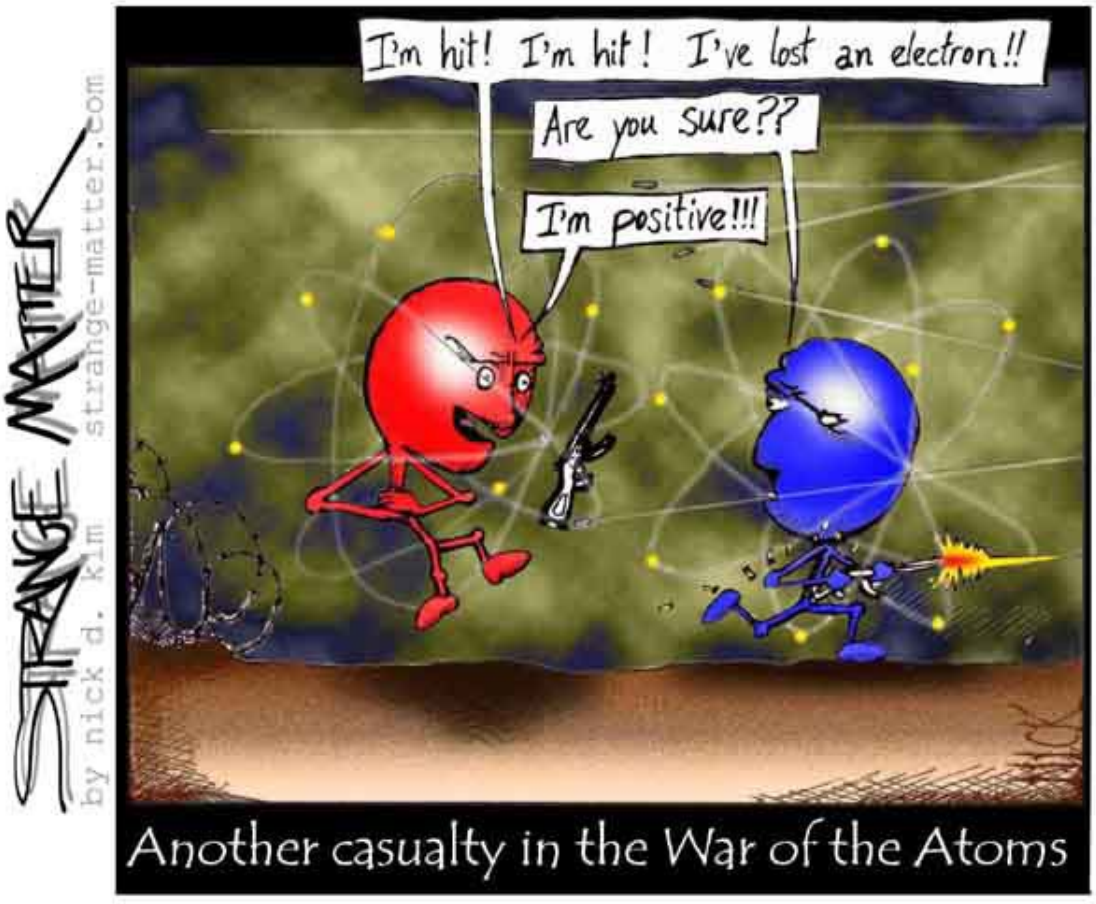
Rangi Ruru Girls' School

Year 12 Chemistry-Matu 2025
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 Chemistry in 2025! We hope you will enjoy and be challenged by the topics covered this year.
The Y12 Chemistry course aims to provide a solid foundation of skills and concepts on which to base further studies in Chemistry.

In your Chemistry class, your Rangi Ruru values and Rangi 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 Chemistry this year?

Chemistry helps us make sense of the world.	Chemistry and help us understand the material world and how we operate in it.
Chemistry has a continuous, evolving human history.	*Nō ngā tupuna, tuku iho, tuku iho.* The human ideas that have been passed down from generation to generation over time can help people today develop their thinking.
Chemistry is elegant, explorative, creative and powerful.	Chemistry uses data, evidence and relationships to find out, explore and explain.
Chemistry helps us in our everyday lives and decisions and is key to many areas of knowledge and practice.	*Whiria te kaha tūātinitini, whiria te kaha tūāmanomano.* Together we can use our strengths to achieve more. The concepts, skills and processes of Chemistry are used in everyday practices and decisions from what materials we use for clothing, what food we eat, and to health.
Chemistry rewards persistence and positivity.	Chemistry offers multiple ways to approach and solve problems. Experimentation and failures play an important role in understanding.

What will I do in Year 12 Chemistry?

You will develop your skills of observation in a chemical context, learning to link observations to chemical species. You will learn to work with accuracy and precision when analyzing chemical substances. Practical work will be supported by chemical equations and calculations. The Internal assessments in Level Two Chemistry will develop practical skills and be supported by chemical equations and calculations.

What will I learn in Year 12 Chemistry?

The content focus Year 12 Chemistry is

1) Understanding how atoms in molecules are held together and how this determines the properties of the molecules.
2) Understanding the factors that influence rates of reaction, equilibrium reactions and the properties of acids and bases.

The content covered in the **three** externals will provide an understanding of concepts that will be further developed in Level Three Chemistry.

What skills will you develop in Year 12 Chemistry?

