and waves  Forming pulse and waves | Sources of transverse and longitudinal waves | Comprehensive secondary physics students book 2 pages 67-69  Comprehensive secondary physics teachers book 2 pages 34-35  Secondary physics KLB students book 2 page 170-173  Principles of physics (M.Nelkom) pages  Golden tips physics page 87 |  |
| 13 | 1-2 | Waves I | Characteristics of waves | By the end of the lesson, the learner should be able to:  Define amplitude (a), the wave length (l) the frequency (f) and the period (T) of a wave | Describing and defining the characteristics of waves | Ripple tank  Rollers  Springs  Chart showing the characteristics of waves | Comprehensive secondary physics students book 2 pages 69-71  Comprehensive secondary physics teachers book 2 pages 34-35  Secondary physics KLB students book 2 page 174-183  Principles of physics (M.Nelkom) pages  Golden tips physics page 89 |  |
|  | 3-4 | Waves I | Revision | By the end of the lesson, the learner should be able to:  Derive and solve problems using the formula v=fx | Deriving the equation v=fx  Solving problems using the formula v=fx | Set questions | Comprehensive secondary physics students book 2 pages 70-71  Comprehensive secondary physics teachers book 2 pages 335  Secondary physics KLB students book 2 page 183  Principles of physics (M.Nelkom) pages  Golden tips physics page 96 |  |
| **14** |  | **END OF TERM EXAMINATIONS** | | | | | |  |
| **15** |  | **REPORT MAKING AND CLOSURE** | | | | | |  |

