

The Alberta Curriculum

GRADE 8

checklist format

compiled by: [The Canadian Homeschooler](#)
using the 2020 Alberta Curriculum



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Introduction

Often in homeschooling, families opt to follow a similar plan as that of publicly schooled children. This involves getting and understanding the governmental outlines for each subject and seeing what they need to learn when.

In Alberta, the full curriculum outline is freely available through the Alberta Education website (<https://new.learnalberta.ca>), (music can be found at <https://education.alberta.ca/media/482121/jhmusic.pdf> and French can be found at https://education.alberta.ca/media/160306/nine_year.pdf) however the curriculum is broken up into subjects, not by grades, which can prove to be a bit of a frustration.

I decided to pull together the curriculum into an easy-to-reference checklist format for each grade, stripped down to the basics, in hopes that it will help families feel a little less overwhelmed. I hope that it will help make planning a little more manageable. Although I originally put this together for homeschoolers, it is a valuable tool for anyone interested in seeing what kids are supposed to be learning at their grade level, and to evaluate what their child already knows.

Below you will find all the expectations for Grade Eight Mathematics, Language Arts, Science, Social Studies, the Arts, Health & Physical Education and French in Alberta.

At the time of creating this checklist, I used the most up-to-date versions of the government curriculum for each subject. I will attempt to edit and update the checklist if and when there are changes made, but I make no promises that I will always be able to keep up with it. Remember to keep an eye on the Alberta Education's website for the most up-to-date information.

Thank you to Alaina K. for her help in compiling this resource.

Happy learning!



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Please note that this checklist is a free product and may be distributed freely to whomever can use it.

Math

Number

	Specific Expectations
<i>Develop number sense.</i>	
<input type="checkbox"/>	Demonstrate an understanding of perfect squares and square roots, concretely, pictorially and symbolically (limited to whole numbers)
<input type="checkbox"/>	Determine the approximate square root of numbers that are not perfect squares (limited to whole numbers)
<input type="checkbox"/>	Demonstrate an understanding of percentages greater than or equal to 0%, including greater than 100%.
<input type="checkbox"/>	Demonstrate an understanding of ratio and rate.
<input type="checkbox"/>	Solve problems that involve rates, ratios, and proportional reasoning.
<input type="checkbox"/>	Demonstrate an understanding of multiplying and dividing positive fractions and mixed numbers, concretely, pictorially and symbolically.
<input type="checkbox"/>	Demonstrate an understanding of multiplication and division of integers, concretely, pictorially, and symbolically.

Patterns & Relations (Patterns)

	Specific Expectations
<i>Use patterns to describe the world and to solve problems.</i>	
<input type="checkbox"/>	Graph and analyze two-variable linear relations.

Patterns & Relations (Variables & Equations)

	Specific Expectations
<i>Represent algebraic expressions in multiple ways</i>	
<input type="checkbox"/>	Model and solve problems concretely, pictorially, and symbolically, using linear equations of the form: <ul style="list-style-type: none">$ax = b$$x/a = b, a \neq 0$$ax + b = c$$x/a + b = c$$x/a + b = c, A \neq 0$$a(x+b) = c$ where a, b , and c , are integers

Shape and Space (Measurement)

	Specific Expectations
<i>Use direct and indirect measurement to solve problems.</i>	
<input type="checkbox"/>	Develop and apply the Pythagorean theorem to solve problems
<input type="checkbox"/>	Draw and construct nets for 3-D objects
<input type="checkbox"/>	Determine the surface area of: <ul style="list-style-type: none">• right rectangular prisms• right triangular prisms• right cylinders to solve problems.
<input type="checkbox"/>	Develop and apply formulas for determining the volume of right rectangular prisms, right triangular prisms and right cylinders.

Shape and Space (3-D Objects and 2-D Shapes)

	Specific Expectations
<i>Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.</i>	
<input type="checkbox"/>	Draw and interpret top, front and side views of 3-D objects composed of right rectangular prisms

Shape and Space (Transformations)

	Specific Expectations
<i>Describe and analyze position and motion of objects and shapes.</i>	
<input type="checkbox"/>	Demonstrate an understanding of the congruence of polygons.

Statistics and Probability (Data Analysis)

	Specific Expectations
<i>Collect, display and analyze data to solve problems.</i>	
<input type="checkbox"/>	Critique ways in which data is presented in circle graphs, line graphs, bar graphs and pictographs.

Statistics and Probability (Chance and Uncertainty)

	Specific Expectations
<i>Use experimental or theoretical probabilities to represent and solve problems involving uncertainty.</i>	
<input type="checkbox"/>	Solve problems involving the probability of independent events.

Math Knowledge and Employability

Number Concepts and Number Operations

	Specific Expectations
<i>Demonstrate a number sense for whole numbers, common fractions, decimals and percents and apply arithmetic operations to solve problems with whole numbers, fractions, decimals and percents in everyday contexts.</i>	
Students will:	<input type="checkbox"/> use estimation strategies to estimate quantities and read and write numerals and number words to 1 000 000.
	<input type="checkbox"/> compare and order whole numbers.
	<input type="checkbox"/> represent an understanding of place value to the hundredths concretely, pictorially and symbolically.
	<input type="checkbox"/> recognize, model and describe multiples, factors, composites and primes to 100 concretely, pictorially and symbolically.
	<input type="checkbox"/> represent and describe proper fractions, mixed numbers and equivalent fractions concretely, pictorially and symbolically.
	<input type="checkbox"/> compare and order proper fractions and decimals to the hundredths.
	<input type="checkbox"/> estimate and apply arithmetic operations to whole numbers and decimals to the hundredths in everyday contexts.
	<input type="checkbox"/> estimate and apply arithmetic operations to proper fractions with like denominators concretely, pictorially and symbolically.
	<input type="checkbox"/> identify decimal equivalents for commonly used fractions, such as halves, quarters and tenths
	<input type="checkbox"/> estimate and apply arithmetic operations to decimals to the hundredths concretely, pictorially and symbolically to solve problems in everyday contexts.
	<input type="checkbox"/> represent and explain the meaning of percentage and the relationship between percentage and decimals concretely, pictorially and symbolically.
	<input type="checkbox"/> Students will assess the reasonableness of calculations and problem-solving strategies, using a variety of tools and/or strategies; e.g., estimation, mental mathematics, tables, graphs,

	calculators and/or computers.
	<input type="checkbox"/> estimate and measure temperature and use conversion charts and other tools to compare Celsius and Fahrenheit, as appropriate in everyday experiences.
	<input type="checkbox"/> identify common uses of positive and negative numbers, including above/below sea level and temperatures.

Patterns and Relations (Patterns and Relationships)

	Specific Expectations
Students will:	<input type="checkbox"/> recognize that patterns and relationships exist in nature and everyday living
	<input type="checkbox"/> use patterns and relationships to develop a better understanding of their environments and to solve everyday problems at home, in the workplace and in the community, using technology as appropriate
	<input type="checkbox"/> assess the reasonableness of calculations and problem-solving strategies
	<input type="checkbox"/> communicate mathematically and investigate the application of patterns and relationships in a variety of career and workplace situations, working individually or as a member of a team.
	<input type="checkbox"/> identify and describe, in spoken or written form, patterns and relationships in nature and in everyday contexts
	<input type="checkbox"/> represent a rule for a pattern, make predictions using the rule and extend the rule.

Patterns and Relations (Variables and Equations)

	Specific Expectations
Students will:	<input type="checkbox"/> represent algebraic equations in multiple ways to solve everyday problems, using technology as appropriate
	<input type="checkbox"/> communicate mathematically and investigate the application of variables and equations in a variety of career and workplace situations, working individually or as a member of a team.

	<input type="checkbox"/> describe everyday situations, using variables.
	<input type="checkbox"/> represent and explain the meaning of preservation of equality by balancing or using models and diagrams.
	<input type="checkbox"/> use pre-algebra strategies to solve equations with one unknown and with whole numbers.

Shape and Space (Measurement)

	Specific Expectations
Students will:	<input type="checkbox"/> estimate and take accurate measurements using everyday metric (SI) and imperial units of measure
	<input type="checkbox"/> solve problems using appropriate measuring devices, (i.e., metric (SI) and imperial), strategies and technology in home, workplace and community contexts
	<input type="checkbox"/> communicate mathematically and investigate the application of shape and space in a variety of career and workplace situations, working individually or as members of a team
	<input type="checkbox"/> assess reasonableness of calculations and problem-solving strategies.
	<input type="checkbox"/> recognize and explain the meaning of length, width, height, depth, thickness, perimeter and circumference.
	<input type="checkbox"/> estimate and use everyday metric (SI) tools and units to take accurate linear measurements; e.g., millimetre, centimetre, metre, kilometre.
	<input type="checkbox"/> estimate and use everyday imperial tools and units to take accurate linear measurements; e.g., inches, feet, yards, miles.
	<input type="checkbox"/> estimate, measure and calculate the perimeters of quadrilaterals and triangles to solve problems in everyday contexts.
	<input type="checkbox"/> estimate, measure and calculate the perimeter and area of irregular shapes by dividing them into parts, using manipulatives and diagrams.
	<input type="checkbox"/> demonstrate the relationships among the circumference, radius and diameter of circles.
	<input type="checkbox"/> calculate and solve everyday problems that involve mass (weight) and volume (capacity), using metric and imperial units.
	<input type="checkbox"/> use concrete objects to relate cm ³ to mL.

	<input type="checkbox"/> use conversion charts, calculators and/or other tools to compare and convert common metric (SI) and imperial linear units, as required in everyday contexts.
	<input type="checkbox"/> recognize the relationships among seconds, minutes, hours, days, weeks, months, years, centuries and millennia, using a variety of tools; e.g., calendars and technology.
	<input type="checkbox"/> estimate and measure time on 12-hour and 24- hour clocks, using digital and analog timepieces.
	<input type="checkbox"/> convert between hours and minutes and between minutes and seconds, as required in everyday contexts.

Shape and Space: 3-D Objects and 2-D Shapes

	Specific Expectations
Students will:	<input type="checkbox"/> create, examine and manipulate 3-D objects and 2-D shapes, using transformations and technology, and other tools as appropriate, to better understand shapes and objects at home, in the workplace and in the community
	<input type="checkbox"/> communicate mathematically and investigate the application of shape and space in a variety of career and workplace situations, working individually or as members of a team.
	<input type="checkbox"/> identify, classify, describe and construct models of 3-D objects; e.g., rectangular prisms, cubes, cylinders, cones and spheres.
	<input type="checkbox"/> design and construct nets for 3-D objects.
	<input type="checkbox"/> recognize and identify, from everyday observations and experiences, points, lines, parallel lines, intersecting lines, perpendicular lines, vertical lines, horizontal lines and line segments.
	<input type="checkbox"/> identify and illustrate lines of symmetry on quadrilaterals and triangles.
	<input type="checkbox"/> recognize and label the quadrants on a grid.
	<input type="checkbox"/> identify and plot points in the first quadrant of a coordinate grid, using ordered pairs.
	<input type="checkbox"/> reproduce a given geometric drawing on grid paper.

