# PRESIDENT'S OFFICE, REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT, SECONDARY SCHOOL

**TEACHER NAME: SCHEME OF WORK OF PHYSICS FORM TWO YEAR OF 2025**

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| Competen  ce | Specific  Objectives | Month | Week | Main Topic | Sub Topic | Perio  ds | Teaching Activities | Learning Activities | Learning Aids | Assessment | References | Remarks |
| The student should have ability to: charge bodies using different methods | The student should be able to:   1. explain the concept of static electricity 2. explain the origin of charges 3. identify the two types of charges 4. state the fundamental law of static   electricity   1. charge bodies using different   methods | Januar y | Week 3 | STATIC ELECTRIC ITY | The concept of static electricity | 4 | 1. lead student to demonstrate the picking up of papers using a charged body 2. organize read review on origin of charges 3. guide discussion on movement of charges when two bodies are charged 4. demostrate attraction and repulsion when a charged body is brought near a glass rod 5. organize experiments to show various methods of charging a body | i) demostrate picking small pieces of papers ii) discuss the origin of charges iii) students to identify two types of charges iv) charge a body by various methods | plastic pen, ebonite rod, glass rod, fur, paper, perspex comb, silk, polythene rod, polythene rod, thread , retort stand, | can the student;   1. explain the concept of static electricity? 2. explain the origin of charges 3. identify two types of charges 4. state the fundamental law of static electricity 5. can the student charge bodies   using different methods | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: charge an electrosco pe | The student should be able to:   1. describe the structure of gold leaf electroscope 2. determine the sign of charges 3. identify the steps of charging and ischarging a gold leaf   electroscope | Januar y | Week 4 | STATIC ELECTRIC ITY | detection of charges | 4 | 1. organize experiment to show different methods of charging a body 2. guide the student to learn the mode of action of electrophorus 3. lead students to discharge an electroscope by earthing | 1. students to draw and label an electroscope 2. student to charge an electrophorus by inducting using charged polythene base 3. students to charge an electroscope by induction using charge polythene base | gold leaf  electroscpe  -electrophorus  -charged polythene base | can the student;   1. describe the structure of a leaf electroscpe 2. determine the sign of a charge | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: test for electrical conductivi  ties | the student should be able to:  a) distinguish between a conductor and an insulator | Febru ary | Week 1 | STATIC ELECTRIC ITY | conductors and insulators | 3 | i) lead the student to distinguish between an insulator and conductor ii) lead students study electrol conductivities of conductors and insulators | to identify insulators and conductors by passing electric current over it. | copper, wire, alluminium wire, glass rod, ebonite, wood, fur wax | can the student differentiate between insulator and a conductor? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: construct an  air-filled capacitor | the student should be able to:   1. explain the concept of capacitance 2. explain the mode of action of a capacitor 3. describe the construction of air filled   capacitor   1. determine equivalence capacitance of a combustion of   capacitor | Febru ary | Week 2 | STATIC ELECTRIC ITY | capacitors | 3 | 1. lead student to define a capacitor 2. with student describe the mode of action of capacitor 3. lead students to identify different types of charges 4. explain the construction of an air capicitor | 1. students in groups give the meaning of capacitance 2. describe the mode of action of capacitance 3. demostrate charging and discharging of a capacitor 4. student to derive equivalent capacitance of two or more capacitors connected in series and in parrallel. | air- filled  capacitor  -capacitors  -connecting wires -paper filled capacitor  -battery -resistor volumeter | can the student:   1. explain the concept of capacitance? 2. explain the mode of action of capacitors 3. construct an air filled   capacitor? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should | the student should be able to:  a) recognize that | Febru ary | Week 3 | STATIC ELECTRIC ITY | charge distribution along the | 3 | i) organize experiment to show that charge in conductor reside on outer surface | i) verify experimentary that charges reside on lower surface of conductor | electrohorus , cylindrical conductor,pear | is the student able to show that  charges in | Physics For Secondary Schools, | . |

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| have ability to: show the distributio n of  charge | charge in a conductor reside on its outer surface b) show that charge in a conductor is concentrated on sharply curved  surface area |  |  |  | surface of a conductor |  | ii) carry out experiment to show the distribution of charge | ii) carry out experiment to show the distribution of charges | shaped conductor, proof plane | conductor resides on the outer surface | Students Book Form  Two. By T.I.E |  |
