Attachment 1

LOCALLY DEVELOPED COURSE OUTLINE

Astronomy (2022)15-3
Astronomy (2022)25-3
Astronomy (2022)35-3

Submitted By:

The Elk Island School Division

Submitted On:

Apr. 20, 2022

Attachment 1

Course Basic Information

Outline Number	Hours	Start Date	End Date	Development Type	Proposal Type	Grades
15-3	62.50	09/01/2022	08/31/2026	Acquired	Authorization	G10
25-3	62.50	09/01/2022	08/31/2026	Acquired	Authorization	G10
35-3	62.50	09/01/2022	08/31/2026	Acquired	Authorization	G10

Course Description

While inundated with space and astronomy in modern media, many students remain unaware that the sky is constantly changing above them. Using a variety of astronomical tools; telescopes, binoculars, lenses, and signing out the Star Lab, students in the Astronomy sequence will experience first-hand observations that foster foundational understandings, including:

- An appreciation for the vastness of space;
- Knowledge of the position and motion of celestial objects;
- The ability to explain nucleosynthesis and stellar evolution;
- Knowledge of historical models of astronomy, cosmology and astrophysics;
- Competency in basic astrophotography; and
- Knowledge of space exploration and flight dynamics.

Field experiences will offer practical application to observe and document the various objects visible in the day and night skies. Students will further use their field experience observations to develop and reinforce the learning outcomes within this course sequence. While field experiences and observations are part of the course, they are dependent upon the teacher and school's ability to offer them and the student's ability to participate. Alternative methods for field experiences and gathering observations may be considered (i.e. Remote observations online).

Required Equipment: Star Lab; Telescopes; Binoculars and lenses

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Course Prerequisites

15: none

25: level 15 or Science 10

35: level 25 or Science 20 or Physics 20

Sequence Introduction (formerly: Philosophy)

In Astronomy 15-25-35, students will analyze, assess, and refine connections among celestial observations, human exploration, creativity, innovation and technological advancements. By embracing historical human curiosity pertaining to the sky above, students can further critically examine their perspective within the solar system and universe. Moreover, throughout the course sequence, students will enhance their scientific literacy and numeracy by applying active observation and documentation skills (such as diagrams, sketches, field notes) of various celestial bodies visible in the daytime and nighttime skies.

The Astronomy course sequence promotes the development of engaged thinkers and ethical citizens by allowing students to strive for personal excellence in their high school learning journey, using astronomy to enhance scientific literacy and numeracy. Further, the combination of classroom and evening field experiences enables students to solve complex problems; to think critically; to apply multiple literacies in reading, writing, and mathematics; to demonstrate communication skills; and to collaborate with others in the application of knowledge and skills in studying the celestial sphere

Student Need (formerly: Rationale)

Astronomy 15-25-35 prepares students to become active participants in Canadian society through exploring countless connections among the historical knowledge of stars, human exploration, and technological advancements that improve our understanding of the planet, solar system, and universe. Students will enhance their propensity to become ethically engaged citizens by appreciating their place within the solar system and universe; and recognizing the interconnectedness of social, economic, and environmental endeavours associated with space exploration.

Scope and Sequence (formerly: Learner Outcomes)

This course is intended to support students in developing a robust understanding of their place in the universe. This is achieved by combining aspects of the Sciences and the Social Sciences in order to offer an engaging and challenging opportunity to students. As the course progresses, students will engage in aspects of history, physics and other areas of study to better understand the complex and interdisciplinary nature of Astronomy.

Guiding Questions (formerly: General Outcomes

1 Examine the size, scale and vastness of space through daytime and nighttime observations

2 Compare and contrast daytime and nighttime skies through first-hand observations and astrophotography

3 Understand the stellar processes of star formation and evolution

4 Examine observations and data from a variety of astronomical tools to understand the composition, movement and interactions among the Earth, solar system, and stellar bodies

5 Compare and contrast historical models of the local solar system, galaxy and universe and describe the scientific validity behind each model

6 Analyze the links among the development of past and present technology; the advancement of scientific knowledge in the context of space exploration; and the common, practical applications of space exploration

7 Explore the advancements and applications of Einstein's Theories of Special and General Relativity

8 Examine the features involved in flight dynamics

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Learning Outcomes (formerly: Specific Outcomes)

1 Examine the size, scale and vastness of space through daytime and nighttime observations	**15-3 25-3 35-3**
1.1 Explain how "seeing" conditions and differing atmospheric effects impact sky transparency	X
1.2 Design a 3-dimensional, theoretical scale model of the solar system relative to both size and distance	X
1.3 Articulate positions and relative motions of moons, planets, asteroids, and comets by interpreting solar system and sky	X
1.4 Interpret planetary and satellite elliptical paths as they orbit in the same approximate plane	X
1.5 Explain planetary and satellite motions to daytime and nighttime observations to approximately predict when a planet will be in opposition to Earth for optimal observation	X
1.6 Determine distance of nearby stars by interpreting tabular data of nearby stars to define a light year and apply observations	X

2 Compare and contrast daytime and nighttime skies through first-hand observations and astrophotography	**15-3 25-3 35-3**
2.1 Apply the scientific method in using terms and skills of amateur astronomers when observing daytime and nighttime skies	X
2.2 Apply the implications of nighttime observations through the physiological basis of sight	X
2.3 Articulate positions and motions of moons, planets and asteroids based on daytime and nighttime observations	X
2.4 Analyze the movement of celestial bodies using units of time	X
2.5 Analyze stellar brightness through nighttime sky surveys	X
2.6 Identify the meridian line and zenith point using naked eye nighttime sky surveys	X

2.7 Identify the approximate locations and/or times for sunrise, sunset and noon at various times using the naked eye, sextant and telescopic sky surveys	X
2.8 Construct sky maps using naked eye sky surveys of the nighttime sky applied to the rotation about Polaris and the North Celestial Pole	X
2.9 Confirm the tilt of the Earth's spin axis through both observations and hypothesizing how the changing geometry of the spin and the orbit of the Earth changes perspective of the Sun at current latitude of observation	X
2.10 Analyze how the geometry of the sun, Earth and moon change as the moon orbits the Earth by interpreting telescopic and binocular observations of Earth’s moon through its successive phases	X
2.11 Articulate the geometry of the moon's orbits about Jupiter by interpreting telescopic and binocular observations of Jupiter’s moons	X
2.12 Describe planets in the solar system including Venus, Jupiter and Saturn through naked eye and larger aperture telescopic observations	X
2.13 Explain the complex effects of light pollution on astronomical observations by comparing current designs aimed at minimizing pollution effects and preserving dark sky regions	X
2.14 Explain the basic terms and perform skills with equipment used for single long exposure wide field astrophotography and/or processing to facilitate an understanding of stellar bodies	X
2.15 Apply the basic terms and skills used for stacked multiple exposure planetary astrophotography and/or processing to facilitate an understanding of planetary bodies such as the rings of Saturn	X
2.16 Demonstrate the functionality of German Equatorial mounts through use of geocentric coordinates	X
2.17 Apply the basic terms and skills for stacked long exposure deep sky astrophotography and/or processing to facilitate an understanding of stellar bodies	X

3 Understand the stellar processes of star formation and evolution	**15-3 25-3 35-3**
3.1 Project the sun's actual image, size, location, and any visible sunspots on a piece of paper	X
3.2 Interpret the impact of the sun's magnetic field on the Earth	X
3.3 Interpret solar time using sundial observations of analemma in relation to local time and Earth's spin axis and relative velocity as Earth orbits the sun	X
3.4 Apply sundial observation to analemma to correction of solar time to local time to interpretation of Earth's spin axis and relative velocity as the planet orbits the sun	X
3.5 Demonstrate the daily path of the sun through the sky	X
3.6 Classify stars and trace lifespans on the Hertzsprung-Russel Diagram by interpreting life cycles, classes and compositions of stars	X
3.7 Interpret qualitatively, the composition, mass, temperature and velocity of stars in relation to the Hertzsprung-Russel Diagram using spectroscopy	X
3.8 Interpret phases of the stellar process of nuclear star formation based on initial gas cloud, mass influence on final state of the star, force of gravity, circular motion	X
3.9 Describe primary chemical processes including the proton-proton (PP) chain and Carbon-Nitrogen-Oxygen (CNO) cycle	X
3.10 Explain nucleosynthetic processes related to stellar formation and the Big Bang	X
3.11 Explain key chemical compounds within the field of astrochemistry	X
3.12 Classify deep sky objects within their lifetime of stellar evolution	X
3.13 Differentiate observable stellar bodies in the northern and southern hemisphere to qualitatively explain the existence of deep sky objects existence of deep sky objects	X
3.14 Explain nuclear processes, including the production of neutrinos through radioactive decay	X

3.15 Describe, quantitatively, binding energy, binding energy per nucleon and transmutation of isotopes throughout the chart of nuclides.	X
3.16 Explain the role of hydrostatic equilibrium within stellar evolution	X

4 Examine observations and data from a variety of astronomical tools to understand the composition, movement and interactions among the Earth, solar system, and stellar bodies	**15-3 25-3 35-3**
4.1 Design, construct, and apply knowledge of simple refracting telescope to focal length	X
4.2 Design, construct, and apply knowledge of a variety of sundials to geometric method of laying out sundial	X
4.3 Apply aperture regarding stellar brightness, focal length and magnification to celestial telescopic observations	X
4.4 Evaluate technologies to identify extra-solar planets	X
4.5 Compare and contrast telescopic constellation observation and naked eye constellation observation	X
4.6 Interpret data gathered by modern terrestrial and space telescopes in Radio, Microwave, Infrared, Visible, Ultraviolet, X-Ray and Gamma	X
4.7 Apply the phenomena of reflection, refraction, diffraction, interference and polarization in the design and limitations of current telescopes and data interpretation	X
4.8 Explore technological implementation that reduces/limits the interference of terrestrial observations	X
4.9 Explore technological implementation that allows the quantitative analysis of stellar bodies through temperature and brightness in the context of the Stefan Boltzmann Law	X
4.10 Explore technological implementation that allows the quantitative analysis of stellar bodies through the distance modulus	X
4.11 Explain how the use of interferometry enables measurements of gravitational waves and characteristics of massive stellar bodies	X

5 Compare and contrast historical models of the local solar system, galaxy and universe and describe the scientific validity behind each model	**15-3 25-3 35-3**
5.1 Compare and contrast the evidenced used for early models and contrast with a Newtonian model	X
5.2 Compare and contrast the evidence used for early models and with the Keplerian model	X
5.3 Explain, qualitatively, how Kepler's laws and uniform circular motion were used in the development of Newton's Law of Universal Gravitation	X
5.4 Demonstrate applications of Newton's law of universal gravitation and Kepler's laws in the context of orbital dynamics for stellar bodies	X
5.5 Articulate the parameters of an orbit	X
5.6 Explain how general relativity improved on Newton's Law of Gravitation	X
5.7 Contrast current models resulting from contributions by modern astrophysicists	X
5.8 Examine the functionality of Hubble's Law	X

6 Analyze the links among the development of past and present technology; the advancement of scientific knowledge in the context of space exploration; and the common, practical applications of space exploration	**15-3 25-3 35-3**
6.1 Investigate fundamental questions related to exploration motives	X
6.2 Articulate the conditions necessary for intelligent life to exist	X
6.3 Explain the historical significance of origins of space exploration and the value of scientific knowledge advancements as a function of spin off technology	X
6.4 Investigate the challenges involved with collaborating, planning, engineering, operating and executing space exploration missions	X

7 Explore the advancements and applications of Einstein's Theories of Special and General Relativity	**15-3 25-3 35-3**
7.1 Evaluate the Michelson Morley Experiment and results by interpreting data and relevant applications	X
7.2 Demonstrate, quantitatively and qualitatively, time dilation, length contraction, and Einstein's postulates	X
7.3 Analyze, quantitatively, simple systems for reference frames within the context of special relativity	X
7.4 Validate the Theory of General Relativity by applying data from gravitational waves	X
7.5 Explain the interaction of stellar bodies not detectable with EMR by using gravitational waves	X
7.6 Compare the scientific validity of the Big Bang, Big Freeze, and Big Crunch models	X
7.7 Explain the characteristics of black holes - singularities, event horizon, accretion disc, spaghettification, effects on time - due to strong gravitational fields	X
7.8 Apply the phenomenon of gravitational lensing to astronomical observations	X

8 Examine the features involved in flight dynamics	**15-3 25-3 35-3**
8.1 Analyze orbital dynamics for natural and artificial satellites by applying Newton's law of universal gravitation and Kepler's laws	X
8.2 Explain, qualitatively, the Rocket Equation	X
8.3 Compare and contrast the evolution of space exploration propulsion systems	X
8.4 Evaluate aerodynamic design considerations for a variety of atmospheric entries and exits	X

Facilities or Equipment

Facility

- No required facilities

Facilities:

Equipment

- Star Lab
- Telescopes
- Binoculars and lenses

Learning and Teaching Resources

No required resources

Sensitive or Controversial Content

No sensitive or controversial content.

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Issue Management Strategy

Health and Safety

No directly related health and safety

Risk Management Strategy

Statement of Overlap with Existing Programs

Provincial Courses with Overlap and/or Similar

Science 30

Identified Overlap/Similarity

Unit C, General Outcome 2. Science 30 focuses on understanding EMS spectrum and its applications in space exploration

Reasoning as to Why LDC is Necessary

Most of this curriculum provides a general introduction to EMS use in space exploration. The Astronomy courses will dig deeper in the various ways that these ideas can be used to refine observations and explore the nature of the celestial bodies. Science 30 examines the impact of refraction on observations, while the Astronomy LDC will look at ways to overcomes these distortions as well as examine it under Snell's law and the Thin Lens equations.

Provincial Courses with Overlap and/or Similar

Physics 20

Identified Overlap/Similarity

Unit C, General Outcome 1

Reasoning as to Why LDC is Necessary

The Physics 20 course looks at orbit through a mathematical analysis, while Astronomy will focus on a deep qualitative understanding that focuses on application and interpretation.

Student Assessment

No identified student assessment.

Course Approval Implementation and Evaluation

Attachment 2

LOCALLY DEVELOPED COURSE OUTLINE

Biology (IB)35-3

Biology (IB)35-5

Submitted By:

The Elk Island School Division

Submitted On:

Mar. 14, 2016

Course Basic Information

Outline Number	Hours	Start Date	End Date	Development Type	Proposal Type	Grades
35-3	62.50	09/01/2015	08/31/2024	Acquired	Reauthorization	G11 G12
35-5	125.00	09/01/2016	08/31/2024	Acquired	Reauthorization	G12

Course Description

Biology (IB) 35 is a locally developed course that allows students in the International Baccalaureate Diploma Programme to meet the IB program requirements that are beyond the provincial curriculum through additional instruction and opportunities to further study experimental sciences. Biology (IB) 35 allows students to engage in the pursuit to understand systems consisting of interconnected living and nonliving components and the relationships within the living and nonliving universe. The emphasis of Biology (IB) 35 is on the development of skills relating to scientific literacy, critical thinking and problem solving as students critically analyze evidence to form conclusions.