Shape and Space (Transformations)

	Specific Expectations
Students will:	<input type="checkbox"/> enhance their understanding of objects, shapes and motion in their everyday lives
	<input type="checkbox"/> perform, create and examine transformations to become aware of shapes and objects.
	<input type="checkbox"/> recognize and describe motion as a slide (translation), a turn (rotation) or a flip (reflection).
	<input type="checkbox"/> identify and describe tessellations found in the environment that are created with regular and irregular shapes.
	<input type="checkbox"/> create tessellations, using regular and irregular shapes.

Statistics and Probability (Collecting and Analyzing Information)

	Specific Expectations
Students will:	<input type="checkbox"/> collect and/or generate and display data and other information related to home, workplace and community applications, using technology as appropriate
	<input type="checkbox"/> interpret, examine and maintain data, charts, graphs and other records for personal and/or workplace use
	<input type="checkbox"/> apply probability and chance to make predictions when planning and making everyday decisions.
	<input type="checkbox"/> identify appropriate information/data sources; i.e., first-hand, second-hand and combinations.
Students will: use a variety of strategies to interpret information from prepared graphs and/or charts; e.g.,	
	<input type="checkbox"/> read axis and column subheadings and text under, beside or above
	<input type="checkbox"/> compare and examine pictures, bars, lines, symbols or markers
	<input type="checkbox"/> find trends or patterns
	<input type="checkbox"/> discuss information with classmates or others for clarification

	<input type="checkbox"/> reread to connect information in graphs and charts to surrounding and/or other information
	<input type="checkbox"/> make predictions based on information and data.
	<input type="checkbox"/> develop and communicate appropriate conclusions and discuss the reasonableness of data and results.
	<input type="checkbox"/> gather, organize and display information and data, using a variety of organizers/methods; e.g., journals, diagrams, charts, lists, graphs, spreadsheets, rank ordering and/or frequency charts.
	<input type="checkbox"/> examine and discuss the results of simple probability experiments/experiences.
	<input type="checkbox"/> demonstrate and/or discuss that different outcomes may occur when repeating the same experiment and/or everyday activity.

Language Arts

General Outcome	Specific Expectations
Students will listen, speak, read, write, view and represent to explore thoughts, ideas, feelings and experiences.	<i>Discover and Explore</i>
	<input type="checkbox"/> Revise understanding and expression of ideas by connecting new and prior knowledge and experiences
	<input type="checkbox"/> Review, reread, discuss and reflect on oral, print and other media texts to explore, confirm or revise understanding
	<input type="checkbox"/> Seek out and consider diverse ideas, opinions and experiences to develop and extend own ideas, opinions and experiences
	<input type="checkbox"/> Discuss and respond to ways that forms of oral, print and other media texts enhance or constrain the development and communication of ideas, information and experiences
	<input type="checkbox"/> Pursue personal interest in specific genres by particular writers, artists, storytellers and filmmakers
	<input type="checkbox"/> Examine and reflect on own growth in effective use of language to revise and extend personal goals
	<i>Clarify and Extend</i>
	<input type="checkbox"/> Acknowledge the value of the ideas and opinions of others in exploring and extending personal interpretations and perspectives
	<input type="checkbox"/> Exchange ideas and opinions to clarify understanding and to broaden personal perspectives
	<input type="checkbox"/> Reconsider and revise initial understandings and responses in light of new ideas, information and feedback from others
<i>Discover and Explore</i>	
Students will:	<input type="checkbox"/> extend and revise their understanding of ideas and information by connecting new and prior knowledge and personal experiences
	<input type="checkbox"/> extend and revise their understanding of ideas and information by exploring a variety of print and nonprint texts on related topics and themes
	<input type="checkbox"/> extend their understanding by taking different points of view when reviewing and reflecting on print and nonprint texts

	<input type="checkbox"/> experiment with language, form, structure and images to create different effects, considering purpose and audience
	<input type="checkbox"/> examine ways that language and forms influence the development and communication of ideas, information and experiences in print and nonprint texts; e.g., read a novel, view a film adaptation and compare the development and communication of the story
	<input type="checkbox"/> experiment with language to enhance language development; e.g., use new vocabulary, vary sentence structure and use figurative language
	<input type="checkbox"/> extend experiences by exploring and assessing a variety of print and nonprint texts, based on personal preferences and recommendations from others
	<input type="checkbox"/> identify and explain the reasons for their personal preferences; e.g., genres, artists, storytellers, filmmakers and authors
	<input type="checkbox"/> apply self-evaluation and other strategies and tools, e.g., checklists and inventories, to identify language strengths and weaknesses and develop personal language learning goals
	<input type="checkbox"/> create a language learning plan to meet attainable secondary, post-secondary and career goals and include a record/collection of achievements and goals; e.g., career portfolio
	<input type="checkbox"/> investigate career-related language skills using self-evaluation and other strategies to identify attainable career opportunities; e.g., Alberta Learning Information Service (ALIS) Web site, National Occupation Classification (NOC)
	<input type="checkbox"/> review and revise their language learning plan design to extend language growth
<i>Clarify and Extend</i>	
Students will:	<input type="checkbox"/> acknowledge the value of, and respond constructively to, the ideas and opinions of others when exploring and extending their personal interpretation and perspectives
	<input type="checkbox"/> assess and revise their personal opinions and ideas, based on alternative opinions and ideas
	<input type="checkbox"/> exchange ideas and opinions to clarify understanding and to broaden their personal perspectives
	<input type="checkbox"/> examine and re-examine ideas, information and experiences

	from different points of view to find patterns and relationships
	<input type="checkbox"/> synthesize information from a variety of sources to extend understanding and perspective
	<input type="checkbox"/> identify the purpose, message and intended audience of a communication and verify understanding
	<input type="checkbox"/> apply metacognition and other strategies to share, examine and re-examine points of view, opinions, experiences, perspectives and interpretations through discussion or by using various communication technologies; e.g., telephone, e-mail
	<input type="checkbox"/> use a variety of strategies to examine, clarify and assess understanding; e.g., discuss, review, reread and reflect
	<input type="checkbox"/> revise their initial understandings, points of view and responses, based on new ideas, information and feedback
<i>Use Strategies and Cues</i>	
Students will listen, speak, read, write, view and represent to comprehend and respond personally and critically to oral, print and other media texts.	<input type="checkbox"/> Use strategies to supplement and extend prior knowledge and experiences when interpreting new ideas and information
	<input type="checkbox"/> Use knowledge of authors, forms and genres, developed during previous reading, to direct and extend reading experiences
	<input type="checkbox"/> Enhance understanding by paraphrasing main ideas and supporting details, and by rereading and discussing relevant passages
	<input type="checkbox"/> Monitor understanding; skim, scan or read slowly and carefully, as appropriate, to enhance comprehension
	<input type="checkbox"/> Take notes, make outlines and use such strategies as read, recite, review to comprehend and remember ideas and information
	<input type="checkbox"/> Identify and use visual and textual cues in reference materials, such as catalogues, databases, web sites, thesauri and writers' handbooks, to access information effectively and efficiently
	<input type="checkbox"/> Identify and use structural features of a variety of oral, print and other media texts, such as newspapers, magazines, instruction booklets, advertisements and schedules, encountered in everyday life to access ideas and information and to read with purpose
	<input type="checkbox"/> Choose and use strategies for word identification, vocabulary development and spelling that either build on specific

	strengths or address areas for improvement
	<input type="checkbox"/> Use a thesaurus to extend vocabulary and locate appropriate words that express particular aspects of meaning
	<i>Respond to Texts</i>
	<input type="checkbox"/> Experience oral, print and other media texts from a variety of cultural traditions and genres, such as magazine articles, diaries, drama, poetry, Internet passages, fantasy, nonfiction, advertisements and photographs
	<input type="checkbox"/> Write and represent narratives from other points of view
	<input type="checkbox"/> Expect that there is more than one interpretation for oral, print and other media texts, and discuss other points of view
	<input type="checkbox"/> Explain connections between own interpretation and information in texts, and infer how texts will influence others
	<input type="checkbox"/> Make connections between biographical information about authors, illustrators, storytellers and filmmakers and their texts
	<input type="checkbox"/> Interpret the choices and motives of characters portrayed in oral, print and other media texts, and examine how they relate to self and others
	<input type="checkbox"/> Identify and describe characters' attributes and motivations, using evidence from the text and personal experiences
	<input type="checkbox"/> Discuss various ways characters are developed and the reasons for and plausibility of character change
	<input type="checkbox"/> Compare two similar oral, print or other media texts by considering the characters, plot, conflicts and main ideas
	<input type="checkbox"/> Discuss how techniques, such as word choice, balance, camera angles, line and framing, communicate meaning and enhance effects in oral, print and other media texts
	<input type="checkbox"/> Identify ways that characters can be developed, and discuss how character, plot and setting are interconnected and mutually supportive
	<input type="checkbox"/> Identify and discuss how word choice and order, figurative language, plot, setting and character work together to create mood and tone
	<i>Understand Forms, Elements, and Techniques</i>
	<input type="checkbox"/> Discuss how the choice of form or genre of oral, print and

	other media texts is appropriate to purpose and audience
	<input type="checkbox"/> Compare the usefulness of different types of media texts
	<input type="checkbox"/> Distinguish theme from topic or main idea in oral, print and other media texts
	<input type="checkbox"/> Identify and explain characters' qualities and motivations, by considering their words and actions, their interactions with other characters and the author's or narrator's perspective
	<input type="checkbox"/> Compare and contrast the different perspectives provided by first and third person narration
	<input type="checkbox"/> Summarize the content of media texts, and discuss the choices made in planning and producing them
	<input type="checkbox"/> Identify creative uses of language and visuals in popular culture, such as commercials, rock videos and magazines; explain how imagery and figurative language, such as hyperbole, create tone and mood
	<i>Create Original Text</i>
	<input type="checkbox"/> Create oral, print and other media texts related to issues encountered in texts and in own life
	<input type="checkbox"/> Retell oral, print and other media texts from different points of view
	<input type="checkbox"/> Create oral, print and other media texts with both main and minor characters
	<input type="checkbox"/> Choose forms or genres of oral, print or other media texts for the particular affects they will have on audiences and purposes
Students will listen, speak, read, write, view and represent to manage ideas and information.	<i>Plan and Focus</i>
	<input type="checkbox"/> Experiment with several ways to focus a topic, and select a form appropriate to audience and purpose
	<input type="checkbox"/> Identify and trace the development of arguments, opinions or points of view in oral, print and other media texts
	<input type="checkbox"/> Select the most appropriate information sources for topic, audience, purpose and form
	<input type="checkbox"/> Choose a plan to access, gather and record information, according to self-selected parameters
	<i>Select and Process</i>
	<input type="checkbox"/> Obtain information from a variety of sources, such as artifacts, debates, forums, biographies, autobiographies, surveys,

	documentaries, films, CDRoms, charts and tables, when conducting research
	<input type="checkbox"/> Expand and use a variety of tools and text features, such as subtitles, margin notes, key words, electronic searches, previews, reviews, visual effects and sound effects, to access information
	<input type="checkbox"/> Record key ideas and information from oral, print and other media texts, avoiding overuse of direct quotations
	<input type="checkbox"/> Adjust rate of reading or viewing to suit purpose and density of information in print or other media texts
	<input type="checkbox"/> Develop and use criteria for evaluating the usefulness, currency and reliability of information for a particular research project
	<i>Organize, Record and Evaluate</i>
	<input type="checkbox"/> Organize ideas and information creatively, as well as logically, to develop a comparison or chronology, or to show a cause–effect relationship
	<input type="checkbox"/> Organize ideas and information to establish an overall impression or point of view in oral, print and other media text
	<input type="checkbox"/> Make notes in point form, summarizing major ideas and supporting details; reference sources
	<input type="checkbox"/> Discard information that is irrelevant for audience, purpose, form or point of view
	<input type="checkbox"/> Use a consistent and approved format to give credit for quoted and paraphrased ideas and information
	<input type="checkbox"/> Evaluate the relevance and importance of gathered information; address information gaps
	<input type="checkbox"/> Incorporate new information with prior knowledge and experiences to develop new understanding
	<i>Share and Review</i>
	<input type="checkbox"/> Communicate ideas and information in a variety of oral, print and other media texts, such as interviews, minilessons and documentaries
	<input type="checkbox"/> Integrate appropriate visual, print and/or other media to inform and engage the audience