**PHYSICS SCHEMES OF WORK**

**FORM TWO 2016**

**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 | Evaluation | Revision | By the end of the lesson, the learner should be able to:  Get the correct responses to the holiday assignments | Discussions on correct answers to holiday assignment | Marking scheme for holiday assignment | Comprehensive secondary physics students book 2 pages 69-71  Comprehensive secondary physics teachers book 2 pages 34-35  Secondary physics KLB students book 2 page 183-185  Principles of physics (M.Nelkom) pages  Golden tips physics page 89 |  |
|  | 3-4 | Sounds | Production of sounds | By the end of the lesson, the learner should be able to:  Demonstrate that sound is produced by vibrating objects | Producing sound by vibrating strings, tins and bottles | Strings  Tins  Bottles  Stick  Tuning forks  Nails  shakers | Comprehensive secondary physics students book 2 pages 73  Comprehensive secondary physics teachers book 2 pages 37-39  Secondary physics KLB students book 2 page 186-189  Principles of physics (M.Nelkom) pages  Golden tips physics page 93 |  |
| 3 | 1-2 | Sounds | Propagation of sounds | By the end of the the lesson, the learner should be able to:  Show that light does not travel in vacuum | Demonstrating that sound requires a materials random for perpetration | Bell jar  Vacuum pump  Electric bell | Comprehensive secondary physics students book 2 pages 74  Comprehensive secondary physics teachers book 2 pages 37-39  Secondary physics KLB students book 2 page 190-193  Principles of physics (M.Nelkom) pages  Golden tips physics page 94 |  |
|  | 3-4 | Sounds | Nature of sound waves | By the end of the lesson, the learner should be able to:  Describe the nature of sound waves | Describing and observing the characteristics of sound waves using the echo methods to find the speed of sound  Discussions | Open tube  Closed tube  Strings  bottles | Comprehensive secondary physics students book 2 pages 74-76  Comprehensive secondary physics teachers book 2 pages 37-39  Secondary physics KLB students book 2 page 194  Principles of physics (M.Nelkom) pages  Golden tips physics page 93 |  |
| 4 | 1-2 | Sound | Speed of sound | By the end of the lesson, the learner should be able to:  Determine the speed of sound in air by echo methods | Investigating the factors determining the speed of sound | Stop clock/watch  Chart on procedure for formulating the speed of sound | Comprehensive secondary physics students book 2 pages 77-78  Comprehensive secondary physics teachers book 2 pages 37-39  Secondary physics KLB students book 2 page 190-193  Principles of physics (M.Nelkom) pages  Golden tips physics page 95 |  |
|  | 3-4 | Sound | Factors affecting the speed of sound | By the end of the lesson, the learner should be able to:  State factors that affect the speed of sound | Discussing how different aspects of nature affects the speed of sound | Sources of sound  Solid  Water  Air | Comprehensive secondary physics students book 2 pages 78-79  Comprehensive secondary physics teachers book 2 pages 38-39  Secondary physics KLB students book 2 page 193  Principles of physics (M.Nelkom) pages  Golden tips physics page 95 |  |
| 5 | 1-4 | Sound | Revision | By the end of the lesson, the learner should be able to:  Solve problems involving sound | Questions and answers  Carrying out projects | Exercise in the students book 2 | Comprehensive secondary physics students book 2 pages 79-80  Comprehensive secondary physics teachers book 2 pages 39  Secondary physics KLB students book 2 page 198-203  Principles of physics (M.Nelkom) pages  Golden tips physics page 96 |  |
| 6 | 1-2 | Fluid Flow | Structure and turbulent flow | By the end of the lesson, the learner should be able to  Describe the streamline and turbulent flow | Discussions  Observing and defining  Streamline and turbulent flow | Water  Pipes of varying diameter  Sheet of paper | Comprehensive secondary physics students book 2 pages 81  Comprehensive secondary physics teachers book 2 pages 40-42  Secondary physics KLB students book 2 page 204-208  Principles of physics (M.Nelkom) pages  Golden tips physics page 48 |  |
|  | 3-4 | Fluid Flow | Equation of continuity | By the end of the lesson, the learner should be able to  Derive the equation of continuity | Deriving the equation of continuity  Discussions | pipes of varying diameter  charts on equation of continuity | Comprehensive secondary physics students book 2 pages 82  Comprehensive secondary physics teachers book 2 pages 40-42  Secondary physics KLB students book 2 page 210-215  Principles of physics (M.Nelkom) pages  Golden tips physics page 49 |  |
| 7 | 1-2 | Fluid Flow | Bernoulli’s effect | By the end of the lesson, the learner should be able to  Describe experiments to illustrate Benoullli’s effect | Illustrating Bernoulli’s effect by experiments | Paper funnel  Plane paper | Comprehensive secondary physics students book 2 pages 83-84  Comprehensive secondary physics teachers book 2 pages 40-42  Secondary physics KLB students book 2 page 215-221  Principles of physics (M.Nelkom) pages  Golden tips physics page 49 |  |
|  | 3-4 | Fluid Flow | Application of Bernoulli’s effect | By the end of the lesson, the learner should be able to:  Describe where Bernoulli’s effect is applied such as in the Bunsen burner, spray gun, carburetor, aerofoil and spinning ball | Describing the application of Bernoulli’s principle | Bunsen burner | Comprehensive secondary physics students book 2 pages 84-87  Comprehensive secondary physics teachers book 2 pages 40-42  Secondary physics KLB students book 2 page 221-231  Principles of physics (M.Nelkom) pages  Golden tips physics page 49-50 |  |
| 8 | 1-4 | Fluid Flow | Revision | By the end of the lesson the learner should be able to:  Solve problems involving the equilibrium of continuity | Answering the questions  Discussing answers to assignment | Exercise in the students’ book 2  assignment | Comprehensive secondary physics students book 2 pages 88  Comprehensive secondary physics teachers book 2 pages 42  Secondary physics KLB students book 2 page 231-234  Principles of physics (M.Nelkom) pages  Golden tips physics page 50 |  |
| **9-10** | **1-4** | **TOPICAL REVISION** | | | | | |  |
| **11** |  | **END YEAR EXAMINATIONS** | | | | | |  |
| **11** |  | **END YEAR EXAMINATIONS** | | | | | |  |
| **12** |  | **REPORT MAKING AND CLOSURE** | | | | | |  |