Teachers who wish to view a version of Biology (IB) 35 -3 that displays specific outcomes in a sequence can download it from LDCOMS. This ‘teacher-friendly’ version is located in the “Assessment” section of LDCOMS for this course.

Course Prerequisites

All prerequisites are recommended.

Due to the flexibility within the locally developed IB science course, the student may be taking the course at the grade 11 or 12 level (and possibly grade 10 level as an exception). (NOTE: The student may only complete this course once in their high school program.) The recommended Pre-requisite course is Science 10 to permit this flexibility. For schools offering this course at the grade 11 or 12 level, the recommended pre-requisite or recommended co-registration (same year) course is the Alberta Education Science course on the same topic at the same grade level. The audience for the course will be students registered in the International Baccalaureate programs who shall be completing the IB Diploma Program or IB Certificate.
Mathematical Recommendation: It is recommended that students enrolled in Locally Developed IB Science courses are taking the highest Mathematics course at the same grade level as the provincial science course coming from an IB authorized school.

Sequence Introduction (formerly: Philosophy)

The Ministerial Order on Student Learning (#001/2013) states that “the fundamental goal of education in Alberta is to inspire all students to achieve success and fulfilment, and reach their full potential by developing the competencies of Engaged Thinkers and Ethical Citizens with an Entrepreneurial Spirit, who contribute to a strong and prosperous economy and society”. The Biology (IB) 35 course supports many elements of this ministerial order through the establishment of outcomes that foster critical thinking, discovery through inquiry, reflection, exploration and experimentation. It is intended to provide additional opportunity for students to further and more deeply study experimental sciences.

Outcomes in Biology (IB) 35 allow students to nurture their curiosity and develop skills for inquiry and research. Students in Biology (IB) 35 develop and use conceptual understanding, exploring knowledge across a range of disciplines and engaging with issues and ideas that have local and global significance. The Biology (IB) 35 course requires the student to seek and evaluate a range of points of view, and to grow from the experience.

Student Need (formerly: Rationale)

Biology (IB) 35 is a course that allows students in the International Baccalaureate (IB) Diploma Programme to meet the IB program requirements that are beyond the provincial curriculum through additional instruction and opportunities to further study experimental sciences. The outcomes in this locally developed course represent the outcomes not currently provided in Alberta programs of study that are part of this IB Program.

Biology (IB) 35 is intended to provide students with opportunities to become engaged in the process of scientific inquiry as a means of gaining an understanding of life and living organisms. This locally developed course supports students in the development of a range of competencies, such as problem-solving and critical thinking as they critically analyze evidence to form conclusions.

The emphasis of Biology (IB) 35 is on the development of a repertoire of skills that students can apply to real life situations. This course aims to foster students to become informed creators of solutions to scientific problems. The components of this course focus on the development of skills relating to scientific literacy and critical thinking. Biology (IB) 35 also provides opportunities for students to explore possible career interests and pathways that could capitalize on their knowledge, skills and abilities in scientific inquiry.

Biology (IB) 35 supports District Priorities 1 and 2:

• Foster growth and success for every student by supporting their journey from early learning through high school completion and beyond.

• Provide welcoming, high quality learning and working environments.

Scope and Sequence (formerly: Learner Outcomes)

The aim of the Biology (IB) 35 course is articulated through four general outcomes. These four general outcomes serve as the foundation of the Biology (IB) 35 course and identify what students are expected to know and be able to do upon completion of the course.
The general outcomes are interrelated and interdependent.
Each general outcome is further broken down into specific outcomes that students are to achieve by the end of the course. Achievement of the specific outcomes enables students to develop and demonstrate the four general outcomes. Each specific outcome is to be addressed.

Specific outcomes are developmentally appropriate, building upon and making connections to prior learning throughout the Biology (IB) 35 course. Depending on the learning context and developmental needs of students, specific outcomes may be delivered individually, in an integrated manner, or as groups of outcomes.

Optional Outcomes

The International Baccalaureate (IB) Diploma Programme Biology Curriculum includes optional outcomes. Therefore, there are optional specific outcomes listed for each general outcome in this locally developed course.

Topics

The International Baccalaureate Diploma Programme Biology Curriculum is organized through topics. Core topics must be addressed. Students are also required to achieve outcomes through a minimum of one of the optional topics provided.

The core topics are as follows:

• Cells

- Molecular Biology
- Genetics
- Ecology
- Evolution and Biodiversity
- Plant Biology
- Animal Physiology

The optional topics are as follows:

- Option A: Neurology and Behavior
- Option B: Biotechnology and Bioinformatics
- Option C: Ecology and Conservation
- Option D: Human Physiology

Guiding Questions (formerly: General Outcomes

1 Students will use the process of scientific inquiry to test and refine predictions, analyses and explanations of natural phenomena. (entrepreneurial spirit)

2 Students will use the process of scientific inquiry to test and refine predictions, analyses and explanations of natural phenomena.

3 Students will construct and appraise the importance of understanding biological processes to society (ethical citizen)

4 Students will engage in the human pursuit to understand systems consisting of interconnected living and nonliving components.

5 Students will explain and demonstrate the main concepts of biology by evaluating patterns of similarity and diversity through analysis of structures and functions. (engaged thinker)

6 Students will engage in the human pursuit to understand the relationships within the living and nonliving universe.

7 Students will evaluate patterns of similarity and diversity through analysis of structures and functions.

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Learning Outcomes (formerly: Specific Outcomes)

1 Students will use the process of scientific inquiry to test and refine predictions, analyses and explanations of natural phenomena. (entrepreneurial spirit)	**35-3 35-5**
1.1 develop a logical argument that explains the development of life from non-living materials, and the development of eukaryotic cells as supported by evidence of the endosymbiotic theory	X
1.2 develop a critique of the cell theory using giant algae, aseptate fungal hyphae and giant striated muscle as possible examples of exceptions	X
1.3 discuss the use of stem cells to treat Stargardt's disease and one other named condition	X
1.4 analyze the falsification of the Davson-Danielli model and how it led to the Singer-Nicolson model	X
1.5 deduce the correlation between smoking and the incidence of cancers	X
1.6 explain how the polarity of water applies to organisms by comparing the thermal properties of water with those of methane	X
1.7 explain how the Cairns' technique gives evidence to support our current understanding of the length and structure of DNA	X
1.8 predict the locus of a human gene and its polypeptide product using provided databases	X
1.9 design an experiment to assess one factor affecting the rooting of a stem cutting	X
1.10 determine the statistical significance of association between two species using a chi-squared test of quadrat sampling data	X
1.11 analyze the reliability of data regarding carbon dioxide and methane concentrations in the atmosphere	X

1.12 analyze evidence to support or refute the idea that increasing concentrations of carbon dioxide are causing a threat to coral reefs	X
1.13 develop an argument using the precautionary principle to address human impacts on climate change	X
1.14 deduce evolutionary relationships including the relationship between humans and other primates using cladograms	X
1.15 develop hypotheses about the effect of temperature and humidity on transpiration rates and design experiments to test these hypotheses	X
1.16 develop hypotheses to predict factors affecting germination and design experiments to test these hypotheses	X
1.17 measure transpiration rates using potometers	X
1.18 model water transport in xylem using simple apparatus including blotting or filter paper, porous pots and capillary tubing	X
1.19 analyse data from experiments measuring phloem transport rates using aphid stylets and radioactively-labelled carbon dioxide	X
1.20 use chi-square tests to determine whether the difference between an observed and expected frequency distribution is statistically significant, such as with data from a dihybrid cross	X
1.21 Specific Outcomes for Optional Topics: 1.21 discuss the relationship of the development of the neural tube to spina bifida	X
1.22 analyze the correlations between body size and brain size in different animals (Neurobiology and Behaviour)	X
1.23 analyze evidence from ethology studies that have developed current understanding of learned and inherited behavior in animals (Neurobiology and Behaviour)	X
1.24 relate the theory of natural selection to the frequencies of specific behaviors in a variety of animal species (Neurobiology and Behaviour)	X
1.25 analyse data from invertebrate behaviour experiments in terms of the effect on chances of survival and reproduction (Neurobiology and Behaviour)	X

1.26 evaluate the impact of psychoactive drugs and anesthetics on the central nervous system and synaptic transmission (Neurobiology and Behaviour)	X
1.27 evaluate the impact of natural selection on the various behaviours of animals, considering courtship, migratory and foraging behaviour	X

2 Students will use the process of scientific inquiry to test and refine predictions, analyses and explanations of natural phenomena.	**35-3 35-5**
2.1 develop a logical argument that explains the development of life from non-living materials, and the development of eukaryotic cells as supported by evidence of the endosymbiotic theory	X
2.2 predict the effect of antibiotics on viruses, prokaryotic cells, and eukaryotic and cells	X
2.3 develop a critique of the cell theory using giant algae, aseptate fungal hyphae and giant striated muscle as possible examples of exceptions	X
2.4 explain how the polarity of water applies to organisms by comparing the thermal properties of water with those of methane	X
2.5 separate photosynthetic pigments using chromatography	X
2.6 explain how the Cairns' technique gives evidence to support our current understanding of the length and structure of DNA	X
2.7 predict the locus of a human gene and its polypeptide product using provided databases	X
2.8 design an experiment to assess one factor affecting the rooting of a stem cutting	X
2.9 determine the statistical significance of association between two species using a chi- squared test of quadrat sampling data	X
2.10 analyze the reliability of data regarding carbon dioxide and methane concentrations in the atmosphere	X

2.11 analyze evidence to support or refute the idea that increasing concentrations of carbon dioxide are causing a threat to coral reefs	X
2.12 develop an argument using the precautionary principle to address human impacts on climate change	X
2.13 construct dichotomous keys to classify a variety of specimens	X
2.14 deduce evolutionary relationships including the relationship between humans and other primates using cladograms	X
2.15 develop hypotheses about the effect of temperature and humidity on transpiration rates and design experiments to test these hypotheses	X
2.16 develop hypotheses to predict factors affecting pollination and design experiments to test these hypotheses	X
2.17 Specific Outcomes for Optional Topics: analyze the correlations between body size and brain size in different animals (Neurobiology and Behaviour)	X
2.18 analyze evidence from ethology studies that have developed current understanding of learned and inherited behavior in animals (Neurobiology and Behaviour)	X
2.19 relate the theory of natural selection to the frequencies of specific behaviors in a variety of animal species (Neurobiology and Behaviour)	X
2.20 explain how indicator species are used to assess specific environmental conditions and calculate the value of a biotic index (Biotechnology and Bioinformatics)	X
2.21 calculate diversity index using the formula for Simpson's reciprocal index of diversity (Ecology and Conservation)	X
2.22 confirm the energy content of food by combustion (Human Physiology)	X

3 Students will construct and appraise the importance of understanding biological processes to society (ethical citizen)	**35-3 35-5**

3.1 debate the ethics of the therapeutic use of stem cells from specially created embryos, from the umbilical cord blood of a new-born baby and from an adult's own tissues	X
3.2 discuss the application of osmosis to the preservation of tissues and organs in medical procedures	X
3.3 calculate body mass index by calculation or by using a nomogram	X
3.4 summarize the development of lactose free milk using enzymes and its role in society	X
3.5 summarize the use of active transport and hydrostatic pressure gradients to transport water and organic compounds within plants	X
3.6 assess the potential risks and benefits associated with genetic modification of crops	X
3.7 explain the action of plant hormones as they relate to plant growth, development, reproduction and adaptation to environmental conditions	X
3.8 summarize the biotic and abiotic influences on the function of flowers for sexual reproduction in flowering plants	X
3.9 analyze the relationships between the types of nitrogenous wastes excreted from animals and their evolutionary history and habitats	X
3.10 describe the rationale for the human induction of polyploidy in plants	X
3.11 debate the ethical use of animals in experiments	X

4 Students will engage in the human pursuit to understand systems consisting of interconnected living and nonliving components.	**35-3 35-5**
4.1 calculate body mass index by calculation or by using a nomogram	X
4.2 summarize the development of lactose free milk using enzymes and its role in society	X
4.3 measure transpiration rates using potometers	X

4.4 summarize the use of active transport and hydrostatic pressure gradients to transport water and organic compounds within plants	X
4.5 explain the action of plant hormones as they relate to plant growth, development, reproduction and adaptation to environmental conditions	X
4.6 summarize the biotic and abiotic influences on the function of flowers for sexual reproduction in flowering plants	X
4.7 analyze the relationships between the types of nitrogenous wastes excreted from animals and their evolutionary history and habitats	X
4.8 Specific Outcomes for Optional Topics: compare in situ and ex situ conservation strategies in terms of preservation and management of natural habitats (Ecology and Conservation)	X
4.9 describe biogeographic factors influencing biodiversity of species (Ecology and Conservation)	X
4.10 evaluate the health consequences of diets based on the amounts and types of macronutrients and micronutrients (Human Physiology)	X
4.11 evaluate the risks and benefits of sun exposure as it relates to the production of vitamin D	X

5 Students will explain and demonstrate the main concepts of biology by evaluating patterns of similarity and diversity through analysis of structures and functions. (engaged thinker)	**35-3 35-5**
5.1 draw and label an annotated and scaled diagram of the ultrastructure of a prokaryotic cell from electron micrographs	X
5.2 interpret electron micrographs to deduce the function of specialized eukaryotic cells based on the identification of organelles	X
5.3 compare and differentiate prokaryotic and eukaryotic cells in terms of their structures, functions and evolutionary development	X
5.4 calculate the magnification of drawings and the actual size of structures and ultrastructures shown in drawings and micrographs.	X

5.5 draw molecular diagrams of the following biochemical compounds: ribose, D-ribose, alpha-D-glucose and beta-D-glucose saturated fatty acids a generalized amino acid	X
5.6 identify the following biochemical compounds from molecular diagrams: lipids: triglycerides, phospholipids, and steroids proteins or parts of polypeptides (amino acids joined by peptide bonds)	X
5.7 explain why the proteomes among individuals of a species have such variety	X
5.8 compare the number of genes in a typical human with individuals of other species (one plant and one animal)	X
5.9 compare the genome size in T2 phage, Escherichia coli, Drosophila melanogaster, Homo sapiens and Paris japonica	X
5.10 classify one plant and one animal species from domain to species level	X
5.11 distinguish between phyla of plants (bryophyta, filicinophyta, coniferophyta and angiospermophyta) and animals (porifera, cnidaria, platyhelminthes, annelida, mollusca and arthropoda and chordata) using simple external recognition features	X
5.12 distinguish between families of animals (birds, mammals, amphibians, reptiles and fish) using simple external recognition features	X
5.13 draw and label diagrams of primary xylem vessels from microscope images of stem sections	X
5.14 summarize structural adaptations of plants in arid and saline environments for water conservation	X
5.15 explain the structure and function of vascular tissue (xylem and phloem) of plants in terms of osmosis, active transport, and hydrostatic pressure	X
5.16 draw and label diagrams of the internal structures of animal-pollinated flowers and seeds	X
5.17 explain how patterns of chromosome number in some genera of plants can be linked to speciation due to polyploidy	X
5.18 compare internal and external fertilization in animals	X