	<ul style="list-style-type: none"> □ Assess the research process, and consider alternative ways of achieving research goals
Students will listen, speak, read, write, view and represent to enhance the clarity and artistry of communication.	<i>Enhance and Improve</i>
	<ul style="list-style-type: none"> □ Share draft oral, print and other media texts in a way that will elicit useful feedback
	<ul style="list-style-type: none"> □ Evaluate how particular content features contribute to, or detract from, the overall effectiveness of own and others' oral, print and other media texts; make and suggest revisions
	<ul style="list-style-type: none"> □ Revise by adding words and phrases that emphasize important ideas or create dominant impressions
	<ul style="list-style-type: none"> □ Revise to enhance sentence variety, word choice and appropriate tone
	<ul style="list-style-type: none"> □ Enhance the coherence and impact of documents, using electronic editing functions
	<ul style="list-style-type: none"> □ Use paragraph structures to demonstrate unity and coherence
	<ul style="list-style-type: none"> □ Vary handwriting style and pace, depending on the context, audience and purpose
	<ul style="list-style-type: none"> □ Choose an effective format for documents, depending on the content, audience and purpose
	<ul style="list-style-type: none"> □ Explore and explain ways that new words, phrases and manners of expression enter the language as a result of factors, such as popular culture, technology, other languages
	<ul style="list-style-type: none"> □ Infer the literal and figurative meaning of words in context, using idioms, analogies, metaphors and similes
	<ul style="list-style-type: none"> □ Experiment with figurative language, voice, sentence patterns, camera angle and music to create an impression or mood
	<i>Attend to Conventions</i>
	<ul style="list-style-type: none"> □ Use words and phrases to modify, clarify and enhance ideas and descriptions in own writing
	<ul style="list-style-type: none"> □ Use a variety of simple, compound and complex sentence structures to communicate effectively, and to make writing interesting
	<ul style="list-style-type: none"> □ Use correct pronoun–antecedent agreement in own writing
	<ul style="list-style-type: none"> □ Use verb tenses consistently throughout a piece of writing
	<ul style="list-style-type: none"> □ Develop a systematic and effective approach to studying and remembering the correct spelling of key words encountered in

	a variety of print and other media texts
	<input type="checkbox"/> Use knowledge of spelling generalizations and how words are formed to spell technical terms and unfamiliar words in own writing
	<input type="checkbox"/> Identify the use of spelling variants in print and other media texts, and discuss the effectiveness depending on audience and purpose
	<input type="checkbox"/> Use hyphens to break words at the end of lines, and to make a new word from two related words in own writing
	<input type="checkbox"/> Identify semicolons, dashes and hyphens when reading, and use them to assist comprehension
	<input type="checkbox"/> Use parentheses appropriately in own writing
	<input type="checkbox"/> Use appropriate capitalization and punctuation for referencing oral, print and other media texts
	<i>Present and Share</i>
	<input type="checkbox"/> Plan and facilitate small group and short, whole class presentations to share information
	<input type="checkbox"/> Present information to achieve a particular purpose and to appeal to interest and background knowledge of reader or audience
	<input type="checkbox"/> Plan and shape presentations to achieve particular purposes or effects, and use feedback from rehearsals to make modifications
	<input type="checkbox"/> Anticipate the organizational pattern of presentations, and identify important ideas and supporting details
	<input type="checkbox"/> Use appropriate verbal and nonverbal feedback to respond respectfully
Students will listen, speak, read, write, view and represent to respect, support and collaborate with others.	<i>Respect Others and Strengthen Community</i>
	<input type="checkbox"/> Compare own with others' understanding of people, cultural traditions and values portrayed in oral, print and other media texts
	<input type="checkbox"/> Clarify and broaden perspectives and opinions, by examining the ideas of others
	<input type="checkbox"/> Compare ways in which oral, print and other media texts reflect specific elements of cultures or periods in history
	<input type="checkbox"/> Participate in organizing and celebrating special events,

	recognizing the appropriateness and significance of language arts
	<input type="checkbox"/> Use inclusive language and actions that demonstrate respect for people of different races, cultures, genders, ages and abilities
	<i>Work within a Group</i>
	<input type="checkbox"/> Propose ideas or advocate points of view that recognize the ideas of others and advance the thinking of the group
	<input type="checkbox"/> Use opportunities as a group member to contribute to group goals and extend own learning
	<input type="checkbox"/> Contribute ideas, knowledge and strategies to identify group information needs and sources
	<input type="checkbox"/> Organize and complete tasks cooperatively by defining roles and responsibilities, negotiating to find the basis for agreement, setting objectives and time frames, and reviewing progress
	<input type="checkbox"/> Evaluate the quality of own contributions to group process, and offer constructive feedback to others; propose suggestions for improvement
Respect Themselves and Others and Strengthen Community	
<i>Appreciate Diversity</i>	
Students will:	<input type="checkbox"/> examine how ideas, people, experiences and cultural traditions and values are portrayed in print and nonprint texts and compare their own with others' understanding; e.g., Aboriginal oral stories and artifacts
	<input type="checkbox"/> recognize that individual differences and perspectives are influenced by culture, religion, age, gender and experiences and are valuable and honourable
	<input type="checkbox"/> clarify and enhance their understanding, perspectives and opinions by examining the ideas of others
<i>Relate Texts to Culture</i>	
Students will:	<input type="checkbox"/> identify and compare the ways in which texts reflect specific elements of cultures or periods in history; e.g., Aboriginal peoples
<i>Celebrate Accomplishments and Events</i>	
Students will:	<input type="checkbox"/> participate in organizing and celebrating special events,

	considering the various ways language arts are used across cultures, age groups and genders to honour and celebrate people and accomplishments; e.g., Aboriginal and other cultural/community events
<i>Use Language to Show Respect</i>	
	<input type="checkbox"/> use inclusive language and behaviour and create texts in ways that demonstrate respect for people of different heritage, cultures, genders, ages, abilities, opinions and communities
<i>Cooperate with Others</i>	
Students will:	<input type="checkbox"/> demonstrate respect for their rights and the rights of others, within a group and a community, by being fair and honest, demonstrating integrity and personal ethics and by valuing equity within the group
	<input type="checkbox"/> contribute collaboratively in group situations by asking questions and listening and building on the ideas of others
	<input type="checkbox"/> identify and model the behaviours of a successful student and/or worker; e.g., listen to and follow directions, seek assistance, arrive on time, organize materials, paraphrase directions, prioritize tasks and recognize expectations
	<input type="checkbox"/> distinguish among constructive criticism, ridicule and sarcasm and identify strategies to respond appropriately
<i>Work in Groups</i>	
Students will:	<input type="checkbox"/> communicate appropriately with group members to develop and/or identify goals, generate ideas, monitor progress and share responsibility for the completion of a project/group goal
	<input type="checkbox"/> identify and demonstrate appropriate behaviour within a group; e.g., listen without interrupting, contribute when appropriate, disagree and/or offer suggestions in an appropriate manner
	<input type="checkbox"/> identify and model motivational techniques, e.g., positive reinforcement, suggestions and paraphrasing, to focus group members on tasks and achieve group goals
	<input type="checkbox"/> acknowledge conflicting points of view within a group and contribute to compromise in a positive manner, using a variety of strategies; e.g., follow a problem-solving or issue-resolution model
	<input type="checkbox"/> assess personal effectiveness when assuming major roles within a group

	<input type="checkbox"/> identify leadership roles within a group to enhance personal leadership skills
<i>Evaulation Group Processes</i>	
Students will:	<input type="checkbox"/> evaluate group processes, and personal contributions to group processes, to determine and communicate strengths and areas for improvement

Science & Technology

Mix and Flow of Matter

Section	Specific Expectations
<p>Students will:</p> <p>Investigate and describe fluids used in technological devices and everyday materials</p>	<input type="checkbox"/> Investigate and identify examples of fluids in household materials, technological devices, living things and natural environments
	<input type="checkbox"/> Explain the Workplace Hazardous Materials Information System (WHMIS) symbols for labelling substances; and describe the safety precautions to follow when handling, storing and disposing of substances at home and in the laboratory
	<input type="checkbox"/> Describe examples in which materials are prepared as fluids in order to facilitate transport, processing or use (<i>e.g., converting mineral ores to liquids or slurries to facilitate transport, use of paint solvents to facilitate mixing and application of pigments, use of soapy water to carry away unwanted particles of material</i>)
	<input type="checkbox"/> Identify properties of fluids that are important in their selection and use (<i>e.g., lubricant properties of oils, compressibility of gases used in tires</i>)
<p>Students will:</p> <p>Investigate and describe the composition of fluids, and interpret the behaviour of materials in solution</p>	<input type="checkbox"/> Distinguish among pure substances, mixtures and solutions, using common examples (<i>e.g., identify examples found in households</i>)
	<input type="checkbox"/> Investigate the solubility of different materials, and describe their concentration (<i>e.g., describe concentration in grams of solute per 100 mL of solution</i>)
	<input type="checkbox"/> Investigate and identify factors that affect solubility and the rate of dissolving a solute in a solvent (<i>e.g., identify the effect of temperature on solubility; identify the effect of particle size and agitation on rate of dissolving</i>)
	<input type="checkbox"/> Relate the properties of mixtures and solutions to the particle model of matter (<i>e.g., recognize that the attraction between particles of solute and particles of solvent helps keep materials in solution</i>)
<p>Students will:</p> <p>Investigate and compare the properties of gases and</p>	<input type="checkbox"/> Investigate and compare fluids, based on their viscosity and flow rate, and describe the effects of temperature change on liquid flow
	<input type="checkbox"/> Observe the mass and volume of a liquid, and calculate its

liquids; and relate variations in their viscosity, density, buoyancy and compressibility to the particle model of matter	density using the formula $d = m/v$ [Note: This outcome does not require students to perform formula manipulations or solve for unknown terms other than the density.]
	<input type="checkbox"/> Compare densities of materials; and explain differences in the density of solids, liquids and gases, using the particle model of matter
	<input type="checkbox"/> Describe methods of altering the density of a fluid, and identify and interpret related practical applications (e.g., describe changes in buoyancy resulting from increasing the concentration of salt in water)
	<input type="checkbox"/> Describe pressure as a force per unit area by using the formula $p = F/A$, and describe applications of pressure in fluids and everyday situations (e.g., describe pressure exerted by water in hoses, air in tires, carbon dioxide in fire extinguishers; explain the effects of flat heels and stiletto heels, using the concept of pressure)
Students will: Identify, interpret and apply technologies based on properties of fluids	<input type="checkbox"/> Investigate and compare the compressibility of liquids and gases
	<input type="checkbox"/> Describe technologies based on the solubility of materials (e.g., mining salt or potash by dissolving)
	<input type="checkbox"/> Describe and interpret technologies based on flow rate and viscosity (e.g., heavy oil extraction from tar sands, development of motor oils for different seasons, ketchup/mustard squeeze bottles)
	<input type="checkbox"/> Describe and interpret technologies for moving fluids from one place to another (e.g., intravenous lines, pumps and valves, oil and gas pipelines)
	<input type="checkbox"/> Construct a device that uses the transfer of fluids to apply a force or to control motion (e.g., construct a model hydraulic lift; construct a submersible that can be made to sink or float by transfer of a fluid; construct a model of a pump)

