

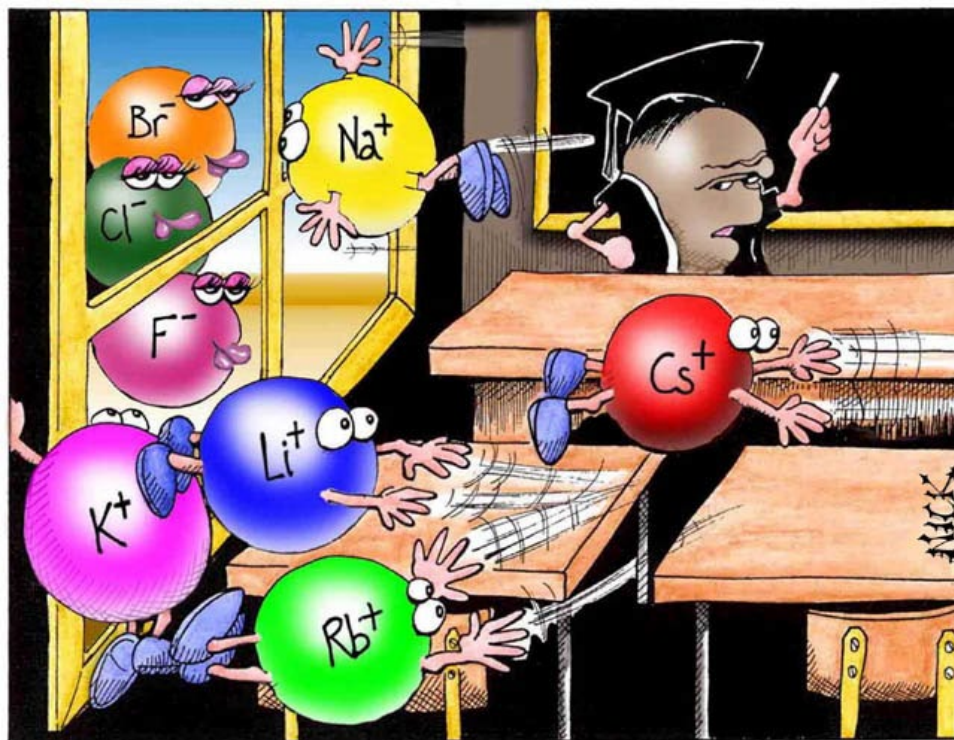


Rangi Ruru
Girls' School

Year 13 Chemistry-Matu 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.*



"Perhaps one of you gentlemen would mind telling me just what it is outside the window that you find so attractive..?"

Welcome to Chemistry in 2024! We hope you will enjoy and be challenged by the topics covered this year. This course aims to prepare you for future studies in Chemistry or meet the requirements for entry to tertiary courses.

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.	<i>Nō ngā tupuna, tuku iho, tuku iho.</i> 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.	<i>Whiria te kaha tūātinini, whiria te kaha tūāmanomano.</i> 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.
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What will you know and do in Year 13 Chemistry?

Year 13 Chemistry builds on many of the concepts learnt in Year 12 Chemistry. You will continue to develop practical skills, linking observation with chemical species and explaining the observations.

What will you learn in Year 13 Chemistry?

The content focus of Year 13 Chemistry is

- 1) Comparing electrolysis and electrochemical cells.
- 2) Explaining Periodic trends and intermolecular forces.
- 3) Understanding how the functional groups of organic molecules determine their reactivity.
- 4) Using spectroscopic data to identify organic molecules
- 5) Applying equilibrium principles to solubility and acid and base behaviour.

The standards offered in Year 13 aim to provide skills and content knowledge to allow students pursue a variety of courses in the future. There will be some optional standards and student will be required to make their choices at different time during the year. An independent practical investigation that builds on the titration skills developed last year can be completed instead of the organic or aqueous equilibria Standards.

What skills will you develop in Year 13 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 of data analysis and reporting in the context of spectroscopy.