5.19 Special Outcomes for Optional Topics: 3.19 annotate a diagram of embryonic tissues in Xenopus used as an animal model, during neurulation (Neurobiology and Behaviour)	X
5.20 state the functions of the visual cortex, Broca's area and nucleus accumbens of the brain (Neurobiology and Behaviour)	X
5.21 distinguish between innate and learned behaviour as it relates to learning and memory (Neurobiology and Behaviour)	X

6 Students will engage in the human pursuit to understand the relationships within the living and nonliving universe.	**35-3 35-5**
6.1 describe the rationale for the human induction of polyploidy in plants	X
6.2 debate the ethical use of animals in experiments	X
6.3 Specific Outcomes for Optional Topics: evaluate the benefits and limits of using and modifying microorganisms to perform industrial processes (Biotechnology and Bioinformatics)	X
6.4 evaluate the benefits and limits of modifying crops that can be modified to increase yields and to obtain novel products (Biotechnology and Bioinformatics)	X
6.5 summarize how biotechnology can be used in the prevention and mitigation of contamination from industrial, agricultural and municipal wastes (Biotechnology and Bioinformatics)	X
6.6 summarize how biotechnology can be used in the prevention, diagnosis and treatment of disease (Biotechnology and Bioinformatics)	X
6.7 summarize how computers are used to analyze sequence data in biological research (Biotechnology and Bioinformatics)	X

7 Students will evaluate patterns of similarity and diversity through analysis of structures and functions.	**35-3 35-5**
7.1 draw and label an annotated and scaled diagram of the ultrastructure of a prokaryotic cell from electron micrographs	X

7.2 interpret electron micrographs to deduce the function of specialized eukaryotic cells based on the identification of organelles	X
7.3 compare and differentiate prokaryotic and eukaryotic cells in terms of their structures, functions and evolutionary development	X
7.4 draw molecular diagrams of the following biochemical compounds: · ribose, D-ribose, alpha-D-glucose and beta-D-glucose · saturated fatty acids · a generalized amino acid	X
7.5 identify the following biochemical compounds from molecular diagrams: · lipids: triglycerides, phospholipids, and steroids · proteins or parts of polypeptides (amino acids joined by peptide bonds)	X
7.6 explain why the proteomes among individuals of a species have such variety	X
7.7 compare the number of genes in a typical human with individuals of other species (one plant and one animal)	X
7.8 compare the genome size in T2 phage, Escherichia coli, Drosophila melanogaster, Homo sapiens and Paris japonica	X
7.9 classify one plant and one animal species from domain to species level	X
7.10 distinguish between phyla of plants (bryophyta, filicinophyta, coniferophyta and angiospermophyta) and animals (porifera, cnidaria, platyhelminthes, annelida, mollusca and arthropoda and chordata) using simple external recognition features	X
7.11 distinguish between families of animals (birds, mammals, amphibians, reptiles and fish) using simple external recognition features	X
7.12 draw and label diagrams of primary xylem vessels from microscope images of stem sections	X
7.13 summarize structural adaptations of plants in arid and saline environments for water conservation	X
7.14 explain the structure and function of vascular tissue (xylem and phloem) of plants in terms of osmosis, active transport, and hydrostatic pressure	X

7.15 draw and label diagrams of the internal structures of animal-pollinated flowers and seeds	X
7.16 explain how patterns of chromosome number in some genera of plants can be linked to speciation due to polyploidy	X
7.17 compare internal and external fertilization in animals	X

Facilities or Equipment

Facility

This course must be delivered in a facility that meets all District health and safety requirements, including Board Policies and District Regulations HF.BP - Safe, Caring and Respectful Learning Environments and HF.AR – Safe, Caring and Respectful Learning Environments.
Laboratory facilities required.

Facilities:
Science Lab Facility

Equipment

A range of equipment may be used to support the delivery of this course. Please refer to Board Policies and District Regulations HF.BP – Safe, Caring and Respectful Learning Environments, HF.AR – Safe, Caring and Respectful Learning Environments and AEBB.BP - Wellness of Students and Staff for more information.

Learning and Teaching Resources

A wide range of resources may be used to meet the outcomes of this course series a
should align with criteria outlined in GI.AR - Teaching and Learning Resources, HF.E
Caring and Respectful Learning Environments and HF.AR – Safe, Caring and Respe
Learning Environments.

The delivery of this course will conform to the following Administrative Procedures:

.
Administrative Procedure 205 Controversial Issuesand Resources

.
Administrative Procedure 270 Learning Resources Selection.

Sensitive or Controversial Content

Occasionally issues of a sensitive or controversial nature may be encountered or explored. Teachers are advised to use their discretion and take the needs of individual students and the local community context into consideration when addressing sensitive or controversial topics or issues.
Resource Selection and Controversial Issues
The delivery of this course will conform to the following Administrative Procedures:

.
Administrative Procedure 205 Controversial Issuesand Resources

.
Administrative Procedure 270 Learning Resources Selection.

Issue Management Strategy

Attachment 2

Health and Safety

Safety components for this course include the criteria outlined in District Regulations HF.BP: Safe, Caring and Respectful Learning Environments, HF.AR – Safe, Caring and Respectful Learning Environments and AEBB.BP: Wellness of Students and Staff.
The delivery of this course will conform to the following Administrative Procedures (These procedures are found on Staff Connect under Division Documents, and then under Procedures):

.
Administrative Procedure 260 Field Trips

.
Administrative Procedure 406 Health and Safety

.
Administrative Procedure 555 Use of Private Vehicles

.
Administrative Procedure 352 Transportation of Student.

Safety in Science Classes
To assess and mitigate risk when planning for instruction, a number of documents are available to help teachers. For courses based on the Sciences, the Alberta Education website provides a document called “Safety in the Science Classroom” athttp://education.alberta.ca/teachers/program/science/safety.aspx .

Risk Management Strategy

Statement of Overlap with Existing Programs

Some remaining outcomes in the locally developed course do have slight overlap due to similar topics, but exceed the provincial outcomes.

Attachment 2

Student Assessment

The primary purpose of assessment is to improve student learning and provide valid and reliable information to students and parents/guardians about student progress related to Alberta programs of study and locally developed courses of study. Student achievement and growth related to all locally developed courses is to be assessed, evaluated and reported in accordance with the following provincial and District requirements:

• School Act

• Guide to Education

• Teaching Quality Standard Applicable to the Provision of Basic Education in Alberta (Ministerial Order #016/97)

• GK.BP Student Assessment, Achievement and Growth, and

• GKB.AR Standards for Evaluation

This locally developed course must be delivered and assessed by a teacher possessing a valid Alberta Teaching Certificate.
Assessment of student learning conforms to EIPS Learning Assessment Administrative Procedure 360; therefore, assessment will reflect the following principles:
Assessment of student performance is explicitly tied to the learning outcomes of the course

.

Students are involved in understanding and articulating learning targets and criteria of success

.

Students have opportunities to receive feedback in non-graded and formative learning activities and assignments before submitting assignments or engaging in activities for summative evaluation

.

Assessments are purposefully designed in ways that motivate and challenge students, and are respectful of student diversity

.

Students are provided choice in how they demonstrate learning

.

Assessment data is gathered from a broad range of assessment activities and includes information from student work products and performances, from teacher observations of student learning processes, and from student reflections/student-provided evidence of success

.

Assigned grades emphasize the most recent and/or most consistent evidence of student learning

Provisions are made for consistent use of accommodations as applicable to support fair assessment.
Where a specific learner outcome spans all levels (15-25-35), students are expected to show an increasing level of sophistication and refinement of skills in demonstrating the outcome. Overall, general and specific outcomes can be achieved and assessed concurrently rather than sequentially.

References

Guskey, T. R. (May, 2006). Making high school grades meaningful. Phi Delta Kappa International,

87(9), pp. 670-675. Retrieved from http://www.jstor.org/stable/20442125

Reeves, D.B. (Dec 2004). The case against zeros. Phi Delta Kappan 86 (4). Retrieved from

http://schools.esu13.org/bannercounty/Documents/caseagainstzero.pdf

Webber, C.F., Aitken, N. Lupart, J. & Scott, S. (2009). The Alberta student assessment study final report. Edmonton, Canada:

Course Approval Implementation and Evaluation

The school's principal will ensure the objectives of the course are being met within the guidelines under which the course was intended to operate, with full consideration of the philosophy and rationale for the course itself. The teachers ensure that they are meeting the guidelines under which the course was intended.
This course, as all other courses, is subject to monitoring from Central Services.
EIPS Monitoring Forms are to be submitted to the Director, Learning Supports by the end of June each school year.

Attachment 3

LOCALLY DEVELOPED COURSE OUTLINE

Competencies in Math (2022)15-3
Competencies in Math (2022)15-5

Submitted By:

The Elk Island School Division

Submitted On:

Apr. 20, 2022

Attachment 3

Course Basic Information

Outline Number	Hours	Start Date	End Date	Development Type	Proposal Type	Grades
15-3	62.50	09/01/2022	08/31/2026	Acquired	Authorization	G10
15-5	125.00	09/01/2022	08/31/2026	Acquired	Authorization	G10

Course Description

Competencies in Math 15 will cover topics including number sense, logical reasoning, measurement, algebra, graphical reasoning, statistics and probability.

The course will enhance numeracy skills in students, develop their critical thinking and problem solving abilities, and set them up for success in future courses in mathematics.
The **5-credit version** includes all learning outcomes from all topics.
The **3-credit version** includes learning outcomes from Number Sense and a minimum of two complete additional topics (Logic and Reasoning, Measurement, Algebra, Graphical Reasoning, Statistics and Probability) from the 5-credit version. This flexibility is provided to meet the learning needs of the students.

This locally developed course does not meet the mathematics requirement for graduation.

Course Prerequisites

No prerequisites.

Sequence Introduction (formerly: Philosophy)

This course aims to improve student mastery of mathematical skills, concepts and ideas. Students will extend their knowledge beyond performing routine operations and will be encouraged to explore a deeper understanding of mathematical concepts through critical thinking and exploration exercises. Students will collaborate with their teacher and peers on exploring multiple ways to solve problems. As such, students will be challenged to become engaged learners, critical thinkers, and competent problem solvers.

Student Need (formerly: Rationale)

Some students struggle to make sense of mathematics as they experience gaps in previous learning and may require additional resources and strategies to fill in these gaps. While the required help is often within reach in their school environment, the one resource often lacking is time. This course aims to give these students an opportunity to be successful in mathematics and have them reach their full potential as engaged learners by providing them with additional strategies, alternate approaches, resources and time with the ultimate goal of learners enrolling in provincial Mathematics 10 courses.

Scope and Sequence (formerly: Learner Outcomes)

The goal of this course is to enhance the numeracy skills of students. Students will use numeracy willingly and confidently in their everyday lives and will be able to communicate effectively using the language of mathematics.
Students will explore a variety of mathematical topics that will lead to an appreciation for mathematics in real-life contexts. In this course, students will discover multiple ways to solve problems and they will develop an appreciation for mathematical contributions to advancements in society.

3-credit version REQUIRED (entire topic)
·Number Sense
3-credit version REQUIRED (a minimum of two of the following additional topics - all Specific Outcomes)
·Logic and Reasoning
·Measurement
·Algebra
·Graphical Reasoning
·Statistics and Probability

5-credit version requires all topics.

Guiding Questions (formerly: General Outcome

1 Number Sense (Required for either 3-credit or 5-credit version)

2 Logic and Reasoning (Required for 5-credit version; Two additional Topics (General Outcomes) required for 3-crediдt version)

3 Measurement (Required for 5-credit version; Two additional Topics (General Outcomes) required for 3-crediдt version)

4 Algebra (Required for 5-credit version; Two additional Topics (General Outcomes) required for 3-crediдt version)

5 Graphical Reasoning (Required for 5-credit version; Two additional Topics (General Outcomes) required for 3-crediдt version)

6 Statistics and Probability (Required for 5-credit version; Two additional Topics (General Outcomes) required for 3-crediдt version)

Attachment 3

Learning Outcomes (formerly: Specific Outcomes)

1 Number Sense (Required for either 3-credit or 5-credit version)	**15-3 15-5**
1.1 Solve problems that involve real numbers using trial and error.	X X
1.2 Solve problems that involve real numbers using patterns.	X X
1.3 Solve problems that involve real numbers using estimation strategies	X X
1.4 Solve problems that involve real numbers using pictorial representations.	X X
1.5 Apply mental math strategies to solve problems with real numbers.	X X
1.6 Explore and communicate the characteristics of a rational or irrational number and its significance in our everyday lives.	X X
1.7 Explore place value, rounding, significant digits and their importance in scientific notation.	X X

2 Logic and Reasoning (Required for 5-credit version; Two additional Topics (General Outcomes) required for 3-crediдt version)	**15-3 15-5**
2.1 Solve logic puzzles using trial and error.	X X
2.2 Solve logic puzzles using patterns.	X X
2.3 Solve logic puzzles using graphic organizers.	X X
2.4 Solve logic puzzles using process of elimination.	X X
2.5 Engage in games that improve an understanding of numbers and logic.	X X
2.6 Evaluate and verify reasoning strategies used in a problem solving process.	X X

3 Measurement (Required for 5-credit version; Two additional Topics (General Outcomes) required for 3-crediдt version)	**15-3 15-5**
3.1 Demonstrate an understanding of the Pythagorean Theorem by applying the formula to real life situations.	X X
3.2 Demonstrate an understanding of 3 D objects and apply the relationship between surface area and volume to real life contexts.	X X

4 Algebra (Required for 5-credit version; Two additional Topics (General Outcomes) required for 3-crediдt version)	**15-3 15-5**
4.1 Apply problem solving strategies to generate possible solutions to a problem through identifying patterns.	X X
4.2 Apply problem solving strategies to generate possible solutions to a problem through generating an equation.	X X
4.3 Apply problem solving strategies to generate possible solutions to a problem through trial and error.	X X
4.4 Apply problem solving strategies to generate possible solutions to a problem through drawing a picture.	X X

5 Graphical Reasoning (Required for 5-credit version; Two additional Topics (General Outcomes) required for 3-crediдt version)	**15-3 15-5**
5.1 Analyze circle graphs, bar graphs, double bar graphs, scatterplots, pictographs and piecewise graphs to solve problems.	X X
5.2 Explore the characteristics of the coordinate plane and plot ordered pairs in all four quadrants.	X X
5.3 Analyze patterns effectively to identify rules and trends to make predictions.	X X
5.4 Create a graph to represent a set of data.	X X

6 Statistics and Probability (Required for 5-credit version; Two additional Topics (General Outcomes) required for 3-crediдt version)	**15-3 15-5**

6.1 Explore the variety of uses for statistics in real life contexts.	X X
6.2 Analyze the results of tasks involving experimental probabilities of independent and dependent events.	X X

Facilities or Equipment

Facility

No special facilities required.

Facilities:

Equipment

This course does not require any special equipment, although access to a graphing calculators, manipulatives and the internet is strongly recommended.

Learning and Teaching Resources

No unique required resources.

Sensitive or Controversial Content

There are no sensitive or controversial issues expected within this course.

Attachment 3

Issue Management Strategy

Health and Safety

Classroom setting - no unique health and safety issues.

