

AC 7-10 Blueprint Template CNM

1

1.1

1.1A

Activities / Resources

1. Pre-test

1.1A Reading

1.1B

Activities / Resources

1.1 Quiz

1.2

1.2A

Activities / Resources

1.2A HW

1.2B

Activities / Resources

1.2 Quiz

1.3

1.3A

Activities / Resources

1.3A HW

1.3B

Activities / Resources

1.3 Quiz

1.4

1.4A

Activities / Resources

1.4A HW

1.4B

Activities / Resources

1.4 Quiz

2

4

3

Canvas Blueprint Course Outline
junior-middle school

Canvas pages and/or modules		Canvas Outcomes	Page / module /assignment	Assignment / quiz / discussion
Unit	Sub-topic or Chunk	Learning Goals	Suggested Activities/Resources	Formative Assessment
1.1 Title...	A. Name...	<ol style="list-style-type: none"> Identify... Recall...and use...to predict.... 	<ul style="list-style-type: none"> Label the handout with.... Use different colours to represent the different... Write definitions for... 	<ol style="list-style-type: none"> Pre-Test 1.1A Reading assignment (HW)
	B. Name...	<ol style="list-style-type: none"> Describe... Explain how... 	<ul style="list-style-type: none"> Draw...diagrams representing... Determine...from...diagrams 	1.1 Quiz
1.2 Title...	A. Name...	<ol style="list-style-type: none"> Investigate and describe... Predict the... Write... 	<ul style="list-style-type: none"> Complete...booklet questions for... Complete Naming...interactive.... 	1.2A Interactive assignment (HW)
	B. Name...	<ol style="list-style-type: none"> Use...to predict... Write...using... 	<ul style="list-style-type: none"> Combine... Name...and justify... 	1.2 Quiz
1.3 Title...	A. Name...	<ol style="list-style-type: none"> Describe the properties of... Write... 	<ul style="list-style-type: none"> Complete...book questions. 	1.3A Reading assignment (HW)
	B. Name...	<ol style="list-style-type: none"> Recall the names of... Use...to predict... 	<ul style="list-style-type: none"> Application of... Complete...booklet questions... 	1.3 Quiz
1.4 Title...	A. Name...	<ol style="list-style-type: none"> Write... 	<ul style="list-style-type: none"> Class practice worksheet. Simulated activity. 	1.4A Interactive assignment (HW)
	B. Name...	<ol style="list-style-type: none"> Define the... Use the...to determine... 	<ul style="list-style-type: none"> Interactive presentation 1 Interactive presentation 2 Class worksheet. 	1.4 Quiz

QCAA General Syllabus

Physics CNM

1. Thermal, nuclear & electrical physics

1.1 Heating processes

A. Kinetic particle model & heat flow

1.1A Resources

1.1A PP

1.1A videos 1 - 4

1.1A EP Smart Lesson

1.1A Activities (formative tasks)

