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

Competence	Specific Objectives	Month	Week	Main Topic	Sub Topic	Periods	Teaching Activities	Learning Activities	Learning Aids	Assessment	References	Remarks
The student should have ability to: add displacement velocities anf forces	the student should be able to: a) distinguish betweenscalar and vector quantities b) add vectors using graphical methods c) state the triangular and parallelogram law of forces	January	Week 3	APPLICATIONS OF VECTORS	Scalar and vector quantities	4	i) guide the student to classify physical quantities as either scalar or vector ii) demonstrate vector addition by graphical method iii) lead the student to state the parallelogram and triangular law	i) student to classify physical quantities as either scalar or vector ii) add displacement velocities and forces by graphical methods iii) state the triangular and parallelogram law of force	graph papers, rulers, and a mathematical set	is the student able to: i) classify physical quantities as either scalar or vector ii) add displacement velocities and forces by graphical methods iii) state the triangular and parallelogram law of force	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.
The student should have ability to: calculate relative motion	the student should be able to: a) explain the concept of relative motion b) calculate relative motion of bodies c) apply the concept of relative motion in daily life	January	Week 4	APPLICATIONS OF VECTORS	relative motion	4	i) lead the students to explain the concept of relative motion ii) calculate the relative motion of two bodies by calculations or drawing iii) lead the students to discuss the application of relative motion in daily life	i) to explain the concept of relative motion ii) calculate the relative motion of two bodies by calculations or drawing iii) students to discuss the application of relative motion in daily life	graph papers, rulers and mathematical sets	is the student able to: i) explain the concept of relative motion? ii) calculate the relative motion of two bodies by calculations or drawing? iii) apply the relative motion in daily life	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.
The student should have ability to: resolve vectors and apply in calculating and locating bodies	the student should be able to: a) explain the concept of components of a vector b) resolve vector into perpendicular component c) apply resolution vectors in solving problems	February	Week 1	APPLICATIONS OF VECTORS	resolution of vectors	4	i) lead the student to explain the concept of resolution of a vector ii) guide student on how to resolve a vector	i) students to explain the concept of vector resolution ii) students to resolve vector into mutual perpendicular directions iii) students to solve problems of forces and velocities by resolving	moving boat, air plane,graph paper, mathematical set, ruler and protractor	is the student able to explain the concept of resolution of vectors? is the student able to resolve a vector into two perpendicular components?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.
The student should have ability to: reduce friction in moving bodies	the student should be able to: a) explain the concept of friction b) realize the advantages and disadvantages of friction c) describe the methods of reducing friction	February	Week 2	FRICTION	Concept of friction	4	i) assist the students to explain the concept of friction ii) guide the students to discuss the advantages and disadvantages of friction iii) guide the students in groups to discuss ways of reducing frictions	i) discuss in groups the concept of friction ii) mention the advantages and disadvantages of friction iii) discuss in groups the ways of reducing friction	plane, lubricants, wooden block, screws, motor tyre and treads	is the student able to explain the concept of friction? can the student describe the advantages and disadvantages of friction? is the student able to describe the methods of reducing friction?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.

The student should have	the student should be able to: a) identify the types of friction	Febru ary	Week 3	FRICTION	types of friction	4	i) lead the students to discuss the types of friction ii) guide the students to determine the limiting friction	i) students to identify types of frictions ii) students to identify limiting friction by use of a	block of wood, rough surface, spring balance	is the student able to identify types of friction? is the student able	Physics For Secondary Schools, Students	.

ability to: determine limiting friction	b) determine limiting friction							piece of wood.		to determine limiting friction?	Book Form Three. By T.I.E	
The student should have ability to: apply the laws of friction	the student should be able to; a) state the laws of friction b) determine the coefficient of friction c) apply laws of friction in solving problems	Febru ary	Week 3	FRICTION	Laws of friction	2	i) lead the students to state the laws of friction ii) guide the students to discuss the coefficient of static and dynamic equilibrium ii) guide students to solve problems of friction	i) state the laws of friction ii) in groups the students to carry out experiment to determine the coefficient of static friction	spring balance, trolley, weights	is the student able to state the laws of friction? is the student able to solve problems by applying the laws of friction? can the student determine the coefficient of static friction?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.
The student should have ability to: calculate the size of image formed by convex mirrors	the student should be able to: a) distinguish between convex and concave mirror b) explain the terms principle axis, pole principle, focus and radius of curvature as applied in curved mirrors c) locate the image formed by a curved mirror d) determine practically the focal length of a curved mirror e) determine the position, size and nature of the image formed by a curved mirror f) use convex and concave mirrors in real life	Febru ary	Week 4	LIGHT	Reflection of light from curved mirrors	4	i) convey concave and convex mirror to the students ii) guide the students to describe the principles of mirrors iii) help students locate the images formed by a convex mirror iv) carry out experiments to determine the focal length of a concave mirror by non-parallax method or illuminated object. v) to guide the students to compute the position of images formed by using the the mirror formulae vi) the teacher to demonstrate the uses of the convex and concave mirrors.	i) describe the features of concave and convex mirrors and distinguish them ii) explain the principles of curved mirrors iii) define the nature position, and size of image formed by curved mirror iv) deduce the correct focal length of a concave mirror v) use formula to compute the position of image formed. vi) student identify various uses of convex and concave mirrors	convex mirror, concave mirror, spoon, curved mirrors, graph paper, object pane paper, ray box shaving mirrors	can the student: distinguish between convex and concave mirror? define the terms applied in curved mirrors? determine the position size an nature of the image formed by curved mirror practically? use convex and concave mirrors in daily life?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.