Risk Management Strategy

Attachment 3

Statement of Overlap with Existing Programs

Provincial Courses with Overlap and/or Similarity

Math 8/9

Identified Overlap/Similarity

Pythagorean Theorem, Surface Area and Volume of 3□D Shapes

Reasoning as to Why LDC Is Necessary

Students research how the Pythagorean Theorem was developed and explore, through concrete measurements that the Pythagorean Theorem is valid for all right angled triangles. Students require more time to develop and synthesize the understanding of 3□dimensional objects and the relationship between surface area and volume.

Locally Developed Courses with Overlap and/or Similarity

ESL Introduction to Mathematics

Identified Overlap/Similarity
Algebra and Interpreting Graphs

Reasoning as to Why LDC Is Necessary
The two courses are similar in that they offer an opportunity to explore mathematical concepts in a real□life context and provide multiple strategies for students to apply their acquired knowledge. Some of the outcomes for algebra and the graphing section are similar however, the algebra explored in Competencies in Mathematics extends beyond a single step process when compared to ESL Introduction to Math. In comparing the philosophies of the two courses, Competencies in Math offers scaffolded support in mathematics to all learners. ESL Introduction to Math is focused on English language acquisition for ESL Learners (LP 1 and 2) in the context of mathematics.

Student Assessment

No specific assessments required.

Attachment 3

Course Approval Implementation and Evaluation

Attachment 4

LOCALLY DEVELOPED COURSE OUTLINE

Learning Strategies15-3
Learning Strategies15-5
Learning Strategies25-3
Learning Strategies25-5
Learning Strategies35-3
Learning Strategies35-5

Submitted By:

The Elk Island School Division

Submitted On:

May. 6, 2022

Attachment 4

Course Basic Information

Outline Number	Hours	Start Date	End Date	Development Type	Proposal Type	Grades
15-3	62.50	09/01/2022	08/31/2026	Acquired	Reauthorization	G10
15-5	125.00	09/01/2022	08/31/2026	Acquired	Reauthorization	G10
25-3	62.50	09/01/2022	08/31/2026	Acquired	Reauthorization	G10
25-5	125.00	09/01/2022	08/31/2026	Acquired	Reauthorization	G10
35-3	62.50	09/01/2022	08/31/2026	Acquired	Reauthorization	G10
35-5	125.00	09/01/2022	08/31/2026	Acquired	Reauthorization	G10

Attachment 4

Course Description

Learning Strategies is a series of course designed to assist high school students in developing the understandings, literacies, skills, and values to be successful in learning in all high school subjects and in lifelong learning. In collaboration with teachers, educational assistants, peers and parents, students will explore, develop, deepen, and apply a range of strategies for academic success. Progressively, students gain confidence, realize increased independence, and apply their strategies to other learning contexts.

While the nature of learning is complex and not always strictly linear, Learning Strategies content progresses in rigor from remembering and comprehending (15 level), to applying and analyzing (25 level), to creating and evaluating (35 level).

Level 15: As students transition to the expectations of high school, they will explore, comprehend, and begin to select for their personal learning strategies toolkits a range of learning strategies with direct instruction and guidance from their learning team.
Level 25: As students work to become independent and strategically learning high school students, they will analyze, strengthen, and continue to apply to their personal learning strategies toolkits with increasing confidence.
Level 35: As students prepare to transition to post-secondary and life-long learning, they will innovate and implement learning strategies with increased independence for successful high school completion and assemble their personalized toolkit that will be beneficial in further learning endeavors.

The **5-credit version** includes all learning outcomes from all topics.
The **3-credit version** includes all learning outcomes from the "Self Advocacy and Relationship Management in Learning" theme and a minimum of two complete additional themes from the 5-credit version: (understanding yourself and others as learners, organization and time and material management, understanding the learning process, preparing for evaluation). This flexibility is provided to meet the learning needs of the students.

Course Prerequisites

Learning Strategies 15 – none
Learning Strategies 25 – Learning Strategies 15
Learning Strategies 35 – Learning Strategies 25

Sequence Introduction (formerly: Philosophy)

Learning Strategies is a series of courses that ask students to explore a range of strategies to learn more efficiently, reflectively, critically, collaboratively, and more confidently. It is organized into five themes, each with direct application to learning scenarios in the classroom and beyond (understanding yourself and others as learners, organization and time and material management, understanding the learning process, preparing for evaluation, and self-advocacy and relationship management in learning).

Student Need (formerly: Rationale)

Just as the activity of reading in school shifts from learning how to read to reading to learn, high school curricula and practice often emphasizes the “what” of learning, ie. content, over the “how” of learning, ie. strategies. Many high school students, diverse learners in particular, would continue to benefit from instruction in how to learn most effectively across their subjects and into post-secondary education and other adult learning scenarios.

Indigenous thought describes education as a “lifelong, holistic process that begins while a child is still in the womb and continues so long as a person draws breath, encompassing all those learnings we need to live long and well on Mother Earth”. (Castenallano et. al, 2000, p. 1). Given the primacy of learning as a core human activity throughout an individual’s life span, a course that directly addresses how to learn deeply and effectively would be a developmental asset for any student.

Scope and Sequence (formerly: Learner Outcomes)

(Theme 1) **Understanding Self and Others as Learner:** *Students will develop, revise, and share detailed personalized profiles of how they understand their selves as learners pursuing their highest levels of achievement. Additionally, they will come to understand how a learning space may be augmented by having learners with a variety of learning characteristics (eg. styles, preferences, intelligences). They will consider how just learning spaces honor diversity.*

· *General Outcome 1 Students will investigate how their particular characteristics as learners, when researched and understood, and incorporated in their learning, help them learn more effectively.*

· *General Outcome 2 Students will gain an understanding of which equity and accessibility considerations support their personal diversity as learners as well as the diversity of other students.*

(Theme 2) **Organization and Management of and Resources (Time Human, and Material):** *Students will learn and implement a range of strategies to organize and manage resources including time and materials; they will assess and augment their own organizational strategies, learn about effective goal setting, and set goals.*

· General Outcome 3 Students will develop an understanding of the purpose and importance of organization and management, and apply this understanding to their own contexts.

· General Outcome 4 Students will demonstrate the ability to set goals and to establish, implement, monitor, evaluate and revise a plan of action and set priorities.

(Theme 3) **Understanding the Learning Process:** *Students will engage with increasing self-awareness and strategic facility, in the learning process, including preparing to learn, relaxation techniques, note-taking, skill development, and maximizing memory.*

· *General Outcome 5 Students will reflect on and implement techniques to*

maintain alertness, awareness, and relaxation in academic settings.

· *General Outcome 6 Students will reflect on and develop learning process skills including note-taking, skill development, studying, and maximizing memory*

(Theme 4) **Responding to Assessment and Evaluation:***Students will reflect on the assessment and evaluation process in schools as it occurs over a variety of disciplines and develop strategies to respond with increasing facility to assessment and evaluation*

· *General Outcome 7 Students will develop an awareness of and monitor test and assignment requirements, grading processes, and the details of their own academic progress.*

· *General Outcome 8 Students will consider test-taking barriers and strategies and develop a plan to strategically manage their test-taking process*

(Required Theme) **Self-Advocacy and Relationship Management in Learning:** *Students will develop increasingly sophisticated understandings of self-advocacy, resilience, and relationship management and self-advocate, build resiliency, and manage relationships in academic contexts with increasing confidence.*

· General Outcome 9 Students will build resiliency and address barriers to learning

· General Outcome 10 Students will develop a conceptual understanding of self-advocacy and practice self-advocating.

Guiding Questions (formerly: General Outcomes

1 Students will investigate how their particular characteristics as learners, when researched and understood, and incorporated in their learning, help them learn more effectively. (Theme 1)

2 Students will gain an understanding of which equity and accessibility considerations support their personal diversity as learners as well as the diversity of other students. (Theme 1)

3 Students will develop an understanding of the purpose and importance of organization and management, and apply this understanding to their own contexts. (Theme 2)

4 Students will demonstrate the ability to set goals and to establish, implement, monitor, evaluate and revise a plan of action and set priorities. (Theme 2)

5 Students will reflect on and implement techniques to maintain alertness, awareness, and relaxation in academic settings. (Theme 3)

6 Students will reflect on and develop learning process skills including note-taking, skill development, studying, and maximizing memory. (Theme 3)

7 Students will develop an awareness of and monitor test and assignment requirements, grading processes, and the details of their own academic progress. (Theme 4)

8 Students will consider test-taking barriers and strategies and develop a plan to strategically manage their test-taking process. (Theme 4)

9 Students will build resiliency and address barriers to learning. (Required Theme)

10 Students will develop a conceptual understanding of self-advocacy and practice self-advocating. (Required Theme)

Attachment 4

Learning Outcomes (formerly: Specific Outcomes)

1 Students will investigate how their particular characteristics as learners, when researched and understood, and incorporated in their learning, help them learn more effectively. (Theme 1)	**15-3**	**15-5**	**25-3**	**25-5**	**35-3**	**35-5**
1.1 Comprehend variety of learning styles.	X	X				
1.2 Comprehend that people have a variety of learning preferences then explore and describe their personal preferences from various aspects of learning preferences are as time of day and levels of alertness.	X	X				
1.3 Identify and explore various aspects of a learner's profile and illustrate how it applies to their own profile including aspects.	X	X				
1.4 Identify the qualities of a variety of environments in which learning occurs.	X	X				
1.5 Analyze specific qualities of one's personal learning style, and how this compares with the learning styles of others.			X	X		
1.6 Research more complicated aspects of learning preferences and identify specific personal learning preferences, and contrast/compare theirs with the learning preferences of others.			X	X		
1.7 Describe their own learner profile and distinguish how it is unique and different from other learners in areas.			X	X		
1.8 Analyze a variety of learning environments and what contributes to successful learning in environments.			X	X		
1.9 Evaluate one's personal learning style in a variety of contexts and construct actionable strategies to facilitate learning success.					X	X
1.10 Appraise and communicate clearly about individual personal learning preferences in a variety of contexts and formulate a study plan that incorporates what one understands about their learning preferences and the impact on one's learning.					X	X

1.11 Communicate clearly to others about their own learner profile and formulate a study process that considers aspects.					X	X
1.12 Independently evaluate a variety of learning environments for which ones are most effective for their personal learning and which they find most challenging and then formulate a plan for how they can be most success in those environments.					X	X

2 Students will gain an understanding of which equity and accessibility considerations support their personal diversity as learners as well as the diversity of other students. (Theme 1)	**15-3**	**15-5**	**25-3**	**25-5**	**35-3**	**35-5**
2.1 Comprehend that individuals differ in their learning profiles in a variety of ways.	X	X				
2.2 Reflect on personal barriers to learning and explain resources that are available to address these barriers.	X	X				
2.3 Comprehend historical and contemporary discourses surrounding accessibility.	X	X				
2.4 Comprehend that indigenous understandings of learning tend to be more holistic, whereas Western understandings can be more regimented, appreciate that Westernized assessment practices are not always compatible with the latter, and consider the merits of both systems.	X	X				
2.5 Comprehend the concept of Universal Design for Learning and the range of considerations (including accommodations) to make learning accessible for themselves and all students.	X	X				
2.6 Explore and demonstrate acceptance and appreciation of individual differences in learning.			X	X		
2.7 Describe personal barriers to learning and analyze resources available to address these barriers to determine the benefits and pitfalls of each one.			X	X		
2.8 Explain historical and contemporary discourses that limit accessibility and the ways learning institutions are striving to value diversity and inclusion.			X	X		
2.9 Reflect on educational experiences inside and outside of school to compare and contrast experiences related to indigenous / holistic and Westernized understandings of learning.			X	X		

2.10 Explain the concept of Universal Design for Learning and describe the benefits regarding the range of considerations (including accommodations) to make learning accessible for themselves and all students.			X	X		
2.11 Demonstrate acceptance and appreciation of individual differences in learning strengths, weaknesses, interests, affinities and experiences.					X	X
2.12 Investigate and explain personal barriers to learning and formulate detailed plans for accessing support and resources for both high school completion and learning contexts after high school.					X	X
2.13 Evaluate historical and contemporary discourses that limit accessibility and the movement towards inclusion and consider aspects that impacted their learning positively and negatively.					X	X
2.14 Develop a personalized vision of flourishing in learning that balances indigenous / holistic understandings with Westernized understandings.					X	X
2.15 Evaluate learning contexts for accessibility via a Universal Design for Learning lens and select the most appropriate considerations (including accommodations) to make learning accessible for themselves and all students.					X	X

3 Students will develop an understanding of the purpose and importance of organization and management, and apply this understanding to their own contexts. (Theme 2)	**15-3**	**15-5**	**25-3**	**25-5**	**35-3**	**35-5**
3.1 Identify attributes of organizing for learning.	X	X				
3.2 Identify the benefits of good organization and management and consequences of poor organization and management.	X	X				
3.3 Identify strengths and limitations of current personal organization strategies.	X	X				
3.4 Define and use strategies to organize assignments including deadlines, method of evaluation, and format of resources.	X	X				
3.5 Identify efficient and inefficient uses of time and their short-term and long-term impact on learning.	X	X				

3.6 Define various strategies to allocate time on a daily, weekly, monthly, and semester basis.	X	X				
3.7 Apply and demonstrate competency with a range of personal organizational systems for learning.			X	X		
3.8 Consider the pros and cons of various levels of organization, tools and strategies and the impact they have on learning.			X	X		
3.9 Comprehend and reassess strengths and limitations of current personal organization.			X	X		
3.10 Apply organizational and management strategies/skills to new settings and situations including home, work, leisure, and community.			X	X		
3.11 Analyze and apply a variety of strategies to cope with issues that negatively impact learning.			X	X		
3.12 Apply various strategies and tools to address their own time management needs and analyze the impact they have on their time use and make modifications as necessary.			X	X		
3.13 Create a plan that identifies their most effective personal organizational systems for learning and details how this will be utilized in various learning situations.					X	X
3.14 Evaluate their own level of organization and formulate strategies to effectively address challenges and strengths of their personal level of organization across various contexts.					X	X
3.15 Independently apply, and reflect upon the effectiveness of, organizational and management strategies/skills as applied to new settings and situations including home, work, leisure, and community.					X	X
3.16 Implement, evaluate and modify a personal action plan to address stress that stems from organizational and management difficulties.					X	X
3.17 Evaluate personal study habits to determine issues that negatively impact their learning and assemble a protocol to ameliorate deleterious consequences.					X	X
3.18 Independently monitor and evaluate time use and make constructive modifications as necessary.					X	X

