

Class 2 Science B

Updated 22/08/2020

	Key Learning Objectives	Textbook
Week 1	<ul style="list-style-type: none"> - The importance of electricity in our lives - Need for a complete circuit ... key circuit symbols - What is current and where do charges come from.. units of current 	Pages : 64- 65
Week 2	<ul style="list-style-type: none"> - What is potential difference? Units of potential difference - Practical – setting up circuits to include a power source and components like motor/buzzer/bulb. - Measuring current – measuring potential difference ... equipment 	Pages: 66 - 67
Week 3	<ul style="list-style-type: none"> - Recap current and voltage and methods to measure - Understand differences between series and parallel circuits through a hands on activity – building series and parallel circuits 	Pages: 68 -69
Week 4	<ul style="list-style-type: none"> - Current and potential difference in series and parallel circuits - Resistance ... definition ...units ... calculation 	Page: 68 - 69
Week 5	<ul style="list-style-type: none"> - Calculation practice using $V = IR$ 	Page : 70 – 71
Week 6	<ul style="list-style-type: none"> - Problem solving with electric circuits. 	Pages: 64 - 71
Week 7 – 9	Review – Term Test – Feedback	-

Week 10	<ul style="list-style-type: none"> - Different energy sources– renewable and non-renewable ... advantages /disadvantages 	Pages: 90 - 91
Week 11	<ul style="list-style-type: none"> - Energy in food - Calculation practice ... units 	Pages : 80 - 81
Week 12	<ul style="list-style-type: none"> - Different types of energy stores and energy transfers from one store to another - Principle of conservation of energy 	Page : 82- 83
Week 13	<ul style="list-style-type: none"> - Energy(heat) vs Temperature, definition and methods to measure temperature - Methods of heat transfer - Solids, liquids gases particle arrangement and implications about conduction 	Page: 84 - 86
Week 14	<ul style="list-style-type: none"> - Convection and radiation 	Pages : 87 - 89
Week 15	Problem solving ... practice ... energy transfers ... energy stores ...	Pages : 80 - 91
Week 16 – 17	Review – Term Test – Feedback	-

Week 18	<ul style="list-style-type: none"> - Define power - Units ... including kW - practice calculations using $P = E \div t$ <p>*** including need to change time to seconds</p>	Pages : 92 – 93
Week 19	<ul style="list-style-type: none"> - Define work done, - Units ... including kJ - practice calculations using $W = F \times d$ <p>*** including need to change distance to meters</p>	Page: 94
Week 20	<ul style="list-style-type: none"> - Deriving the gravitational potential energy formula as a special case of work done - practice using: $E_p = m \times g \times h$ <p>*** including need to change height to meters , energy to J, mass to kg</p> <p>*** solving for any of the variables</p>	Extension of energy sources described on page 82
Week 21	<ul style="list-style-type: none"> - Define kinetic energy - practice using: $E_K = \frac{1}{2} \times m \times v^2$ <p>*** including need to change speed to m/s , energy to J, mass to kg</p> <p>**Only calculation of KE ... no solving for other variables</p>	Extension of energy sources described on page 82
Week 22 – 23	<ul style="list-style-type: none"> - Further calculation practice ... problem solving involving KE and GPE 	Pages: 92 -94 plus extension of 82
Week 24 – 26	Review – Term Test – Feedback	-

Depends on material covered in Class 1 ***
 If light was not covered in class 1 ... cover light

Week 28 (time permitting)	<ul style="list-style-type: none"> - How can you see? - Types of objects depending on how light interacts with them - Describe light waves 	Pages 38-39
Week 29 (time permitting)	<ul style="list-style-type: none"> -Why do we see an image in the mirror? -The law of reflection -Types of reflection -Learn how to draw a reflection ray diagram 	Pages 40-41
Week 30 (time permitting)	<ul style="list-style-type: none"> - Describe refraction of light - Learn how to draw a refraction ray diagram 	Pages 42-43 (half page)

Otherwise

Week 28 (time permitting)	Data analysis ... recording data in tables ... extracting data from tables ... recognising and using directly proportional relationships to predict ...	
Week 29 (time permitting)	Data analysis and graphs ... extracting data from graphs ... drawing graphs ... recognising and using directly proportional or linear graphs to predict ...	
Week 30 (time permitting)	An experiment to measure personal power ... opportunity to apply their knowledge of power ... develop examination techniques when asked to describe an experiment ...	

Above refers to full teaching weeks – no holidays or other activities.

Typical full academic year for classes 1 – 3 includes 30 teaching and learning weeks.