



NAPARIMA COLLEGE

SCHEME OF WORK*

ACADEMIC YEAR: 2018/2019 TERM II

LEVEL: FORM 2N, 2A, 2P & 2S

WEEK	PERIOD	SPECIFIC OBJECTIVES
1	1	<ul style="list-style-type: none"> Review of term test paper
	THERMAL ENERGY	
	2	<ul style="list-style-type: none"> Assess data graphically. Features of graph include: <ul style="list-style-type: none"> Title of graph. Labelling of axes. Selection of scale. Correct plotting of coordinates. Draw line/curve of best fit.
	3	<ul style="list-style-type: none"> Drawing of heating curve of water. Students conduct experiment by measuring temperature (at regular time intervals) of a beaker of water as it is heated to a temperature of approximately 70 °C and then allowed to cool.
2	1	<ul style="list-style-type: none"> Relate a substance undergoing a physical change in state of matter gains potential energy and temperature remain constant. Define 'specific latent heat of fusion' of water. Define 'specific latent heat of vaporization' of water. Apply formula: $E = ml$
	2 & 3	<ul style="list-style-type: none"> Define three types of heat transfer processes: <ul style="list-style-type: none"> Conduction is the transfer of heat through a solid. Convection and is the transfer of heat through a fluid (liquid and gas). Discuss (natural) convection currents forming sea breeze and land breeze (pg. 124 Figure 8.4.6) - Radiation is the transfer of heat through electromagnetic waves.
	1	<ul style="list-style-type: none"> Discuss heat transfer processes occurring in the following: <ul style="list-style-type: none"> Vacuum flask (pg. 124 Figure 8.4.15) Greenhouse effect in glass houses (pg. 124 Figure 8.4.13)

*Above information is subject to change without prior notice by Physics Department.



3	2 & 3	<ul style="list-style-type: none"> • Discuss uses of heat transfer process used as a renewable source of energy in household: <ul style="list-style-type: none"> - Solar heater used to heat water - Solar cooker for food - Solar dryer for making of preservatives
FORMATIVE ASSESSMENT #1: COURSEWORK (15%)		
STATIC ELECTRICITY		
4	1	<ul style="list-style-type: none"> • Explain 'static electricity.' • Demonstration of phenomenon using a pen and tiny pieces of paper • List the properties of electric charges
	3	<ul style="list-style-type: none"> • Describe 'repulsion test' to confirm the charge of an object • Define 'electric field' • Draw electric field surrounding isolated positive and negative charges.
5	1	<ul style="list-style-type: none"> • Describe model of a neutral atom (number of protons = number of electrons) • Explain in terms of electron transfer by friction for a polythene rod and woollen duster • Explain in terms of electron transfer by friction for a Perspex rod and woollen duster
	2 & 3	<ul style="list-style-type: none"> • Explain in terms of electron theory, a negatively charged rod attracting <ul style="list-style-type: none"> - Metal e.g. aluminum - Non-metal e.g. paper
6	1	<ul style="list-style-type: none"> • Investigate the production of lightning and hazards associated with this natural phenomenon. • Discuss the use of lightning conductor or rod as a precaution used to protect building during a lightning storm.
	2	<ul style="list-style-type: none"> • List various precautions a person can practice from being struck during a lightning storm.



	3	<ul style="list-style-type: none"> • Discuss other hazards of static electricity: <ul style="list-style-type: none"> - Refueling of aircraft and tank wagons used to transport fuel. - Handling of microchips using Antistatic Wrist Strap.
7	1 & 2	<ul style="list-style-type: none"> • Discuss useful applications of static electricity: <ul style="list-style-type: none"> - Electrostatic precipitators used to pollution control - Photocopiers - Crop and paint spraying - Fingerprinting
	3	FORMATIVE ASSESSMENT #2: COURSEWORK (15%)
ELECTRICITY		
8	1	<ul style="list-style-type: none"> • Distinguish between electrical conductors and insulators. List examples of each type of material. • List safety precautions for handling of electricity for domestic use. • List general practices used in households to save electrical energy.
	2	<ul style="list-style-type: none"> • Differentiate between electron flow and conventional current in a closed circuit. Direction of conventional current flow is from the (+) terminal of the energy source to the (-), electrons move in opposite direction. • State the S.I. unit of electrical current • Distinguish different type of electrical circuits: open, closed and short
	3	REFLECTIVE WRITING