| The student should have ability to: construct a simple lighting conductor | the student should be able to:   1. explain the phenomenon of ligtning conductor 2. describe the structure and mode of action of lightning conductor 3. construct a simple lightining   conductor | Febru ary | Week 4 | STATIC ELECTRIC ITY | lightning conductor | 3 | 1. organize jigsaw presentation of phenomenon of lighting 2. explain the structure and mode of action of a lighting conductor 3. conduct an excursion for students to observe installed lighting conductor in different building 4. assign students to construct a lighting conductor | 1. participate in presentation on phenomenon of lighting 2. in groups the students discuss the structure and mode of action of lighting conductor 3. student to construct and install a lighting conductor in a school builiding | copper paper,  copper plate, copper rod, and sharp pointed conductor | is the student able to explain the mode of action of lighting conductor?  can the student conduct a simple lighting conductor? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: identify sources of current electricity | the student should be able to:   1. define the term current electricity 2. identify different sources of current electricity in   daily life | March | Week 1 | CURRENT ELECRICI TY | Concept of current electricity | 3 | 1. lead students to define current electricity 2. through questions and answer help students identify sources of current electricity | 1. students in groups to define current electricity 2. discuss in groups the sources of electricity | dry cell,  accumulator, dynamo, generator, solar panel ,  galvanometer | is the student able to define current electricity?  can the student identify different sources of current electricity? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: connect series and parallel in a circuit | The student should be able to:   1. identify   simple circuit components   1. identify   simple electric symbols   1. explain the concept of current , voltage and resistance 2. state the SI units of current, voltage and resistance 3. connect   simple electric circuits   1. measure electric current and voltage 2. analyse   simple electric  circuits | March | Week 2 | CURRENT ELECRICI TY | simple electric circuits | 3 | 1. lead discussions in different circuit components 2. guide students to identify basic electric symbols 3. guide student to explain current, voltage and resistance 4. guide student to state the SI units of current 5. help student to connect cells in parallel and in circuit 6. help the students to connect ammeter and voltage 7. guide student to perform an experiment to verify ohms law 8. guide the students to deduce the equivalence resistance for both parallel and series connections. | 1. in groups the student to list down circuit components 2. search information on electric symbols 3. in groups to give definations of voltage , resistance and current 4. students give the units of current , voltage and resistance 5. to connect circuits in parallel and in circuits 6. to take readings of current and voltage 7. perform experiment to verify ohms law 8. to deduce equivalent resistance of two resistors connected in series and in parallel | battery, cells, resistor, switch, connecting wires, chart  showing basic electric symbols, charts showing the relationship between current, voltage and resistance, bulbs, bulb holders, ammeter, voltmeter, circuit diagrams | can the student be able to:   1. identify basic electric components? 2. identify basic electric symbols and their meaning iii)define current, electricity, and voltage 3. state the units of current, voltage and resistors 4. connect simple electric circuits 5. measure   electric current and voltage   1. analyse   simple electric circuits | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: | The student should be able to:  a) explain the origin of  magnetism | March | Week 3 | MAGNETI SM | Concept of magnetism | 3 | 1. assign student library search to find about origin of magnets 2. display different types of magnetic and non magnetic materials 3. lead students to investigate the | 1. discuss the origin of magnets 2. identify magnetic an non magnetic materials 3. investigate the properties | magnets, copper rod, string,  support, steel rod, nickel rod, cobalt plate, | can the student be able to:  a) explain the origin of  magnetism | Physics For Secondary Schools, Students Book Form | . |

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| apply magnets to make simple machines | 1. identify magnetic and non-magnetic material 2. state the properties of magnets 3. identify types of magnets 4. identify applications of   magnets |  |  |  |  |  | properties of magnets   1. display different types of magnets and help students to identify them 2. help student to investigate the situations where magnets are used | of magnets   1. identify the types of magnets 2. identify the applications of magnets | piece of woo, iron rod, bar, horse shoe  magnets, flip chart, marker pens | 1. identify magnetic and non magnetic substances 2. state the properties of magnets 3. identify types of magnets 4. apply magnets | Two. By T.I.E |  |