Skill Outcomes for Unit A Mix and Flow of Matter

Section	Specific Expectations
<i>Initiating and Planning</i>	
Students will:	<input type="checkbox"/> define practical problems (e.g., How can we remove a salt coating from a bicycle or vehicle?)
Ask questions about the	<input type="checkbox"/> identify questions to investigate, arising from practical

relationships between and among observable variables, and plan investigations to address those questions	problems and issues (e.g., identify questions, such as: “What factors affect the speed with which a material dissolves?”)
	<input type="checkbox"/> phrase questions in a testable form, and clearly define practical problems (e.g., rephrase a question, such as: “Is salt very soluble?” to become “What is the most salt that can be dissolved in one litre of water at 23°C?”)
	<input type="checkbox"/> design an experiment, and identify the major variables (e.g., design or apply a procedure for measuring the solubility of different materials)
<i>Performing and Recording</i>	
Students will: Conduct investigations into the relationships between and among observations, and gather and record qualitative and quantitative data	<input type="checkbox"/> carry out procedures, controlling the major variables (e.g., carry out a test of the viscosity of different fluids)
	<input type="checkbox"/> use instruments effectively and accurately for collecting data (e.g., measure the mass and volume of a given sample of liquid)
	<input type="checkbox"/> construct and test prototype designs and systems (e.g., construct a model submarine that is controlled by an air hose connected to a syringe)
	<input type="checkbox"/> use tools and apparatus safely (e.g., wear safety goggles during investigations of solution properties)
	<input type="checkbox"/> organize data, using a format that is appropriate to the task or experiment (e.g., demonstrate the use of a database or spreadsheet for organizing information)
<i>Analyzing and Interpreting</i>	
Students will: Analyze qualitative and quantitative data, and develop and assess possible explanations	<input type="checkbox"/> identify and suggest explanations for discrepancies in data (e.g., explain a loss in the volume of a liquid, by identifying such factors as evaporation or absorption by a filtering material)
	<input type="checkbox"/> predict the value of a variable, by interpolating or extrapolating from graphical data (e.g., extrapolate results to predict how much solute will dissolve in a given solvent at a given temperature)
	<input type="checkbox"/> identify new questions and problems that arise from what was learned (e.g., identify questions, such as: “What techniques are used to remove pollutants from air and water?”)
	<input type="checkbox"/> identify and evaluate potential applications of findings
<i>Communication and Teamwork</i>	
Students will:	<input type="checkbox"/> identify and correct practical problems in the way a prototype

Work collaboratively on problems; and use appropriate language and formats to communicate ideas, procedures and results	or constructed device functions (e.g., identify and seal leaks in a model fluid system)
	<input type="checkbox"/> work cooperatively with team members to develop and carry out a plan, and troubleshoot problems as they arise
	<input type="checkbox"/> communicate questions, ideas, intentions, plans and results, using lists, notes in point form, sentences, data tables, graphs, drawings, oral language and other means (e.g., show the differences in flow rate, using a data table and diagrams)

Attitude Outcomes for Unit A: Mix and Flow of Matter

Section	Specific Expectations
<i>Interest in Science</i>	
Students will be encouraged to:	<input type="checkbox"/> Show interest in science-related questions and issues, and pursue personal interests and career possibilities within science-related fields (e.g., attempt at home to repeat or extend a science investigation done at school; investigate applications of fluid properties in technologies used in the local community)
<i>Mutual Respect</i>	
Students will be encouraged to:	<input type="checkbox"/> Appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds (e.g., show awareness that knowledge of fluid characteristics has developed in many societies and cultures, based on practical experience with materials in the environment)
<i>Scientific Inquiry</i>	
Students will be encouraged to:	<input type="checkbox"/> Seek and apply evidence when evaluating alternative approaches to investigations, problems and issues (e.g., regularly repeat measurements or observations to increase the precision of evidence)
<i>Collaboration</i>	

Students will be encouraged to:	<input type="checkbox"/> Work collaboratively in carrying out investigations and in generating and evaluating ideas (e.g., assume responsibility for their share of work in preparing for investigations and in gathering and recording evidence; consider alternative ideas and approaches suggested by members of the group; share the responsibility for difficulties encountered in an activity)
<i>Stewardship</i>	
Students will be encouraged to:	<input type="checkbox"/> Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment (e.g., recognize that the disposal of materials through drains creates needs for waste water treatment and may result in downstream environmental impacts)
<i>Safety</i>	
Students will be encouraged to:	<input type="checkbox"/> Show concern for safety in planning, carrying out and reviewing activities (e.g., take the time to organize their work area so that accidents can be prevented; read the labels on materials before using them, and ask for help if safety symbols are not clear or understood; clean their work area during and after an activity)

Unit B: Cells and Systems

Section	Specific Expectations
Students will:	<input type="checkbox"/> Investigate and describe example scientific studies of the characteristics of living things
Investigate living things; and identify and apply scientific ideas used to interpret their general structure, function and organization	<input type="checkbox"/> Apply the concept of system in describing familiar organisms and analyzing their general structure and function
	<input type="checkbox"/> Illustrate and explain how different organisms have similar functions that are met in a variety of ways
Students will:	<input type="checkbox"/> Describe the role of cells as a basic unit of life
Investigate and describe the role of cells within living things	<input type="checkbox"/> Analyze similarities and differences between single-celled and multicelled organisms
	<input type="checkbox"/> Distinguish between plant and animal cells
	<input type="checkbox"/> Describe the movement of gases and liquids into and out of

	cells during diffusion and osmosis, based on concentration differences [<i>Note: This outcome requires a general understanding of processes, not a detailed analysis of mechanisms.</i>]
	<input type="checkbox"/> Examine plant and animal structures; and identify contributing roles of cells, tissues and organs
Students will:	<input type="checkbox"/> Describe, in general terms, body systems for respiration, circulation, digestion, excretion and sensory awareness
Interpret the healthy function of human body systems, and illustrate ways the body reacts to internal and external stimuli	<input type="checkbox"/> Describe, in general terms, the role of individual organs and tissues in supporting the healthy functioning of the human body
	<input type="checkbox"/> Describe ways in which various types of cells contribute to the healthy functioning of the human body
	<input type="checkbox"/> Describe changes in body functions in response to changing conditions
Students will:	<input type="checkbox"/> Identify examples of research into functions and dysfunctions of human cells, organs or body systems
Describe areas of scientific investigation leading to new knowledge about body systems and to new medical applications	<input type="checkbox"/> Describe ways in which research about cells, organs and systems has brought about improvements in human health and nutrition
	<input type="checkbox"/> Investigate and describe factors that affect the healthy function of the human respiratory, circulatory and digestive systems

Skill Outcomes for Unit B: Cells and Systems

Section	Specific Expectations
<i>Initiating and Planning</i>	
Students will:	<input type="checkbox"/> identify questions to investigate (e.g., identify questions that arise from their own observations of plant and animal diversity)
Ask questions about the relationships between and among observable variables, and plan investigations to address those questions	<input type="checkbox"/> rephrase questions in a testable form (e.g., rephrase a question, such as: “Why this structure?” to become questions, such as: “How is this structure used by the organism?”, “How would the organism be affected if this structure were absent or did not function?” or “What similar structures do we find in other organisms?”)
	<input type="checkbox"/> formulate operational definitions of major variables and other aspects of their investigations (e.g., define body systems in

	terms of the functions they perform)
<i>Performing and Recording</i>	
<p>Students will:</p> <p>Conduct investigations into the relationships between and among observations, and gather and record qualitative and quantitative data</p>	<input type="checkbox"/> use instruments—including microscopes—effectively and accurately for collecting data (e.g., use a microscope to produce a clear image of cells)
	<input type="checkbox"/> estimate measurements (e.g., estimate the size of an object viewed under a microscope)
	<input type="checkbox"/> observe and record data, and produce simple line drawings (e.g., draw cells and organisms)
	<input type="checkbox"/> organize data, using a format that is appropriate to the task or experiment (e.g., compare the structure and function of two or more organisms, using charts and drawings)
<i>Analyzing and Interpreting</i>	
<p>Students will:</p> <p>Analyze qualitative and quantitative data, and develop and assess possible explanations</p>	<input type="checkbox"/> identify strengths and weaknesses of different methods of collecting and displaying data (e.g., compare methods of measuring heart rate)
	<input type="checkbox"/> identify and suggest explanations for discrepancies in data (e.g., explain variations in the heart rate and blood pressure of the same individual at different times during the day)
	<input type="checkbox"/> compile and display data, by hand or computer, in a variety of formats, including diagrams, flow charts, tables, bar graphs and line graphs (e.g., prepare charts that compare structures of different organisms)
	<input type="checkbox"/> identify new questions and problems that arise from what was learned
<i>Communication and Teamwork</i>	
<p>Students will:</p> <p>Work collaboratively on problems; and use appropriate language and formats to communicate ideas, procedures and results</p>	<input type="checkbox"/> receive, understand and act on the ideas of others (e.g., adopt and use an agreed procedure for preparing diagrams and charts)
	<input type="checkbox"/> communicate questions, ideas, intentions, plans and results, using lists, notes in point form, sentences, data tables, graphs, drawings, oral language and other means
	<input type="checkbox"/> work cooperatively with team members to develop and carry out a plan (e.g., prepare a class presentation on the digestive system, including a model constructed by the group)
	<input type="checkbox"/> evaluate individual and group processes used in planning, problem solving, decision making and completing a task (e.g.,

	evaluate processes used in completing a cooperative group project)
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Attitude Outcomes for Unit B: Cells and Systems