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

Critical thinking: You will develop the skills critical thinking in reporting on the accuracy of their investigation and the significance of your results.

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: Collaborative tasks will allow you to focus on good communication so your group reaches a common goal.

Achievement Standards offered in 2023

Achievement Standard Number	Subject reference	Version number	Topic/Title	Mode of Assessment	Credits
91910	2.1	1	Carry out a practical investigation into a substance present in a consumer product	Internal	4
91164	2.4	2	Demonstrate understanding of bonding, structure, and energy changes	External	5
91165	2.5	2	Demonstrate understanding of the properties of selected organic compounds	External	4
91166	2.6	2	Demonstrate understanding of chemical reactivity	External	4
91167	2.7	2	Demonstrate understanding of oxidation-reduction	Internal	3

Study Habits

Regular revision of your work in Chemistry is essential for success. External achievement standards in particular require the recall of key concepts and this is best achieved by regular review and asking questions.
Good study habits in 2025 will help develop an understanding of key concepts in Chemistry that are required for further study in many fields.
Success in Level Two Chemistry will provide you with good options in the future.

Assessment Procedures

Information regarding the school policy on assessment, authenticity and appeal procedures is found on your Year Level Team via the link to the HUB and NCEA.
It is very important that you understand the policies and procedures about assessment and if you have any concerns then please ask your Chemistry teacher.

Internally Assessed Achievement Standards

Internally assessed standards will by checked marked for consistent marking across classes.

When the result has been checked and you have agreed with the way in which the assessment was marked you will be asked to sign the assessment cover sheet.

All internally assessed work will be filed at school as it is likely that some of the internally assessed standards will need to be submitted to NZQA for moderation. Moderation is used to ensure that the school is assessing at the required standard.

As most of the Internal Assessment tasks involve practical elements there will be only one assessment opportunity.

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.

Student Obligations
Your obligations include:

- Ensure that you understand the assessment programme and policy
- Ensure you understand the requirements of each internal assessment being completed
- Check thoroughly the accuracy of the marking of internal assessments when it is returned
- Discuss any concerns with your Chemistry teacher

The Award of Year 12 and 13 subject prizes at the end of year Prize Giving.
Top subject awards are based on the whole year's academic performance in the subject. The subject co-ordinators use their professional judgment to select award winners based on the following criteria:

- The proportion of Excellence grades in **Achievement Standards**
- Completion of a standard at the first attempt, as well as the comparative quality and quantity of a student's class work in general.
- Completion of all compulsory standards offered in the course.
- Completion of all standards to a high level in the school examinations.
- Consistent effort made in homework throughout the year.
- Satisfactory class attendance throughout the year.

Year Planner 2025

Level Two Chemistry Teachers: Sb, Rn, Bd

Week		Date			
1	A	27 January	-	31 January	**Introduction:** Review of atomic structure, ions, bonding, formulae, chemical equations. Waitangi Day: 6th Feb
2	B	3 February	-	7 February	
3	A	10 February	-	14 February	
4	B	17 February	-	21 February	**Chemistry 2.7 (I)** Demonstrate understanding of oxidation-reduction **(AS 91167, 3 credits)** **Assessment end of week 7**
5	A	24 February	-	28 February	
6	B	3 March	-	7 March	
7	A	10 March	-	14 March	
8	B	17 March	-	21 March	**Chemistry 2.4 (E)** Demonstrate understanding of bonding, structure, and energy changes **(AS 91164, 5 credits)**
9	A	24 March	-	28 March	
10	B	31 March	-	4 April	
		7 April	-	11 April	
		14 April	-	18 April	
		21 April	-	25 April	Anzac Day: Thurs 25th April
1	A	28 April	-	2 May	**Chemistry 2.4 (E)** **Derived Grade TEST Week 5**
2	B	5 May	-	9 May	
3	A	12 May	-	16 May	
4	B	19 May	-	23 May	
5	A	26 May	-	30 May	**Chemistry 2.1 (I)** **Carry out a practical investigation into a substance present in a consumer product using quantitative analysis** **(AS 91910, 4 credits)** King's B/D: Mon 2rd June **Assessment 4 periods** Matariki: Fri 20th June
6	B	2 June	-	6 June	
7	A	9 June	-	13 June	
8	B	16 June	-	20 June	
9	A	23 June	-	27 June	
		30 June	-	4 July	
		7 July	-	11 July	
		14 July	-	18 July	
1	B	21 July	-	25 July	**Chemistry 2.6 (E)** Demonstrate understanding of chemical reactivity **(AS 91166, 4 credits)** **Derived grade TEST week 6**
2	A	28 July	-	1 August	
3	B	4 August	-	8 August	
4	A	11 August	-	15 August	
5	B	18 August	-	22 August	
6	A	25 August	-	29 August	**Chemistry 2.5** Describe the structural formulae and reactions of compounds containing selected functional groups **(AS 91165, 4 credits)**
7	B	1 September	-	5 September	
8	A	8 September	-	12 September	
9	B	15 September	-	19 September	
		22 September	-	26 September	
		29 September	-	3 October	
1	A	6 October	-	10 October	**Chemistry 2.5** **Derived Grade TEST Week 2**
2	B	13 October	-	17 October	
3	A	20 October	-	24 October	
4	B	27 October	-	31 October	Labour Day: Mon 27th Oct **Last Day 29 October**