The student should have ability to: Apply the refraction of light in daily life.	the student should be able to: a) explain the concept of refraction of light b) measure the angle of refraction and angle and incidence c) state the laws of refractions d)determine the refractive index of a material e) explain the concept of critical angle, and	March	Week 1	LIGHT	refraction of light	4	i) to demonstrate the angle of refraction and angle of incidence ii) discuss the laws of refractions with students iii) guide the student to determine the refractive index of material iv) lead students to determine the critical angle and total internal reflections of light using a semicircular block of glass v) teacher to organize a field trip	i) students measure the angle of refraction and angle of incidence ii) students to state the laws of refractions iii) students to carry out experiments to determine the refractive index of materials iv) to define critical angle and total internal refraction of light	optical pins, protractor, drawing board, ruler, plane mirror, convex lens, optical pins, retort stand, semicircular glass block, tarmac road	is the student able to: measure the angle of refraction and angle of incidence? state the laws of refractions? determine the refractive index of material? explain the concept of critical angle and total internal refractions? explain the occurence of	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.

	total internal reflection of light f) explain the occurence of mirage									mirage?		
The student should have ability to: make use of rectangular prisms in daily life.	the student should be able to: a) explain the refraction of light by rectangular prism b) trace the passage of light in a rectangular prism	March	Week 2	LIGHT	refraction of light by rectangular prism	4	i) lead the students to explain the concept of refraction of light by rectangular prism ii) guide the students to trace the passage of light through a rectangular prism	i) students in groups to discuss concept of refraction of light ii) students in groups to trace the passage of light through a rectangular prism.	diagrams of light, passing through rectangular prism, rectangular prism,rectangular prism ruler, pencil and white paper	is the student able to explain the refraction of light by a rectangular prism? is the student able to trace the passage of light through a rectangular prism?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.
The student should have ability to: construct a simple prism binocular	the student should be able to: a) trace the passage of light through a triangle prism b) demonstrate the dispersion of white light c) determine the angle of deviations and minimum deviations d) construct a simple prism binoculor	March	Week 3	LIGHT	refraction of light by a rectangular prism	4	i) guide the students to trace the passage of light through triangle prism ii) lead the students to demonstrate the dispersion of white light using a prism iii) guide the students to demonstrate angle of deviation and minimum deviations iv) guide the students to construct a prism binocular as a project work	i) demonstrate the passage of light through an isosceles triangle ii) in groups the students discusses the deviations of colour of white iii) determine the angle of deviations and minimum deviations iv) students in groups to construct a prism binoculor as a project work.	source of white light, triangular prism, screen, glass prism, plane paper, mathematical set, ruler, prism binoculor plastic prism, glass prism.	can the student determine the angles of deviations and minimum deviations? is the student able to construct a simple prism binoculor? is the student able to explain the components of white light?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.
The student should have ability to: Make a rainbow prism using water spray	the student should be able to: a) explain the components of white light b) combin e the colours of white light c) explain the appearance of coloured object under white d) identify primary ,secondary and complementary colours e) differen tiate between additive and substractive addition of colours	March	Week 4	LIGHT	colours of light	4	i) facilitate discussion on components of white light seven colours< ROYGBIV> II) lead the students to recombine colours of white light using two triangular glass prism and second prism inverted. iii) guide students to demonstrate the appearance of coloured objects in white light. iv) guide the students to direct the red, blue and green beams which are primary colours to white screen v) guide the students to discuss about additive and sustractive colour mixing.	i) students to form rainbow ii) discuss the formation of primary and secondary rainbows iii) recombine colours of white light by rotating newtons colour disc iv) demonstrate the appearance of coloured objects in white light. v) observe and identify complementary and secondary colours vi) students to perform several experiments on additive and subtractive combination of colours	source of white light, convex lens, ray box, plane paper, tarmac road,water spray, water, handlens, sun rays,prisms, coloured objects, blue filter, green filter, etc	is the student able to: Expalin the components of white light RECOMBINE THE COLOURS OF WHITE LIGHT iii) explain the appearance of coloured sustances in white light iv) identify primary, secondary and complementary colours of white light v)distinguish additive and subtractive combination of colours	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.
The student should have ability to: determine the focal	the student should be able to: a) distingu ish between convex and concave lens b) explain	April	Week 1	LIGHT	refraction of light by lens	2	i) the teacher to show the students the focal length, principle focus, principle axis,and optical center as applied to lenses ii) lead students carry out focal length, principle focus, and principle axis iii) lead students to discuss ray rules	i) students to identify the position of the focal length, principle focus, axis and optical center ii) carry out experiments to determine the focal length of convex lens	concave lens, convex lens, chart showing lens, lens holder, optical pins, plane mirrors, metre rule,	Is the student able to explain the terms, focal length, principle focus, principle axis, and optical center	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.