Section	Specific Expectations
<i>Interest in Science</i>	
Students will be encouraged to:	<ul style="list-style-type: none"> □ Show interest in science-related questions and issues, and pursue personal interests and career possibilities within science-related fields (e.g., select and explore media on topics related to the diversity of living things and the maintenance of health; express interest in science-related/ technology-related careers that contribute to the welfare of living things)
<i>Mutual Respect</i>	
Students will be encouraged to:	<ul style="list-style-type: none"> □ Appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds (e.g., recognize that a wide range of people working in different fields have contributed to scientific and medical knowledge)
<i>Scientific Inquiry</i>	
Students will be encouraged to:	<ul style="list-style-type: none"> □ Seek and apply evidence when evaluating alternative approaches to investigations, problems and issues (e.g., consider a wide variety of possible interpretations of their observations of animal structures and functions; critically evaluate inferences and conclusions, basing their arguments on fact rather than opinion)
<i>Collaboration</i>	
Students will be encouraged to:	<ul style="list-style-type: none"> □ Work collaboratively in carrying out investigations and in generating and evaluating ideas (e.g., assume responsibility for their share of work in preparing for investigations and in gathering and recording evidence; consider alternative ideas and approaches suggested by members of the group; share the responsibility for difficulties encountered in an activity)
<i>Stewardship</i>	
Students will be encouraged to:	<ul style="list-style-type: none"> □ Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment (e.g., show interest in the health of individuals in their family and community; assume personal responsibility for the impact of their actions on the health of others and for the welfare and survival of other living things)

<i>Safety</i>	
Students will be encouraged to:	<input type="checkbox"/> Show concern for safety in planning, carrying out and reviewing activities (e.g., wear proper safety attire, without having to be reminded; follow appropriate safety procedures in handling biological material; clean their work area during and after an activity; ensure the proper disposal of materials)

Unit C: Light and Optical Systems

Section	Specific Expectations
Students will: Investigate the nature of light and vision; and describe the role of invention, explanation and inquiry in developing our current knowledge	<input type="checkbox"/> Identify challenges in explaining the nature of light and vision (<i>e.g., recognize that past explanations for vision involved conflicting ideas about the interaction of eyes and objects viewed; identify challenges in explaining upside-down images, rainbows and mirages</i>)
	<input type="checkbox"/> Investigate the development of microscopes, telescopes and other optical devices; and describe how these developments contributed to the study of light and other areas of science
	<input type="checkbox"/> Investigate light beams and optical devices, and identify phenomena that provide evidence of the nature of light
Students will: Investigate the transmission of light, and describe its behaviour using a geometric ray model	<input type="checkbox"/> Investigate how light is reflected, transmitted and absorbed by different materials; and describe differences in the optical properties of various materials
	<input type="checkbox"/> Measure and predict angles of reflection
	<input type="checkbox"/> Investigate, measure and describe the refraction of light through different materials
	<input type="checkbox"/> Investigate materials used in optical technologies; and predict the effects of changes in their design, alignment or composition
Students will: Investigate and explain the science of image formation and vision, and interpret related technologies	<input type="checkbox"/> Demonstrate the formation of real images, using a double convex lens, and predict the effects of changes in the lens position on the size and location of images
	<input type="checkbox"/> Demonstrate and explain the use of microscopes; and describe, in general terms, the function of eyeglasses, binoculars and telescopes
	<input type="checkbox"/> Explain how objects are seen by the eye, and compare eyes with cameras
	<input type="checkbox"/> Compare the function and design of the mammalian eye with that of other vertebrates and invertebrates

	<input type="checkbox"/> Investigate and describe the development of new technologies to enhance human vision
	<input type="checkbox"/> Investigate and interpret emerging technologies for storing and transmitting images in digital form

Skill Outcomes for Unit C: Light and Optical Systems

Section	Specific Expectations
<i>Initiating and Planning</i>	
<p>Students will:</p> <p>Ask questions about the relationships between and among observable variables, and plan investigations to address those questions</p>	<input type="checkbox"/> identify questions to investigate (e.g., ask about the role of eyeglasses in improving vision)
	<input type="checkbox"/> define and delimit questions to facilitate investigation (e.g., rephrase a question, such as: “Is plastic the best material to use in eyeglasses?” to become “Which material refracts light the most?”)
	<input type="checkbox"/> designate a prediction and a hypothesis based on background information or an observed pattern of events (e.g., predict the effect of dissolved materials on the refraction of light in a liquid) in an experiment, and identify the major variables
	<input type="checkbox"/> formulate operational definitions of major variables and other aspects of their investigations (e.g., operationally define “refraction” and “beam of light”)
<i>Performing and Recording</i>	
<p>Students will:</p> <p>Conduct investigations into the relationships between and among observations, and gather and record qualitative and quantitative data</p>	<input type="checkbox"/> carry out procedures, controlling the major variables
	<input type="checkbox"/> observe and record data, and prepare simple line drawings (e.g., prepare a drawing of the path of a light beam toward and away from a mirror)
	<input type="checkbox"/> use instruments effectively and accurately for collecting data (e.g., measure angles of reflection; use a light sensor to measure light intensity)
	<input type="checkbox"/> organize data, using a format that is appropriate to the task or experiment (e.g., demonstrate use of a database or spreadsheet for organizing information)
	<input type="checkbox"/> use tools and apparatus safely (e.g., use lasers only in ways that do not create a risk of light entering anyone’s eyes)
<i>Analyzing and Interpreting</i>	

<p>Students will:</p> <p>Analyze qualitative and quantitative data, and develop and assess possible explanations</p>	<input type="checkbox"/> predict the value of a variable by interpolating or extrapolating from graphical data (e.g., predict the angle of a refracted beam of light)
	<input type="checkbox"/> identify strengths and weaknesses of different ways of collecting and displaying data (e.g., evaluate different approaches to testing a lens)
	<input type="checkbox"/> state a conclusion, based on experimental data, and explain how evidence gathered supports or refutes an initial idea (e.g., write a conclusion on the effect of dissolved materials on the refraction of light through water)
	<input type="checkbox"/> identify new questions and problems that arise from what was learned (e.g., ask questions about new technologies for improving human vision and about the principles on which these technologies are based)
<i>Communication and Teamwork</i>	
<p>Students will:</p> <p>Work collaboratively on problems; and use appropriate language and formats to communicate ideas, procedures and results</p>	<input type="checkbox"/> receive, understand and act on the ideas of others (e.g., act on the suggestions of others in testing and manipulating various lens combinations)
	<input type="checkbox"/> recommend an appropriate way of summarizing and interpreting their findings (e.g., prepare a drawing and description of an improvised optical device)

Attitude Outcomes for Unit C: Light and Optical Systems

Section	Specific Expectations
<i>Interest in Science</i>	
<p>Students will be encouraged to:</p>	<input type="checkbox"/> Show interest in science-related questions and issues, and pursue personal interests and career possibilities within science-related fields (e.g., choose to investigate challenging topics; seek information from a variety of sources; express interest in science- and technology-related careers)
<i>Mutual Respect</i>	

Students will be encouraged to:	<ul style="list-style-type: none"> □ Appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds (e.g., show awareness of and respect for the research, care and craftsmanship involved in developing means to enhance human vision)
<i>Scientific Inquiry</i>	
Students will be encouraged to:	<ul style="list-style-type: none"> □ Seek and apply evidence when evaluating alternative approaches to investigations, problems and issues (e.g., ask questions to clarify meaning or confirm their understanding; take the time to accurately gather evidence and use instruments carefully; consider observations and ideas from a number of sources during investigations and before drawing conclusions)
<i>Collaboration</i>	
Students will be encouraged to:	<ul style="list-style-type: none"> □ Work collaboratively in carrying out investigations and in generating and evaluating ideas (e.g., choose a variety of strategies, such as active listening, paraphrasing and questioning, in order to understand other points of view; consider alternative ideas and interpretations suggested by members of the group)
<i>Stewardship</i>	
Students will be encouraged to:	<ul style="list-style-type: none"> □ Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment (e.g., recognize that light can contribute to light pollution)
<i>Safety</i>	
Students will be encouraged to:	<ul style="list-style-type: none"> □ Show concern for safety in planning, carrying out and reviewing activities (e.g., select safe methods in using optical devices; readily alter a procedure to ensure the safety of members of the group)

Unit D: Mechanical Systems

Section	Specific Expectations
Students will: Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time	<ul style="list-style-type: none"> <input type="checkbox"/> Investigate and provide examples of mechanical devices used in the past to meet particular needs <input type="checkbox"/> Illustrate how a common need has been met in different ways over time <input type="checkbox"/> Illustrate how trial and error and scientific knowledge both play a role in technological development
Students will: Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts	<ul style="list-style-type: none"> <input type="checkbox"/> Analyze a mechanical device, by: <ul style="list-style-type: none"> – describing the overall function of the device – describing the contribution of individual components or subsystems to the overall function of the device – identifying components that operate as simple machines <input type="checkbox"/> Identify the source of energy for some familiar mechanical devices <input type="checkbox"/> Identify linkages and power transmissions in a mechanical device, and describe their general function
Students will: Investigate and describe the transmission of force and energy between parts of a mechanical system	<ul style="list-style-type: none"> <input type="checkbox"/> analyze mechanical devices to determine speed ratios and force ratios <input type="checkbox"/> build or modify a model mechanical system to provide for different turning ratios between a driving and driven shaft, or to achieve a given force ratio <input type="checkbox"/> compare theoretical and actual values of force ratios, and propose explanations for discrepancies <input type="checkbox"/> identify work input and work output in joules for a simple machine or mechanical system <input type="checkbox"/> Describe fluid pressure qualitatively and quantitatively, by: <ul style="list-style-type: none"> – explaining how forces are transferred in all directions – describing pressure in units of force per unit area <input type="checkbox"/> Describe how hydraulic pressure can be used to create a mechanical advantage in a simple hydraulic jack <input type="checkbox"/> Describe and interpret technologies based on hydraulics and pneumatics

<p>Students will:</p> <p>Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices</p>	<input type="checkbox"/> Evaluate the design and function of a mechanical device in relation to its efficiency and effectiveness, and identify its impacts on humans and the environment
	<input type="checkbox"/> Develop and apply a set of criteria for evaluating a given mechanical device, and defend those criteria in terms of relevance to social and environmental needs
	<input type="checkbox"/> Illustrate how technological development is influenced by advances in science, and by changes in society and the environment

Skill Outcomes for Unit D: Mechanical Systems

Section	Specific Expectations
<i>Initiating and Planning</i>	
<p>Students will:</p> <p>Ask questions about the relationships between and among observable variables, and plan investigations to address those questions</p>	<input type="checkbox"/> identify practical problems (e.g., identify problems related to the effectiveness or efficiency of a mechanical device)
	<input type="checkbox"/> identify questions to investigate arising from practical problems (e.g., “What is the efficiency of this device?”)
	<input type="checkbox"/> propose alternative solutions to a practical problem, select one, and develop a plan
	<input type="checkbox"/> select appropriate methods and tools for collecting data to solve problems (e.g., develop or apply appropriate methods for measuring speed ratios and force ratios; plan and conduct a search, using a wide variety of electronic sources)
	<input type="checkbox"/> formulate operational definitions of major variables and other aspects of their investigations (e.g., define “frictional force” by identifying a method to be used for measuring it)
<i>Performing and Recording</i>	
<p>Students will:</p> <p>Conduct investigations into the relationships between and among observations, and gather and record qualitative and quantitative data</p>	<input type="checkbox"/> research information relevant to a given problem
	<input type="checkbox"/> select and integrate information from various print and electronic sources or from several parts of the same source
	<input type="checkbox"/> construct and test prototype designs and systems
	<input type="checkbox"/> carry out procedures, controlling the major variables (e.g., ensure that materials to be tested are of the same size and are tested under identical conditions)
	<input type="checkbox"/> organize data, using a format that is appropriate to the task or experiment

