



Rangi Ruru
Girls' School

YEAR 11 PŪTAIAO - GENERAL SCIENCE 2024

Course Information for Students

*Ko te pae tawhiti arumia kia tata,
Ko te pae tata whakamaua,
Kia puta i te wheiao ki te ao mārama.*

*Seek to bring the distant horizon nearer,
Grasp it firmly once near,
And so emerge from darkness into enlightenment.*

Welcome to Science in 2024! We hope that your year will be interesting, valuable, challenging and successful.

Many of the major challenges that confront our world need to be approached from a scientific perspective. By choosing to do a General Science course you will study aspects of Chemistry, Physics and Biology.

In your Science class, your Rangī Ruru values and Rangī Graduate dispositions will be demonstrated through:

Whakaute Respect: Acknowledge and respect different perspectives.

Aroha: Take opportunities to work with others in a supportive way.

Rikarika Endeavour: Take responsibility for your own learning and give things a go.

Ngaana Enthusiasm: Have a positive attitude towards learning.

Manaakitanga - Generosity of Spirit: Listen carefully to other's opinions and be curious.

Tika Integrity · Be honest about your own work and be responsible for your own behaviours.

What will you begin to understand in Science this year?

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|---|---|
| Science helps us make sense of the world. | Biology, Chemistry and Physics are all interconnected and help us understand and organise the world and how we operate in it. |
| Science is elegant, explorative, creative and powerful. | Science uses data, evidence and relationships to find out, explore and explain. |
| Matter and energy are conserved in chemical change and in biological systems | Atoms are not gained or lost during chemical reactions – they are rearranged. |
| All living things are related and live as part of interconnected systems | Living things are connected via genes and DNA is the universal molecule of inheritance. |
| Physical phenomena can be explained through physics concepts and communicated using physics conventions | Physics concepts help explain physical phenomena and underpin our understanding of the universe. |

What will you know and do in Science this year?

- Understand that there are different types of chemical reactions and that atoms are re-arranged but matter is conserved.
- Investigate different real-world examples in Physics and explain these using physics concepts.
- Understand that genes can be tracked from generation to generation and the importance of genetic variation in organisms.

What skills will you develop this year?

Using language, symbols and texts appropriately: You will develop knowledge of Science vocabulary, numeric and symbol systems and conventions of Science such as graphs, formulae, units and diagrams.

Critical thinking: Grasp increasingly complex science concepts and apply them to an ever-growing range of contexts.

Gathering evidence: Science investigations are used to generate and evaluate knowledge to answer questions.

Self-management: If you have missed lessons – it is up to you, and not your teacher, to ensure you catch up.

Effective collaboration: You will engage in scientific conversations about your science experiences, the quality of the evidence you have gathered and the evidence of others.

Achievement Standards offered in Level 1 General Science 2024

| Achievement Standard Number | Subject reference | Version number | Topic/Title | Mode of Assessment | Credits |
|-----------------------------|-------------------|----------------|--|--------------------|---------|
| 92021 | CB1.2 | 3 | Demonstrate understanding of chemical reactions in context | Internal | 6 |
| 92045 | PESS1.2 | 3 | Demonstrate understanding of a physical phenomenon through investigation | Internal | 5 |
| 92022 | CB1.3 | 3 | Demonstrate understanding of genetic variation in relation to an identified characteristic | External | 5 |

Total 16 credits

ASSESSMENT PROCEDURES

There are two internal assessments. The Genetics external assessment is a report (written or oral) which is completed in class but submitted to NZQA for external marking.

Timing of assessments

| | | | | |
|-------|------------------------|-------------|-------------------------|-----------|
| 92021 | Chemical reactions | Week 11 | Term 1 | 6 credits |
| 92045 | Physics investigations | Week 9 | Term 2 | 5 credits |
| 92022 | Genetics | TBD (week 9 | Term 3 or start Term 4) | 5 credits |

All Achievement Standard tasks will have a checklist of what is required to attain an Achieved, Achieved with Merit or Achieved with Excellence.

Workbooks and On-line learning

Scipads and Education Perfect will be used for all three achievement standards.