1.1A Reading assignment

1.1A vocabulary quiz

1.1A Mandatory prac submission

1.1A-4

B. Specific heat capacity & calorimetry

C. Phase changes & specific latent heat

1.1C Resources

1.1C PP

1.1C Video

1.1C CK-12 sim

1.1C EP smart lesson

1.1C Activities

1.1C Reading assignment

1.1C Problem solving quiz

D. Energy in systems - mechanical work & efficiency

1.1D Resources

1.1D PP

1.1D EP smart lesson

1.1D videos 1 to 3

1.1D Activities

1.1D Problem solving quiz

1.2 Ionising radiation & nuclear reactions

1.3 Electrical circuits

2. Linear motion & waves

3. Gravity & electromagnetism

4. Revolutions in modern physics

Unit 1 Syllabus

Unit	Topic	Sub-topic (chunk)	Learning Goals (objectives)	Suggested Activities/Resources	Formative Assessment
1 Thermal, nuclear and electrical physics	1 Heating Processes	A. Kinetic particle model and heat flow [2 lessons]	<ol style="list-style-type: none"> describe the kinetic particle model of matter. define and distinguish between thermal energy, temperature, kinetic energy, heat and internal energy. explain heat transfers in terms of conduction, convection and radiation. 	<ul style="list-style-type: none"> PPOINT 1.1A Mandatory practical: Conduct an experiment that obtains data to be plotted on a scatter graph (with correct title and symbols, units and labels on the axes), analysed by calculating the equation of a linear trend line, interpreted to draw a conclusion, and reported on using scientific conventions and language. Text reference: Chapter 1. 	1.1A Reading Assignment (HW) 1.1A Scatterplot virtual experiment (HW) 1.1A Vocabulary Quiz
		B. Specific heat capacity and calorimetry [8 lessons]	<ol style="list-style-type: none"> use $T_K = T_C + 273$ to convert temperature measurements between Celsius and Kelvin. use digital and other measuring devices to collect data, ensuring measurements are recorded using the correct symbol, SI unit, number of significant figures and associated measurement uncertainty (absolute and percentage); all experimental measurements should be recorded in this way. explain that a change in temperature is due to the addition or removal of energy from a system (without phase change). define thermal equilibrium in terms of the temperature and average kinetic energy of the particles in each of the systems define specific heat capacity and the concept of proportionality. explain the process in which thermal energy is transferred between two systems until thermal equilibrium is achieved, and recognise this as the zeroth law of thermodynamics interpret tabulated and graphical data of heat added to a substance and its subsequent temperature change (without phase change). solve problems involving specific heat capacity and thermal equilibrium. 	<ul style="list-style-type: none"> Videos PPT 1.1B Mandatory Practical: Conduct an experiment that determines the specific heat capacity of a substance, ensuring that measurement uncertainties associated with mass and temperature are propagated. Where the mean is calculated (in this, and future experiments), determine the percentage and/or absolute uncertainty of the mean. Text reference Chapter 2. <p>Formulas: (1) $T_K = T_C + 273$ (2) $Q = mc\Delta T$</p>	1.1B Pre-Lab Assignment 1.1B Lab Submission 1.1B Reading Assignment 1.1B Problem Solving Quiz 1.1B Vocabulary Quiz
		C. Phase changes and specific latent heat [4 lessons]	<ol style="list-style-type: none"> explain why the temperature of the system remains the same during the process of state change; explain it in terms of the internal energy of a system and the kinetic particle model of matter define specific latent heat solve problems involving specific latent heat 	<ul style="list-style-type: none"> Video: Specific Latent Heat PPT 1.1C CK-12 phase change sim. Flipped lessons Text reference Chapter 2 <p>Formulas: (1) $Q = mL$</p>	1.1C Reading Assignment 1.1C Problem Solving Quiz
		D. Energy in systems – mechanical work and efficiency [4 lessons]	<ol style="list-style-type: none"> explain that a system with thermal energy has the capacity to do mechanical work recall that the change in the internal energy of a system is equal to the energy added or removed by heating plus the work done on or by the system, and recognise this as the first law of thermodynamics and that this is a consequence of the law of conservation of energy explain that energy transfers and transformations in mechanical systems always result in some heat loss to the environment, so that the amount of useable energy is reduced define efficiency solve problems involving finding the efficiency of heat transfers. 	<ul style="list-style-type: none"> PPT 1.1D Video Practise Q's Text Chap 3 <p>Formulas: (1) $\Delta U = Q + W$ (2) $\eta = \frac{\text{energy output}}{\text{energy input}} \times 100\%$</p>	1.1D Problem Solving Quiz
	2 Ionising radiation & nuclear energy	A. Nuclear model & stability [2 lessons]	<ol style="list-style-type: none"> describe the nuclear model of the atom characterised by a small nucleus surrounded by electrons explain why protons in the nucleus repel each other define the strong nuclear force explain the stability of a nuclide in terms of the operation of the strong nuclear force over very short distances, electrostatic repulsion, and the relative number of protons and neutrons in the nucleus. 	<ul style="list-style-type: none"> 4 Videos PPT 1.2A Text reference Chapter 4 <p>Formulas: (1) $\frac{A}{Z}X$</p>	1.2A Problem Solving Quiz 1.2A Vocabulary Quiz