	the terms focal												

length	length, principle focus, principle axis,and optical center as applied to lenses c) determine practically the focal length of a lens d) locate the image formed by lens e) determine the position, size and nature of image formed by lens f) determine the magnifications of lens g) determine the relationship between focal length, object distance and image distanc						locate and interpret the image formed by the lens iv) guide the students to determine the position, size and nature of image formed by lens	iii) students to draw ray diagrams using the ray rules locate and interpret the image formed iv) students to determine the magnification of a lens v) apply lens formula to do calculations	optical bench, graph paper, mathematical set, ray diagrams	Is the student able to determine practically the focal length can the student locate the image formed by lens? is the student able to determine the magnification of lens?		
The student should have ability to: construct a simple microscope	the student should be able to: a) describe the structure of a simple microscope b) describe the mode of action of a simple microscope c) construct a simple microscope	April	Week 1	OPTICAL INSTRUM ENTS	Simple microscope	2	i) guide the student to describe the structure of a simple microscope ii) lead the students to discuss the mode of action of a simple microscope iii) guide the students to construct a simple microscope	i) students to discuss in groups the structure of a simple microscope ii) groups discuss the mode of action of a simple microscope iii) determine the magnification of a simple microscope	simple microscope, convex lens	is the student able to describe the structure of a simple microscope? is the student able to determine the magnification of a simple microscope? is the student able to construct a simple microscope?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.
The student should have ability to: construct a compound microscope	the student should be able to: a) describe the structure of a compound microscope b) describe the mode of action of a compound microscope c) determine the magnification of a compound microscope d) mention the uses of a compound microscope e) construct a simple compound microscope	April	Week 1	OPTICAL INSTRUM ENTS	compound microscope	2	i) display a compound microscope ii) lead the student to discuss the mode of action of the compound microscope iii) lead the students to determine the magnification of a compound microscope iv) highlight common uses of the compound microscope	i) students to discuss the structure of the compound microscope ii) students to discuss the mode of action of a compound microscope iii) determine the magnification of a compound microscope iv) discuss the use of a compound microscope in our daily lives	lenses, screen,, object, compound microscope	is the student able to describe the structure of a compound microscope? can the student describe the mode of action of a compound microscope? is the student able to calculate the magnification of a compound microscope is the student be able to draw the structure of a compound microscope?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.

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The	the students	April	Week 4	OPTICAL	astronomica	2	i) display an astronomical instruments	i) students in groups to	astronomical	is the student able	Physics For	.

student should have ability to: construct a simple astronomical telescope	should be able to: a) describe the structure of an astronomical instruments b) describe the mode of action of astronomical instruments c) determine the magnification of astronomical instruments d) mention the main uses of astronomical instruments e) construct a simple astronomical telescope		4	INSTRUMENTS	l instruments		ii) guide students to describe the mode of action of astronomical instrument iii) lead students to determine the magnification of astronomical telescope iv) highlight the common applications of astronomical instrument v) guide the students to construct a simple astronomical instrument.	discuss the structure of astronomical instruments ii) determine the magnification of the above instrument iii) students in groups discuss the mode of action of the above instrument iv) students to discuss the uses of astronomical instrument in daily life v) students to construct a simple astronomical telescope	telescope, diagram of astronomical telescope, weather action, tourist site,	to describe the structure of astronomical instrument? is the student able to describe the mode of action of astronomical telescope? is the student able to state the uses of astronomical telescope? can the student construct a simple astronomical telescope?	Secondary Schools, Students Book Form Three. By T.I.E	
The student should have ability to: construct a projectile lantern	the student should be able to; a) describe the structure of the projection lantern b) describe the mode of action of action of a projectile lantern c) determine the magnification of a projectile lantern d) mention the uses of projectile lantern e) construct a simple projectile lantern	May	Week 1	OPTICAL INSTRUM ENTS	projection lantern	4	i) lead The students to discuss the construction of a projectile lantern II)Lead students to discuss the mode of action of a projectile lantern iii) to highlight the uses of projectile lantern iv) lead students to construct a simple projectile lantern	I) Students to discuss the construction of a projectile lantern ii) students to discuss the mode of action of a projectile lantern iii) students to determine the magnification of a projectile lantern iv) students to construct a simple projectile lantern	projection lantern, diagram of a projection lantern, lens, slide, object, and screen	is the student able to describe the projectile lantern? can the student be able to describe the mode of action of a projectile lantern? can the student mention the uses of a projectile lantern? can the student construct a simple projectile lantern?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.
The student should have ability to: construct a lens camera	the student should be able to; a) describe the structure of lens camera b) describe the mode of action of lens camera c) determine the magnification of lens of a camera d) construct a simple camera	May	Week 2	OPTICAL INSTRUM ENTS	the lens camera	4	i) to display the lens camera ii) lead students to describe the mode of action of the lens camera iii) lead the student to discuss the formation of image of an object by a lens camera iv) lead the students to construct a simple lens camera	i) students to describe the mode of action of the lens camera ii) the student to discuss the formation of image of an object by a lens camera iii) The students to construct a simple lens camera	lens camera, diagram of camera,	is the student able to describe the parts of a lens camera? can the student be able to describe how the lens camera works? is the student able to determine the magnification of a lens microscope?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.

