






Wesgreen International School | Inspiring Excellence, Empowering Global Minds  
**Programme of Study – Year 7 Science 2023-24**

**TERM 1**


	Theme	Overview of key learning to take place	How learning will be assessed
	<b><u>Topic:1</u></b>  7A – Cells, Tissues, Organs and Systems	<p>I can recall and describe the life processes.</p> <p>I can explain the difference between organisms and non-living things.</p> <p>I can identify and locate plant and animal organs.</p> <p>I can describe the functions of important plant and animal organs.</p> <p>I can describe what happens in photosynthesis.</p> <p>I can explain how medical doctors use STEM skills.</p> <p>I can describe some of the STEM careers.</p> <p>I can describe how to prepare a microscope slide.</p> <p>I can describe how to use a light microscope to examine a specimen.</p> <p>I can identify main parts of animal cells and plant cells and describe their function.</p> <p>I can identify and recall the main organs in human locomotion, digestive, circulatory, breathing, urinary and nervous system.</p> <p>I can describe what an organ transplant is.</p>	<p><b>Formative Assessment to be used this term:</b></p> <ul style="list-style-type: none"><li>• In class peer and self-assessment of extended answer questions</li><li>• End of topic questions-exam style worksheets</li></ul> 
	<b><u>Topic:2</u></b>  7E – Mixtures and Separation	<p>I can describe how forensic scientists prepare evidence for the court.</p> <p>I can classify mixtures.</p> <p>I can describe how insoluble solids can be separated from liquid.</p>	


		<p>I can describe how solutions are made.</p> <p>I can identify solute and solvent in a solution.</p> <p>I can describe effects of temperature and solvent on solubility.</p> <p>I can describe how Bunsen burner is used.</p> <p>I can identify hazards and describe how to reduce risks.</p> <p>I can describe how solutes can be separated from a solution by evaporation.</p> <p>I can describe differences between evaporation and boiling.</p> <p>I can describe how chromatography can be used to identify substances in a mixture.</p> <p>I can explain how chromatography works.</p> <p>I can explain how distillation can be used to separate solvent from solution.</p> <p>I can explain ways to make water safe to drink.</p>	
	<p><b><u>Topic:3</u></b></p> <p>7I – Energy and changes</p>	<p>I can recall that our bodies need energy.</p> <p>I can explain why different people need different amounts of energy from food.</p> <p>I can recall that the units for measuring energy are joules (J) or kilojoules (kJ). 1kJ=1000J.</p> <p>I can make a fair comparison of results</p> <p>I can calculate ratios.</p> <p>I can describe different ways in which energy is transferred.</p> <p>I can recall laws of conservation of energy.</p>	<p><b>Summative assessment</b></p> <p><b>Mid-term assessment:</b> after first 2 topics of the term.</p> <p><b>End of term assessment:</b> after next 2 topics of the term.</p>

		<p>I can describe the job profile of transport managers.</p> <p>I can give some examples of renewable energy resources.</p> <p>I can explain how the Sun is the original source of energy for most of our energy resources.</p> <p>I can describe advantages and disadvantages of energy sources.</p> <p>I can explain what efficiency means.</p>	
	<p><b><u>Topic 4</u></b></p> <p>7B – Reproduction  7Ba – The scientific method  7Bd – Endangered species  7Be – Growing up – adolescence, puberty and life cycle (excluding menstrual cycle)  7Be- The Work of zoos</p>	<p>I can state the purpose of and common method of scientific method.</p> <p>I can describe how the zoologist work to stop extinction.</p> <p>I can describe careers in zoology.</p> <p>I can describe and explain what puberty, adolescence is.</p> <p>I can describe life cycle of animals (humans).</p> <p>I can explain how studying reproduction help endangered species.</p>	

## TERM 2

	Theme	Overview of key learning to take place	How learning will be assessed
	<p><b><u>Topic 5</u></b></p> <p>7F – Acids and Alkalis</p>	<p>I can recognize some common hazard symbols.</p> <p>I can explain why hazard symbols are necessary.</p> <p>I can recognize some common acids.</p>	