	<input type="checkbox"/> use tools and apparatus safely
<i>Analyzing and Interpreting</i>	
Students will:	<input type="checkbox"/> identify and correct practical problems in the way a prototype or constructed device functions
Analyze qualitative and quantitative data, and develop and assess possible explanations	<input type="checkbox"/> evaluate designs and prototypes in terms of function, reliability, safety, efficiency, use of materials and impact on the environment (e.g., test and evaluate the efficiency and reliability of a prototype device to lift a given mass from the floor to a tabletop)
	<input type="checkbox"/> identify and evaluate potential applications of findings (e.g., identify possible applications of a simple machine or mechanical system they have studied)
<i>Communication and Teamwork</i>	
Students will:	<input type="checkbox"/> use specific language that is scientifically and technologically appropriate (e.g., use such terms as “system,” “subsystem,” “component” and “function” in describing a mechanical system)
Work collaboratively on problems; and use appropriate language and formats to communicate ideas, procedures and results	<input type="checkbox"/> communicate practical problems, plans and results in a variety of ways, using written and oral language, data tables, graphs, drawings and other means (e.g., describe, using pictures and words, the transmission of a force through a mechanical system)
	<input type="checkbox"/> work cooperatively with team members to develop and carry out a plan, and troubleshoot problems as they arise

Attitude Outcomes for Unit D: Mechanical Systems

Section	Specific Expectations
<i>Interest in Science</i>	
Students will be encouraged to:	<input type="checkbox"/> Show interest in science-related questions and issues, and pursue personal interests and career possibilities within science-related fields (e.g., investigate examples of mechanical devices in their home and community; ask questions about techniques and materials used; show an interest in related careers and hobbies)
<i>Mutual Respect</i>	

Students will be encouraged to:	<input type="checkbox"/> Appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds (e.g., recognize that varied solutions to similar problems have been developed by different cultures throughout history; appreciate that different approaches to problems lead to different solutions, and that each may have merits for particular applications)
<i>Scientific Inquiry</i>	
Students will be encouraged to:	<input type="checkbox"/> Seek and apply evidence when evaluating alternative approaches to investigations, problems and issues (e.g., report the limitations of their designs; continue working on a problem or research project until the best possible solutions or answers are uncovered)
<i>Collaboration</i>	
Students will be encouraged to:	<input type="checkbox"/> Work collaboratively in carrying out investigations and in generating and evaluating ideas (e.g., accept various roles within a group, including that of leadership; understand that they can disagree with others but still work in a collaborative manner; share the responsibility for difficulties encountered during an activity)
<i>Stewardship</i>	
Students will be encouraged to:	<input type="checkbox"/> Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment (e.g., consider the impacts of their designs on society and the environment; participate in discussions on the appropriateness of a given technology)
<i>Safety</i>	
Students will be encouraged to:	<input type="checkbox"/> Show concern for safety in planning, carrying out and reviewing activities (e.g., readily alter a procedure to ensure the safety of members of the group; carefully manipulate materials, using skills learned in class or elsewhere; listen attentively to safety procedures given by the teacher)

Unit E: Freshwater and Saltwater Systems

Section	Specific Expectations
Students will:	<input type="checkbox"/> Describe, in general terms, the distribution of water in Alberta, Canada and the world; and interpret information about water characteristics
Describe the distribution and characteristics of	<input type="checkbox"/> Recognize that fresh water and salt water contain varying

water in local and global environments, and identify the significance of water supply and quality to the needs of humans and other living things	amounts of dissolved materials, particulates and biological components; and interpret information on these component materials
	<input type="checkbox"/> Identify major factors used in determining if water is potable, and describe and demonstrate tests of water quality
	<input type="checkbox"/> Describe, in general terms, methods for generating fresh water from salt water, based on evaporation, distillation and reverse osmosis
Students will: Investigate and interpret linkages among landforms, water and climate	<input type="checkbox"/> Describe the processes of erosion and deposition resulting from wave action and water flow, by: – identifying dissolved solids and sediment loads, and identifying sources and endpoints for these materials – describing how waves and tides are generated and how they interact with shorelines
	<input type="checkbox"/> Investigate and describe stream characteristics (<i>e.g., describe the slope, flow rate and stream profile characteristics of a model stream on a stream table</i>)
	<input type="checkbox"/> Describe processes leading to the development of ocean basins and continental drainage systems (<i>e.g., describe the formation of geological features on the ocean floor, such as continental shelves and trenches</i>)
	<input type="checkbox"/> Identify evidence of glacial action, and analyze factors affecting the growth and attrition of glaciers and polar ice caps
	<input type="checkbox"/> Describe the movement of ocean currents and its impact on regional climates
Students will: Analyze factors affecting productivity and species distribution in marine and freshwater environments	<input type="checkbox"/> Investigate life forms found in freshwater and saltwater, and identify and interpret examples of adaptations to these environments
	<input type="checkbox"/> Analyze factors that contribute to the development of adaptations in species found in saltwater and freshwater environments
	<input type="checkbox"/> Investigate and interpret examples of seasonal, short-term and long-term change in populations of living things found in aquatic environments
	<input type="checkbox"/> Analyze relationships between water quality and living things, and infer the quality of water based on the diversity of life supported by it
Students will:	<input type="checkbox"/> Analyze human water uses, and identify the nature and scope of impacts resulting from different uses

Analyze human impacts on aquatic systems; and identify the roles of science and technology in addressing related questions, problems and issues	<input type="checkbox"/> Identify current practices and technologies that affect water quality, evaluate environmental costs and benefits, and identify and evaluate alternatives
	<input type="checkbox"/> Illustrate the role of scientific research in monitoring environments and supporting development of appropriate environmental technologies
	<input type="checkbox"/> Provide examples of problems that cannot be solved using scientific and technological knowledge alone

Skill Outcomes for Unit E: Freshwater and Salt Systems

Section	Specific Expectations
<i>Initiating and Planning</i>	
Students will:	<input type="checkbox"/> identify science-related issues and problems
Ask questions about the relationships between and among observable variables, and plan investigations to address those questions	<input type="checkbox"/> identify questions to investigate, arising from science-related issues
	<input type="checkbox"/> select appropriate methods and tools for collecting relevant data and information (e.g., plan and conduct a search, using a wide variety of electronic sources)
	<input type="checkbox"/> design an experiment, and identify the major variables (e.g., design an experiment to compare the characteristics of two water samples)
<i>Performing and Recording</i>	
Students will:	<input type="checkbox"/> research information relevant to a given issue
Conduct investigations into the relationships between and among observations, and gather and record qualitative and quantitative data	<input type="checkbox"/> select and integrate information from various print and electronic sources or from several parts of the same source (e.g., summarize information on a river basin)
	<input type="checkbox"/> identify strengths and weaknesses of different methods of collecting and displaying data (e.g., identify strengths and weaknesses of technologies used to monitor and map changes in streamflow)
<i>Analyzing and Interpreting</i>	
Students will:	<input type="checkbox"/> apply given criteria for evaluating evidence and sources of information (e.g., assess the authenticity and reliability of electronic sources)
Analyze qualitative and quantitative data, and develop and assess	<input type="checkbox"/> predict the value of a variable, by interpolating or extrapolating from graphical data (e.g., predict future stocks of fish based on long-term data)

possible explanations	<input type="checkbox"/> interpret patterns and trends in data, and infer and explain relationships among the variables (e.g., relate climates to proximity to oceans and to the characteristics of ocean currents)
	<input type="checkbox"/> identify new questions and problems arising from what was learned (e.g., identify questions, such as: “Can ocean currents be modified?”, “Is kelp a viable source of food?”, “How would icecap melting change Canadian coastlines?”)
<i>Communication and Teamwork</i>	
Students will: Work collaboratively on problems; and use appropriate language and formats to communicate ideas, procedures and results	<input type="checkbox"/> use appropriate vocabulary, including correct science and technology terminology, to communicate ideas, procedures and results (e.g., use such terms as salinity, currents and basins when describing oceans and their characteristics)
	<input type="checkbox"/> communicate questions, ideas, intentions, plans and results, using lists, notes in point form, sentences, data tables, graphs, drawings, oral language and other means (e.g., create a concept map, linking the different stages of the water cycle; prepare a multimedia presentation on changing climatic conditions and the effects on glaciers, ice sheets and water levels, incorporating graphics, audio, visuals and text gathered from remote sources)
	<input type="checkbox"/> evaluate individual and group processes used in planning, problem solving, decision making and completing a task (e.g., discuss advantages and disadvantages of different research methods and sources used to gather information on an ocean basin)
	<input type="checkbox"/> defend a given position on an issue, based on their findings

Attitude Outcomes for Unit E: Freshwater and Salt Systems

Section	Specific Expectations
<i>Interest in Science</i>	
Students will be encouraged to:	<input type="checkbox"/> Show interest in science-related questions and issues, and pursue personal interests and career possibilities within science-related fields (e.g., express interest in conducting scientific investigations of their own design; take an interest in media reports on environmental issues, and seek out further information from a variety of sources; take an interest in observing and interpreting their environment during personal and group excursions)

<i>Mutual Respect</i>	
Students will be encouraged to:	<input type="checkbox"/> Appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds (e.g., show awareness of and respect for the contributions of indigenous peoples to knowledge of the environment)
<i>Scientific Inquiry</i>	
Students will be encouraged to:	<input type="checkbox"/> Seek and apply evidence when evaluating alternative approaches to investigations, problems and issues (e.g., seek data that is accurate and based on appropriate methods of investigation; consider observations and ideas from a number of sources before drawing conclusions)
<i>Collaboration</i>	
Students will be encouraged to:	<input type="checkbox"/> Work collaboratively in carrying out investigations and in generating and evaluating ideas (e.g., share observations and ideas with other members of a group, and consider alternative ideas suggested by other group members; share the responsibility for carrying out decisions)
<i>Stewardship</i>	
Students will be encouraged to:	<input type="checkbox"/> Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment (e.g., consider immediate and long-term consequences of personal and group actions; objectively identify potential conflicts between responding to human wants and needs and protecting the environment)
<i>Safety</i>	
Students will be encouraged to:	<input type="checkbox"/> Show concern for safety in planning, carrying out and reviewing activities (e.g., select safe methods and tools for collecting evidence and solving problems; readily alter a procedure to ensure the safety of members of the group)

Science Knowledge and Employability

Unit A: Flow and Matter (Science and Technology Focus)

Section	Specific Expectations
<i>General Outcomes for Science, Technology and Society (STS) and Knowledge</i>	
Students will: investigate and describe fluids used in technological devices and everyday materials	<input type="checkbox"/> list common examples of fluids found in the home and in technological devices, living things and natural environments (<i>e.g., air, water, oil, paint, blood</i>)
	<input type="checkbox"/> identify the Workplace Hazardous Materials Information System (WHMIS) and household safety symbols for labelling substances and describe the safety precautions to follow when handling, storing and disposing of substances
Students will: investigate and describe the composition of fluids and interpret the behaviour of materials in solution	<input type="checkbox"/> distinguish between pure substances and mixtures, using common examples
	<input type="checkbox"/> investigate the solubility of different substances and describe how solutions can have different concentrations
Students will: investigate and compare the properties of gases and liquids and relate variations in their viscosity, density and buoyancy	<input type="checkbox"/> investigate the effects of changes in temperature and viscosity on flow rates
	<input type="checkbox"/> conduct investigations on the properties of fluids
	<input type="checkbox"/> compare the densities of materials and explain how the differences in density of solids, liquids and gases affect buoyancy
	<input type="checkbox"/> identify that pressure is a force per unit area
	<input type="checkbox"/> describe applications of fluid pressure in everyday situations