| The student should have ability to: demagneti ze a  magnet | the student should be able to;   1. explain the concept of magetisation and demagnetisation 2. demonstrate magnetisation and demagnetisation   c)design  methods of  storing magnets | March | Week 4 | MAGNETI SM | magnetisati on and  demagnetis ation | 3 | 1. assist the student in library search 2. lead student to magnetise and demagnetise a magnet 3. stimulate discussion on how a magnet can loose its magnetism | 1. do library search and present their findings 2. identify ways in which magnets loose their magnetism | bar magnet, short steel bars | is the student able to design a proper way of storing a magnet? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: shield a magnetic material from field of force | the student should be able to;   1. explain the concept of magnetic fields 2. illustrate magnetic lines of force around a magnet using iron fillings or a compass needle 3. explain   methods of magnetic  shielding | April | Week 1 | MAGNETI SM | magnetic fields on a magnet | 3 | i lead the students to explain the concept of magnet   1. lead students to perform experiment on the pattern lines of force of magnet 2. analyse the properties of magnetic lines of force 3. lead experiment on how to shield a magnetic material from magnetic lines of force | 1. to explain the concept of magnetic fields 2. plot patterns of lines of force 3. demonstrate practically how to shield a magnetic material from magnetic force | soft iron ring, bar magnets, iron  fillings, plain  paper, pencil, compass needle | is the student able to explain the concept of magnetic fields?  can the student explain the  methods of magnetic shielding? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| -- | -- | -- | -- | -- | -- | -- | MID TERM EXAMINATIONS AND  SHORT BREAK | -- | -- | -- | -- | -- |
| The student should have ability to: apply earths magnetic field in daily life. | the student should be able to:   1. explain the phenomenon of earths magnetic field 2. determine the direction of earths magnetic fields 3. locate earths magnetic lines of force about a bar magnet 4. measure angle of inclination (dip) and angle of declination 5. state the applications of earths magnetic | April | Week 4 | MAGNETI SM | earths magnetic field | 3 | 1. explain the existence of earths magnetic fields 2. lead students to determine the direction of earths magnetic fields 3. assist students to locate the earths magnetic lines of force about a bar magnet 4. guide the students to determine the angle of inclination and declination 5. assist students carry out library search on application of earths magnetic fields | 1. explain the phenomenon of earths magnetic field 2. determine the direction of earths magnetic field 3. use iron fillings to determine earths magnetic field about a bar magnet 4. measure the angle made by the settled needle with respect to horizontal plane 5. students to discuss findings on the applications of earths magnetic fields | bar magnet,  thread, retort  stand, iron filling, compass needle, protractor, scale support | can the student be able to: a)  determine the direction of earths magnetic field   1. locate earths magnetic lines of force about a bar magnet 2. state the   applications of earths magnetic field | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |

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|  | fields |  |  |  |  |  |  |  |  |  |  |  |
| The student should have ability to: Apply moment of force in daily life. | the student should be able to:   1. explain the effects of turning force 2. determine the moment of force 3. state the principle of moment 4. apply the principle of moment in daily   life. | May | Week 1 | FORCES IN EQUILIBR IUM | Moment of force | 3 | 1. guide the students in carrying out activities of pulling and pushing of objects 2. lead the students to determine moment of force 3. guide students to conduct an experiment to verify principle of moment of force | 1. students apply simultaneously parallel and opposite forces on different objects 2. determine the moment of force 3. students to explain how the principle of moment of force is applied in different situations | hinged window, hinge door, suspended piece of woo, students desk, metre rule, two different masses, sea saw, beam balance, door. | 1. is the student able to state the effects of turning of force 2. can the student determine the moment of force 3. can the student state the moment of force 4. can the student apply the principle of moment of   force in daily life. | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: Determine the center of gravity of irregular and regular  object | The student should be able to:<br< a) explain the center of gravity<br< b) determine the center of gravity of a regular shaped body<br<  c) determine the center of gravity of an irregular  object | May | Week 2 | FORCES IN EQUILIBR IUM | Center of gravity | 3 | 1. teacher to organize students gallery walk on meaning of center of gravity 2. guide the student to determine the center of gravity of a regular object 3. guide the student to determine the center of gravity of a irregular object | 1. students explain the meaning of center of gravity 2. students to determine the center of gravity of s regular object 3. students to determine the center of gravity of s irregular object | flip charts,  marker pens, masking tape, a piece of uniform triangular cardboard, plumbline, supporting nail, ruler. | is the student able to explain center of gravity?  