		<p>I can plan and explain some safety precautions.</p> <p>I can name examples of indicators made from plants and describe their use.</p> <p>I can name some common examples of acids and alkalis.</p> <p>I can describe the pH scale and how it useful.</p> <p>I can describe what happens during neutralisation.</p> <p>I can write word equation for neutralisation reaction.</p> <p>I can explain the pH changes taking place during neutralisation.</p> <p>I can describe the skills that chemists have to work in chemistry industry.</p> <p>I can describe and explain some everyday neutralisation reactions.</p> <p>I can explain the danger associated with chemicals at home.</p>	<p><b>Formative Assessment to be used this term:</b></p> <ul style="list-style-type: none"> <li>• In class peer and self-assessment of extended answer questions</li> <li>• End of topic questions-exam style worksheets</li> </ul>
	<p><b><u>Topic 6</u></b></p> <p>7J – Current Electricity</p>	<p>I can explain how switches work.</p> <p>I can describe what happens when the number of bulbs in a circuit is changed.</p> <p>I can identify what current is and how it is measured.</p> <p>I can identify when physical or abstract models are being used.</p> <p>I can identify what part of a physical model represent.</p> <p>I can plan an investigation to help evaluate a model.</p> <p>I can explain why models are used.</p> <p>I can identify what parts of a physical model represent.</p>	



		<p>I can use a physical model to help explain electric circuits.</p> <p>I can evaluate a physical model.</p> <p>I can state what is meant by series and parallel circuit.</p> <p>I can explain how switches can control the different kinds of circuits.</p> <p>I can describe how changing the number of components in circuit affects the current.</p> <p>I can describe the differences in how current behaves in series and parallel circuit.</p> <p>I can describe how changing the number or type of components in circuit affects the current.</p> <p>I can describe how a voltmeter is used.</p> <p>I can explain why current increases when voltage of the supply is increased.</p> <p>I can describe the relationship between current and resistance.</p> <p>I can describe what robot engineers do.</p> <p>I can explain some safety precautions to be followed when using electricity.</p> <p>I can describe the job that fuses and circuit breakers do.</p> <p>I can explain how a fuse works.</p> <p>I can describe the ways in which electricity related ideas have changed the world.</p>	
	<b><u>Topic 7</u></b>	<p>I can describe how muscles in the gas exchange system allows ventilation.</p> <p>I can describe what happens during gas exchange in the lungs.</p> <p>I can describe the functions of different parts of human double circulatory system.</p>	

	<p>7C – Muscles and Bones</p>	<p>I can describe function of blood and where the different blood cells are made. I can describe the role of scientific questions in the scientific method.</p> <p>I can identify scientific, non-scientific and ethical questions.</p> <p>I can describe the functions of different bones in the skeleton.</p> <p>I can describe some different types of joints.</p> <p>I can explain how antagonistic pairs of muscles operate.</p> <p>I can describe how prosthetics are designed.</p> <p>I can recall that different drugs affect the body.</p> <p>I can explain how some athletes work on their chances of winning.</p>	
	<p><b><u>Topic 8</u></b></p> <p>7G – Particle Model ‘</p>	<p>I can describe and explain properties of three states of matter.</p> <p>I can state what is meant by density.</p> <p>I can describe scientific question, hypothesis and predictions.</p> <p>I can describe how evidence is used to develop a hypothesis into a theory.</p> <p>I can recognize that all matter is made up of particles.</p> <p>I can describe, draw and recognize arrangement of particles.</p> <p>I can explain how Brownian motion supports the particle model.</p> <p>I can explain how scientific theories work and evolve.</p> <p>I can state what is meant by diffusion and recall some of its effects.</p> <p>I can say what is meant by gas pressure and recall some of its effects.</p>	<div data-bbox="1854 868 1989 986" data-label="Image"> </div> <p><b>Summative assessment</b></p> <p><b>Mid-term assessment:</b> after first 2 topics of the term.</p> <p><b>End of term assessment:</b> after next 2 topics of the term.</p>


		<p>I can describe the cause of gas pressure using particle model/theory.</p> <p>I can describe how meteorologists work.</p>	
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### TERM 3