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 2024

Achievement Standard Number	Subject reference	Version number	Topic/Title	Mode of Assessment	Credits
91393	3.7	2	Demonstrate understanding of oxidation-reduction processes	Internal	3
91390	3.4	2	Demonstrate understanding of thermochemical principles and the properties of particles and substances	External	5
91391	3.5	2	Demonstrate understanding of the properties of organic compounds	External	5
91388	3.2	2	Demonstrate understanding of spectroscopic techniques	Internal	3
91392	3.6	2	Demonstrate understanding of equilibrium principles in aqueous systems	External	5
91387	3.1	2	Carry out an investigation in chemistry involving quantitative analysis	Internal	4

A course consisting of the two internals (AS 91393 and 91388) and the three externals will give the most comprehensive coverage of Chemistry content.

Other options are to replace either of the externals (AS 91391 Organic or AS 91393 Aqueous) with an Internal (AS 91387, Investigation)

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 be 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.

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 derived grade assessments.
- Consistent effort made in homework throughout the year.
- Satisfactory class attendance throughout the year.

Year Planner 2024

Level Three Chemistry

Teachers: BI, Rn

Week		Date			
1	A	29 January	-	2 February	Chemistry 3.5 (E) ORGANIC STRUCTURES Demonstrate understanding of the properties of organic compounds (AS 91391 5 credits)
2	B	5 February	-	9 February	
3	A	12 February	-	16 February	
4	B	19 February	-	23 February	Chemistry 3.2 (I) (AS 91388 3 credits) Demonstrate understanding of spectroscopic data in chemistry (Assessment Wk 6)
5	A	26 February	-	1 March	
6	B	4 March	-	8 March	Chemistry 3.4 (E) Demonstrate understanding of thermochemical principles and the properties of particles and substances Easter Fri: 29 th March Easter Mon & Tues: 1 st & 2 nd April
7	A	11 March	-	15 March	
8	B	18 March	-	22 March	
9	A	25 March	-	29 March	
10	B	1 April	-	5 April	
11	A	8 April	-	12 April	Anzac Day: Thurs 25 th April
		15 April	-	19 April	
		22 April	-	26 April	
		29 April	-	3 May	
1	A	6 May	-	10 May	Chemistry 3.4 (E) (AS 91390 5 credits) Derived grade test week 4
2	B	13 May	-	17 May	
3	A	20 May	-	24 May	Chemistry 3.7 (I) Demonstrate understanding of oxidation-reduction processes (AS 91393 3 credits) King's B/D: Mon 3 rd June
4	B	27 May	-	31 May	
5	A	3 June	-	7 June	
6	B	10 June	-	14 June	Assessment week 7
7	A	17 June	-	21 June	
8	B	24 June	-	28 June	Chemistry 3.5 (E) (AS 91391 5 credits)
9	A	1 July	-	5 July	
		8 July	-	12 July	
		15 July	-	19 July	
		22 July	-	26 July	
1	A	29 July	-	2 August	ORGANIC REACTIONS Demonstrate understanding of the properties of organic compounds Derived grade test week 6
2	B	5 August	-	9 August	
3	A	12 August	-	16 August	
4	B	19 August	-	23 August	
5	A	26 August	-	30 August	Chemistry 3.6 (E) Demonstrate understanding of equilibrium principles in aqueous systems (AS 91392 5 credits)
6	B	2 September	-	6 September	
7	A	9 September	-	13 September	
8	B	16 September	-	20 September	
9	A	23 September	-	27 September	
		30 September	-	4 October	Chemistry 3.1 (I) Carry out an investigation in chemistry involving quantitative analysis
		7 October	-	11 October	
1	A	14 October	-	18 October	3.6 Derived Grade TEST
2	B	21 October	-	25 October	
3	A	28 October	-	1 November	Labour Day: Mon 28 th Oct
4	B	4 November	-	8 November	
5	A	11 November	-	15 November	Show Day: Fri 15 th Nov
6	B	18 November	-	22 November	