4 Students will demonstrate the ability to set goals and to establish, implement, monitor, evaluate and revise a plan of action and set priorities. (Theme 2)	**15-3**	**15-5**	**25-3**	**25-5**	**35-3**	**35-5**
4.1 Demonstrate an understanding of the processes involved in goal-setting, problem-solving and decision making.	X	X				
4.2 Consider the processes one uses for short term and long-term goal setting, problem-solving and for decision making.	X	X				
4.3 Comprehend constraints and alternatives in the goal-setting, problem-solving and decision-making processes.	X	X				
4.4 Identify criteria to determine growth in goal-setting, problem-solving and decision making.	X	X				
4.5 Analyze, modify and extend the processes used for setting short and long-term goals, problem-solving and for decision making.			X	X		
4.6 Apply goal setting, problem-solving and decision-making processes in a variety of situations including home, work, leisure, and community.			X	X		
4.7 Reassess and modify one's personal criteria for growth in goal-setting, problem-solving and decision-making.			X	X		
4.8 Develop personal criteria to determine growth in goal-setting, problem-solving and decision making.			X	X		
4.9 Appraise, modify and extend, with increasing independence, the processes used for setting short and long-term goals, problem-solving and for decision making for addressing personal issues.					X	X
4.10 Implement goal setting, problem-solving and decision making in a variety of situations including home, work, leisure, and community.					X	X
4.11 Independently apply, monitor, and modify one's personal criteria for growth in goal-setting, problem-solving and decision-making.					X	X
4.12 Evaluate personal criteria to determine growth in goal-setting, problem-solving and decision making and extend beyond the school setting.					X	X

5 Students will reflect on and implement techniques to maintain alertness, awareness, and relaxation in academic settings. (Theme 3)	**15-3**	**15-5**	**25-3**	**25-5**	**35-3**	**35-5**
5.1 Recognize and explore a variety of techniques to monitor mental and physical readiness to learn before and during engaging in learning strategies content.	X	X				
5.2 Recognize and explore a variety of anticipatory techniques for learning across academic contexts	X	X				
5.3 Recognize and trial range of mindfulness resources / practices.	X	X				
5.4 Select and apply technique to monitor physical and mental readiness to learn before and during engaging in learning strategies content that they feel are most effective and explain the impact on their learning.			X	X		
5.5 Identify and apply anticipatory techniques that they believe are most effective in support their own learning across academic contexts			X	X		
5.6 Establish preferences for mindfulness resources / practices.			X	X		
5.7 Formulate a plan to implement techniques to monitor physical and mental readiness throughout the day across a variety of learning contexts and evaluate their effectiveness.					X	X
5.8 Develop a plan to use anticipatory techniques for learning throughout the day and over a variety of learning spaces and consistently monitor their effectiveness and adjust the plan accordingly.					X	X
5.9 Explain preferences for chosen mindfulness resources / preferences.					X	X

6 Students will reflect on and develop learning process skills including note-taking, skill development, studying, and maximizing memory. (Theme 3)	**15-3**	**15-5**	**25-3**	**25-5**	**35-3**	**35-5**
6.1 Describe and explain various purposes for making notes.	X	X				
6.2 Develop strategies used to make notes.	X	X				

6.3 Identify academic area or greatest need for academic skill development (reading comprehension, writing, basic math skills, vocabulary, background knowledge) and research and trial resources to develop this skill.	X	X							
6.4 Identify strategies for effective studying.	X	X							
6.5 Recognize the neurological process of memory and begin to consider its implications for memory tasks at school.	X	X							
6.6 Comprehend and trial several new memory techniques.	X	X							
6.7 Identify personal note making strategies and evaluate if they meet the purpose for note-taking.			X	X					
6.8 Expand awareness to include several additional note-making techniques.			X	X					
6.9 With support initiate a plan of skill development in academic area of greatest need using previously researched resources.			X	X					
6.10 Extend repertoire of study strategies, incorporating knowledge of one's learner profile (learning styles and preferences, strengths, challenges, affinities, etc.) by selecting, trialing and evaluating new techniques.			X	X					
6.11 Explain and apply the neurological process of memory and reflect on its implications in schooling.			X	X					
6.12 Extend repertoire of memory techniques by selecting, trialing and evaluating new techniques			X	X					
6.13 Create effective notes with personally identified preferred styles and effectively use notes to support learning in academic contexts.					X	X			
6.14 Sharpen and apply efficient note making techniques across a variety of media for the purposes of acquiring and clarifying information.					X	X			
6.15 Develop skill in area of greatest academic need using a variety of resources and with increasing independence.					X	X			
6.16 Evaluate their personal study system and formulate ways to improve is effectiveness.					X	X			
6.17 Extend and apply a repertoire of effective study strategies to increase effectiveness in a variety of learning contexts.					X	X			

6.18 Create a memory strategy and demonstrate how to apply it to an academic task involving memorization that incorporates an instructed strategy and an understanding of the neurological process of memory.					X	X

7 Students will develop an awareness of and monitor test and assignment requirements, grading processes, and the details of their own academic progress. (Theme 4)	**15-3**	**15-5**	**25-3**	**25-5**	**35-3**	**35-5**
7.1 Define a variety of overarching concepts related to assessment and evaluation in school contexts such as formative and summative assessment, rubric, accommodation, choice, criteria, pre and post testing, diagnostic testing, and reassessment.	X	X				
7.2 Develop an awareness of criteria frequently used to assess various types of learning products.	X	X				
7.3 Demonstrate comprehension of marking schemes, task weightings, grades / class webpage software and begin track progress of assessment in all classes.	X	X				
7.4 Discuss the assessment emphasis and their plans to respond successfully to this emphasis in one or more of their courses with a demonstrable comprehension of overarching assessment and evaluation concepts.			X	X		
7.5 Develop, with assistance, and implement a plan to continually meet criteria on a variety of course assessments (including making strategic choices on multi-option tasks).			X	X		
7.6 With assistance track achievement results in all classes.			X	X		
7.7 Compare the assessment foci and their plans to respond successfully to these foci in two or more of their courses with a demonstrable comprehension of overarching assessment and evaluation concepts.					X	X
7.8 With increasing independence, implement, monitor, and continually renew and revise a plan to succeed on course assessments (including making strategic choices on multi-option tasks), monitoring and adjusting this as needed.					X	X
7.9 Independently and effectively track achievement results in all classes.					X	X

Attachment 4

8 Students will consider test-taking barriers and strategies and develop a plan to strategically manage their test-taking process. (Theme 4)	**15-3**	**15-5**	**25-3**	**25-5**	**35-3**	**35-5**
8.1 Comprehend symptoms and positive and negative impact of anxiety on test-taking.	X	X				
8.2 Develop awareness of, select, trial and evaluate several additional strategies to cope with test anxiety.	X	X				
8.3 Develop awareness of skills helpful in managing evaluation and test-taking.	X	X				
8.4 Develop awareness of, select, trial and evaluate test-taking strategies appropriate for various types of testing.	X	X				
8.5 Define the concept of academic accommodation, identify several accommodations and how they support a level playing field, and articulate a process for applying for accommodations.	X	X				
8.6 Develop a plan to monitor emotions during test-taking, practice plan during tests in Learning Strategies / and or reflect on use of plan in other classes.			X	X		
8.7 Identify strengths and limitations of current anxiety reduction strategies and tend, apply and refine repertoire of strategies to reduce test anxiety.			X	X		
8.8 Develop and apply a personal system to manage evaluation and test-taking.			X	X		
8.9 Extend and refine repertoire of test-taking strategies appropriate for various types of testing.			X	X		
8.10 Implement, assess the effectiveness of, and refine accommodations provided for test-taking.			X	X		
8.11 Evaluate and revise plan to manage emotions during test-taking, either directly during Learning Strategies tests or by reflecting on use of plan in other classes.					X	X
8.12 Continually evaluate personal anxiety reduction strategies.					X	X
8.13 Apply and communicate clearly to others a personal system to manage evaluation and test-taking.					X	X
8.14 Apply and continually evaluate strategies for responding to various types of testing.					X	X

8.15 Apply and communicate clearly to other accommodations provided for test-taking.					X	X

9 Students will build resiliency and address barriers to learning. (Required Theme)	**15-3**	**15-5**	**25-3**	**25-5**	**35-3**	**35-5**
9.1 Define key aspects of resiliency and the associated process of adapting to various forms of adversity and stress.	X	X				
9.2 Prepare an action plan to overcome problems and barriers and include consideration of possible consequences. Recognize barriers and develop a plan, with assistance.	X	X				
9.3 Develop an awareness of available supports, beyond caring family members and friends, and how these supports function and can offer assistance.	X	X				
9.4 Analyze, modify and extend understandings of resiliency and the associated process of adapting to various forms of adversity and stress.			X	X		
9.5 Create and analyze an action plan considering existing barriers and consequences. Consider possible barriers and develop a plan.			X	X		
9.6 Demonstrate an ability to access support, if needed, beyond caring family members and friends, and analyze which supports are most effective and appropriate based on personal circumstances and specific situations.			X	X		
9.7 Independently evaluate the underpinning elements of resiliency and extend analysis beyond the school setting.					X	X
9.8 Formulate and evaluate an action plan considering existing barriers and consequences. Independently consider probable barriers and develop a plan.					X	X
9.9 Reflect on attempts to independently access support, beyond caring family members and friends, and evaluate which supports are most effective and appropriate based on personal circumstance.					X	X

10 Students will develop a conceptual understanding of self-advocacy and practice self-advocating. (Required Theme)	**15-3**	**15-5**	**25-3**	**25-5**	**35-3**	**35-5**

10.1 Describe key aspects of self-advocacy and its importance.	X	X		
10.2 Describe methods to request information, assistance, and accommodations that ensures their voice is heard by various members of their educational team.	X	X		
10.3 Describe their rights as students in schools and understand how they can impact their learning.	X	X		
10.4 Describe key elements of effective communication and why these elements are important to successfully communicating their needs.	X	X		
10.5 Describe the positive implications associated with seeking feedback from trusted others.	X	X		
10.6 Develop an understanding of how the degree of interconnected impacts the individual (positively & negatively).	X	X		
10.7 Describe various ways to self-reinforce success and realize that mistakes are an acceptable part of learning.	X	X		
10.8 Comprehend that academic and life success can relate to individual values as to what is important and personal understanding of life balance.	X	X		
10.9 Analyze, modify and extend in practice their understandings and application of key aspects in self-advocacy.			X	X
10.10 Analyze, modify and extend in practice how they request information, assistance, and accommodations that ensures their voice is heard by various members of their educational team.			X	X
10.11 Analyze, modify and extend their understandings and assertation of their rights within an educational setting.			X	X
10.12 Practice and perform in hypothetical and real-life application effective communication elements with classmates and instructional staff in academic settings and reflect on their communicative efficacy.			X	X
10.13 Demonstrate sensitivity and discernment in response to feedback from others and make subsequent considered adjustments.			X	X
10.14 Analyze the complexity and the degree to which interconnectivity impacts the individual. Specifically, the interconnection between oneself.			X	X

10.15 Demonstrate ways to self-reinforce success and recognize that mistakes are an acceptable part of learning.	X	X		
10.16 Reflect on personalized understandings and values in relation to academic and life success.	X	X		
10.17 Independently evaluate their current level of success with key aspects of self-advocacy and formulate a plan of how to improve in one or more of the key aspects.			X	X
10.18 Independently evaluate their current level of success in their ability to request information, assistance, and accommodations that ensures their voice is heard by various members of their educational team.			X	X
10.19 Investigate and evaluate how one's individual rights intersect with hegemony beyond the educational setting.			X	X
10.20 Create a product, including scenarios, to advise student about effective elements communication in academic settings.			X	X
10.21 Evaluate one's own sensitivity and discernment in response to feedback from others and make subsequent considered adjustments. Examine the elements below through a historiographic and/or philosophical lens.			X	X
10.22 Evaluate the complexity and the degree to which interconnectivity impacts the individual.			X	X
10.23 Evaluate one's individual effectiveness regarding self-reinforce towards success and analyze how mistakes are an acceptable part of learning.			X	X
10.24 Set tentative long term goals related to academic and life success.			X	X

Facilities or Equipment

Facility

No required facilities.

Attachment 4

Facilities:

Equipment

No required equipment.

Learning and Teaching Resources

No required resources

Sensitive or Controversial Content

No sensitive or controversial content.

Issue Management Strategy

Health and Safety

No directly related health and safety concerns.

Risk Management Strategy

Attachment 4

Statement of Overlap with Existing Programs

Provincial Courses with Overlap and/or Similarity
Career and Live Management (CALM 20), and Personal and General Psychology.

Identified Overlap/Similarity
Career and Life Management has a career and health focus, though not exclusively tied to learning or life-long learning in general. The Personal and General psychology courses have some overlap as Learning Strategies incorporates Psychological research, but Learning Strategies overwhelmingly samples the branch of Positive Psychology which the other curricula do not.

Reasoning as to Why Locally Developed Courses Is Necessary
As earlier mentioned, the focus on the science and art of learning, and life-long learning is unique to this set of courses, whatever small overlaps to other courses exist, and since “how to learn” tends not to be addressed in other high school curricula, it is useful to all learners, and diverse learners especially.

Locally Developed Courses with Overlap and/or Similarity
Self directed Learning 15.

Identified Overlap/Similarity
Both focus on learning.

Reasoning as to Why Locally Developed Courses Is Necessary
One of our district schools, with a self-directed learning approach, offers a course related to the "how" of learning specific to transitioning from more traditional coursework to self-directed coursework. But Learning Strategies focusses on the "how" of learning across school contexts and would be of use to all schools across the district, and Alberta.

Student Assessment

No specifically required assessments. Assessments should be drawn from the outcomes and appropriate to the class context and student needs.

Course Approval Implementation and Evaluation

Attachment 5

LOCALLY DEVELOPED COURSE OUTLINE

Psychology - Abnormal35-3

Submitted By:

The Elk Island School Division

Submitted On:

May. 6, 2022

Attachment 5

Course Basic Information

Outline Number	Hours	Start Date	End Date	Development Type	Proposal Type	Grades
35-3	62.50	09/01/2022	08/31/2026	Acquired	Reauthorization	G12

Course Description

Psychology - Abnormal 35 provides students with an overview of normal and abnormal behaviour within the conditions that affect individuals in our society. Students learn about perspectives of abnormality, causal factors, types of disorders, as well as assessment methods, prevention, and treatment.

Sensitive & Controversial Issues

Several mental illnesses result from abuse and trauma. Other mental illnesses result in behaviours that fall far outside the realm of what society considers ordinary or acceptable. Information presented in this course is meant solely for educational purposes and should be presented in a non-offensive manner. Validation and acceptance of those who are experiencing mental health issues is one of the main reasons this course was created. Psychology - Abnormal 35 should not trigger or exacerbate any mental health issues. Should an issue arise, teachers are recommended to share their concerns with appropriate provincial mental-health support services.

Course Prerequisites

Personal Psychology 20 or General Psychology 20

Sequence Introduction (formerly: Philosophy)

The social sciences are an important component of a well-rounded education that enables students to broaden their knowledge, acquire transferable skills, and develop the values and attitudes advantageous to living in a global society. Students with social science literacy skills will gain an increased understanding of human interaction and, by studying Psychology - Abnormal 35 specifically, can demonstrate empathy and compassion for those experiencing mental illness. This course highlights the facts that mental illness is not a character defect and that mental illness can affect anyone of any culture, age, or gender identity.

The Psychology - Abnormal 35 curriculum encourages thinking and exploration in the areas of self-understanding, diversity, and one's relations with others; students reflect on who they are and who they may become.