The student should have ability to: correct human eye deffects	the student should be able to: a) describe the structure of the human eye b) explain the accomodation power of the human eye c) identify the	May	Week 3	OPTICAL INSTRU M ENTS	the human eye	4	i) to lead student to explain how the eye adjusts to light ii) guide students to discuss the defects of human eye iii) lead the students on discussion on similarity between human eye and lens camera	i) draw diagram of a human eye ii) students discuss how the eye adjusts itself to form an image iii) discuss how to correct short and long sightedness iv) discuss the relationship between a human eye and lens camera	a model of a human eye, spectacles,optica l diagram of a lens camera	can the student draw a human eye? is the student able to explain the accommodation power of the eye? can the student describe the correction of	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.

	defects of human eye d) explain the correction of defects of human eye e) compare the human eye an the lens camera									human eye defects? can the student compare the lens camera and the human eye?		
The student should have ability to: identify sources of thermal energy in nature	the student should be able to: a) explain the concept of heat b) state the sourcesof thermal energy in our daily life c) differentiate heat and temperature	May	Week 4	THERMAL EXPANSION	Thermal Energy	4	i) lead the student to brainstorm on the concept on heat ii) highlight sources of thermal energy in our daily life iii) guide the students to differentiate between heat and tempereture	i) student to brainstorm on the concept on heat ii) highlight sources of thermal energy in our daily life iii) students to differentiate between heat and tempereture	fire wood, charcoal, electricity,petrol, diesel, solar, hot water, cold water, bar break heater,	can the student able to explain the concept of heat? can the student state the an the sources of thermal energy? can the student differentiate between heat an temperature	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.
The student should have ability to: calculate linear expansion of solids	the student should be able to: a) demonstrate the expansion of solids b) explain the expansion of solids in terms of kinetic theory of matter c) identify the expansivity of different solids d) explain the application of expansion of solids in daily life	June	Week 1	THERMAL EXPANSION	thermal expansion of solids	4	i) guide the students to explain the expansion of solids using ball and ring ii) guide the students in groups to explain the expansion and contraction of solids in terms of kinetic theory of matter iii) lead the students to develop formulas for linear expansion of solids iv) to develop the concept of coefficient of linear expansions	i) the students to explain the expansion of solids using ball and ring ii) the students in groups to explain the expansion and contraction of solids in terms of kinetic theory of matter iii) the students to develop formulas for linear expansion of solids iv) develop the concept of coefficient of linear expansions	marble model, ball and ring, source of heat, chart of metals of various expansivity, rails, diagrams showing brigdes,	is the student able to explain the concept of expansion? ii) can the student explain the expansion of solids in terms of kinetic energy? iii) can the student state the application of expansion of solids?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.
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The student should have ability to: apply the anomalous expansion of water in daily life	the student should be able to: a) explain the apparent expansion of liquids b) demonstrate the effects of heat in liquids c) verify the anomalous expansion of water d) explain the application of expansion of water in daily life	July	Week 3	THERMAL EXPANSION	thermal expansion of liquids	4	i) guide the student to explain the expansion of liquids ii) teacher to lead the students to show the effects of heat on density of liquids iii) to lead the students to carry out experiments to investigate the variation of density with temperature	i) students show volume expansion of liquids experimentally ii) the students to show the effects of heat on density of liquids iii) students to carry out experiments to investigate the variation of density with temperature iv) student to discuss in groups the anomalous expansion of water	water, motor oil, hydrometer, ice, graph paper, heater, beaker, pictures and photographs of marine life	is the student able to explain the apparent expansion of water? can the student demonstrate the effect of heat on liquids? can the student determine the expansion of water experimentally? can the student give the applications of anomalous expansion of water	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.

