PHYSICS SCHEMES OF WORK FORM 2

TERM 2

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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 gravityDetermine centre of gravity of lamina objects  | Defining centre of gravityDetermining centre of gravity of lamina objects  | Lamina objectsPlumb linepencils  | Comprehensive secondary physics students book 2 pages 30Comprehensive secondary physics teachers book 2 pages 15-17Secondary 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 gravityDetermine centre of gravity of lamina objects  | Defining centre of gravityDetermining centre of gravity of lamina objects  | Lamina objectsPlumb linepencils  | Comprehensive secondary physics students book 2 pages 30Comprehensive secondary physics teachers book 2 pages 15-17Secondary 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 stabilityDiscussions  | Pictures and charts showing applications of stability  | Comprehensive secondary physics students book 2 pages 15-17Comprehensive secondary physics teachers book 2 pages 33Secondary 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 stabilityDiscussions  | Pictures and charts showing applications of stability  | Comprehensive secondary physics students book 2 pages 15-17Comprehensive secondary physics teachers book 2 pages 33Secondary 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 mirrorsConvex mirrorsparabolic mirrorsPlane papersSoft board, pins  | Comprehensive secondary physics students book 2 pages 35Comprehensive secondary physics teachers book 2 pages 18-22Secondary 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 mirrorsConvex mirrorsparabolic mirrorsPlane papersSoft board, pins  | Comprehensive secondary physics students book 2 pages 35Comprehensive secondary physics teachers book 2 pages 18-22Secondary 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 mirrorsObserving reflection at spherical mirrors  | Variety of a curved mirrorsGraph papersRulers  | Comprehensive secondary physics students book 2 pages 35-37Comprehensive secondary physics teachers book 2 pages 18-22Secondary 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 mirrorsObserving reflection at spherical mirrors  | Variety of a curved mirrorsGraph papersRulers  | Comprehensive secondary physics students book 2 pages 35-37Comprehensive secondary physics teachers book 2 pages 18-22Secondary 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 magnificationState and explain the applications of curved mirrorsState the defects of spherical mirrors  | Explaining magnification and formula in curved mirrorsDescribing the uses of curved mirrorsAsking questions  | Curved mirrorsExercise in students book 2  | Comprehensive secondary physics students book 2 pages 40-43Comprehensive secondary physics teachers book 2 pages 19-24Secondary 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 magnificationState and explain the applications of curved mirrorsState the defects of spherical mirrors  | Explaining magnification and formula in curved mirrorsDescribing the uses of curved mirrorsAsking questions  | Curved mirrorsExercise in students book 2  | Comprehensive secondary physics students book 2 pages 40-43Comprehensive secondary physics teachers book 2 pages 19-24Secondary 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 diagramsDescribing image characteristics  | Graph papersSoft boardsPlane papersPins  | Comprehensive secondary physics students book 2 pages 37-38Comprehensive secondary physics teachers book 2 pages 18-22Secondary 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 mirrorsDescribing the nature of images formed in concave mirror  | Concave mirrors  | Comprehensive secondary physics students book 2 pages 39-40Comprehensive secondary physics teachers book 2 pages 19-22Secondary 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 conductorCarrying out experiments  | CompassWiresBatteryAmmeterCompass needleCardboardScrewsIron fillings  | Comprehensive secondary physics students book 2 pages 44-47Comprehensive secondary physics teachers book 2 pages 25-28Secondary 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 conductorCarrying out experiments  | CompassWiresBatteryAmmeterCompass needleCardboardScrewsIron fillings  | Comprehensive secondary physics students book 2 pages 44-47Comprehensive secondary physics teachers book 2 pages 25-28Secondary physics KLB students book 2 page 123-128   |  |
| 3 | 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 conductorCarrying out experiments  | CompassWiresBatteryAmmeterCompass needleCardboardScrewsIron fillings  | Comprehensive secondary physics students book 2 pages 44-47Comprehensive secondary physics teachers book 2 pages 25-28Secondary physics KLB students book 2 page 123-128   |  |
