|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PHYSICS FORM 2 SCHEMES OF WORK – TERM 1** | | | | | | | | |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** | **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 * 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   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 * Principles of physics (M.Nelkom) pages 149 * Golden tips physics page 124 |  |
| **2** | **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 * 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:   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 * Principles of physics (M.Nelkom) pages 444 * Golden tips physics page 124-125 |  |
| **3** | **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 * 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:   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 * Principles of physics (M.Nelkom) pages 440 * Golden tips physics page 125-126 |  |
| **4** | **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 demagnetizative 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 * 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   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 * Principles of physics (M.Nelkom) pages * Golden tips physics page 127 |  |
| **5** | **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 * 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:   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 * Principles of physics (M.Nelkom) pages * Golden tips physics page 131 |  |
| **6** | **1-2** | MEASUREMENT II | The vernire calipers | By the end of the lesson, the learner should be able to   1. 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:   1. 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 |  |
| **7** | **1-2** | MEASUREMENT II | Decimal places, significant figures and standard form | By the end of the lesson, the learner should be able to:   1. 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:   1. 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 |  |
| **8** | **1-2** | MEASUREMENT II | Revision | By the end of the lesson the learner should be able to:   1. 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:   1. Define moments of force about a point 2. 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 |  |
| **9** | **1-2** | THE TURNING EFFECTS OF A FORCE | Principles of moments | By the end of the lesson, the learner should be able to:   1. 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   1. 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 |  |
| **10** | **1-2** | TURNING EFFECTS OF A FORCE | Revision | By the end of the lesson, the learner should be able to:   1. 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:   1. 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 |  |
| **11** | **1-2** | Equilibrium and centre of gravity | Centre of gravity | By the end of the lesson, the learner should be able to   1. Define centre of gravity 2. 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:   1. 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 |  |
| **12** | **1-2** | Equilibrium and centre of gravity | Stability | By the end of the lesson, the learner should be able to:   1. 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:   1. 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 |  |
|  | | | | | | | | |
| **PHYSICS FORM 2 SCHEMES OF WORK – TERM 2** | | | | | | | | |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** | **1-2** | REFLECTION AT CURVED SURFACES | Spherical mirrors | By the end of the lesson, the learner should be able to:   1. 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:   1. 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 |  |
| **2** | **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:   1. 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   1. 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 |  |
| **3** | **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   1. Define magnification 2. State and explain the applications of curved mirrors 3. 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   1. 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 |  |
| **4** | **1-2** | MAGNETIC EFFECT OF ELECTRIC CURRENT | Magnetic field pattern | By the end of the lesson, the learner should be able to:   1. 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:   1. 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 |  |
| **5** | **1-2** | MAGNETIC EFFECTS OF ELECTRIC CURRENT | Strength of an electron-magnets | By the end of the lesson, the learner should be able to:   1. 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:   1. 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 |  |
| **6** | **1-2** | MAGNETIC EFFECTS OF ELECTRIC CURRENT | Construction of an electric bell | By the end of the lesson, the learner should be able to   1. 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   1. Experimentally determine direction of a force on a conductor carrying current in a magnetic field | * Experiments on motor effects * Flemings rules illustrated | * Magnets * Wires * Pattery * 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 |  |
| **7** | **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:   1. 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;   1. 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 |  |
| **8** | **1-2** | THE MAGNETIC EFFECT OF ELECTRO-CURRENT | Revision | By the end of the lesson, the learner should be able to   1. 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 |  |
| **9** | **1-2** | HOOK’S LAW | Hook’s law | By the end of the lesson, the learner should be able to:   1. 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:   1. 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 |  |
| **10** | **1-2** | HOOK’S LAW | The spring balance | By the end of the lesson, the learner should be able to:   1. 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:   1. 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 |  |
| **11** | **1-2** | WAVES I | Pulses and waves | By the end of the lesson, the learner should be able to   1. 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   1. 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 |  |
| **12** | **1-2** | WAVES I | Characteristics of waves | By the end of the lesson, the learner should be able to:   1. 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:   1. 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 |  |
|  | | | | | | | | |
| **PHYSICS FORM 2 SCHEMES OF WORK – TERM 3** | | | | | | | | |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** | **1-2** | EVALUATION | Revision | By the end of the lesson, the learner should be able to:   1. 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:   1. 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 |  |
| **2** | **1-2** | SOUNDS | Propagation of sounds | By the end of the the lesson, the learner should be able to:   1. 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:   1. 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 |  |
| **3** | **1-2** | SOUND | Speed of sound | By the end of the lesson, the learner should be able to:   1. 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:   1. 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 |  |
| **4** | **1-4** | SOUND | Revision | By the end of the lesson, the learner should be able to:   1. 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 |  |
| **5** | **1-2** | FLUID FLOW | Structure and turbulent flow | By the end of the lesson, the learner should be able to   1. 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   1. 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 |  |
| **6** | **1-2** | FLUID FLOW | Bernoulli’s effect | By the end of the lesson, the learner should be able to   1. 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:   1. 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 |  |
| **7** | **1-4** | FLUID FLOW | Revision | By the end of the lesson the learner should be able to:   1. 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 |  |
|  | | | | | | | | |