The student should	the student should be able to: a) explain th	July	Week 4	THERMAL EXPANSION	thermal expansion of gases	4	i) lead the students to discuss the concept of linear expansion ii) lead the students to carry out	i) students to discuss the concept of linear expansion ii) students to carry out	heat, cappilary tube, ruler, tripod stand, water,	can the student explain the expansion of gases	Physics For Secondary Schools,	.

have ability to: apply the concept of expansion of gases in daily life	concept of thermal expansion of gases b) investigate the relationship between volume, and temperature of a fixed mass of air at constant pressure c) investigate the relationship between volume, and pressure of a fixed mass of air at constant temperature d) investigate the relationship between pressure, and temperature of a fixed mass of air at constant pressure e) identify the general equation from gas laws f) explain th						experiment to determine the relationship between volume and temperature, pressure and volume, and pressure and temperature of a fixed mass of a gas iii) guide the students to develop general gas equation iv) help the students to apply general gas equations to solve problems v) lead students to develop the concept of absolute temperature scale and the zero temperature scale vi) lead the students to convert the degree celsius to kelvin scale vii) the teacher to lead a discussion on standard temperature and pressure values	experiment to determine the relationship between volume and temperature, pressure and volume, and pressure and temperature of a fixed mass of a gas iii) develop general gas equation iv) students to apply general gas equations to solve problems v) the students to convert the degree celsius to kelvin scale vi) student to apply the values of standard temperature and pressure vii) students to discuss in groups the application of expansion of gases in daily life	thermometer, graph paper, beaker, mercury reservior, rubber tubing, glass bulb with cappillary tube chart showing STP values, graph papers charts showing STP values of gases, model of a pistol engine	of gases? is the student able to verify charles law, boyles law, and pressure law? is the student able to derive the general gas equation? is the student able to explain the absolute scale of temperature? can the student convert degree celsius into kelvin scale? can the student explain the standard temperature and pressure? is the student able to explain the application of expansion of gases in daily life?	Students Book Form Three. By T.I.E	
The student should have ability to: To demonstrate transfer of thermal heat by conduction	The student should be able to: a) explain the concept of conduction of heat; b) identify good and bad conductors of heat; c) explain how to minimize heat losses due to conduction;. d) apply knowledge of conduction in daily life.	August	Week 1	TRANSFER OF THERMAL ENERGY	Conduction	4	i) To guide students in groups to discuss the concept of conduction of heat. ii) To lead students to identify good and bad conductors of heat. iii) To guide students to discuss how heat losses due to conduction can be minimized. iv) To highlight selective uses of good and bad conductors of heat in every day life.	i) Students to brainstorm the concept of heat transfer. ii) Students to demonstrate conduction in solids by standing in a row and pass an object from the first to the last changing their positions. iii) Students to identify good and bad conductors of heat. iv) Students to discuss in groups how to minimize heat loss due to conduction. v) Students to discuss the selective uses of good and bad conductors of heat in everyday life	Brass rod Bunsen burner Wooden rod Wire gauge Glass-fibre insulation Foam insulation Thick carpets Draught-exclude rs.	Is the student able to explain the concept of conduction of heat? Is the student able to identify good and bad conductors of heat? Is the student able to minimize heat losses due to conduction? Is the student able to apply knowledge and conduction in daily life?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.

The student should have ability to: To demonstrate transfer of thermal energy by convencti on	The student should be able to: a) explain the concept of convection of heat; b) explain convection in fluids in terms of kinetic theory of matter; c) explain how to minimize heat	Augus t	Week 2	TRANSFE R OF THERMAL ENERGY	Convection	4	i) To guide students to demonstrate convection currents in water using crystals of potassium permanganate. ii) To lead students to discuss heat transfer in liquids and gases using the kinetic theory of matter. iii) To highlight proper methods of minimizing heat losses due. to convection. iv) To guide students to discuss the mode of action of domestic hot water supply system.	i) Students to demonstrate correction currents in water using crystals of potassium permanganate. ii) Students to discuss the formation of sea and land breezes during day and night. iii) Students to identify methods of minimizing. heat losses due to convection. iv) Students to discuss the mode of action of domestic hot water supply system.	Box apparatus Smoke Potassium peimanganate Water Diagram of a hot water system Houses which have hot system.	Is the student able to explain the concept of convection of heat? Is the student able. to explain convection in fluids in terms of kinetic of theory matter? Is the student able	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.

