Year 10 Science Intensive: Biology

Work rate calendar (WRC) 2024 — 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 (refer to Learning Sequence in QLearn)/ Assessment to be submitted
1	22 Jan – 26 Jan	Unit Biology	**Orientation** Familiarise with expectations and resources for Science Monday 22 January — Welcome calls for students: Prep – Year 12 Wednesday 24 January — Learning for success: Prep – Year 12 Friday 26 January — Australia Day Holiday	
2	29 Jan – 2 Feb		**DNA and genes** What can be inherited? Genes in DNA contain the genetic code for all inherited traits (optional) Practical demo (video): Extract DNA The genome is cut into chromosomes each including many genes	Supervisor Safety Declaration signed and uploaded to QLearn
3	5 Feb – 9 Feb		**Alleles** Mutation Alleles on chromosomes Mitosis Friday 9 February — Senior orientation day: Years 10–12	
4	12 Feb – 16 Feb		**Genetic manipulation** Selective breeding Genetic manipulation techniques **SA1 Research Skills**	**Biology progress Quiz** (QLearn)
5	19 Feb – 23 Feb		**SA1 Planning** Class time: SA1 proposal	**SA1: Proposal**
6	26 Feb – 1 Mar		**Chromosome assortment** Sexual vs Asexual reproduction Meiosis Inheritance/Punnett squares	
7	4 Mar – 8 Mar		**SA1 Draft** Pedigree diagrams • SA1 draf	**SA1 draft**
8	11 Mar – 15 Mar		**Chromosome sorting** Sex linked traits Practical: Drosphila Natural selection	**Practical drosophila**
9	18 Mar – 22 Mar		**SA1 Report** Practical: rabbit selection • SA1 Final report	**Practical Rabbit selection** **SA1: Report (final)**
10	25 Mar – 29 Mar		**Evolution** Evidence for evolution Microevolution Thursday 28 March — Cross country / Fun run: Prep – Year 12 Friday 29 March — Good Friday	

LEGEND: Class work — send-in | Summative assessment | Exam block | School events | Public holidays | Student free day

Year 10 Science Intensive: Chemistry

Work rate calendar (WRC) 2024 — Term 2

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 (refer to Learning Sequence in QLearn)/ Assessment to be submitted
1	15 Apr – 19 Apr	Unit Chemistry	**Atoms, elements, and the periodic table** Investigate the structure of atoms and their organisation into the periodic table of elements.	
2	22 Apr – 26 Apr		Thursday 25 April — Anzac Day **Electron configurations and ions** Investigate ions and the bonds they can form.	
3	29 Apr – 3 May		**Periodic Trends** Investigate the trends in chemical properties found across the elements of the periodic table.	
4	6 May – 10 May		Monday 6 May — Labour Day **Types of chemical reactions** Investigate chemical change as described by chemical reactions.	**Chemistry Quiz**
5	13 May – 17 May		**Conservation of mass and balancing equations** Investigate the law of conservation of mass.	
6	20 May – 24 May		**Rate of reaction** Investigate the rate of chemical reactions.	**SA2 Practice Data test** Complete in QLearn
7	27 May – 31 May		**SA2 Data Test** Complete assessment in QLearn.	**SA2 Data Test** Complete in QLearn
8	3 Jun – 7 Jun		**Mandatory Practical 3 – Reaction Rate** Conduct a given student experiment and write up the results in a report.	
9	10 Jun – 14 Jun		**Mandatory Practical 4- Reaction Rate Modified** Plan and conduct a modified student experiment.	
10	17 Jun – 21 Jun		Friday 21 June — Athletics carnival / Sports day: Prep – Year 12 **Mandatory Practical - Reaction Rate Modified** Plan and conduct a modified student experiment.	**Student experiment**

LEGEND | Class work — send-in | Summative assessment | Exam block | School events | Public holidays | Student free day

Year 10 Science Intensive: Physics

Work rate calendar (WRC) 2024 Term 3

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 (refer to Learning Sequence in QLearn)/ / Assessment to be submitted
1	8 Jul – 12 Jul	Unit Physics	**Introduction to energy** Forces, energy, energy transfers, and energy transformations	
2	15 Jul – 19 Jul		**Speed and Velocity** Explore the concepts of speed and velocity.	
3	22 Jul – 26 Jul		**Mandatory Practical 5 - Speed** Conduct a given student experiment and write up the results in a report.	
4	29 Jul – 2 Aug		**Kinetic and gravitational potential energy** Investigate kinetic and gravitational potential energy.	**Physics Quiz**
5	5 Aug – 9 Aug		**Acceleration** Investigate the acceleration of objects.	
6	12 Aug – 16 Aug		Wednesday 14 August — Royal Queensland (Ekka) Show Holiday **Mandatory Practical 6 – Speed Modified (SA3_Student_Experiment)** Plan and conduct a modified student experiment	
7	19 Aug – 23 Aug		**Mandatory Practical 6 – Speed Modified (SA3_Student_Experiment)** Plan and conduct a modified student experiment.	**SA3 Student Experiment Draft**
8	26 Aug – 30 Aug		Friday 30 August — Student free day **Newton's first and second laws of motion** Investigate Newton's first and second laws of motion.	
9	2 Sept – 6 Sept		**SA3_Student_Experiment Final drafting and submission Complete assessment in QLearn.** Complete assessment in QLearn	**SA3 Student Experiment - Final Due**
10	9 Sept – 13 Sept		Wednesday 11 September — Connect excursion: Years 7–9 Friday 13 September — Connect excursion: Years 10–12 **Sound Elements Newton's third law** Investigate Newton's 3rd law of motion.	

LEGEND | Class work — send-in | Summative assessment | Exam block | School events | Public holidays | Student free day

Year 10 Science Intensive: Earth Science

Work rate calendar (WRC) 2024 — Term 4

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 (refer to Learning Sequence in QLearn)/ / Assessment to be submitted
1	30 Sept – 4 Oct	Unit 4: Earth Science	**Global Systems** Investigate and define Earth's four main global systems: The Geosphere, Hydrosphere, Atmosphere and the Biosphere	
2	7 Oct – 11 Oct		Monday 7 October — King's Birthday Holiday Energy and Ecosystems Investigate ecosystems and how energy flows through the Biosphere	
3	14 Oct – 18 Oct		Monday 14 October – Wednesday 16 October — School camp: Years 9–10 **The Carbon Cycle and The Greenhouse Effect** Investigate the Earth's Carbon Cycle, and the Greenhouse effect	
4	21 Oct – 25 Oct		**Climate Change and Global Warming** Investigate the Earth's Climate Changes and the effect of Global warming	**Earth Science Quiz**
5	28 Oct – 1 Nov		**The Scientific Beginning – The "Big Bang" Theory** Investigate the "Big Bang" theory, as the theoretical scientific explanation for the origin of the universe	
6	4 Nov – 8 Nov		**The Life Cycle of Stars** Investigate the life cycle of stars	**SA4 Practice exam** Complete in QLearn
7	11 Nov – 15 Nov		**SA4 Exam** Complete the SA4 assessment in QLearn.	**SA4 Exam** Complete in QLearn
8	18 Nov – 22 Nov		Friday 22 November — Aquatic carnival: Prep – Year 11 Friday 22 November — Final day: Years 10–11 **The Sun and Beyond** Investigate the Sun, model ecosystems and the concept of "Terraforming an Exoplanet"	
9	25 Nov – 29 Nov			
10	2 Dec – 6 Dec			
11	9 Dec – 13 Dec			

LEGEND: Class work — send-in | Summative assessment | Exam block | School events | Public holidays | Student free day