

CURRICULUM ALIGNMENT – Disease Detecting: Nuclear Diagnostics

Ontario

Grade	Course Name and Number	Strand	Expectations
10	Science, Grade 10 (SNC2D)	A. Scientific Investigation Skills and Career Exploration	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, analysing and interpreting, and communicating).
10	Science, Grade 10 (SNC2D)	A. Scientific Investigation Skills and Career Exploration	Specific Expectation A1.3: Identify and locate print, electronic and human sources that are relevant to research questions.
10	Science, Grade 10 (SNC2D)	A. Scientific Investigation Skills and Career Exploration	Specific Expectation A1.7: Select, organize and record relevant information on research topics from various sources, including electronic, print, and/or human sources (e.g. websites for public health organizations, federal and provincial government publications, reference books, personal interviews), using recommended formats, and an accepted form of academic documentation.
10	Science, Grade 10 (SNC2D)	A. Scientific Investigation Skills and Career Exploration	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).
10	Science, Grade 10 (SNC2D)	B. Biology: Tissues, Organs and Systems of Living Things	Overall Expectation B1: Evaluate the importance of medical and other technological developments related to systems biology and analyze their societal and ethical implications.
10	Science, Grade 10 (SNC2D)	B. Biology: Tissues, Organs and Systems of Living Things	Specific Expectation B1.2: Assess the importance to human health and/or society of medical imaging technologies (e.g. ultrasound, X-rays, computerized axial tomography [CT or CAT] scan, magnetic resonance imaging [MRI], microscopy, biophotonics) used in Canada in diagnosing or treating abnormalities in tissues, organs, and/or systems.
10	Science, Grade 10 (SNC2P)	A. Scientific Investigation Skills and Career Exploration	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).
10	Science, Grade 10 (SNC2P)	A. Scientific Investigation Skills and Career Exploration	Specific Expectation A1.3: Identify and locate print, electronic, and human sources that are relevant to research questions.

10	Science, Grade 10 (SNC2P)	A. Scientific Investigation Skills and Career Exploration	Specific Expectation A1.7: Select, organize and record relevant information on research topics from various sources, including electronic, print, and/or human sources (e.g. websites for public health organizations, federal and provincial government publications, reference books, personal interviews), using recommended formats and an accepted form of academic documentation.
10	Science, Grade 10 (SNC2P)	A. Scientific Investigation Skills and Career Exploration	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).
10	Science, Grade 10 (SNC2P)	B. Biology: Tissues, Organs and Systems	Overall Expectation B1: Analyze some current technologies or substances that have an impact on human tissues, organs or systems, and evaluate their effects on human health.
10	Science, Grade 10 (SNC2P)	B. Biology: Tissues, Organs and Systems	Specific Expectation B1.1: Analyze, on the basis of research, medical imaging technologies (e.g. ultrasound, X-rays, computerized axial tomography [CT or CAT] scan, magnetic resonance imaging [MRI], microscopy, biophotonics) used in Canada to explore, diagnose or treat the human body, and communicate their findings.
12	Biology, Grade 11 (SBI3U)	A. Scientific Investigation Skills and Career Exploration	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	Biology, Grade 11 (SBI3U)	A. Scientific Investigation Skills and Career Exploration	Specific Expectation A1.3: Identify and locate print, electronic and human sources that are relevant to research questions.
12	Biology, Grade 11 (SBI3U)	A. Scientific Investigation Skills and Career Exploration	Specific Expectation A1.7: Select, organize and record relevant information on research topics from various sources, including electronic, print, and/or human sources (e.g. websites for public health organizations, federal and provincial government publications, reference books, personal interviews), using recommended formats and an accepted form of academic documentation.
12	Biology, Grade 11 (SBI3U)	A. Scientific Investigation Skills and Career Exploration	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	Biology, Grade 11 (SBI3U)	E: Animals: Structure and Function	Overall Expectation E1. Analyze the relationships between changing societal needs, technological advances, and our understanding of internal systems of humans.

12	Biology, Grade 11 (SBI3U)	E: Animals: Structure and Function	Specific Expectation E1.1 Evaluate the importance of various technologies, including Canadian contributions, to our understanding of internal body systems (e.g. endoscopes can be used to locate, diagnose and surgically remove digestive system tumours; lasers can be used during surgery to destroy lung tumours; nuclear magnetic resonance [NMR] imaging can be used to diagnose injuries and cardiovascular disorders, such as aneurysms).
11	Health Care, Grade 11 (TPJ3M)	A. Health Care Fundamentals	Overall Expectation A1: Demonstrate an understanding of health care terminology and its correct usage.
11	Health Care, Grade 11 (TPJ3M)	A. Health Care Fundamentals	Specific Expectation A1.1: Demonstrate an understanding of health care terminology (e.g. manifestation, obstruction), and use it correctly in oral and written communication.
11	Health Care, Grade 11 (TPJ3C)	A. Health Care Fundamentals	Overall Expectation A1: Demonstrate an understanding of health care terminology and its correct usage.
11	Health Care, Grade 11 (TPJ3C)	A. Health Care Fundamentals	Specific Expectation A1.1: Demonstrate an understanding of fundamental health care terminology (e.g. hypertension, jaundice, diabetes, obstruction, acute, chronic), and use it correctly in oral and written communication.
11	Health Care, Grade 11 (TPJ3C)	A. Health Care Fundamentals	Overall Expectation A5: Compare conventional and complementary methods of disease prevention and treatment.
11	Health Care, Grade 11 (TPJ3C)	A. Health Care Fundamentals	Specific Expectation A5.1: Research and describe conventional methods of preventing and treating disease (e.g. prescribed and over-the-counter medication, radiation treatment, chemotherapy, surgery, microscopic surgery, diet, lithotripsy).
12	Physics, Grade 12 (SPH4C)	A. Scientific Investigation Skills and Career Exploration	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 (SPH4C)	A. Scientific Investigation Skills and Career Exploration	Specific Expectation A1.3: Identify and locate a variety of print and electronic sources that enable them to address research topics fully and appropriately.
12	Physics, Grade	A. Scientific Investigation Skills and	Specific Expectation A1.7: Select, organize and record relevant information on