	losses. due to convection d) apply knowledge of convection to daily life.							v) Student to visit houses with the hot water system		to minimize heat losses due. to convection? Is the student able to apply knowledge of convection in daily life?		
The student should have ability to: To demonstrate transfer of thermal energy by radiation	The student should be able to: a) explain the concept of radiation; b) identify good absorbers and emitters of radiant heat; c) minimize heat losses due to radiation	August	Week 3	TRANSFER OF THERMAL ENERGY	Radiation	4	i) To guide. students to brainstorm how heat from the sun reaches the earth's surface. ii) To highlight good absorbers and emitter of radiant energy. iii) To guide students to discuss how to minimize heat losses due to radiation.	i) Students in groups to discuss the concept of radiation and vacuum between the sun and the earth's atmosphere. ii) Students to discuss on how thermal radiation can be detected iii) Students to demonstrate that black surfaces are good absorbers and emitters of radiant heat iv) Students to discuss how to minimize heat losses due to radiation. v) Students to discuss in groups how heat losses due to conduction, convection and radiation are minimized in a thermos flask.	Thermopile Thermometer Soot (black body) Concave reflector Water tanks Thermos flask	Is the student able to explain the concept of radiation?. Is the student able to identify good absorbers and emitters? Is the student able to minimize heat losses due to radiation?	Physics For Secondary Schools, Students Book Form Three. By T.I.E
The student should have ability to: To determine heat capacity and specific heat capacity	The student should be able to: a) explain the factors which determine heat quantity of a substance; b) determine the heat capacity; c) determine the specific heat capacity.	August	Week 4	MEASUREIVIENT OF THERMAL ENERGY	Heat Capacity	4	i) To lead students to discuss the factors which determine heat content of a substance. ii) To guide students to the definition of the heat capacity of substance. iii) To highlight the concept of specific heat capacity of a substance.	a) Students to discuss the factors which determine heat concept of a substance. b) Students to determine the heat capacity and its SI unit. c) The students to discuss the specific heat capacity and its SI unit.	Eater Thermometer Beaker	Is the student able to explain the factors which determine heat quantity of a substance? Is the student able to determine the heat capacity? Is the student able to determine the specific	Physics For Secondary Schools, Students Book Form Three. By T.I.E

										heat capacity?	
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The student should have ability to: Student to demonstrate change of state	The student should be able to: a) explain the behavior of particles of matter by applying kinetic theory; b) Determine experimentally the melting point of a substance from its cooling curve. c) demonstrate the effect of impurities on the freezing point and the boiling	Septe mber	Week 3 & 4	MEASURE IVIENT OF THERMAL ENERGY	Change of State	2	i) To lead students to demonstrate the behavior of particles in a solid, liquid and gases. ii) To lead students to demonstrate the effect of the impurities of the freezing point of water. iii) To lead students. to demonstrate the effect of pressure on the boiling point and freezing point of water. iv) To lead students to demonstrate the phenomenon of regulation. v) To highlight the concept of boiling and evaporation in respect to the kinetic theory of matter.	a) Studen ts to demonstrate the behavior of particles in a gas by using the smoke cell. b) Student s to explain the behavior of particles in matter in terms of the kinetic theory of gases. c) Student s to find out the effect of impurities on the boiling and freezing point Of substance. d) Student s to find out the effect of pressure on boiling point and freezing point of liquids. e) Student s to discuss in groups the concept of regulation. f) Students in groups to	Water Salt Heater Beaker Conical flask Rubber band Thermometer Block of ice Weights Thin wire	Is the student able to explain the behavior of particles of matter by applying kinetic theory? Is the student demonstrate the effect of impurities on freezing and boiling points of a substance. <Ii>s the students demonstrate the effect of pressure on boiling and freezing points? Is the student able	Physics For Seconda ry Schools, Students Book Form Three. By T.I.E