is the student able to determine the center of gravity of a regular object  is the student able to determine the center of gravity of a irregular object | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: Apply the three states of equilibriu m in daily life | The student should be able to:   1. explain the conditions of equilibrium 2. explain stable, unstable and neutral equilibrium 3. apply conditions of stable unstable   and neutral equilbrium in  daily life | May | Week 3 | FORCES IN EQUILIBR IUM | Types of equilibrium | 3 | 1. lead students to brainstorm on conditions of equilibrium 2. lead student to identify three states of equilibrium 3. lead students to apply to three conditions of equilibrium | 1. students to explain the condition for equilibrium 2. explain unstable, stable and neutral equilibrium 3. identify the application of three states of equilibrium in daily life | solid wooden cone, table , bottle, ball, solid objects of various objects, model of a bus or a lorry | Is the student able to explain the three states of  equilibrium?  Can the student explain the CONDTIONS OF STABLE ,  UNSTABLE  AND neutral equilibrium? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: construct simple machines | the student should be able to:   1. explain the concept of simple machines 2. explain the terms applied in simple machines 3. identify different kinds of   simple machines | May | Week 4 | SIMPLE MACHINE S | Concept of simple machines | 3 | 1. lead student to get the meaning of simple machines 2. help students to define the terms, load   , effort, mechanical advantage, velocity,,ration, efficiency as applied in machines   1. stimulate students to identify different types of simple machines | 1. student to explain the concept of simple machines 2. students in groups to mention different types of simple machines | bolts and nus, spanners, wheel barrow, heavy  stone, rope, bottle openers,crow bar, capped bottles | is the student able to explain the meaning of a simple machine?  can the student explain the terms used in simple machines?  is the student able to mention some  simple machines? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: use pulleys to solve different | 1. the student should be able to:    1. identify different pulleys in a system    2. determine the mechanical advantage, velocity ration, | June | Week 1 | SIMPLE MACHINE S | pulleys | 2 | 1. guide the student to identify different types of pulleys 2. help student to determine the mechanical advantage, velocity ration, and efficiency of pulleys 3. use pulleys in daily life | i) identify different types of pulleys ii) student to determine the mechanical advantage, velocity ration, and efficiency of pulleys  iii) make application of pulley system in daily life | single fixed pulley, rope,two masses,metre rule , pens, flip charts, movable pulleys, block  and tackle pulleys | can the student identify different pulley systems?  is the student able to determine the mechanical advantage, velocity ratio and efficiency of | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |

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| problems in daily life | and efficiency of pulleys  c)use pulleys in  daily life |  |  |  |  |  |  |  |  | machines |  |  |
| -- | -- | -- | -- | -- | -- | -- | REVISION, PREPARATIONS AND SITTING FOR TERMINAL EXAMINATIONS AND LONG  HOLIDAY | -- | -- | -- | -- | -- |
| The student should have ability to: Construct an inclined plane | the student should be able to:   1. determine the mechanical advantage, velocity ratio and efficiency of inclined planes 2. apply inclined planes in daily   life | July | Week 2 | SIMPLE MACHINE S | inclined plane | 2 | 1. facilitate the calculations of mechanical advantage, efficiency and velocity ration of inclined planes 2. lead discussion on the application of simple incline planes in daily life | 1. students to determine mechanical advantage, efficiency and velocity ration of inclined planes 2. discuss the applications of inclined planes in life | Inclined plane, heavy load, building stopes, ladders | Can the student identify the  applications of simple machines | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: lift heavy loads using screw jack | The student should be able to:   1. describe the structure of a screw jack 2. determine the mechanical advantage, velocity ratio,and efficiency of a screw jack. 3. apply screw   jack in daily life | July | Week 3 | SIMPLE MACHINE S | Screw jack | 2 | 1. help the students to study the main features of a screw jack 2. assist student to calculate the mechanical advantage, velocity ratio and efficiency of machines 3. guide students mention the daily uses of simple machines | i) practice lifting heavy load using simple machines ii) student to calculate the mechanical advantage, velocity ratio and efficiency of machines  iii) discuss the application of screw jack in daily life | car, screw jack | can the student calculate the mechanical advantage, velocity ratio and efficiency of machines?  