

Year 09 Science: Biology

Work rate calendar (WRC) 2025

Term 1

All students are expected to participate in all online lessons and complete all assessment as outlined in this **Work rate calendar**.

Teachers may adjust topics, class work, assessment and submission dates. Adjustments will be communicated via QLearn or during lessons.

Assessment				
Supervised assessment		Summative exams are to be supervised by the student's official exam supervisor.		
Non-supervised assessment		Students must sign declaration of academic integrity.		
Week	Dates	Unit	Topic	Class work / Assessment to be submitted
1/2	27 Jan – 7 Feb	Unit 01: Biology	Monday 27 January — Australia Day Holiday Homeostasis- thermoregulation and osmoregulation <ul style="list-style-type: none"> Homeostasis and its significance in living organisms. Regulating temperature through physiological processes. Osmoregulation: Functions of the kidneys and urinary system. 	
3	10 Feb – 14 Feb		The nervous system and Stimulus-response Model <ul style="list-style-type: none"> Main parts of the nervous system (CNS & PNS) Components of the stimulus-response model. The endocrine system <ul style="list-style-type: none"> Major glands of the endocrine system. Hormones and their target organs. Implications of hormonal imbalances. Control system: nervous vs endocrine	
4	17 Feb – 21 Feb		Friday 14 February — Senior orientation day: Years 10–12 Regulating body sugar <ul style="list-style-type: none"> Insulin and glucagon regulating blood sugar levels. Consequences of imbalanced blood sugar regulation (e.g., diabetes). Negative and positive feedback mechanism <ul style="list-style-type: none"> Differentiate between negative and positive feedback loops Illustrate how feedback mechanisms regulate physiological processes 	Mandatory quiz 5pm, 14 Feb 2025
5	24 Feb – 28 Feb		Immune system and body response to pathogens Immune system responding to pathogens. Feedback mechanism and immune system – the case of diabetes	
6	3 Mar – 7 Mar		Reproduction in plants and animals Sexual and asexual reproduction Plants sexual organs Animals sexual organs	SA1 Practice exam 5pm, 7 March 2025
7	10 Mar – 14 Mar		Fertilization Sex cells – gametes Fertilization in both plants and animals	
8	17 Mar – 21 Mar		Sexual reproduction and survival of species Revision	SA1 Final Exam 5pm, 21 st March 2025
9	24 Mar – 28 Mar		Monday 24 March – Wednesday 26 March — School camp: Years 7–8 SHE – Research Investigation on Pharmaceutical industry Feedback system disorder and pharmaceuticals	
10	31 Mar – 4 Apr		Thursday 3 April — Cross country / Fun run: Prep – Year 12	

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Year 9 Science

Work rate calendar (WRC) 2025

Term 2

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Assessment					
Supervised assessment		Summative exams are to be supervised by the student's official exam supervisor.			
Non-supervised assessment		Students must sign declaration of academic integrity.			
Week	Dates	Unit	Topic	Class work / Assessment to be submitted	
1	21 Apr – 25 Apr	Unit 2: Chemistry	Monday 21 April — Easter Monday		
			Friday 25 April — Anzac Day		
Structure of atoms					
Compare and contrast subatomic particles by mass and electric charge.					
2	28 Apr – 2 May		Chemical reactions		
			Describe chemical reactions Balance chemical equations		
3	5 May – 9 May		Monday 5 May — Labour Day	Mandatory Practical – Conservation of Mass Check point 9 th May 2025	
			Law of Conservation of Mass		
			Understand law of conservation of mass Observe the law of conservation of mass – plan & conduct a scientific investigation as a fair test.		
4	12 May – 16 May		SA2: Experimental Investigation		
		Modify Mandatory Practical – Conservation of Mass Plan & conduct a scientific investigation as a fair test.			
5	19 May – 23 May	SA2: Experimental Investigation	SA2 Draft Due 5pm, 23 rd May 2025		
		Analyse and communicate results Evaluate quality of data and identify improvements			
6	26 May – 30 May	Acis & Bases			
			Properties of acids & bases, measuring acidity, acid base reactions, neutralisation		
7	2 Jun – 6 Jun	Acids & Bases and Explosive Chemical reactions	SA2 Final Due 5pm, 6 th June 2025		
		Practical– measuring pH of household substances, examine explosive chemical reactions.			
8	9 Jun – 13 Jun	Isotopes			
		Atomic number and mass. Define isotopes, write isotopes using correct notation.			
9	16 Jun – 20 Jun	Radioisotopes, half lives, radioactivity			
		Explain decay process of radio isotopes, find half lives of radioactive isotopes, list practical uses if radioisotopes.			
10	23 Jun – 27 Jun	Friday 27 June — Athletics carnival / Sports day: Prep – Year 12			
		Historical context of radioactivity and key scientists. Radioactivity – Applications and Safety			