	points of a substance. d) demonstrate the effect of pressure on the boiling point and freezing point of a substance; e) explain the phenomenon of regulation; f) give the concept of boiling and evapor							discuss the concept of boiling and evaporation in term of kinetic theory.		to explain the phenomenon of regulation? Is the student able to , know the concept of boiling and evaporation in respect to the kinetic theory of matter?		
The student should have ability to: Demonstrate change of state	Student should be able to: g) demonstrate latent heat of fusion and vaporization; h) describe the mechanism of refrigeration.	October	Week 1	MEASUREIVIENT OF THERMAL ENERGY	Change of State cont...	4	i) To guide students to discuss in groups the concept of the specific latent heat of fusion and vaporization of substance and its SI units. ii) To display a chart diagram of refrigerator and lead the students to discuss the parts of a refrigerator.	a) Students to perform an experiment of heating water into vapour and plot the temperature time graph water and deduce the latent heat of vaporization. b) Students to perform an experiment of cooling naphthalene and deduce the definition of specific latent heat of fusion of a substance. c) The students to discuss the parts of a refrigerator.	Beaker Thermometer Heater Water Chart showing the diagram of refrigerator. Refrigerator	Is the student demonstrate the latent heat of vaporization and fussion? Is the student be able to describe the mechanism of .a refrigerator?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.
The student should have ability to: To demonstrate concept of evaporation of liquids	The student should be able . to: a) explain the process of evaporation of liquid; b) identify factors affecting evaporation of a liquid; c) distinguish between saturated and unsaturated vapours; and d) explain the effect of temperature on saturated vapour pressure (S.V.P) of a liquid.	October	Week 2	VAPOUR AND HUMIDITY	Vapour	4	i) To lead the students to discuss the concept of evaporation of liquids. ii) To assist students to discuss the effect of temperature, pressure, surface area of the liquid nature of liquid and atmospheric conditions on vaporation. ii) To lead students in discussion on evaporation of drops of a volatile liquid above the surface of a mercury in a simple barometer. iii) To lead students to discuss the increase of SVP of volatile liquid due to temperature rise.	a) Students to explain the concept of evaporation of liquids. b) Students to discuss the factors affecting evaporation. c) Students to discuss unsaturated vapour. d) Students to discuss the SVP of volatile liquid due to temperature rise.	Violet liquid (ether) Spirit Ether Conical flask	Is the student able to explain the process of evaporation of a liquid? Is the student identify factors affecting evaporation of a liquid? Is the student able to distinguish between saturated and unsaturated vapours? Is the student explain the effect of temperature on saturated vapour pressure (SVP) of a liquid?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.
The student should have ability to: To apply the knowledge of humidity in daily life	The student should be able to: a) explain the concept of humidity; b) explain the formation of dew; c) measure relative humidity; d) apply the knowledge of humidity in daily life.	October	Week 3	VAPOUR AND HUMIDITY	Humidity	4	i) To lead students to discuss the concept of humidity. ii) To lead the students to explain the process of dew formation and the factors which influence: the formation of dew. iii) To lead. students in determination of Relative Humidity of air, using the wet and dry bulb hygrometer. iv) To lead students to discuss the effects of relative humidity in every day life.	a) Students to discuss the concept of humidity. b) Students to demonstrate dew point in laboratory and explain factors which influence the formation of dew. c) Students to find relative humidity from the dew point using Regnault's hygrometer. d) Students to discuss the effects of relative humidity	Beaker Ice blocks Wet and dry bulb Hydrometer special tables Regnault's hygrometer	Is the student able to explain the concept of humidity? Is the student able to explain the formation of dew? Is the student able to measure relative humidity? is the student apply the	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.

								in' every day life.		knowledge of humidity in daily life?		
The student should have ability to: To demonstrate the electromotive force of a cell and the potential difference across a conductor	The student should be able to: a) explain the concept of electromotive force (emf) and potential difference b) state the SI units of electromotive force and potential difference; and c) measure electromotive force of a cell and potential difference across a conductor.	October	Week 4	CURRENT ELECTRIC ITY	Electromotive Force (emf) and Potential Difference (pd)	2	i) To guide students to discuss the concept of electromotive force and potential difference. ii) To guide students to state the units of electromotive force and potential difference. iii) To guide students to measure the electromotive force of a cell and potential difference across a conductor.	a) Students to discuss the concept of electromotive force and potential difference. b) Students to state the units of electromotive force and potential difference. c) Students to measure electromotive force of a cell and potential difference across a conductor	Electric cell Tennocouples Dynamos Switch/key Resistance	Is the student able to explain the concept of electromotive force and potential difference? Can the student state the SI units of electromotive force and potential difference? Is the students able to measure the electromotive force of a cell and the potential difference across a conductor?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.
The student should have ability to: To demonstrate resistance of electric current	The student should be able to: a) explain the concept of electric current in a conductor; b) describe factors which determine the resistance of a conductor; c) determine the relationship between potential difference across the conductor and current;	October	Week 4	CURRENT ELECTRIC ITY	Resistance to Electric Current	2	i) To guide students to discuss the concept of electric current in a conductor. ii) To derive the relation between electric charge and time. iii) To lead students to derive the relation resistance versus length L and cross sectional area A iv) To lead students to determine the relationship between potential difference across the conductor and current.	a) Students to discuss on how movement of charged particles causes electric conductor. b) Students to brainstorm the factors which the resistance of a conductor depend on. c) Students to determine resistance of different lengths of niehrome and constantine wires. d) Students to determine the relationship between potential difference across the conductor and current.	Nichrome wire Constantine wire Micrometer screw gauge Ammeter Voltmeter	Is the student explain the concept of electric current in a conductor? Is the student able to determine resistance of a fixed length of a wire? Is the student able to describe factors which determine the resistance of a conductor? Is the student able to determine the relationship between potential difference across the conductor and. current?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.
The student should have ability to: Demonstrate resistance of electric current	d) identify types of resistors; e) determine the equivalent resistance of more than two resistors in series and parallel; f) explain the mode of action of a Wheatstone bridge. g) Connect and analyse a simple electric circuit.	November	Week 1	CURRENT ELECTRIC ITY	Resistance to Electric Current cont..	2	i) To display various types of resistors. ii) To guide students to determine the equivalence resistance of more than two resistors in series and parallel. iii) To lead students to discuss the internal resistance of a cell. iv) To demonstrate and explain the mode of action of a Wheatstone bridge. v) To lead students to connect and analyse simple electric circuits	a) Students to identify various resistors and their modes of action. b) Students to determine the equivalence resistance of more than two resistors in series and parallel. c) Students to perform an experiment to determine unknown resistance using a Wheatstone bridge. d) Students to connect and analyse simple electric circuits.	Rheostat Resistance box Ammeters Connecting wires Switch Resistors Wheat stone bridge Dry cells Unknown resistance	Is the student able to identify various types of resistors? Is the student able to determine the equivalence resistance of more than two resistors in serious and parallel? Is the student able to describe the mode of action of a Wheatstone bridge? Can the student determine	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.