is the student able to use screw jack in daily life? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: the student to apply wheel and axle in daily life | the student should be able to:   1. determine the structure of a wheel and axle 2. determine the mechanical advantage, velocity ratio and efficiency of wheel and axle 3. use the wheel and axle in daily   life | July | Week 3 | SIMPLE MACHINE S | wheel an axle | 2 | 1. display a wheel and axle of a bicycle 2. determine the mechanical advantage, velocity ratio and efficiency of wheel and axle 3. assist student come up with uses of the wheel and axle | 1. discuss the main features of the wheel and axle 2. determine the mechanical advantage, velocity ratio and efficiency of wheel and axle 3. state the uses of the wheel and axle | wheel and axle, bicycle, heavy load, windlass machine | is the student able to describe simple features of wheel and axle?  can the student make use of the wheel and axle? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: make a  model of an hydraulic press | the student should be able to:   1. describe the structure of an hydraulic press 2. determine the mechanical advantage, velocity ratio and efficiency of hydraulic press in daily life 3. state the uses of hydraulic press in daily life | July | Week 4 | SIMPLE MACHINE S | hydraulic press | 2 | 1. display a model of hydraulic press and describe to the students how it works 2. determine the mechanical advantage, velocity ratio and efficiency of hydraulic press in daily life 3. state the uses of hydraulic press in daily life | 1. discuss in groups the structure of an hydraulic press 2. determine the mechanical advantage, velocity ratio and efficiency of hydraulic press in daily life 3. discuss the application of hydraulic press in daily life | model of  hydraulic press, two strings of different sizes | is the student able to describe the structure of hydraulic press in daily life?  can the student determine the mechanical advantage, velocity ratio and efficiency of hydraulic press in daily life ?  is the student able to make use of hydraulic press in  daily life | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |

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| The student should have ability to: Describe Distance and Displacem  ent | The student should be able to:   1. distinguish between distance and displacement; 2. state the SI units of distance and   displacement. | Augus t | Week 1 | MOTION IN STRAIGH T LINE | Distance and Displaceme nt | 2 | 1. To guide students to distinguish between distance and displacement. 2. To display various flash cards with SI units, one of which has the correct SI unit of distance and displacement. | 1. Students to give the difference between distance and displacement. 2. Students to identify SI units of distance and displacement. Students to state the SI units of distance and displacement. | Tape measure Markers Reference books Flash cards | Can the student distinguish between distance and displacement? Is the student able to state Si. units of distance and displacement? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: Describe speed and velocity | The student should be able to:  a) distinguish between speed and velocity;  . b) state the SI unit of speed and velocity;  c) determine average velocity of a body. | Augus t | Week 1 | MOTION IN STRAIGH T LINE | Speed and Velocity | 3 | 1. To assist students to distinguish between speed and velocity. 2. To organize think pair share on the SI unit of speed and velocity 3. To stimulate students to determine average velocity of a body. | 1. Students to distinguish between speed and velocity. 2. Students to state the SI unit of speed and velocity. 3. Students to determine average velocity of the body. | Timer Measuring tape Reference books Internet Speedometers  Timer Measuring tape | Can the student distinguish between speed and velocity?  Can the student state the SI units of speed and velocity?  Can the student determine the average velocity of  the body? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: Describe acceleratio n and  retardation | The student should be able to:  a) interpret velocity  time-graph; b)  determine the acceleration of a body; and c) explain the  concept of retardation. | Augus t | Week 2 | MOTION IN STRAIGH T LINE | Acceleratio n | 4 | 1. To display different velocity time graphs for students to interpret. 2. To guide students to discuss the velocity-time graphs. 3. To lead students to explain the concept of retardation. Students to explain the concept of retardation. | 1. Through   reciprocal-teaching and question and answer techniques students to interpret velocity-time graphs for increasing velocity, constant velocity and decreasing velocity.   