Student Need (formerly: Rationale)

Psychology is one of the many fields of study that provides a frame of reference for students to understand themselves, others, and social relationships. Addressing issues in psychology assists students in understanding, interpreting, and participating in society with increasing insight and skill. Students will benefit from developing skills that help them become engaged thinkers as they explore why people act in certain ways under given circumstances. Students, as ethical citizens who strive to improve the human condition, will learn to better understand human behaviour, the relationship between human behaviour and problems and issues in society, as well as think critically about solutions that may improve and maintain the mental health of Albertans.

Attachment 5

Scope and Sequence (formerly: Learner Outcomes)

Students will benefit from studying this course because of the inherent value in increasing one's understanding of behaviour; both their own behaviour and that of others.

Students will understand that

• culture and stereotypes influence the interpretation of behavior

• predisposition, psychosocial factors, and sociocultural factors interact to influence behavior as do physical, emotional, and nutritional deprivation

• there are similarities between the symptoms and causes of clinical, cognitive, and personality disorders

• there are varying degrees to which peoples' lives are disrupted because of mental illness.

Guiding Questions (formerly: General Outcomes

1 Students will analyze the historical emergence of abnormal psychology as a concept and as an area of clinical practice

2 Students will conclude that assessing behaviour as normal or abnormal can be complex and depends on the interpretation and interaction of many factors

3 Students will explore that attitudes, values, focus/attention, and prior experiences affect perception

4 Students will examine the complex nature of mental illness and evaluate several theories regarding the causes of abnormal behaviour

5 Students will investigate relationships among deprivation, various central nervous system impairments, and abnormal behaviour patterns

6 Students will understand the complex the nature and symptomology of various disorders including those that involve some violation of legal and/or social standards including alcohol and drug abuse patterns, impulse control, and violence

7 Students will appreciate how confounding factors affect information analysis and correlation

8 Students will understand that treatment options for mental health issues are varied and should be carefully tailored to the specific illness and person

9 Students will evaluate the prevalence of mental illness in Alberta as well as assess economic, legal, and ethical considerations associated with mental illness

Attachment 5

Learning Outcomes (formerly: Specific Outcomes)

1 Students will analyze the historical emergence of abnormal psychology as a concept and as an area of clinical practice	**35-3**
1.1 evaluate how abnormal behaviour was viewed and treated in the past	X
1.2 analyze the contributions of various historical figures to our current understanding of mental illness and treatment	X
1.3 demonstrate an understanding of the North American classification system for mental disorders (DSM)	X
1.4 assess the relevance of clinical interviews and testing	X

2 Students will conclude that assessing behaviour as normal or abnormal can be complex and depends on the interpretation and interaction of many factors	**35-3**
2.1 differentiate among the major perspectives of psychologists	X
2.2 compare and contrast several standpoints regarding the definition of abnormal	X
2.3 apply the course definition of abnormal behaviour to real-life situations	X
2.4 analyze issues in the assessment and diagnosis of mental disorders	X

3 Students will explore that attitudes, values, focus/attention, and prior experiences affect perception	**35-3**
3.1 assess how stereotypes influence perception and analyze the consequences of (benefits of limitations) making judgments based on stereotypes	X
3.2 evaluate the effects of stereotyping and labelling on mental health	X
3.3 critique the current stereotypes of mental illness	X

3.4 describe the consequences associated with a self-fulfilling prophecy	X
3.5 compare common mistakes in logic including the influence of bias and prejudice on logic	X
3.6 analyze the enduring attitudes of critical thinkers and develop a willingness to change an opinion in light of new information	X

4 Students will examine the complex nature of mental illness and evaluate several theories regarding the causes of abnormal behaviour	**35-3**
4.1 describe and defend how predisposition, biological factors, and the brain interact to cause abnormal behavior	X
4.2 assess the influence of environment on the behaviour of genetically identical siblings separated at birth and/or raised together while being treated differently	X
4.3 defend how psychosocial factors affect behavior	X
4.4 differentiate among the ways different cultures view abnormality	X
4.5 assess and describe how sociocultural factors affect mental health	X
4.6 justify the benefits of examining multiple perspectives when assessing information	X
4.7 articulate an informed position on the relative influence of genetics and the environment on human behaviour	X

5 Students will investigate relationships among deprivation, various central nervous system impairments, and abnormal behaviour patterns	**35-3**
5.1 investigate the effects of physical deprivation on mental health and development including hospitalization syndrome in infants/orphans	X
5.2 analyze the importance of nutrition on mental health	X
5.3 assess the role of sleep in mental health and evaluate their sleep hygiene	X

5.4 determine the genetic syndrome a person has from evaluating his or her karyotype	X
5.5 analyze the effect of constitutional liabilities on behavior	X
5.6 apply the Johari window and apply it to different scenarios	X
5.7 critique the health implications of bullying	X

6 Students will understand the complex the nature and symptomology of various disorders including those that involve some violation of legal and/or social standards including alcohol and drug abuse patterns, impulse control, and violence	**35-3**
6.1 o identify and describe the general symptoms of clinical disorders cognitive disorders intellectual developmental disorder personality disorders	X
6.2 o compare and contrast the possible causes of clinical disorders cognitive disorders intellectual developmental disorder personality disorders	X
6.3 summarize the possible causes of Tourette syndrome, autism, and attention deficit hyperactivity disorder	X
6.4 outline how dissociative disorders develop	X
6.5 investigate the multifaceted sensory nature of synesthesia	X
6.6 compare and contrast disorders that develop in childhood, adolescence, and adulthood	X
6.7 assess the interaction of mind-altering substances to changes in behaviour	X

7 Students will appreciate how confounding factors affect information analysis and correlation	**35-3**
7.1 differentiate between correlation and causation	X
7.2 interpret statistical data to determine if relationship is positive or negative (inverse or direct)	X
7.3 identify confounding factors in statistical relationships	X
7.4 describe the concept of perceptual blindness as it relates to focus and the interpretation of information/data	X

7.5 analyze the different types of reliability and validity	X

8 Students will understand that treatment options for mental health issues are varied and should be carefully tailored to the specific illness and person	**35-3**
8.1 conclude that one medication that works on one subgroup of individuals may not work on another subgroup	X
8.2 identify potential side-effects of medications on the brain and behavior	X
8.3 compare and contrast the various treatment methods	X

9 Students will evaluate the prevalence of mental illness in Alberta as well as assess economic, legal, and ethical considerations associated with mental illness	**35-3**
9.1 investigate the prevalence of various mental illnesses in Alberta	X
9.2 analyze the consequences of untreated mental illness in Alberta	X
9.3 critique Alberta's sterilization history	X

Facilities or Equipment

Facility

No unique facilities are required for this course.

Facilities:

Attachment 5

Equipment

No unique equipment is required for this course.

Learning and Teaching Resources

No unique learning resources are required for this course.

Sensitive or Controversial Content

As noted in the course description section, this course was developed to educate students about mental illness and highlight the fact that having an illness is not a character defect. Several mental illnesses result from abuse and trauma. Other mental illnesses result in behaviours that fall far outside the realm of what society considers ordinary or acceptable. Information presented in this course is meant solely for educational purposes and should be presented in a non-offensive manner. Validation and acceptance of those who are experiencing mental health issues is one of the main reasons this course was created. Abnormal Psychology 35 should not trigger or exacerbate any mental health issues. Should an issue arise, teachers are recommended to share their concerns with appropriate provincial mental-health support services.

Issue Management Strategy

Health and Safety

There are no specific health and safety components associated with this course.

Risk Management Strategy

Attachment 5

Statement of Overlap with Existing Programs

There is minimal overlap between Abnormal Psychology 35, the three provincially originated psychology courses from Alberta Education, and the Psychology (AP) 35-3 locally developed course. The overlap is outlined as follows:

Provincial Courses with Overlap and/or Similar

Personal Psychology 20

Identified Overlap/Similarity

Theme 2 of Personal Psychology centers on the development of personality. Abnormal Psychology focusses on causes of personality disorders as well as signs, symptoms, and treatment.

Theme 4 of Personal Psychology briefly covers mental retardation. The Abnormal Psychology course correctly identifies this condition as intellectually disabled and makes note that it is NOT a mental illness. The course defines the topic as well as its diagnosis and various causes. The end of this section delves into Alberta's sterilization history and the Leilani Muir case study.

Themes 5 and 6 of Personal Psychology center on biology and behaviour. Abnormal Psychology specifically focusses on the development of maladaptive behaviour caused by biology and the environment.

Reasoning as to Why LDC is Necessary

The LDC is necessary because the content differs significantly from what is contained in the program of studies for Personal Psychology 20 and provides a more current perspective of mental illness.

Provincial Courses with Overlap and/or Similar

General Psychology 20

Identified Overlap/Similarity

Theme 7 of General Psychology centers on behaviour disorders with a focus on neurosis and psychosis. The Abnormal Psychology briefly mentions psychotic disorders, but additionally delves into clinical disorders such as panic disorder, anxiety disorder, obsessive-compulsive disorder, phobias, eating disorders, kleptomania, pyromania, trichotillomania, Munchausen syndrome, bipolar disorder, schizophrenia, sleep disorders, and so forth.

Reasoning as to Why LDC is Necessary

The LDC is necessary because the content differs significantly from what is contained in the program of studies for General Psychology 20 and allows for amore balanced and current view of mental wellness.

Attachment 5

Provincial Courses with Overlap and/or Similar

Experimental Psychology 30
Identified Overlap/Similarity

Theme 2 of Experimental Psychology 30 does briefly touch on correlation, validity, and reliability. With Abnormal Psychology, however, these topics are linked to assessment and the DSM.
Reasoning as to Why LDC is Necessary

The LDC is necessary because the content differs significantly from what is contained in the program of studies for Experimental Psychology 30.

Other Courses with Overlap/Similarity

Psychology (AP) 35-3 (Developed by West Island College Society of Alberta)
Identified Overlap/Similarity

General Outcome 2 of AP 35-3 investigates the nature of sleep cycles, theories of dreaming, and some sleep disorders. There is some overlap in the Abnormal Psychology 35 course regarding the sleep cycles and disorders, but Abnormal Psychology focuses more on preventing sleep-related illness by focusing on sleep hygiene.
General Outcome 5 of AP 35-3 explores the influence of nature and nurture on development. Abnormal Psychology 35 also examines this topic, but through a case study of identical sisters suffering from schizophrenia.
Reasoning as to Why LDC is Necessary

The overlap is cursory. The learning objectives are sufficiently different.

Other Courses with Overlap/Similarity

Career and Life Management (CALM)
Identified Overlap/Similarity

General Outcome 1: Personal Choices addresses emotional/psychological, intellectual, social, spiritual and physical dimensions of health – and the dynamic interplay of these factors – in managing personal well-being. Abnormal Psychology 35 focuses on increasing student knowledge and understand of abnormal behavior which can lead to students demonstrating greater empathy and compassion for those experiencing mental illness. Personal well-being is simply inherent.
Reasoning as to Why LDC is Necessary

The overlap is cursory. The learning objectives are sufficiently different.

Student Assessment

There are no required assessments for this course.

Course Approval Implementation and Evaluation

Attachment 6

LOCALLY DEVELOPED COURSE OUTLINE

Technical Theatre (2022)15-3
Technical Theatre (2022)15-5
Technical Theatre (2022)25-3
Technical Theatre (2022)25-5
Technical Theatre (2022)35-3
Technical Theatre (2022)35-5

Submitted By:

The Elk Island School Division

Submitted On:

Apr. 20, 2022

Course Basic Information

Outline Number	Hours	Start Date	End Date	Development Type	Proposal Type	Grades
15-3	62.50	09/01/2022	08/31/2026	Acquired	Authorization	G10
15-5	125.00	09/01/2022	08/31/2026	Acquired	Authorization	G10
25-3	62.50	09/01/2022	08/31/2026	Acquired	Authorization	G10
25-5	125.00	09/01/2022	08/31/2026	Acquired	Authorization	G10
35-3	62.50	09/01/2022	08/31/2026	Acquired	Authorization	G10
35-5	125.00	09/01/2022	08/31/2026	Acquired	Authorization	G10

Course Description

Technical Theatre 15-25-35 offers students the chance to engage in non-acting roles that are required to realize complex theatrical performances. Students will be challenged to think and react creatively and critically while collaborating with teams to support the production and performance aspects of theatre. Students will have the opportunity to explore multiple technical roles, including stage management, sound, lighting, set & props, as well as costumes and makeup. Students will also develop an appreciation for the role and impact of the technical aspects of theatre as a means of communicating with an audience.

Course Prerequisites

15: none

25: level 15

35: level 25

Sequence Introduction (formerly: Philosophy)

Technical Theatre 15-25-35 is designed to offer students an opportunity to explore and experience the skills necessary to realize a theatrical performance. The course provides opportunities for students to study technical mastery in a production-based environment. Technical Theatre is process driven and supports the creation of theatrical performances.

Through the exploration and application of the technical aspects of theatre, students will have the opportunity to be creative and innovative and apply multiple literacies as they solve complex problems and work toward a theatrical performance. Effective teamwork, collaboration, and communication are essential skills of life-long learners who can adapt to change with an attitude of optimism and hope for the future. In Technical Theatre students will build positive relationships, share responsibility, and demonstrate flexibility.

Student Need (formerly: Rationale)

A significant number of students interested in pursuing Drama/Theatre would like to participate in the non-performing, technical components involved in theatrical productions. Technical Theatre recognizes that students need a practical component to both deepen and broaden understanding of technical elements of theatre. Technical Theatre may also act as a steppingstone for students wishing to consider a career in the non-performing technical components of theatre production, film and event production.

Scope and Sequence (formerly: Learner Outcomes)

Technical Theatre 15-25-35 fosters the development of creative and collaborative competencies through active participation in the technical theatre elements. The essential understandings focus on how the elements of these disciplines are related to communication and expression. Each course focuses on the outcomes of understanding roles and responsibilities of each technical theatre element with a focus on practical skills and collaborative problem solving. The learning outcomes of Technical Theatre 15-25-35 are intended to be achieved through a variety of experiences in technical theatre disciplines such as lighting, sound, props, sets, costumes, make-up and/or stage management. Ideally, students will experience all elements of technical theatre, but it is recognized that this will be largely based on facility and equipment availability.

Guiding Questions (formerly: General Outcomes

1 How can technical theatre elements be understood, analyzed, and appreciated?

2 How can students demonstrate technical theatre skills through design and application in stage management, sound, lighting, sets, properties, costumes and/or make-up?

3 How can students demonstrate the individual responsibility necessary to participate as a collaborative member in a technical theatre team?