Important Information for Internal Assessments

- **Absences** – It is important that you do not miss any assessments (Internal or External) except for genuine reasons of sickness, accident or other extreme emergency. Providing a Medical Certificate from your Doctor must cover absence during an assessment. On your return to school you will be given the opportunity to do the task for the particular Achievement Standard. This will NOT be possible if you choose to go on a family holiday, or similar non-school related event, at the time of assessment.
- **Assessment Policies** – Information regarding the school policy on assessment, authenticity and appeal procedures is found on <https://hub.rangiruru.school.nz/assessment/>. Ensure you read these thoroughly and follow all guidelines. Know your rights and responsibilities.
- **Filing** – When an Internal assessment task has been marked you will be asked to **verify the sighting and acceptance of the grade awarded by signing the cover sheet**. All assessed work will then be filed at school for security and for moderation by NZQA, if required.
- **Assessment** – If a ‘Not Achieved’ grade is awarded for an **internally** assessed Achievement Standard, there will be no further assessment opportunities in that Achievement Standard.
- You **may be** offered the opportunity of a **resubmission** if your work requires minor corrections or change that you may have overlooked and should be able to identify within a few minutes. Your teacher will approach you prior to the task being handed back to the class as a whole if this is relevant for you. You will be required to identify and make any changes immediately. Your teacher is **not** able to tell you of the specific change required; you must be able to identify the required change yourself.

Year 11 General Science Topics 2024

| Week | | Date | | | |
|------|---|--------------|---|--------------|--|
| 1 | A | 29 January | - | 2 February | 92021 Chemistry – Demonstrate understanding of chemical reactions in a context |
| 2 | B | 5 February | - | 9 February | Waitangi Day: Tues 6 th Feb |
| 3 | A | 12 February | - | 16 February | |
| 4 | B | 19 February | - | 23 February | |
| 5 | A | 26 February | - | 1 March | |
| 6 | B | 4 March | - | 8 March | |
| 7 | A | 11 March | - | 15 March | |
| 8 | B | 18 March | - | 22 March | |
| 9 | A | 25 March | - | 29 March | Easter Fri: 29 th March |
| 10 | B | 1 April | - | 5 April | Easter Mon & Tues: 1 st & 2 nd April |
| 11 | A | 8 April | - | 12 April | Internal Assessment |
| | | 15 April | - | 19 April | |
| | | 22 April | - | 26 April | Anzac Day: Thurs 25 th April |
| | | 29 April | - | 3 May | |
| 1 | B | 6 May | - | 10 May | 92045 – Physics – Demonstrate understanding of a physical phenomenon through investigation |
| 2 | A | 13 May | - | 17 May | |
| 3 | B | 20 May | - | 24 May | |
| 4 | A | 27 May | - | 31 May | |
| 5 | B | 3 June | - | 7 June | King's B/D: Mon 3 rd June |
| 6 | A | 10 June | - | 14 June | |
| 7 | B | 17 June | - | 21 June | |
| 8 | A | 24 June | - | 28 June | Matariki: Fri 28 th June |
| 9 | B | 1 July | - | 5 July | Internal Assessment |
| | | 8 July | - | 12 July | |
| | | 15 July | - | 19 July | |
| | | 22 July | - | 26 July | |
| 1 | A | 29 July | - | 2 August | 92022 – Biology- Genetics - Demonstrate understanding of genetic variation in relation to an identified characteristic |
| 2 | B | 5 August | - | 9 August | |
| 3 | A | 12 August | - | 16 August | |
| 4 | B | 19 August | - | 23 August | |
| 5 | A | 26 August | - | 30 August | |
| 6 | B | 2 September | - | 6 September | |
| 7 | A | 9 September | - | 13 September | |
| 8 | B | 16 September | - | 20 September | |
| 9 | A | 23 September | - | 27 September | Common assessment exam? |
| | | 30 September | - | 4 October | |
| | | 7 October | - | 11 October | |
| 1 | B | 14 October | - | 18 October | Common assessment exam? |
| 2 | A | 21 October | - | 25 October | |
| 3 | B | 28 October | - | 1 November | STUDY LEAVE Labour Day: Mon 28th Oct |
| 4 | A | 4 November | - | 8 November | |

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|---|---|-------------|---|-------------|------------------------------------|
| 5 | B | 11 November | - | 15 November | Show Day: Fri 15 th Nov |
| 6 | A | 18 November | - | 22 November | |