	Theme	Overview of key learning to take place	How learning will be assessed
	<p><b>Topic 9</b></p> <p>7K – Forces</p>	<p>I can recall the effects of force on an object.</p> <p>I can name forces and classify them as contact and non-contact forces.</p> <p>I can describe how extension of a spring depends on the force applied.</p> <p>I can recall effects of friction.</p> <p>I can explain some ways in which friction can be changed.</p> <p>I can identify some situations in which friction is helpful or not.</p> <p>I can calculate pressure and recall its units.</p> <p>I can describe effects of high and low pressure.</p> <p>I can explain why scientists use SI units.</p> <p>I can record numbers using specific units.</p> <p>I can identify balanced and unbalanced forces.</p> <p>I can explain effects of balanced and unbalanced forces.</p> <p>I can explain how architects and civil engineers work together.</p>	<div data-bbox="1836 686 1971 805" data-label="Image"> </div> <p><b>Formative Assessment to be used this term:</b></p> <ul style="list-style-type: none"> <li>• In class peer and self-assessment of extended answer questions</li> <li>• End of topic questions-exam style worksheets</li> </ul>

	<p><b><u>Topic 10</u></b></p> <p>7D – Ecosystems</p>	<p>I can recall what species is.</p> <p>I can describe variation as continuous or discontinuous.</p> <p>I can present information as bar charts and scatter graphs.</p> <p>I can identify relationships using scatter graphs.</p> <p>I can describe some adaptations for different habitats.</p> <p>I can describe how inherited variations are caused.</p> <p>I can identify causes of environmental variation.</p> <p>I can describe adaptations to seasonal and daily changes.</p> <p>I can describe ways in which organisms can affect their habitats and communities.</p> <p>I can describe intra- and inter- specific competition.</p> <p>I can use food web to make predictions.</p> <p>I can explain how planners use their knowledge to build greener cities.</p> <p>I can use pyramids of numbers to describe how energy is lost in a food chain.</p> <p>I can explain why pesticides need to be used carefully.</p> <p>I can describe how some humans compete with each other.</p>	
	<p><b><u>Topic 11</u></b></p> <p>7H – Atoms, Elements and some Molecules</p>	<p>I can draw, use and interpret tables, bar charts, pie charts and scatter graphs.</p> <p>I can identify best way to present a data.</p> <p>I can recognize difference between atoms and molecules.</p>	



		<p>I can identify elements, mixtures and compounds from descriptions and particle diagrams.</p> <p>I can use chemical symbols for common elements n explain why they are an international code.</p> <p>I can explain that our resources of elements are limited and we can run out of them.</p> <p>I can identify metals and non-metals by their properties.</p> <p>I can relate use of an element to its properties.</p> <p>I can explain the factors that affect profitability of mining.</p> <p>I can describe changes that occur when compounds are formed.</p> <p>I can name simple compounds.</p> <p>I can use and understand word equations.</p> <p>I can describe examples of decomposition reaction.</p>	
	<p><b>Topic 12</b></p> <p>7L – Sound</p>	<p>I can explain what causes sound and how to make louder sound.</p> <p>I can explain link between frequency and pitch.</p> <p>I can describe how sound moves through different materials.</p> <p>I can explain how sound gets fainter as we move further from the source.</p> <p>I can present information as a scatter graph.</p> <p>I can describe what line graph and scatter graph show.</p> <p>I can identify relationships using scatter graphs.</p>	<p><b>Summative assessment</b></p> <p><b>Mid-term assessment:</b> after first 2 topics of the term.</p> <p><b>End of term assessment:</b> after next 2 topics of the term.</p> 

	<p>I can describe parts of ears and their function.</p> <p>I can describe how microphones convert sound into electrical signals.</p> <p>I can describe some uses of ultrasound.</p> <p>I can explain how SONAR and echolocation work.</p> <p>I can compare longitudinal and transverse waves.</p> <p>I can recall that all waves can be reflected.</p> <p>I can explain what superposition is.</p> <p>I can explain how animals get affected by human noises.</p>	
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