1. Students to determine the rate of change in velocity with time. Students to determine acceleration of a   body. | Velocity-time graphs Trolleys  Ticker-tape-time r | Can the student interpret  velocity-time graph?  Can the student determine the acceleration of a body?  Is the student able to explain concept of retardation? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: Describe Equations of Uniformly Accelerate d Motion | The student should be able to:   1. derive equations of uniformly accelerated motion; 2. apply   equations of accelerated motion in daily  life. | Augus t | Week 2 | MOTION IN STRAIGH T LINE | Equations of Uniformly Accelerated Motion | 2 | 1. To facilitate students to apply deductive thinking to derive equations of uniformly accelerated motion. 2. To motivate students to solve problems related to equations of uniformly accelerated motion | 1. Students to derive equations of uniformly accelerated motion. 2. Students to solve problems related to equations of uniformly accelerated motion. | Kinematics reference books Velocity-time graphs for uniformly accelerated motion.  Bank of  kinematics questions | Is the student able to derive equations of uniformly accelerated motion?  Is the student able to apply equations of motion in daily life? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: Describe motion under gravity | The student should be able to:   1. explain the concept of gravitational force; 2. determine acceleration due to gravity; 3. explain the applications of gravitational force. | Augus t | Week 3 | MOTION IN STRAIGH T LINE | Motion under Gravity | 3 | 1. To encourage students to share their ideas on a body thrown vertically upwards and a falling body. 2. To organize the students to determine acceleration due to gravity experimentally. 3. To direct the students to search and discuss applications of gravitational force. | 1. Students in groups to explain the concept of gravitational force. 2. Students to perform an experiment on determination of accelerations due to gravity by simple pendulum. | Pendulum bob  In extensible string  Meter rules Stop watch Retort stand  Small string holding corks Graph papers.  Reference books Internet  Flip charts Marker pens | Is the student able to explain the concept of gravitational force?  Is the student determine acceleration due to gravity?  Is the student explain the  applications of gravitational  force? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |

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| The student should have ability to: Describe First Law of Motion | The student should be able to:  .a) explain the concept of inertia;   1. state Newton&apos;s first law of motion; 2. verify Newton&apos;s first law of   motion | Augus t | Week 3 | NEWTON  &apos;S LAWS OF MOTION | First Law of Motion | 3 | 1. To stimulate discussion on the behavior of an object when there is a sudden change of its state of motion. 2. To lead students to state Newton&apos;s first law of motion. 3. To facilitate for demonstrations of Newton&apos;s first law of motion on an object at rest. | 1. Students to brainstorm the tendency of applied force on a body when is at rest or in motion. 2. Students to state Newton&apos;s law of motion. 3. Students to perform an experiment to verify Newton&apos;s first law of motion. | Heavy load Bottle Cards  Coin Tumbler  Table cloth on a table  Tea cups | Is the student explain. the concept of linear momentum?  Is the student able to state the S.I. units of linear momentum?  Is the student determine linear momentum? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: Describe Second Law of Motion | The student should be able to:  a) explain concept of linear momentum;  b.) state the S.I unit of linear momentum;  c) determine linear momentum; | Augus t | Week 4 | NEWTON  &apos;S LAWS OF MOTION | Second Law of Motion | 3 | 1. To facilitate for students to investigate the relationship between the velocity and mass of a body moving in a straight line. 2. To encourage students to deduce the SI units of linear momentum from the product of mass and velocity. iii) To guide students to determine experimentally the linear momentum of a body   iv) Students to perform an experiment to measure the velocity of a trolley loaded  with a known mass. | 1. Students to explain the concept of linear momentum. 2. Students to deduce and state the SI unit of linear momentum 3. Students to compute the product of total mass of trolley and its velocity to give the linear momentum. | Trolley Various masses Meter rule | Is the student explain. the concept of linear momentum?  Is the student able to state the S.I. units of linear momentum?  Is the student determine linear  momentum? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: Describe Conservati on of  Linear Momentu m | The student should be able to:   1. distinguish between elastic and inelastic collisions; 2. state the principle of conservation of linear momentum;   c ) apply the principle of conservation of linear momentum in solving problems, | August | Week 4 | NEWTON  &apos;S LAWS OF MOTION | Conservatio n of Linear Momentum | 4 | i) To organize. students to investigate types. of collision. ii) To lead students to deduce tine relationship between linear momentum before and after a collision.  