	<i>(e.g., water pressure in hoses and air pressure in tires)</i>
Students will: identify and describe technologies based on properties of fluids	<input type="checkbox"/> describe technologies based on flow rate and viscosity (e.g., appropriate use of motor oils in different seasons, ketchup and mustard squeeze bottles)
	<input type="checkbox"/> describe how fluids are transported from one place to another (e.g., oil and gas pipelines, pumps).
<i>Skill Outcomes</i>	
<i>Initiating and Planning</i>	
Students will: apply science-related initiating and planning skills to resolve problems, investigate issues and/or complete experiments, using appropriate technology at home, in the workplace and in the community	<input type="checkbox"/> identify practical problems (e.g., how boats can be used to transport materials)
	<input type="checkbox"/> identify prior knowledge and determine information gaps (e.g., use a K-W-L chart)
	<input type="checkbox"/> state a prediction to guide an investigation
	<input type="checkbox"/> conduct an experiment and identify the major variables (e.g., apply a known procedure to measure the solubility of different substances).
<i>Performing and Recording</i>	
Students will: apply science-related performing and recording skills to investigate problems, questions and issues; perform experiments; and record information, using appropriate technology, at home, in the workplace and	<input type="checkbox"/> identify the variables to be examined in an investigation or experiment
	<input type="checkbox"/> identify information and sources that may be inaccurate, incomplete and/or biased
	<input type="checkbox"/> conduct procedures, controlling the major variables (e.g., conduct a test to compare the viscosity of different fluids)
	<input type="checkbox"/> use instruments effectively and accurately to collect data (e.g., measure the volume of a given sample of liquid)
	<input type="checkbox"/> use materials and apparatus safely (e.g., wear safety goggles)

in the community	during investigations of solution properties)
	<input type="checkbox"/> organize data, using a format that is appropriate to the task or experiment (e.g., demonstrate the use of a chart or database for organizing information).
<i>Analyzing and Interpreting</i>	
Students will: apply science-related analyzing and interpreting skills to investigations/experiments and assess personal and group performance, using appropriate technology, at home, in the workplace and in the community	<input type="checkbox"/> identify patterns and relationships in information
	<input type="checkbox"/> identify and suggest explanations for discrepancies in data (e.g., explain a loss in the volume of a liquid by identifying such factors as evaporation or absorption by a filtering material)
	<input type="checkbox"/> identify new questions and problems that arise from what was learned (e.g., “What techniques are used to dispose of motor oil?”).
<i>Communication and Teamwork</i>	
Students will: apply science-related communication and teamwork skills to work collaboratively on problems, and use appropriate language and formats to communicate ideas, procedures and results at home, in the workplace and in the community	<input type="checkbox"/> communicate questions, ideas, plans and results, using a variety of strategies (e.g., speaking and/or writing, lists, notes in point form, data tab communicate a position on an issue or problem, based on personal/group findings, graphs, drawings, computer technology, presentations)
	<input type="checkbox"/> work cooperatively with team members to develop and conduct a plan and to troubleshoot problems as they arise.

Attitude Outcomes

Students will be encouraged to:

- ☐ show interest in science-related questions and issues and pursue personal interests and career possibilities within science-related fields (e.g., repeat, at home, a science investigation conducted at school)
- ☐ appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds (e.g., show awareness that knowledge of fluid characteristics has developed in many societies and cultures, including Aboriginal cultures)
- ☐ use scientific methods to carefully gather evidence when investigating problems and issues (e.g., regularly repeat measurements or observations to increase the precision of evidence)
- ☐ work collaboratively when conducting investigations and when generating and evaluating ideas (e.g., assume responsibility for their share of work when preparing for investigations and when gathering and recording evidence; consider alternative ideas and approaches suggested by members of the group)
- ☐ demonstrate sensitivity when pursuing a balance between the needs of humans and the requirements for a sustainable environment
- ☐ recognize that the traditional Aboriginal lifestyle supports a unique relationship with the environment
- ☐ be encouraged to: demonstrate concern for safety when planning, conducting and reviewing activities (e.g., wear proper safety attire without being reminded).

Unit B: Cells and Systems (Nature of Science Emphasis)

Section	Specific Expectations
Students will: investigate living things and identify ideas used to interpret their general structure, function and organization	<input type="checkbox"/> define organism and give examples
	<input type="checkbox"/> apply the concept of system when describing familiar organisms and examine their general structure and function
	<input type="checkbox"/> illustrate and explain how different organisms have similar functions that are met in a variety of ways (e.g., recognize food gathering as a common function of animals and note a variety of food-gathering structures)
Students will: investigate and describe the role of cells within living things	<input type="checkbox"/> describe the role of the cell as a basic unit of life
	<input type="checkbox"/> describe similarities and differences between single-celled and multicelled organisms (e.g., compare, in general terms, an amoeba and a grizzly bear)
	<input type="checkbox"/> distinguish between plant and animal cells (e.g., distinguish between cell walls and cell membranes)
	<input type="checkbox"/> examine plant and animal structures and identify contributing roles of cells, tissues and organs
Students will: interpret the healthy function of human body systems and describe ways the body reacts to internal and external stimuli	<input type="checkbox"/> describe, in general terms, the functions of the different body systems (e.g., the respiratory, digestive and excretory systems)
	<input type="checkbox"/> identify and describe the roles of organs and tissues in supporting the healthy functioning of the human body (e.g., the role of the lungs in exchanging oxygen and carbon dioxide)
	<input type="checkbox"/> describe how to maintain healthy body systems (e.g., the impact of exercise on the heart and lungs)
Students will: describe areas of scientific investigation leading to new knowledge about body systems and to new medical applications	<input type="checkbox"/> describe ways in which research about cells, organs and systems has brought about improvements in human health and nutrition (e.g., development of medicines, diets based on the needs of organs such as the heart)

	<ul style="list-style-type: none"> □ investigate factors that affect the healthy functioning of the human respiratory, circulatory and digestive systems (e.g., investigate the effect of illness, aging or air quality on the function of the respiratory system).
Skills Outcomes	
<i>Initiating and Planning</i>	
<p>Students will:</p> <p>apply science-related initiating and planning skills to ask questions about relationships among observable variables at home, in the workplace and in the community</p>	<ul style="list-style-type: none"> □ identify questions to investigate (e.g., identify questions that arise from their own observations of plant and animal diversity)
	<ul style="list-style-type: none"> □ develop definitions of major variables and other aspects of their investigations (e.g., define body systems in terms of their functions).
<i>Performing and Recording</i>	
<p>Students will:</p> <p>apply science-related performing and recording skills to conduct investigations into the relationships among observations and to gather and record data at home, in the workplace and in the community</p>	<ul style="list-style-type: none"> □ use instruments, including microscopes, effectively and accurately to collect data (e.g., use a microscope to produce a clear image of a cell)
	<ul style="list-style-type: none"> □ observe and record data and produce simple line drawings (e.g., draw cells and organisms)
	<ul style="list-style-type: none"> □ organize data, using a format that is appropriate to the task or experiment (e.g., compare the structure of two or more organisms, using charts and drawings).
<i>Analyzing and Interpreting</i>	
<p>Students will:</p> <p>apply science-related analyzing and interpreting skills to examine data and to assess possible explanations at home, in the workplace and in the community</p>	<ul style="list-style-type: none"> □ identify the strengths and weaknesses of different methods of collecting and displaying data (e.g., compare methods of measuring heart rate)
	<ul style="list-style-type: none"> □ identify and suggest explanations for discrepancies in data (e.g., explain variations in heart rate, in the same individual, at different points in the day)
	<ul style="list-style-type: none"> □ compile and display data in a variety of formats, including diagrams, flow charts, tables and graphs (e.g., prepare charts that compare the structures of different organisms)

	<input type="checkbox"/> identify new questions that arise from what was learned.
<i>Communication and Teamwork</i>	
<p>Students will:</p> <p>apply science-related communication and teamwork skills to work collaboratively on problems, and use appropriate language and formats to communicate ideas, procedures and results at home, in the workplace and in the community</p>	<input type="checkbox"/> communicate questions, ideas, plans and results, using a variety of strategies (e.g., speaking and/or writing, lists, notes in point form, data tables, graphs, drawings, computer technology, presentations)
	<input type="checkbox"/> work cooperatively with team members to develop and conduct a plan and troubleshoot problems as they arise (e.g., prepare a presentation on the digestive system)
	<input type="checkbox"/> receive, understand and incorporate the ideas of others (e.g., use an agreed-upon procedure for preparing diagrams and charts)
	<input type="checkbox"/> evaluate individual and group processes used in planning, problem solving and decision making and when completing a task.

Unit C: Light and Optical Systems (Nature of Science Emphasis)

Section	Specific Expectations
<p>Students will:</p> <p>investigate the nature of light and the role of optical systems in our lives</p>	<input type="checkbox"/> describe what light is and how it travels
	<input type="checkbox"/> identify various natural and artificial sources of light (e.g., the sun, stars, light bulb)
	<input type="checkbox"/> investigate the effects of light and lenses on images, using microscopes, telescopes and other optical devices
<p>Students will:</p> <p>investigate the transmission of light</p>	<input type="checkbox"/> describe how light is reflected, refracted, transmitted and absorbed
	<input type="checkbox"/> investigate how various materials reflect, refract, transmit and absorb light
<p>Students will:</p> <p>investigate and examine the science of image formation and vision and related technologies</p>	<input type="checkbox"/> describe, in general terms, how concave and convex lenses function
	<input type="checkbox"/> describe how the human eye and a camera are similar

