

CURRICULUM ALIGNMENT – Fission vs. Fusion

Saskatchewan

Grade	Course Name and Number	Unit/Module	Specific Outcome
12	Physics 30	Core Unit IV: Nuclear Physics B: Nuclear Fission	Learning Outcome 1: Define the following terms: fission, moderator, nuclear mass defect, chain reaction, enrichment, control rods, nuclear reactor, critical mass.
12	Physics 30	Core Unit IV: Nuclear Physics B: Nuclear Fission	Learning Outcome 2: Describe what happens during fission reaction.
12	Physics 30	Core Unit IV: Nuclear Physics B: Nuclear Fission	Learning Outcome 5: Recognize that neutrons are released during fission.
12	Physics 30	Core Unit IV: Nuclear Physics B: Nuclear Fission	Learning Outcome 6: Recognize that a very large amount of energy is released during a fission reaction.
12	Physics 30	Core Unit IV: Nuclear Physics B: Nuclear Reactors	Learning Outcome 2: Identify the type of fuel used in a nuclear reactor.
12	Physics 30	Core Unit IV: Nuclear Physics B: Nuclear Reactors	Learning Outcome 3: Outline the nuclear fuel cycle, from the initial mining of raw materials to the final storage of waste material.
12	Physics 30	Optional Unit VIII: Atomic Physics C. Nuclear Fusion	Learning Outcome 2: Describe what happens during a fission reaction.
12	Physics 30	Optional Unit VIII: Atomic Physics C. Nuclear Fusion	Learning Outcome 4: Recognize that scientists believe that nuclear fusion is possible under extremely high temperatures.
12	Physics 30	Optional Unit VIII: Atomic Physics C. Nuclear Fusion	Learning Outcome 5: State that fusion reactions produce no long-term waste products.
12	Physics 30	Optional Unit VIII: Atomic Physics C. Nuclear Fusion	Learning Outcome 6: Recognize that the fuel needed for a fusion reaction is abundant.
12	Physics 30	Optional Unit VIII: Atomic Physics C. Nuclear Fusion	Learning Outcome 7: Compare fusion and fission.
12	Physics 30	Optional Unit VIII: Atomic Physics C. Nuclear Fusion	Learning Outcome 8: Explain one possible way of sustaining a fusion reaction.
12	Physics 30	Optional Unit VIII: Atomic Physics C. Nuclear Fusion	Learning Outcome 9: Suggest the potential that fusion has for providing an abundant supply of energy.