Year 09 Science: Earth Sciences

Work rate calendar (WRC) 2025

Term 3

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Assessment				
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Week	Dates	Unit	Topic	Class work / Assessment to be submitted
1	14 Jul – 18 Jul	Unit 03: Earth Sciences	Exploring the four main global systems – the geosphere, hydrosphere, atmosphere and biosphere. <ul style="list-style-type: none"> Describe the Earth's four main systems. Explain how different systems interact The carbon cycle and carbon reservoirs 	
2	21 Jul – 25 Jul		The 3 main processes in the carbon cycle <ul style="list-style-type: none"> photosynthesis, respiration and combustion 	
3	28 Jul – 1 Aug		<p>Wednesday 30 July — SET plan meetings: Year 10</p> Greenhouse effect <ul style="list-style-type: none"> The role of carbon dioxide in maintaining temperature to supports life on earth. Natural and enhanced greenhouse effect Greenhouse gases (CO₂) and it heat trapping capacity 	
4	4 Aug – 8 Aug		Investigating carbon footprint <ul style="list-style-type: none"> Understand carbon footprint – what is it and how is it measured? Trace the emission of greenhouse gases (CO₂) through the lifecycle of a product. Introduce Research Investigation – Claim Research Investigation: Rationale 	
5	11 Aug – 15 Aug		<p>Wednesday 13 August — Royal Queensland (Ekka) Show Holiday</p> Developing Research Question Identify 3 secondary resources: <ul style="list-style-type: none"> Authentic sources Referencing sources Analyse evidence: identifying patterns and relationships <ul style="list-style-type: none"> How to analyse data in graphs or tables 	<p>Check point 1: Rational and Research Question</p> <p>5pm, 15th August 2025</p>
6	18 Aug – 22 Aug	Unit 03: Earth sciences	Evaluating secondary sources <ul style="list-style-type: none"> Recency, Site, Author mentioned, method/data Drawing conclusion: <ul style="list-style-type: none"> Links to claim. Research question answered? 	<p>SA3 Draft submission</p> <p>5pm, 22nd August 2025</p>
7	25 Aug – 29 Aug		Working on feedback	
8	1 Sept – 5 Sept		<p>Friday 5 September — Student free day</p> Work on feedback	<p>SA3 Final submission</p> <p>5th September 2025</p>
9	8 Sept – 12 Sept		<p>Friday 12 September — Connect day: Years 7–8</p> Unit 4: Energy Transfer by Heat Particle nature of energy. Energy transfer and transformation.	
10	15 Sept – 19 Sept		<p>Wednesday 17 September — Connect day: Years 9–10</p> Heat Transfer: Conduction, convection and radiation	

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Work rate calendar (WRC) 2025

Term 4

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Assessment

Supervised assessment Summative exams are to be supervised by the student's official exam supervisor.

Non-supervised assessment Students must sign declaration of academic integrity.

Week	Dates	Unit	Topic	Class work / Assessment to be submitted
1	6 Oct – 10 Oct	Unit <x>: <Title>	Monday 6 October — King's Birthday Holiday	
			Energy transfer by heat	
			Revise and consolidate Particle behaviour in different states. Energy transfers and transformations.	
			Electricity: Particle nature of electricity. Current, voltage, resistance	
2	13 Oct – 17 Oct		Electricity	
			Electric circuits, series and parallel	
3	20 Oct – 24 Oct		Energy efficiency	
			Compare energy efficiency of different systems	
4	27 Oct – 31 Oct		Energy transfer by sound Sound waves and the wave model	
			Sound as a longitudinal wave, how sound travels through different mediums, the speed of sound, measure sound wave frequency and amplitude	
5	3 Nov – 7 Nov		Energy transfer by light Light waves and Electromagnetic Spectrum	Mandatory Quiz 5pm 7 th November 2025
			The electromagnetic spectrum, reflection, refraction, the speed of light	
6	10 Nov – 14 Nov		Revision	SA4 Practice Exam 5pm, 14th November
			Review and consolidate SA4 Practice exam	
7	17 Nov – 21 Nov	Unit <x>: <Title>	Friday 21 November — Aquatic carnival: Prep – Year 11	SA4 Final Exam
			Revision	5pm, 21 st November
			Feedback, review and consolidate SA4 Final exam	
8	24 Nov – 28 Nov	Unit <x>: <Title>	Friday 28 November — STEM Connect day: Years 5–9	
			Friday 28 November — Final day: Years 10–11	
			Energy Use and environment	
			Modelling Hydroelectric dam Environmental impacts of dams	
9	1 Dec – 5 Dec		Kinetic energy	
			Kinetic energy and mass The Congo dam project	
10	8 Dec – 12 Dec		Review and consolidate	
			Consolidate concepts on energy	