iii) Students to compare the total momentum before and after collision, and hence deduce the principle of conservation of linear momentum. iv) To organize students for group discussion to identify applications of the principle of conservation of linear momentum. | 1. Students to conduct experiment to distinguish between elastic and inelastic collision. 2. Students to determine experimentally the linear momentum of two bodies moving towards each other before and after collision. 3. Students in the groups to discuss applications of the principle of conservation of linear momentum. 4. The students to apply the principle of conservation of linear momentum in solving problems | Tennis ball . ,  Spongy floor/surface Muddy surface Two trolley Various masses Reference books | Is the student able to distinguish between elastic  and inelastic collisions?  Is the student state the principle of conservation of linear momentum?  Is the student able to apply the  principle of  conservation of linear momentum in solving  problems? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
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| The student should have ability to: Describe third law of motion | The student should be able to:   1. distinguish between action and reaction forces; 2. state Newton&apos;s third law of motion; 3. apply Newton&apos;s third law of motion. | Septe mber | Week 3  &  4 | NEWTON  &apos;S LAWS OF MOTION | Third Law of Motion | 4 | 1. To lead students to give the meaning of action and reaction forces. 2. To organize the students to demonstrate that action and reaction forces are related. 3. To organize students in groups to discuss application of Newton&apos;s third law of motion. 4. To lead students to solve problems involving Newton&apos;s third laws of motion. | 1. Students to identify the action forces and reaction forces in bodies. 2. Students to deduce that for each action force there is equal and opposite reaction force. 3. Students to state Newton&apos;s third law of motion. 4. Students to discuss in groups the applications of Newton&apos;s third law in daily life. 5. Students to solve problems involving Newton&apos;s third laws of   motion. | Balloon Bicycle pump  Stiff spiral spring  Block of wood or book  A table Stand-on  weighing scale | Is the student able to distinguish between action  and reaction forces?  Is the student state Newton's third law of motion?  Is the student apply Newton's  third law of motion? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |

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| The student should have ability to: Describe concept of temperatur  e | The student should be able to:   1. define the term temperature; 2. state the S.I. units of   temperature. | Octob er | Week 1 | TEMPERA TURE | Concept of Temperatur e | 2 | 1. To lead the students using Think- Pair-Share to define the team temperature. 2. The teacher to lead students to state the SI unit of temperature. | 1. Students to define the term temperature. 2. Students to state the S.I unit of temperature. | Water Ice Heater  Deep freezer Internet | Is the student able to define the term temperature?  Is the student state the S.I. units of temperature? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: Describe Measurem ent of  Temperatu re | The student should be able to:   1. identify measurable physical properties that   change with temperature;   1. define the fundamental interval of a thermometer; 2. describe the   `mode&apos; of action of  liquid-in-glass thermometer;   1. measure accurately the temperature of a   body. | Octob er | Week 1 | TEMPERA TURE | Measureme nt of  Temperatur e | 2 | 1. To assist students to seek information from different sources on measurable physical properties that change with temperature. 2. By using question and answer to guide students to define fundamental interval of a thermometer. 3. To organize the students to study how alcohol in-glass thermometer works, Students to record the reading of thermometer in ice and hot water. iii) To lead the students to measure temperature of different bodies. | 1. Students to work in groups to collect information on physical properties that change with temperature. 2. Students to define the upper and lower fixed points of a thermometer. 3. Students to describe the mode of action of liquid-in-glass thermometer. 4. Students in groups to record the temperature different bodies. | Water. Heater Balloon  Mercury in an evacuated Narrow tube Alcohol  Melting ice Boiling water Hot water  One-sided-closed narrow glass cylinder Thermometer | Is the student able to identify measurable physical properties that change with temperature?  Is the student define the  fundamental interval of a thermometer?  Is the student describe the mode of action of liquid-in-glass thermometer?  Can the student measure accurately the temperature of  a body? