



AOTE A COLLEGE

NCEA Course Outline 2024



Course title:	Science Level 1
NCEA level(s):	1
Course Code:	SCD100

Goals

The goals of this course are for students to

- develop the ability to choose appropriate problem solving strategies, eg solving a simpler problem or looking at extremes
- compare and contrast theories in order to understand the power and scope of a particular theory
- discuss implications of a theory to explore deep questions such as the nature of the universe
- contrast worldviews around the origins of the universe and investigate how these worldviews have shaped the scientific development of our understanding of the nature of our universe
- identify gaps in their own understanding and seek help in order to understand more complex concepts
- develop understanding of cause and effect when looking at the interactions between the geosphere, biosphere, hydrosphere, and atmosphere
- use systems thinking to look at the interweaving of the spheres
- develop three-dimensional thinking in explanations of phenomena
- make predictions about the effects of natural events
- explore the concept of thought experiments, asking the question: what would it mean if...?
- test systems and make sense of theories
- make links between models and physics concepts
- discuss the strengths and limitations of models.

Assessment

- School Examination (August)
- Level 1 NCEA Internal Assessments in March (1.1) and June (1.2)

- Level 1 NCEA External Assessments in August (1.3) and November (1.4)

Course Endorsement

Course endorsement with **Achieved, Merit or Excellence** is possible

Assessment summary

NZQF Standard Code	Level	Standard Title	Credits	Is this a UE Literacy reading standard? (Yes or No)	Is this a UE Literacy writing standard? (Yes or No)	Assessment type (External or Internal)	Is re - assessment available? (Yes or No)	Grade Record
1.1 (92044)	1	Demonstrate understanding of human-induced change within the Earth system	5	No	No	Internal	No	
1.2 (92045)	1	Demonstrate understanding of a physical phenomenon through investigation	5	No	No	Internal	No	
1.3 (92046)	1	Demonstrate understanding of the effect on Earth of interactions between the Sun and the Earth-Moon system	5	No	No	External	No	
1.4 (92047)	1	Demonstrate understanding of energy in a physical system	5	No	No	External	No	

Topic outline (in teaching order)

Topic	NZQF Standard Code	Content	Teaching Time
Demonstrate understanding of a physical phenomenon through investigation	92045 Science 1.2	This Standard requires learners to understand physical phenomenon through investigation For this Standard, learners use relevant physics concepts to describe relationships involved in a physical phenomenon using supporting evidence. The physics concept must derive from an aspect of mechanics and could include: motion - constant speed, motion - constant acceleration, distance-time graphs, speed-time graphs, forces and pressure.	15 weeks (some of 1.4 will also be included in this time)
Demonstrate understanding of the effect on Earth of interactions between the Sun and the Earth-Moon system	92046 Science 1.3	This Standard requires learners to show understanding of how life on Earth is affected by the interactions between the Sun and the Earth-Moon system. Learners can explore how Māori, Pacific, and other indigenous knowledge describes the interaction of the Sun, Earth, and Moon, and the implications for life on Earth. Learners will demonstrate skills in gathering and interpreting evidence from different sources, using models to show understanding of the concepts, linking of cause to effect, writing explanations, and using appropriate science concepts, knowledge, and literacy.	5 weeks
Demonstrate understanding of energy in a physical system	92047 Science 1.4	This Standard requires learners to demonstrate understanding of energy in a physical system Physics concepts related to the ideas of energy involved in a physical system by describing energy transfer and transformation supported by representation and calculation. The forms of energy will include: Mechanical energy, Thermal energy, Electrical energy and Work As part of this assessment learners will need to demonstrate skills in simple problem solving, interpreting how relationships are used to describe and represent concepts. Students will also demonstrate use of statements, descriptions, calculations and representations to explain concepts	7 weeks
Demonstrate understanding of human-induced change within the Earth system	92044 Science 1.1	For this Standard, learners will need to show their understanding of how human - induced change affects the Earth system. As part of this assessment, learners will need to demonstrate knowledge or interactions in the Earth system related to the concept of spheres, and the effects that can result from human-induced changes in the system. This can be done through a mātauranga Māori or other scientific understanding, or an interweaving of both.	7 weeks

This may yet be subject to change as the completed Standards and Assessment Tasks are provided by NCEA

	Term 1 02 Feb - 12 Apr	Term 2 29 Apr - 05 Jul	Term 3 22 Jul - 27 Sep	Term 4 14 Oct - 8 Dec
Week 1	Mon 29 Jan Course Confirmation Week Year 9 Powhiri 01/02	Mon 29 Apr	Mon 22 Jul	Mon 14 Oct
Week 2	Mon 05 Feb Waitangi observed 06/02 1.2 Physical phenomenon through investigation (some of 1.4 will also be taught during this time)	Mon 06 May Assessment 1.2 to be completed and turned in by the end of the week.	Mon 29 Jul	Mon 21 Oct Regional Teacher Only Day 25/10
Week 3	Mon 12 Feb	Mon 13 May	Mon 05 Aug Assessment 1.3 turned in	Mon 28 Oct Labour Day Mon 28 Oct Seniors Last Day Wed 30/10
Week 4	Mon 19 Feb	Mon 20 May Assessment 1.2 to be completed and turned in by the end of the week.	Mon 12 Aug	Mon 04 Nov NCEA Exams Start Tue 05 Nov
Week 5	Mon 26 Feb Goal Setting day 01/03	Mon 27 May Fri 31/05 Regional Teacher Only Day 1.4 energy in a physical system	Mon 19 Aug	Mon 11 Nov
Week 6	Mon 04 Mar	Mon 03 Jun Mon 03/06 King's Birthday	Mon 26 Aug Course Selection Day	Mon 18 Nov
Week 7	Mon 11 Mar	Mon 10 Jun	Mon 02 Sep Winter Tournament Week 1.1 human-induced change	Mon 25 Nov NCEA Exams Finish 29 Nov
Week 8	Mon 18 Mar Summer Tournament Week	Mon 17 Jun Fri 28/06 Matariki	Mon 09 Sep Derived Grade Exams	Mon 02 Dec
Week 9	Mon 25 Mar Good Fri 29/03	Mon 24 Jun 1.3 interactions between Sun and Earth-Moon systems	Mon 16 Sep	Mon 09 Dec Last day for Juniors 07/12
Week 10	Mon 01 Apr Easter Monday 01/04 Easter Tuesday 02/04	Mon 01/07	Mon 23 Sep	

Week 11	Mon 08 Apr			
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