| 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  | BatteryMagnetsWiresFerromagnetic materials  | Comprehensive secondary physics students book 2 pages 49-51Comprehensive secondary physics teachers book 2 pages 27Secondary 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 currentWiremagnets  | Comprehensive secondary physics students book 2 pages 49-51Comprehensive secondary physics teachers book 2 pages 25-28Secondary 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 currentWiremagnets  | Comprehensive secondary physics students book 2 pages 49-51Comprehensive secondary physics teachers book 2 pages 25-28Secondary 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 currentWiremagnets  | Comprehensive secondary physics students book 2 pages 49-51Comprehensive secondary physics teachers book 2 pages 25-28Secondary 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 ironNails CompassSolenoid  | Comprehensive secondary physics students book 2 pages 47-48Comprehensive secondary physics teachers book 2 pages 25-28Secondary 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  | SolenoidSoft ironNails compass  | Comprehensive secondary physics students book 2 pages 47-48Comprehensive secondary physics teachers book 2 pages 25-28Secondary 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  | SolenoidSoft ironNails compass  | Comprehensive secondary physics students book 2 pages 47-48Comprehensive secondary physics teachers book 2 pages 25-28Secondary 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  | SolenoidSoft ironNails compass  | Comprehensive secondary physics students book 2 pages 47-48Comprehensive secondary physics teachers book 2 pages 25-28Secondary 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  | BatteryAmmeterDifferent magnetic materials  | Comprehensive secondary physics students book 2 pages 48-49Comprehensive secondary physics teachers book 2 pages 25-28Secondary 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 bellDiscussing the use of electric motor  | An electric bellAn electric motor  | Comprehensive secondary physics students book 2 pages 49-58Comprehensive secondary physics teachers book 2 pages 23-28Secondary 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 bellDiscussing the use of electric motor  | An electric bellAn electric motor  | Comprehensive secondary physics students book 2 pages 49-58Comprehensive secondary physics teachers book 2 pages 23-28Secondary 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 bellDiscussing the use of electric motor  | An electric bellAn electric motor  | Comprehensive secondary physics students book 2 pages 49-58Comprehensive secondary physics teachers book 2 pages 23-28Secondary 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 bellChart in electric bell  | Comprehensive secondary physics students book 2 pages 48-49Comprehensive secondary physics teachers book 2 pages 25-28Secondary 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 effectsFlemings rules illustrated  | MagnetsWires BatteryPins  | Comprehensive secondary physics students book 2 pages 52-53Comprehensive secondary physics teachers book 2 pages 25-28Secondary 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 effectsFlemings rules illustrated  | MagnetsWires BatteryPins  | Comprehensive secondary physics students book 2 pages 52-53Comprehensive secondary physics teachers book 2 pages 25-28Secondary 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 lawDeriving Hook's law  | Wire springsMassesSpring balanceGraph paper  | Comprehensive secondary physics students book 2 pages 60-61Comprehensive secondary physics teachers book 2 pages 30-32Secondary 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 lawDeriving Hook's law  | Wire springsMassesSpring balanceGraph paper  | Comprehensive secondary physics students book 2 pages 60-61Comprehensive secondary physics teachers book 2 pages 30-32Secondary 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 springSuspending masses of springs  | SpringsMeter ruleGraph papersMasses | Comprehensive secondary physics students book 2 pages 61-63Comprehensive secondary physics teachers book 2 pages 30-31Secondary 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 springSuspending masses of springs  | SpringsMeter ruleGraph papersMasses | Comprehensive secondary physics students book 2 pages 61-63Comprehensive secondary physics teachers book 2 pages 30-31Secondary 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 WoodMeter ruleMasses  | Comprehensive secondary physics students book 2 pages 63-65Comprehensive secondary physics teachers book 2 pages 30-32Secondary 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 WoodMeter ruleMasses  | Comprehensive secondary physics students book 2 pages 63-65Comprehensive secondary physics teachers book 2 pages 30-32Secondary 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 answersProblem solving  | Questions in the students book 2  | Comprehensive secondary physics students book 2 pages 65-66Comprehensive secondary physics teachers book 2 pages 32-33Secondary 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 answersProblem solving  | Questions in the students book 2  | Comprehensive secondary physics students book 2 pages 65-66Comprehensive secondary physics teachers book 2 pages 32-33Secondary 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/ropesRipple frankWater StonesBasins  | Comprehensive secondary physics students book 2 pages 67Comprehensive secondary physics teachers book 2 pages 34-35Secondary 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/ropesRipple frankWater StonesBasins  | Comprehensive secondary physics students book 2 pages 67Comprehensive secondary physics teachers book 2 pages 34-35Secondary physics KLB students book 2 page 173-176 7  |  |
| 13-14 | **End Term Exams and closing** |