Learning Outcomes (formerly: Specific Outcomes)

1 How can technical theatre elements be understood, analyzed, and appreciated?	**15-3**	**15-5**	**25-3**	**25-5**	**35-3**	**35-5**
1.1 Use and demonstrate understanding of stage terminology and theatrical vocabulary.	X	X	X	X	X	X
1.2 Demonstrate an understanding of the role of theatrical stage equipment.	X	X	X	X	X	X
1.3 Develop an appreciation of how theatrical design elements impact style, interpretation and mood.	X	X				
1.4 Model an appreciation of how theatrical design elements impact style, interpretation and mood.			X	X		
1.5 Refine and demonstrate how theatrical design elements impact style, interpretation and mood.					X	X
1.6 Develop an understanding the role of audience plays in choice of play and style of performance.	X	X				
1.7 Model an understanding the role of audience in choice of play and style of performance.			X	X		
1.8 Refine and illustrate the role of audience in choice of play and style of performance.					X	X
1.9 Demonstrate an appreciation of theatre as a medium to provoke personal, collective, and global change.		X		X		X
1.10 Research and examine post-secondary, community, and/or professional career opportunities in the technical theatre.						X
1.11 Demonstrate the ability to critically analyze and critique a performance using appropriate language unique to set, props, costumes, lighting, sound and stage management.	X	X	X	X	X	X

2 How can students demonstrate technical theatre skills through design and application in stage management, sound, lighting, sets, properties, costumes and/or make-up?	**15-3**	**15-5**	**25-3**	**25-5**	**35-3**	**35-5**

2.1 Demonstrate understanding of text and style to inform design choices.	X	X	X	X	X	X
2.2 Demonstrate an understanding of the different types of stages and spaces.	X	X				
2.3 Apply understanding of the effect of different types of stages throughout the creative process.			X	X		
2.4 Refine understanding of the effect of different types of stages throughout the creative process.					X	X
2.5 Develop and maintain script notation.	X	X	X	X	X	X
2.6 Identify the purpose of cue sheets and design plots.	X	X				
2.7 Utilize cue sheets and design plots to craft a theatre design.			X	X		
2.8 Refine the use of cue sheets and design plots to craft a theatre design.					X	X
2.9 Demonstrate an understanding of how to source and create cues.	X	X	X	X	X	X
2.10 Develop use of theatrical equipment to create the technical elements of a performance.	X	X				
2.11 Apply use of theatrical equipment to create the technical elements of a performance.			X	X		
2.12 Refine use of theatrical equipment to create the technical elements of a performance.					X	X
2.13 Develop an understanding of how to construct, acquire and create basic elements of costumes, make-up, sets and props.	X	X				
2.14 Develop an understanding of how to construct, acquire and create intermediate elements of costumes, make-up, sets and props.			X	X		
2.15 Develop an understanding of how to construct, acquire and create advanced elements of costumes, make-up, sets and props.					X	X

3 How can students demonstrate the individual responsibility necessary to participate as a collaborative member in a technical theatre team?	**15-3**	**15-5**	**25-3**	**25-5**	**35-3**	**35-5**
3.1 Demonstrate safe handling of theatre tools and equipment.	X	X	X	X	X	X

3.2 Demonstrate understanding of emergency safety procedures for performance spaces.	X	X	X	X	X	X
3.3 Demonstrate understanding and use of personal protective equipment.	X	X	X	X	X	X
3.4 Demonstrate respect, empathy and open-mindedness while collaborating and communicating with peers.	X	X	X	X	X	X
3.5 Engage in ongoing critical assessment of their own work and the work of others.	X	X	X	X	X	X
3.6 Demonstrate collaborative problem solving during the creation process and live performances.	X	X	X	X	X	X
3.7 Develop an understanding of the roles and responsibilities of the front of house and the technical theatre team.	X	X				
3.8 Demonstrate how to execute cues in collaboration with all members of a technical team.			X	X	X	X

Facilities or Equipment

Facility

No required facilities

Facilities:

Equipment

- Ceiling grid or lighting trees
- Light board
- Variety of stage lights
- Sound board
- Variety of microphones
- Speakers
- Light and sound cables

Learning and Teaching Resources

No required resources

Sensitive or Controversial Content

No sensitive or controversial content.

Issue Management Strategy

Health and Safety

No directly related health and safety

Risk Management Strategy

Attachment 6

Statement of Overlap with Existing Programs

Course: Drama 10, 20, 30

Outcome/s: Technical theatre disciplines of costume, lighting, management, properties, set, sound are an elective component of the Drama 10, 20, 30 curriculums.

Rationale: The learner outcomes for technical theatre in Drama 10, 20, 30 span all three grades and provide limited scope of student learning of these disciplines. Students in Drama are required to learn significantly more outcomes related to acting, including movement, speech, improvisation, and acting, which suggest they are the focus of the Drama curriculum. Technical Theatre provides students the opportunity to extend that learning from Drama, or, for those students who do not want to be required to perform, they can focus their learning on the non-performance roles within drama.

Course: EST1140, EST2140, EST3140

Outcome/s: The EST Theatrical Makeup courses cover the application of theatrical makeup and makeup design

Rationale: Technical Theatre combines makeup with costumes as an elective component students can choose. The costumes & makeup outcomes of Technical Theatre require students to consider makeup and costumes together as part of preparing a theatre piece for performance. Tech Theatre provides a small sampling of the outcomes that would be covered in depth by a CTS Esthetics class.

Course: FAS1010, FAS1030, FAS1130, FAS2130, FAS2180, FAS3130, FAS3180

Outcome/s: The FAS Construction and Creative Costuming and Theatrical Costuming courses cover the application of construction of clothing and theatrical costumes.

Rationale: Technical Theatre combines makeup with costumes as an elective component students can choose. The costumes & makeup outcomes of Technical Theatre require students to consider makeup and costumes together as part of preparing a theatre piece for performance. Tech Theatre provides a small sampling of the outcomes that would be covered in depth by a CTS Fashion class.

Attachment 6

Student Assessment

No identified student assessment.

Course Approval Implementation and Evaluation

Attachment 7

LOCALLY DEVELOPED COURSE OUTLINE

Traditional Land Based Learning25-S
Traditional Land Based Learning35-S

Submitted By:

The Elk Island School Division

Submitted On:

May. 6, 2022

Course Basic Information

Outline Number	Hours	Start Date	End Date	Development Type	Proposal Type	Grades
25-5	125.00	09/01/2022	08/31/2024	Acquired	Authorization	G11
35-5	125.00	09/01/2022	08/31/2024	Acquired	Authorization	G11

Course Description

This course will provide opportunities for students to acquire, demonstrate, and reflect on their knowledge of traditional land use. The primary goal is to allow students to participate in experiential land use activities that are culturally relevant. The activities will provide students with an opportunity to articulate and expand their knowledge and skills. The intent is to complete the course in an outdoor camp setting with Elders/Knowledge Holders present and participating.

The outcomes of this course will address: traditional food gathering and preparation in an outdoor environment, development of environmental stewardship through an Indigenous lens, and knowledge and skill acquisition of wildlife, forestry and construction. Opportunities to demonstrate and reflect on culturally significant protocols and use of the Indigenous language (e.g. Cree) will be infused throughout this course. The general and specific learner outcomes in this course will reflect the input collected from the community.

This course requires a permanent outdoor recreation area on traditional lands and equipment to support the learning.
Students will interact with local Elders and Knowledge Keepers during this course.

Course Prerequisites

Traditional Land Based Learning 25 prerequisites:

- First Aid/CPR with AED (HCS2020)
- Food Basic (FOD1010)
- Workplace Safety Systems (HCS3030)
- Construction Tools & Materials (CON1010)
- Introduction to Stewardship (ENS1010)

Traditional Land Based Learning 35 prerequisite:

- Traditional Land Based Learning 25

Sequence Introduction (formerly: Philosophy)

A goal for students is to be strong in identity, healthy and successful. Providing a locally developed course in Land based learning from a traditional perspective will support students in attaining this goal. Land based learning is a way for Elders and Knowledge Holders to share their traditions and cultural values with students through shared experiences. Land based learning will assist students in acquiring knowledge and skills that can be utilized in their daily lives and beyond. The purpose is to present a course that will not only enhance cultural identity and traditions, but also embrace technology while providing sustainable ways of living in the community.

Student Need (formerly: Rationale)

There is a need to provide promising practises that effectively support the well-being, participation, engagement and achievement in education for Indigenous students and non-Indigenous students. Providing Land Based learning opportunities for students, from a traditional perspective, will help responsive educators to achieve this goal. The Truth and Reconciliation commission has called for action, so offering a course in Land based Learning is a way forward. This course will:

· Advance the bridging of Indigenous and Western knowledge.

· Promote the modelling of land and place based teaching pedagogy and practices.

· Increase high school credit attainment rates for Indigenous students.

· Include students and community in wetlands and fire management research.

· Encourage Indigenous students to enrol and participate in science related careers and occupations.

· Develop pride in culture, tradition, language, and livelihoods.

Scope and Sequence (formerly: Learner Outcomes)

Students will illustrate their ability to become engaged, ethical and entrepreneurial citizens by utilizing a variety of knowledge and skills such as: critical thinking, problem solving, communicating, incorporating technology and adapting to change. This course will provide a foundation for Indigenous students to embrace their cultural heritage while at the same time provide opportunities for them to extend their knowledge and attain high school credits. It may open gateways for careers in forestry, environmental studies, and science based careers.

Attachment 7

Guiding Questions (formerly: General Outcomes

1 Identify traditional foods and plan, prepare and evaluate preparation methods.

2 Demonstrate and foster environmental stewardship and study the interrelationships between plants, animals and humans from a holistic perspective.

3 Develop spatial awareness, mapping skills, and survival skills in a traditional wilderness setting.

4 Assist in the construction of various structures to help in the development of an outdoor recreation area.

5 Interact with local Elders and Knowledge Keepers to further student understanding and appreciation of traditional perspectives.

Attachment 7

Learning Outcomes (formerly: Specific Outcomes)

1 Identify traditional foods and plan, prepare and evaluate preparation methods.	**25-5 35-5**
1.1 Demonstrate safe and sanitary practices of food handling in an outdoor setting	X
1.2 Utilize a variety of outdoor cooking methods: open fire, coals, propane & smoking	X
1.3 Employ methods of safe handling of tools, equipment & supplies	X
1.4 Employ methods to properly store food outdoors	X
1.5 Competently execute meal planning & purchasing supplemental food supplies for an extended outdoor camp	X
1.6 Describe factors that determine availability of food.	X
1.7 Plan, prepare and serve at least one traditional food considering traditional cooking methods and serving protocols.	X
1.8 Describe traditional food patterns and customs and when and how they are used.	X
1.9 Employ methods to prepare and preserve traditional food from bush to table.	X
1.10 Employ methods of safe handling of tools, equipment & supplies.	X
1.11 Demonstrate safe and sanitary practises of food handling in an outdoor setting.	X
1.12 Employ methods to properly store foods outdoors.	X
1.13 Explore traditional food preservation method.	X
1.14 Plan, prepare and serve at least three traditional foods (depending on availability) considering traditional cooking methods and serving protocols	X

2 Demonstrate and foster environmental stewardship and study the interrelationships between plants, animals and humans from a holistic perspective.	**25-5 35-5**
2.1 Interact with Elders and Knowledge Keepers to share what they know about living on the land through their experiences and knowledge and be prepared to extend their learning from this knowledge sharing their experiences.	X
2.2 Identify and describe the cultural significance of local species and traditional land areas.	X
2.3 Interact and listen to Elders/ Knowledge Keepers about the Spiritual connections with the land and begin to form opinions regarding their significance.	X
2.4 Find and describe two local medicinal plants and their use.	X
2.5 Identify solutions that promote sustainability of wildlife and their habitat on traditional lands.	X
2.6 Identify and describe how Indigenous culture is reflected/connected with the land and environmental stewardship.	X
2.7 Investigate best practices that could be implemented on traditional lands to promote forest health, ecosystems.	X
2.8 Investigate and describe how interacting with the land promotes health and wellness.	X
2.9 Select and analyze the benefits of three local medicinal plants.	X
2.10 Investigate and analyze the impact that Indigenous people have on promoting the management of wildlife on their traditional lands.	X

3 Develop spatial awareness, mapping skills, and survival skills in a traditional wilderness setting.	**25-5 35-5**
3.1 Learn and use traditional methods of navigation by following the teachings of an Elder/ Knowledge Keeper.	X
3.2 Use map/compass and GPS to navigate in a traditional wilderness setting.	X
3.3 Use gathered GPS data and ArcGIS to produce story maps of their traditional lands.	X

3.4 Demonstrate use of one traditional navigational technique and one technological navigational technique in a wilderness area.	X
3.5 Demonstrate safety in navigating a traditional wilderness area.	X
3.6 Use GPS to collect data points, and ArcGIS to produce maps of: spiritually significant areas, location of medicinal plants and berry picking areas and detail of wilderness recreation area.	X
3.7 Investigate and discuss information from maps and digital imaging and how they compare.	X
3.8 Observe and practice safety and survival skills while conducting a “day” excursion on traditional lands.	X
3.9 Plan and conduct a “day” excursion on traditional lands.	X
3.10 Construct a weather-proof shelter using materials available on traditional lands.	X

4 Assist in the construction of various structures to help in the development of an outdoor recreation area.	**25-5 35-5**
4.1 Students will follow all safety guidelines as specified by qualified log builder.	X
4.2 Identify and describe requirements and characteristics of building logs.	X
4.3 Describe and practice making basic log joints used in log construction.	X
4.4 Identify and select the required tools and materials to complete the following project.	X
4.5 Develop basic log construction skills by building and finishing a log structure.	X
4.6 Students will follow all safety guidelines as specified by qualified log builder.	X
4.7 Apply basic log construction techniques to assist in the building of a log structure on traditional lands.	X
4.8 Identify and describe foundation options for a small log structure.	X

4.9 Identify and select required tools and materials to complete log structure.	X
4.10 Apply knowledge of log materials, planning and construction techniques to assist in the production of a log structure that can be utilized for traditional activities.	X

5 Interact with local Elders and Knowledge Keepers to further student understanding and appreciation of traditional perspectives.	**25-5 35-5**
5.1 Demonstrate knowledge of procedure for drying meat following instruction from Elder/Knowledge Keeper.	X
5.2 Assist in the construction of a dry meat rack.	X
5.3 Demonstrate ability to prepare meat for drying.	X
5.4 Assist in the preparation of the smoking process.	X
5.5 Illustrate safety and appropriate work behaviours through clean-up of site and restoration.	X
5.6 Observe and learn how to hunt and track game through interaction with Elders/Knowledge Keepers.	X
5.7 Review procedure for tanning and hide making with Elder/Knowledge Keeper.	X
5.8 Assist in constructing a rack for tanning hide following direction of an Elder/Knowledge Keeper.	X
5.9 Demonstrate use of tools required for tanning and hide making.	X
5.10 Illustrate safety and appropriate work behaviours through clean-up of site and restoration.	X

Facilities or Equipment

Facility

Permanent outdoor recreation area on traditional lands

Attachment 7

Facilities:

Equipment

·Class set (12) GPS units
·Class set: (12) Tablets/iPads
·Subscription to ArcGIS
·Access to log building tools
·Outdoor cooking equipment for large groups
·Personal Protection Equipment (PPE) may be required for some activities

Learning and Teaching Resources

No specific resources are required for this course.

Sensitive or Controversial Content

None identified.

Issue Management Strategy

Attachment 7

Health and Safety

All students will have a current standard first aid certificate.