										unknown resistance by using a Wheatstone bridge? Is the student able to connect and analyse simple circuits.?		
The student should have ability to: To demonstrate effects of electric current	The student should be able to: a) explain the mechanism of heating by electric current; b) describe factors which determine the quantity of heat generated in a conductor due to a current; c) determine electrical power; d) interpret the power rating of electrical appliances.	November	Week 2	CURRENT ELECTRIC ITY	Effects of an Electric Current	4	i) To guide students to discuss the mechanism of heating by electric current. ii) To guide students to demonstrate the conversion of electrical energy to heat energy a using a heating element. iii) To guide students to carry out an experiment to investigate the relationship between heat, generated in a conductor and the current, the current is passed and its resistance. iv) To lead students to the definition of electrical power from the general definition of power and its SI unit. v) To guide a students to discuss electrical appliance power ratings.	a) Student to discuss the mechanism of heating of electric current. b) Student to carry out an experiment to investigate the relationship between heat, time and resistance of a conductor. c) Students to state joule's law of heat and SI unit of electrical energy. d) Student to determine the electrical power. e) Students to discuss the commercial unit of electrical energy consumption in every day life (kilo watt â€" hours)	Power source Heating element Electric iron Electric kettle Electric bulb	Is the students able to explain the mechanism of heating by electric current? Is the student able to describe the factors which determine the quantity of heat generated in a conductor due to a current? Is the student able to determine electrical power? Is the student able to interpret the power rating of electrical appliances? Is the student able to read the electric meter?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.
The student should have ability to: To demonstrate electric installation	The student should be able to: a) explain the meaning of the letters E (Earthing) L (Live) and N (Neutral) in electrical wiring. b) describe the functions of a fuse and a circuit breaker; c) perform wiring on a board; d) check and rectify electrical faults in domestic appliances.	November	Week 3	CURRENT ELECTRIC ITY	Electric installation	4	i) To lead students to discuss the meaning of the letters E, L, N electrical wiring regarding their colors. ii) To display different types of fuses and guide students to demonstrate the melting of a fuse wire by our loading it. iii) To guide students to perform wiring on aboard. iv) To guide students to discuss how to check and rectify electrical faults in domestic appliances.	a) Students to open a three- pin plug and wire correctly according to the colors. b) Students to discuss the properties, materials, melting and functions of a fuse and functions of a circuit breaker. c) Students to perform wiring on a board. d) Students to discuss how to check and rectify electrical faults in domestic appliances.	Three-pin plug Electrical installation board Copper Fuse for lighting circuit Fuses for power circuit Fuse wires. Wiring board Connecting wire	Is the student able to wire the three-pin plug? Is the student able to describe the function of a fuse and circuit breaker? Is the student able to perform wiring on a board? Is the student able to check and rectify electrical faults in domestic appliances?	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.

The student should have ability to: To demonstrate concept of dry cell	The student should be able to: a) .describe the mode of action of a dry cell (Leclanche); b) Determine voltage of combination of	November	Week 4	CURRENT ELECTRIC ITY	Cells	4	i) To display to students the dry cell. ii) To guide students to determine voltage combination of cells in series and parallel. iii) To lead students to identify the cell defects. iv) To lead students to describe the mode of action of a lead-acid accumulator. v) To guide students to explain the	a) Students to draw the dry cell and label its parts. b) Student to discuss the construction and mode of action of the Leclanche (dry cell). c) Students to discuss and identify the cell defects. d) Students to discuss mode	Dry cells Lead-acid accumulator Battery charger Lead-acid accumulator	Is the student able to describe the mode of action of the Leclanche (dry cell)? Is the student able to determine voltage of	Physics For Secondary Schools, Students Book Form Three. By T.I.E	.

and lead-acid accumulator	cells in series and parallel c) identify the cell defects; d) describe the mode of action of lead-acid accumulator; e) explain the charging and discharging phenomenon of an accumulator; f) use cells and accumulators in daily life.						charging and discharging process of an accumulators. vi) To guide students to identify the applications of dry cells in daily life,	of accumulator. e) Students to discuss the charging and discharging phenomenon of an accumulator. f) Students to use cells and accumulators in daily life.		combination of cells in series and parallel? Is the student able to identify cell defects? Is the student able to discuss the mode of action of a lead-acid accumulator? Is the student able to explain the charging and discharging phenomenon of an accumulator? Is the student able to use cells and accumulator daily life?		
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