	12 (SPH4C)	Career Exploration	research topics from a variety of appropriate sources, including electronic, print, and/or human sources, using suitable formats and an accepted form of academic documentation.
12	Physics, Grade 12 (SPH4C)	A. Scientific Investigation Skills and Career Exploration	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 (SPH4C)	D. Electricity and Magnetism	Specific Expectation D1.2: Assess the impact of an electromagnetic technology that is used for the benefit of society or the environment (e.g. devices for diagnosing and treating diseases, technologies for treating seeds to increase the rate of germination).
12	Biology, Grade 12 (SBI4U)	A. Scientific Investigation Skills and Career Exploration	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	Biology, Grade 12 (SBI4U)	A. Scientific Investigation Skills and Career Exploration	Specific Expectation A1.3: Identify and locate a variety of print and electronic sources that enable them to address research topics fully and appropriately.
12	Biology, Grade 12 (SBI4U)	A. Scientific Investigation Skills and Career Exploration	Specific Expectation A1.7: Select, organize and record relevant information on research topics from a variety of appropriate sources, including electronic, print, and/or human sources, using suitable formats and an accepted form of academic documentation.
12	Biology, Grade 12 (SBI4U)	A. Scientific Investigation Skills and Career Exploration	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	Biology, Grade 12 (SBI4U)	B. Biochemistry	Overall Expectation B1: Evaluate the impact of environmental factors and medical technologies on certain cellular processes that occur in the human body.
12	Biology, Grade 12 (SBI4U)	B. Biochemistry	Specific Expectation B1.2: Evaluate, on the basis of research, some advances in cellular biology and related technological applications (e.g. new treatments for cancer, HIV/AIDS, and hepatitis C; radioisotopic labelling to study the function of internal organs; fluorescence to study genetic material within cells; forensic biological techniques to aid in crime resolution).

12	Science, Grade 12 (SNC4M)	A. Scientific Investigation Skills and Career Exploration	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	Science, Grade 12 (SNC4M)	A. Scientific Investigation Skills and Career Exploration	Specific Expectation A1.3: Identify and locate a variety of print and electronic sources (e.g. Material Safety Data Sheets, appliance manuals, hydro bills, the Live Safe! Work Smart! website) that enable them to address research topics fully and appropriately.
12	Science, Grade 12 (SNC4M)	A. Scientific Investigation Skills and Career Exploration	Specific Expectation A1.7: Select, organize and record relevant information on research topics from a variety of appropriate sources, including electronic, print, and/or human sources, using suitable formats and an accepted form of academic documentation.
12	Science, Grade 12 (SNC4M)	A. Scientific Investigation Skills and Career Exploration	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, graphic organizers, simulations, models, workplace labels).
12	Science, Grade 12 (SNC4M)	B. Medical Technologies	Overall Expectation B1: Assess the impact of medical technologies and therapies, both conventional and alternative, used to diagnose and treat human health conditions.
12	Science, Grade 12 (SNC4M)	B. Medical Technologies	Specific Expectation B1.1: Assess the costs and benefits of a conventional medical technology, therapy, or device that is used to diagnose or treat a human health condition (e.g. diagnostic technologies such as X-rays and ultrasound; surgical procedures such as laser removal of tumours; biomedical devices such as prosthetics).
12	Science, Grade 12 (SNC4M)	B. Medical Technologies	Overall Expectation B2: Investigate the uses of, and analyze the information provided by, a variety of medical technologies.
12	Science, Grade 12 (SNC4M)	B. Medical Technologies	Overall Expectation B3: Demonstrate an understanding of the function and use of a variety of medical technologies and the information they provide about the human body.
12	Science, Grade 12 (SNC4M)	B. Medical Technologies	Specific Expectation B3.3: Explain the function and use of a variety of medical devices and technologies for diagnostic and treatment purposes (e.g. sphygmomanometer, stethoscope, ultrasound, X-ray, computerized axial tomography [CAT] scan, pacemaker, chemotherapy).
12	Science, Grade 12 (SNC4M)	B. Medical Technologies	Specific Expectation B3.5: Describe a recent technological development or advance in diagnosis or treatment in the health care field (e.g. artificial skin for burn victims, artificial

			and transgenic organ transplants, smart drugs, nanotechnologies, biophotonics).
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