Saskatchewan

Grade	Course Name and Number	Unit/Module	Specific Outcome
12	Physics 30	Optional Unit VIII: Atomic Physics B: Half Life and Radioactive Decay	**Learning Outcome 22:** Explain that the rate of radioactive decay is directly proportional to the amount of radioactive material present.
12	Physics 30	Optional Unit VIII: Atomic Physics B: Half Life and Radioactive Decay	**Learning Outcome 23:** Recognize that the decay constant is a measure of the rate of radioactive decay.
12	Physics 30	Optional Unit VIII: Atomic Physics B: Half Life and Radioactive Decay	**Learning Outcome 24:** Recognize that the rate of decay of a radioactive nuclide is also measured and expressed by its half-life and its mean life.
12	Physics 30	Optional Unit VIII: Atomic Physics B: Half Life and Radioactive Decay	**Learning Outcome 25:** Determine the decay constant from the half-life and vice versa.
12	Physics 30	Optional Unit VIII: Atomic Physics B: Half Life and Radioactive Decay	**Learning Outcome 26:** State the correct units for half-life.
12	Physics 30	Optional Unit VIII: Atomic Physics B: Half Life and Radioactive Decay	**Learning Outcome 28:** Recognize that it is not possible to determine when an individual nucleus within a radioactive sample will undergo decay.
12	Physics 30	Optional Unit VIII: Atomic Physics B: Half Life and Radioactive Decay	**Learning Outcome 29:** Recognize that it is possible to determine the length of time needed for a certain proportion of the nuclei within a radioactive sample to decay.
12	Physics 30	Optional Unit VIII: Atomic Physics B: Half Life and Radioactive Decay	**Learning Outcome 30:** Recognize that the expressed relationships for the radioactive decay are based on statistics and probability, and on the examination of the behaviour of a large number of individual situations.