

CURRICULUM ALIGNMENT – Radioactive Half-Life: The Whole Story

Ontario

Grade	Course Name and Number	Strand	Expectations
11	Chemistry, Grade 11 (SCH3U)	A. Scientific Investigation Skills and Career Development	Overall Expectation A1: Demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills (initiating and planning, performing and recording, analyzing and interpreting, and communicating).
11	Chemistry, Grade 11 (SCH3U)	A. Scientific Investigation Skills and Career Development	Specific Expectation A1.10: Draw conclusions based on inquiry results and research findings, and justify their conclusions with reference to scientific knowledge.
11	Chemistry, Grade 11 (SCH3U)	A. Scientific Investigation Skills and Career Development	Specific Expectation A1.11: Communicate ideas, plans, procedures, results, and conclusions orally, in writing, and/or in electronic presentations, using appropriate language and a variety of formats (e.g. data tables, laboratory reports, presentations, debates, simulations, models).
11	Chemistry, Grade 11 (SCH3U)	B. Matter, Chemical Trends and Chemical Bonding	Specific Expectation B2.1: Use appropriate terminology related to chemical trends and chemical bonding, including, but not limited to: atomic radius, effective nuclear charge, electronegativity, ionization energy, and electron affinity.
11	Chemistry, Grade 11 (SCH3U)	B. Matter, Chemical Trends and Chemical Bonding	Specific Expectation B3.1: Explain the relationship between the atomic number and the mass number of an element, and the difference between isotopes and radioisotopes of an element.
12	Chemistry, Grade 12 (SCH4C)	A. Scientific Investigation Skills and Career Development	Overall Expectation A1: Demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills (initiating and planning, performing and recording, analyzing and interpreting, and communicating).
12	Chemistry, Grade 12 (SCH4C)	A. Scientific Investigation Skills and Career Development	Specific Expectation A1.10: Draw conclusions based on inquiry results and research findings, and justify their conclusions with reference to scientific knowledge.
12	Chemistry, Grade 12 (SCH4C)	A. Scientific Investigation Skills and Career Development	Specific Expectation A1.11: Communicate ideas, plans, procedures, results, and conclusions orally, in writing, and/or in electronic presentations, using appropriate language and a variety of formats (e.g. data tables, laboratory reports, presentations, debates, simulations, models).
12	Chemistry, Grade 12 (SCH4C)	B. Matter and Qualitative Analysis	Specific Expectation B3.1: Explain the relationship between the atomic number and the mass number of an element, and the difference between isotopes and radioisotopes of an element.

12	Physics, Grade 12 (SPH4U)	A. Scientific Investigation Skills and Career Development	Overall Expectation A1: Demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills (initiating and planning, performing and recording, analyzing and interpreting, and communicating).
12	Physics, Grade 12 (SPH4U)	A. Scientific Investigation Skills and Career Development	Specific Expectation A1.10: Draw conclusions based on inquiry results and research findings, and justify their conclusions with reference to scientific knowledge.
12	Physics, Grade 12 (SPH4U)	A. Scientific Investigation Skills and Career Development	Specific Expectation A1.11: Communicate ideas, plans, procedures, results, and conclusions orally, in writing, and/or in electronic presentations, using appropriate language and a variety of formats (e.g. data tables, laboratory reports, presentations, debates, simulations, models).
12	Physics, Grade 12 (SPH4U)	F. Revolutions in Modern Physics: Quantum Mechanics and Special Relativity	Specific Expectation F3.3: Identify Einstein's two postulates for the theory of special relativity, and describe the evidence supporting the theory (e.g. thought experiments, half-lives of elementary particles, relativistic momentum in accelerators, the conversion of matter into energy in a nuclear power plant).