PHYSICS SCHEMES OF WORK FORM 2

TERM 2

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| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **T/L ACTIVITIES** | **T/L AIDS** | **REFERENCE** | **REM** |
| 1 | **Opening and Revision** | | | | | | | |
| 2 | 1 | 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 |  |
| 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 |  |
| 3 | 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 |  |
| 4 | 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 |  |
| 3 | 1 | 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 |  |
| 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 |  |
| 3 | 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 |  |
| 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 |  |
| 4 | 1 | 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 |  |
| 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 |  |
| 3 | 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 |  |
| 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 |  |
| 5 | 1 | 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 |  |
| 2 | 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 |  |
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| 4 | 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 |  |
| 6 | 1 | 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 |  |
| 2 | 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 |  |
| 3 | 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 |  |
| 4 | 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 |  |
| 7 | 1 | 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 |  |
| 2 | 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 |  |
| 3 | 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 |  |
| 4 | 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 |  |
| 8 | **Mid Term Exams and Break** | | | | | | | |
| 9 | 1 | 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 |  |
| 2 | 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 |  |
| 3 | 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 |  |
| 4 | 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 |  |
| 10 | 1 | 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 |  |
| 2 | 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 |  |
| 3 | 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 |  |
| 4 | 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 |  |
| 11 | 1 | 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 |  |
| 2 | 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 |  |
| 3 | 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 165cs page 18 |  |
| 4 | 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 165cs page 18 |  |
| 12 | 1 | 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 |  |
| 2 | 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 |  |
| 3 | 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 7 |  |
| 3-4 | 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 7 |  |
| 13-14 | **End Term Exams and closing** | | | | | | | |