

Programme description	This course will facilitate the understanding of chemistry as it relates to the NZ Curriculum (level 8) and is aligned to the “material world” and the “nature of science” achievement objectives. 21 credits are available. Students will research current scientific ideas and investigate the chemical and physical properties of a variety of substances (including ionic, metallic, molecular and organic compounds). We will also develop an understanding of oxidation/reduction, spectroscopic analysis and equilibria in solutions to help interpret observations.
Content	Topics covered include: Thermochemistry/Structure and Bonding, Organic compounds, Spectroscopy, equilibrium, and Redox
Prerequisites	16+ credits from Level 2 Chemistry including: 2.4 atomic structure, either 2.5 organic or 2.6 equilibrium, 2.7 redox, 2.2 ions in solution. <i>This is extremely important in chemistry as prior knowledge of these topics is assumed when we build on the concepts at level 3.</i> It is strongly recommended that the student has a Merit or Excellence endorsement from L2 Chemistry as well.
Required	ESA L3 Chemistry learning Workbook (ISBN: 978-1-927194-69-0) by Dorothy Kane (essential), access to Continuing Chemistry NCEA L3 (ISBN 978-14425-6109-0) by Anne Wignall and Terry Wales (also essential) and ESA Study Guide L3 Chemistry (ISBN: 978-1-927194-59-1) by Boniface and Giffney (useful).
Assessment	<p>Externals (15 credits): There will be end of topic tests for each external and school exams to assess your ability on 3.4, 3.5, 3.6. These will enable you, your caregivers, and me to track your progress. The results will be used in cases of ‘compassionate consideration’.</p> <p>Internals (6 credits): There will be ample opportunities to monitor your understanding and get feedback before the assessment dates, so no reassessments will be available for any internal. It is therefore very important that you get feedback on all work before the assessment.</p>
Contact	John Boer, Whangamata Area School, (09-439-7229), johnb@volcanics.school.nz - Volcanics

Standards	Description	Type	Credit value
AS91390v2	Demonstrate understanding of thermochemical principles and the properties of particles and substances	E	5
AS91393v2	Demonstrate understanding of oxidation-reduction processes	I	3
AS91391v2	Demonstrate understanding of the properties of organic compounds.	E	5
AS91388v2	Demonstrate understanding of spectroscopic data in chemistry	I	3
AS91392v2	Demonstrate understanding of equilibrium principles in aqueous systems	E	5

I = Internally Assessed | E = Externally Assessed