Appropriate precautions will be taken when students are in a wilderness setting (eg. site inspection prior to students working in the area) . School division policies regarding field trips will be followed. Elders/Knowledge Keepers will be on site to assist. Firearms will not be handled by students.

Log building aspect of the course will be delivered by a local log building company under the direct supervision of a certified teacher.

Risk Management Strategy

Statement of Overlap with Existing Programs

Provincial Courses with Overlap and/or Similarity

Aboriginal Studies 10-20-30

Identified Overlap/Similarity

Similar topics exist in the locally developed course and the provincial course sequence.

Reasoning as to Why LDC Is Necessary

Traditional Land Based Learning is required as a locally developed course as it extends and complements the provincial courses with a unique perspective for the student.

Student Assessment

No specific student assessments required for this course.

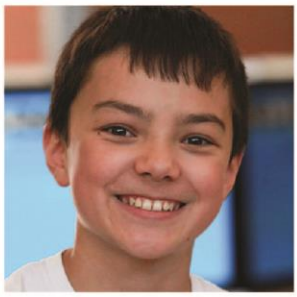
Course Approval Implementation and Evaluation

cbe.ab.ca

Attachment 8

Guitar (2022)

Grade 5, 6, 7, 8, 9



Locally Developed Course

Calgary Board of Education

Locally Developed Courses

Guitar (5, 6, 7, 8, 9) (2022)

Implementation Dates

September 1, 2022 to August 31, 2026

Grade

Level 1
Level 2
Level 3
Level 4
Level 5

Prerequisites

No prerequisites

Course Description

Music is an important art form that plays a significant role in the lives of many students. Guitar extends the creative avenues available for students to learn how to express themselves musically and make meaning from listening to music. Music is a wide-ranging artistic field and Guitar gives students the opportunity to learn instrumental technique, concepts, and theory applied to both classical and modern musical forms.

This course requires the following equipment and materials: sufficient guitars, music stands, chairs, and method book resources for each student. Replacement strings, and a budget for repairs if the school provides instruments. .

Sequence Introduction

Participation in Guitar promotes self-expression, creativity, collaboration, and communication skills. Guitar is focused on the development of instrumental guitar technique, musicianship, making meaning through music, and understanding of theory for individuals and small ensembles. The guitar is a versatile instrument that can be used to play music ranging from classical, contemporary, jazz, punk, rock, metal, country, funk, folk and blues, as well as a supporting instrument in hip hop and similar styles. Students will have the opportunity in Guitar to interpret the compositions of others and apply their developing performance skills to writing their own music and engaging in musical performance.

Student Need

Many students interested in learning music seek to explore popular musical styles that are closely connected to their personal interests while also developing high levels of instrumental skill. Guitar provides the opportunity for students to learn to play an instrument beyond the scope of the Instrumental Music curriculum while developing the conceptual understanding that differentiates provincial music curriculums from community-based instrument lessons.

Scope and Sequence

The study of music is an essential part of our shared humanity – all cultures throughout history have had some kind of relationship with music that bridges social, ritual, religious, and emotional understandings of each other. Stringed instruments, particularly ones played like a guitar (tightened strings plucked or

strummed with fingers or picks) are nearly as common across cultures as is the voice, and the study of guitar is a worthwhile way to access the study of music.

Through this course of study, students will learn to work within the musical arts in an accessible way in a progressive and sequential curriculum. This curriculum is delineated in levels rather than grades to support students having multiple entry points to the study of music regardless of their prior experience. In this way, a grade 9 student may begin at level 1, or a highly experienced grade 7 student might start at level 5. This curriculum is flexible enough to support student learning at every point in their journey. Where a learning outcome is highlighted in more than one area, it is expected that the material is increasing in rhythmic, notational, or theoretical complexity. “Standard Notation” refers to the system of notation typically used in Western music, including 5 line staves and notes with note heads and stems. Tablature notation refers to the common system of notation frequently used by guitarists that indicates which fret is covered on each string in time.

The Guiding Questions span all course levels. Where a learning outcome spans all levels, and outcomes and refinement of skills in demonstrating the outcome. Overall, Learning Outcomes can be achieved and assessed concurrently rather than sequentially. Guitar is designed as a progression of 5 levels. As a course without pre-requisites, teachers should follow the outcomes for individual students based on their level of experience with guitar, not their grade level. In this way, students with or without any prior experience can join a class with their grade cohort, and follow the curriculum given for an appropriate level. Guitar provides students with the opportunity to learn an instrument and the flexibility to pursue their own musical interests in writing music, forming

Guiding Questions

Guiding Questions | Level		**1**	**2**	**3**	**4**	**5**
1	What Fundamental techniques and base knowledge are required to perform music of different styles?	✓	✓	✓	✓	✓
2	How can students develop an understanding of the way music is organized learning guitar?	✓	✓	✓	✓	✓
3	How can students identify, describe, and reproduce the elements of music that define genre, style, and influence?			✓	✓	✓

Learning Outcomes

Guiding Question 1 |		**1**	**2**	**3**	**4**	**5**
1.1	Identify the parts of the guitar	✓	✓	✓	✓	✓
1.2	Play guitar using correct posture and hand position	✓	✓	✓	✓	✓
1.3	Demonstrate instrument care, including but not limited to:					
	▪ Correctly using guitar case or storage rack	✓	✓	✓	✓	✓
	▪ Tuning strings with a tuner	✓	✓	✓	✓	✓
	▪ Tuning strings by matching pitch	✓	✓	✓	✓	✓
	▪ Tuning strings by "5th fret method"		✓	✓	✓	✓
	▪ Changing broken strings when required			✓	✓	✓
1.4	Play basic chord shapes, progressing through the following:					
	▪ 1 finger chords on first three strings	✓				
	▪ Power chords: 2 string root / fifth chords for beginners	✓	✓	✓		
	▪ First position chords		✓	✓	✓	✓
	▪ Barre chords: 9 basic forms – E, em, E7, em7, A am, A7, am7 AM7				✓	✓
1.5	Know how the fretboard works and how to find notes using treble clef and tab. Demonstrate by progressing through the following:					
	▪ C Major scale fragment : C-D-E-F-G on strings 1-2	✓				
	▪ G Major scale in first position – strings 1 - 3		✓			
	▪ E Major scale in first position – 2 octaves, using all 6 strings			✓		
	▪ Chromatic scale in first position – E3 to G#5			✓		
	▪ E minor pentatonic and A minor pentatonic scale				✓	
	▪ Bb Blue Scale				✓	

Guiding Question 1 |		**1**	**2**	**3**	**4**	**5**
	▪ Play arpeggios with p-i-m free strokes				✓	
	▪ Play arpeggios with p-i-m-a free strokes					✓
1.6	Perform music for both solo guitar and small ensembles	✓	✓	✓	✓	✓

Guiding Question 2 |		**1**	**2**	**3**	**4**	**5**
2.1	Identify and interpret musical symbols including but not limited to:					
	▪ Standard notation on the staff – scaffolding with TAB as needed for level 1	✓	✓	✓	✓	✓
	▪ Tablature notation	✓	✓	✓		
	▪ Rhythmic notation	✓	✓	✓	✓	✓
	▪ Time Signatures – 4/4; 3/4; 2/4		✓	✓	✓	
	▪ Standard notation notes on ledger lines			✓	✓	✓
	▪ accidentals		✓			
	▪ Key signatures			✓	✓	✓
	▪ Expressive markings (dynamics, tempo, articulation) and other music markings – repeat, dal Segno, first/second endings, etc				✓	✓
	▪ Connecting chords and key signatures with their scale degrees – also known as Nashville Number System				✓	✓
2.2	Read and perform:					
	▪ Rhythms include, but not limited to eighth notes, quarter notes, half notes, whole notes and their corresponding rests	✓	✓	✓	✓	✓
	▪ Tablature melodies in first person	✓				
	▪ Tablature melodies in 2nd position		✓			

Guiding Question 2 |		**1**	**2**	**3**	**4**	**5**
	▪ Standard notation melodies on first three strings – scaffolding with TAB as needed for Level 1	✓	✓			
	▪ Standard notation melodies on all 6 strings in first position using a key signature				✓	
	▪ Standard notation melodies on all 6 strings in first position using accidentals			✓		✓
	▪ Standard notation in 2nd position					✓
	▪ Melodies that require a shift in position					✓
2.3	Compose and perform:					
	▪ Melodies using scales and patterns learned in 2.2	✓	✓	✓	✓	✓
	▪ Strumming patterns using rhythms learned in 2.2	✓	✓	✓	✓	✓
	▪ Chord progressions using chords learned in outcome 1.4	✓	✓	✓	✓	✓
2.4	Listen and perform from an aural example:					
	▪ Identify and recreate strumming patterns	✓	✓	✓	✓	✓
	▪ Identify and recreate melodies or riffs by ear		✓	✓	✓	✓
	▪ Identify and recreate chord progressions by ear				✓	✓

Guiding Question 3 |		1	2	3	4	5
3.1	Identify and describe guitar style and culture					
	▪ Recognize and describe the features that distinguish guitar-focused styles of western music, including but not limited to Rock; Jazz; blues, classical, country, bluegrass	✓				
	▪ Compare and contrast the features that distinguish guitar (or guitar-like) traditions from cultures including but not limited to Spanish, African, Greek, Mexican, Cuban, American, Indian, Persian, Caribbean		✓			
3.2	Explore influences on contemporary guitar music from other musical styles, time periods and various cultures			✓		✓
3.3	Analyse significant individuals guitarists for stylistic influences and impact on their musicians				✓	
3.4	Critique musical qualities and stylistic decisions in live performances and studio recorded / produced music					✓

Required Resources

sufficient guitars, music stands, chairs, and method book resources for each student. Replacement strings, and a budget for instrument repair and replacement if the school provides instruments. Audio/video equipment (smartboard, speakers loud enough to be heard while class is playing) is strongly recommended to demonstrate techniques, recordings, performances. The school may determine if provided instruments are to remain in the classroom, or be rented to each student.

Student Assessment

No specific assessment required

Required Facilities

No required facilities

Required Equipment

- Guitars (typically acoustic)
- Music Stands
- Electronic tuners
- Replacement strings

Health and Safety

If using amplifiers for performance of guitar music, volume must be kept within acceptable range to prevent potential hearing damage.

Sensitive or Controversial Content

No sensitive or controversial content.

Course Approval, Implementation and Evaluation

No specific processes.

Attachment 9

Locally Developed Course Outline

Math Strategies 7-8-9

(2022)

Elk Island Public Schools

Your Future in MIND

Submitted:

May 2022

Course Description:

Math Strategies 7-8-9 builds upon skills in number sense, logical reasoning, measurement, algebra, graphical reasoning, statistics, and probability.

The course aims to enhance numeracy skills and develop critical thinking and problem-solving abilities to support students in meeting the curricular requirements for their grade level.

The outcomes of this course incorporate the competencies of Alberta Education's Ministerial Order on Student Learning (#001/2013):

- Critical Thinking
- Problem Solving
- Managing Information
- Creativity and Innovation
- Communication
- Collaboration
- Cultural and Global Citizenship
- Personal Growth and Well-Being

Student Need:

Some students struggle to make sense of mathematics or may have experienced gaps in learning that require additional strategies and resources to fill. Other students have a desire to further their use of mathematics and make deeper connections in applying mathematical reasoning to the world around them. While such support and enrichment are often provided in the core classroom environment, time is often the barrier to accessing it.

This course is designed to give students the opportunity to reach their full academic potential by providing them with additional strategies, approaches, and resources to meet and extend the curricular outcomes of their grade level.

Scope and Sequence (Learner Outcomes):

The goal of this course is to prepare students to use mathematics confidently to solve problems, communicate and reason mathematically, develop an appreciation of and value for mathematics, make connections between mathematics and its applications, commit to lifelong learning, and become mathematically literate adults.

This course will focus on the mathematical processes that will support the learning outcomes across the four strands:

1. Number
2. Patterns and Relations (Patterns) / Patterns and Relations (Variables and Equations)
3. Shape and Space
4. Statistics and Probability

Guiding Questions (General Outcomes):

1. Students use **Communication and Collaboration** to learn and express their understanding.
2. Students make **Connections** between mathematical ideas to everyday experiences and to other courses.
3. Students use **Mental Mathematics and Estimation** to demonstrate fluency and understanding.
4. Students develop **Problem Solving and Reasoning** strategies and apply new mathematical knowledge to everyday experiences.
5. Students select and use **Technology** as tools for learning, solving problems, and for communicating information about mathematics.
6. Students develop **Visualization** skills to assist in processing information, making connections, communicating understanding, and solving problems.

Learning Outcomes (Specific Outcomes):

Communication & Collaboration	**7**	**8**	**9**
Explore and communicate with others mental math strategies and the use of these strategies in our daily lives.	✓	✓	✓
Explain reasoning strategies used to generate possible solutions when solving problems using real numbers.	✓	✓	✓
Collaborate with others to generate possible solutions when solving problems.	✓	✓	✓

Connections	**7**	**8**	**9**
Explore and communicate the significance of real numbers in our everyday lives (use of fractions, units of measurement, etc.).	✓	✓	✓
Explore and use a variety of statistical information in real life contexts.	✓	✓	✓
Demonstrate an understanding of shape and space in relation to everyday contexts.	✓	✓	✓

Mental Mathematics and Estimation	**7**	**8**	**9**
Solve problems that involve real numbers using estimation strategies.	✓	✓	✓
Apply mental math strategies to solve problems with real numbers.	✓	✓	✓
Engage in mathematical games to improve and understanding of numbers and reasoning.	✓	✓	✓

Problem Solving & Reasoning	**7**	**8**	**9**
Solve problems that involve real numbers using trial and error.	✓	✓	✓
Solve problems that involve real number using patterns.	✓	✓	✓
Evaluate and verify reasoning strategies.	✓	✓	✓

Technology	**7**	**8**	**9**
Select and use technology as tools for learning and solving problems.	✓	✓	✓
Use technology to create and communicate real numbers in our everyday lives (use software to design and generate images, use spreadsheets to analyze data, etc.).	✓	✓	✓

Visualization	**7**	**8**	**9**
Apply problem solving strategies to generate possible solutions concretely, pictorially, and symbolically.	✓	✓	✓
Create visual models to represent mathematical thinking and calculations.	✓	✓	✓

Facilities or Equipment

Facilities

No special facilities required.

Equipment

Access to calculators, manipulatives and internet are strongly recommended.

Learning and Teaching Resources

No unique resources required.

Assessment Standards

Assessment practices will follow board policies. No unique assessment is required.

Sensitive or Controversial Content

There are no sensitive or controversial issues expected with this course.

Issue Management Strategy

Health and Safety

Classroom setting – no unique health and safety issues.

Risk Management Strategy

Statement of Overlap with Existing Programs

Math 7-8-9

Reasoning For LDC

Students often require additional time to explore mathematical strategies to complete concepts and find success. This course will focus on providing students with additional strategies, resources and support to assist with meeting and extending curricular outcomes in the classroom.

School Authority Monitoring and Evaluation

The school's principal will ensure that the outcomes of this course are being met. Teachers will ensure that they are meeting the guidelines under which the course was intended. Instructional Supports will regularly review this Locally Develop Course.