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: Describe water energy | The student should be able to:   1. explain the generation of electricity from water; 2. explain the importance of water energy; 3. construct a model of   hydroelectric power plant. | Octob er | Week 2 | SUSTAIN ABLE ENERGY SOURCES | Water Energy | 2 | 1. To lead students to discuss the generation of electricity from water. 2. To lead students to discuss the importance and advantage of hydroelectricity. 3. To guide students to construct a model of an hydroelectric power plant. | 1. Students to describe energy changes in the generation of   hydroelectricity.   1. Students to discuss common applications of water energy. 2. Student to draw a diagram of a model of an hydroelectric-power plant. | Diagram of a hydroelectric power plant Hydroelectric power plant.  Reference books.  Manila sheet Styrofoam Razor blades Wood | Is the student able to explain the generation of  electricity from water?  Is the student explain the  importance of water energy?  Is the student able to construct a model of  hydroelectric-pow  er plant? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: Describe solar energy | The student should be able to:   1. explain the sun as a source of energy; 2. explain the conversion of solar energy to electric energy; 3. construct a model of solar panel. | Octob er | Week 2 | SUSTAIN ABLE ENERGY SOURCES | Solar Energy | 2 | 1. To lead students to discuss the sun as the primary source of energy on earth 2. To guide students to discuss how solar energy can be converted to electricity. 3. To guide students to discuss the construction of a model of a solar panel. | 1. Students to list down the main applications of solar energy. 2. Students to discuss in group the solar conversion mechanisms to electricity. 3. Students to draw a circuit diagram showing the conversion of solar energy into electricity by a solar cell. 4. Student to design and. construct a model of a solar   panel. | Solar panel  Photovoltaic (solar)  Cell  Solar cells Model of a solar panel | Is the student able to explain the sun as a source of energy?  Is the student explain the conversion of solar energy to  electricity?  Can the student construct a model  of solar panel? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: | The student should be able to:  a) explain wind as a source of energy; | Octob er | Week 3 | SUSTAIN ABLE ENERGY SOURCES | Wind Energy | 3 | 1. To stimulate the students to identify evidence which proves that wind has energy. 2. To organize for educational visit to a place where wind mill is used. | 1. Students to show that wind can cause objects to move. 2. Students to construct a model of a wind mill. 3. Students in groups to | Wind Feathers Cotton wool Wind mill | Is the student able to explain wind as a source of energy? | Physics For Secondary Schools, Students Book Form | . |

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| Describe wind energy | 1. construct a model of a wind mill; 2. apply wind mill in daily life. |  |  |  |  |  | iii) To lead the students to discuss the applications of wind mill in daily life. | discuss the applications of the wind mill. | Wood Nails Glue  Flip chart Marker pens Masking tape | Is the student construct a model of a wind mill?  Is the student able to use windmill in  daily life? | Two. By T.I.E |  |
| The student should have ability to: Describe sea wave energy | The student should be able to:   1. explain sea wave as a source of energy; 2. explain the conversion of sea wave energy to electric energy. | Octob er | Week 4 | SUSTAIN ABLE ENERGY SOURCES | Sea Wave Energy | 2 | 1. To lead students in groups to discuss the sea-waves as a source of energy. 2. To guide students to discuss on how sea wave energy can be converted to electricity. | 1. Students in their groups to discuss the energy from the sea-waves. 2. Students to brainstorm on how sea wave energy can be converted to electricity. 3. Students in groups to construct a model system of converting sea-wave energy   into electricity. | Internet Cardboard Scissors Nails Tape/glue  ,li>Reference books | Is the student explain sea wave as a source of energy?  Is the student explain conversion of sea wave energy to electric energy? | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
| The student should have ability to: Describe geotherma l energy | The student should be able to:   1. explain sea wave as a source of energy; 2. explain the conversion of geothermal energy to electric energy. | Octob er | Week 4 | SUSTAIN ABLE ENERGY SOURCES | Geothermal Energy | 2 | 1. To guide students in group to discuss the geothermal as the source of energy. 2. To lead students to discuss how geothermal energy can be converted into electricity. | 1. Students in their groups to discuss the source of geothermal energy. 2. Students to discuss the ways of converting geothermal energy to electricity. 3. students to draw a diagram of a steam turbine and explain how it works to convert steam energy to   electricity. | Manila paper Scissors Glue  Marker pen Reference books | Is the student explain geothermal as a source of energy?  Is the student able to explain, the conversion of geothermal energy to electric energy?  . | Physics For Secondary Schools, Students Book Form  Two. By T.I.E | . |
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