Northwest Territories

Grade	Course Name and Number	Unit	Specific Outcome
12	Physics 30	Unit D: Atomic Physics	**Specific Outcome 30–D3.1s:** Formulate questions about observed relationships and plan investigations of questions, ideas, problems and issues, including: • predict the penetrating characteristics of decay products.
12	Physics 30	Unit D: Atomic Physics	**Specific Outcome 30–D3.3s:** Analyze data and apply mathematical and conceptual models to develop and assess possible solutions, including: • graph data from radioactive decay and estimate half-life values; • interpret common nuclear decay chains; • graph data from radioactive decay and infer an exponential relationship between measured radioactivity and elapsed time; and • compare the energy released in a nuclear reaction to the energy released in a chemical reaction, on the basis of energy per unit mass of reactants.
12	Physics 30	Unit D: Atomic Physics	**Specific Outcome 30–D3.4s:** Work collaboratively in addressing problems and apply the skills and conventions of science in communicating information and ideas and in assessing results.
12	Physics 30	Unit D: Atomic Physics	**Specific Outcome 30–D3.1k:** Describe the nature and properties, including the biological effects, of alpha, beta and gamma radiation.
12	Physics 30	Unit D: Atomic Physics	**Specific Outcome 30–D3.2k:** Write nuclear equations, using isotope notation, for alpha, beta-negative and beta-positive decays, including the appropriate neutrino and antineutrino.
12	Physics 30	Unit D: Atomic Physics	**Specific Outcome 30–D3.4k:** Use the law of conservation of charge and mass number to predict the particles emitted by a nucleus.