	<input type="checkbox"/> compare the human eye to other organisms
	<input type="checkbox"/> investigate the development of new technologies to enhance human vision (e.g., laser surgery)
	<input type="checkbox"/> investigate emerging technologies for storing and transmitting images in digital form (e.g., digital cameras, infrared imaging).
Skills Outcomes	
<i>Initiating and Planning</i>	
<p>Students will:</p> <p>apply science-related initiating and planning skills to ask questions about relationships among observable variables and conduct investigations to address those questions at home, in the workplace and in the community</p>	<input type="checkbox"/> identify questions to investigate (e.g., ask about the role eyeglasses play in improving vision)
	<input type="checkbox"/> conduct an experiment and identify the major variables
	<input type="checkbox"/> state a prediction based on background information or an observed pattern of events
	<input type="checkbox"/> formulate definitions of major variables and other aspects of their investigations.
<i>Performing and Recording</i>	
<p>Students will:</p> <p>apply science-related performing and recording skills to conduct investigations into the relationships among observations and to gather and record data at home, in the workplace and in the community</p>	<input type="checkbox"/> conduct procedures, controlling the major variables
	<input type="checkbox"/> observe and record data and produce simple line drawings (e.g., produce a drawing of the path of a light beam toward and away from a mirror)
	<input type="checkbox"/> use instruments effectively and accurately to collect data
	<input type="checkbox"/> organize data, using a format that is appropriate to the task (e.g., demonstrate the use of a chart or spreadsheet for organizing data)
	<input type="checkbox"/> use tools and apparatus safely.
<i>Analyzing and Interpreting</i>	
<p>Students will:</p> <p>apply science-related analyzing and interpreting skills to examine</p>	<input type="checkbox"/> identify the strengths and weaknesses of different methods of collecting and displaying data
	<input type="checkbox"/> state a conclusion, based on experimental data, and

data and to assess possible explanations at home, in the workplace and in the community	<p>explain how evidence gathered supports or refutes an initial idea (e.g., write a conclusion based on the refraction of light through different media)</p> <p><input type="checkbox"/> identify new questions that arise from what was learned (e.g., ask questions about new technologies for improving human vision).</p>
<i>Communication and Teamwork</i>	
<p>Students will:</p> <p>apply science-related communication and teamwork skills to work collaboratively on problems, and use appropriate language and formats to communicate ideas, procedures and results at home, in the workplace and in the community</p>	<p><input type="checkbox"/> receive summarize their findings in an appropriate manner, understand and act on the ideas of others</p>
Attitude Outcomes	
<i>Interest in Science</i>	
Students will be encouraged to:	<p><input type="checkbox"/> show interest in science-related questions and issues and pursue personal interests and career possibilities within science-related fields (e.g., seek information from a variety of sources)</p>
<i>Mutual Respect</i>	
Students will be encouraged to:	<p><input type="checkbox"/> appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds (e.g., show an awareness of and respect for the research, care and craftsmanship involved in developing the means to enhance human vision)</p>
<i>Scientific Inquiry</i>	
Students will be encouraged to:	<p><input type="checkbox"/> use scientific methods to carefully gather evidence when investigating problems and issues (e.g., ask questions to clarify meaning or to confirm their understanding)</p>
<i>Collaboration</i>	

Students will be encouraged to:	<input type="checkbox"/> work collaboratively when conducting investigations and when generating and evaluating ideas (e.g., consider alternative ideas and interpretations suggested by members of the group)
<i>Stewardship</i>	
Students will be encouraged to:	<input type="checkbox"/> demonstrate sensitivity when pursuing a balance between the needs of humans and the requirements for a sustainable environment (e.g., recognize that light can contribute to light pollution)
	<input type="checkbox"/> recognize that the traditional Aboriginal lifestyle supports a unique relationship with the environment
<i>Safety</i>	
Students will be encouraged to:	<input type="checkbox"/> demonstrate concern for safety when planning, conducting and reviewing activities (e.g., select safe methods of using optical devices)

Unit D: Mechanical Systems (Science and Technology Emphasis)

Section	Specific Expectations
Students will: demonstrate the development of science and technology by describing and comparing mechanical devices that have been improved over time	<input type="checkbox"/> identify the source of energy for some familiar mechanical devices
	<input type="checkbox"/> investigate and provide examples of mechanical devices used in the past to meet particular needs (e.g., describe and interpret devices developed to move water or be moved by water, such as the Persian wheel, mill wheel)
	<input type="checkbox"/> investigate how a common need has been met in different ways over time (e.g., development of different kinds of lifting devices)
	<input type="checkbox"/> investigate how trial and error and scientific knowledge both play a role in technological development (e.g., development of aircraft)
Students will: examine simple machines by describing the structures, functions	<input type="checkbox"/> identify and classify a variety of simple, everyday machines and mechanical systems, including those of traditional Aboriginal societies, such as travois and teepees
	<input type="checkbox"/> identify and classify a variety of simple machines (levers),

and component parts of the overall system	using fulcrum, load and force
	<input type="checkbox"/> identify linkages and power transmissions in mechanical devices and describe their general function (e.g., identify the purpose and general function of gear systems within a mechanical device)
	<input type="checkbox"/> recognize that mechanical systems are a combination or modification of one or more simple machines
	<input type="checkbox"/> identify the relationship between the design and function of simple machines and mechanical systems
	<input type="checkbox"/> describe the mechanical advantage of using simple machines
	<input type="checkbox"/> identify the sources of energy (e.g., humans, batteries, electricity) for familiar mechanical devices
Students will: investigate and describe the transmission of force and energy between parts of a mechanical system	<input type="checkbox"/> describe how simple machines and mechanical systems provide a mechanical advantage and influence speed and force
	<input type="checkbox"/> recognize that work is measured in joules
	<input type="checkbox"/> investigate a common mechanical device (e.g., bicycle, vacuum cleaner, water pump)
Students will: examine the social and environmental contexts of science and technology, as they apply to the development of mechanical devices	<input type="checkbox"/> apply a set of criteria to evaluate a given mechanical device
	<input type="checkbox"/> examine the design and function of a mechanical device in relation to its efficiency and effectiveness
	<input type="checkbox"/> illustrate how technological development is influenced by advances in science.
Skill Outcomes	
<i>Initiating and Planning</i>	
Students will: apply science-related initiating and planning skills to ask questions	<input type="checkbox"/> identify practical problems (e.g., identify how the efficiency of a mechanical device impacts its output)
	<input type="checkbox"/> identify questions to investigate arising from practical problems (e.g., "How can the efficiency of a mechanical

about the relationships among observable variables and conduct investigations to address those questions at home, in the workplace and in the community	<p>device be improved?”)</p> <ul style="list-style-type: none"> <input type="checkbox"/> apply methods and tools for collecting data to solve problems.
<i>Performing and Recording</i>	
Students will: apply science-related performing and recording skills to conduct investigations into the relationships among observations and to gather and record data at home, in the workplace and in the community	<input type="checkbox"/> research information relevant to a given problem
	<input type="checkbox"/> collect relevant information from various print and electronic sources
	<input type="checkbox"/> construct and test simple machines
	<input type="checkbox"/> organize data, using a format that is appropriate to the task
	<input type="checkbox"/> use materials and apparatus safely
<i>Analyzing and Interpreting</i>	
Students will: apply science-related analyzing and interpreting skills to examine data and to assess possible explanations at home, in the workplace and in the community	<input type="checkbox"/> identify and correct the practical problems of simple machines (e.g., adjust a pulley system to lift a load)
	<input type="checkbox"/> evaluate designs and prototypes in terms of function, reliability, safety, efficiency and impact on the environment (e.g., pulley hoist system, such as window blinds).
<i>Communication and Teamwork</i>	
Students will: apply science-related	<input type="checkbox"/> use specific language that is scientifically and technologically appropriate (e.g., use such terms as system, component and

communication and teamwork skills to work collaboratively on problems, and use appropriate language and formats to communicate ideas, procedures and results at home, in the workplace and in the community	<i>function when describing a mechanical system)</i>
	<input type="checkbox"/> communicate questions, ideas, plans and results, using a variety of strategies (e.g., speaking and/or writing, lists, notes in point form, data tables, graphs, drawings, computer technology, presentations)
	<input type="checkbox"/> work cooperatively with team members to develop and conduct a plan and to troubleshoot problems as they arise.
Attitude Outcomes	
<i>Interest in Science</i>	
Students will be encouraged to:	<input type="checkbox"/> show interest in science-related questions and issues and pursue personal interests and career possibilities within science-related fields (e.g., investigate examples of mechanical devices in their home and community)
<i>Mutual Respect</i>	
Students will be encouraged to:	<input type="checkbox"/> appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds (e.g., appreciate that different approaches to problems lead to different solutions)
<i>Scientific Inquiry</i>	
Students will be encouraged to:	<input type="checkbox"/> use scientific methods to carefully gather evidence when investigating problems and issues (e.g., report the limitations of designs of simple machines)
<i>Collaboration</i>	
Students will be	<input type="checkbox"/> work collaboratively when conducting investigations and

encouraged to:	when generating and evaluating ideas (e.g., accept various roles within a group, including leadership)
<i>Stewardship</i>	
Students will be encouraged to:	<input type="checkbox"/> demonstrate sensitivity when pursuing a balance between the needs of humans and the requirements for a sustainable environment (e.g., consider the impacts of simple machines on society and the environment)
	<input type="checkbox"/> recognize that the traditional Aboriginal lifestyle supports a unique relationship with the environment
<i>Safety</i>	
Students will be encouraged to:	<input type="checkbox"/> demonstrate concern for safety when planning, conducting and reviewing activities (e.g., manipulate materials carefully, using skills learned in class or elsewhere)

Unit E: Freshwater and Saltwater Systems (Social and Environmental Contexts Emphasis)

Section	Specific Expectations
<p>Students will:</p> <p>describe the distribution and characteristics of water in local and global environments and identify the significance of water supply and quality to the needs of humans and other living things</p>	<input type="checkbox"/> describe, in general terms, the distribution of water in Alberta, Canada and the world
	<input type="checkbox"/> distinguish an aquatic ecosystem from other types of ecosystems
	<input type="checkbox"/> compare adaptations of organisms to freshwater and saltwater ecosystems
	<input type="checkbox"/> recognize that fresh water and salt water contain varying amounts of different substances
	<input type="checkbox"/> describe, in general terms, how fresh water can be generated from salt water by using evaporation and distillation

	<input type="checkbox"/> test and compare the water quality of various samples from the area
<p>Students will:</p> <p>investigate the linkages among landforms, water and climate</p>	<input type="checkbox"/> investigate and describe the water cycle
	<input type="checkbox"/> investigate, describe and illustrate the characteristics of a stream
	<input type="checkbox"/> describe wave erosion and wave deposits
	<input type="checkbox"/> identify evidence of glacial action and examine factors affecting the growth and attrition of glaciers and polar ice caps (e.g., identify factors that affect the size of polar ice sheets and the Columbia Icefield)
	<input type="checkbox"/> relate climate and weather to glaciers, icecaps and water supply
<p>Students will:</p> <p>examine factors affecting productivity and species distribution in marine and freshwater environments</p>	<input type="checkbox"/> investigate life forms found in fresh water and salt water and identify examples of adaptations to these environments (e.g., describe examples of fish and invertebrate species found in a local freshwater environment)
	<input type="checkbox"/> investigate examples of seasonal, short-term and long-term change in populations of living things found in aquatic environments
	<input type="checkbox"/> examine the relationship between water quality and living things
<p>Students will:</p> <p>examine human impacts on aquatic systems and identify the roles of science and technology in addressing related questions, problems and issues</p>	<input type="checkbox"/> examine human water uses
	<input type="checkbox"/> investigate the human impact on the supply and quality of water (e.g., identify pollutants in groundwater and surface water systems resulting from domestic and industrial use)
	<input type="checkbox"/> investigate the human impact on the distribution of freshwater and saltwater organisms
	<input type="checkbox"/> identify current practices and technologies that improve water quality (e.g., research alternatives for ensuring safe water supplies)

	<input type="checkbox"/> provide examples of problems that cannot be solved through the use of technology alone (e.g., pollution, bacteria, retreating of the ice fields).
Skills Outcomes	
<i>Initiating and Planning</i>	
Students will:	<input type="checkbox"/> identify science-related issues and problems
apply science-related initiating and planning skills to ask questions about the relationships among observable variables at home, in the workplace and in the community	<input type="checkbox"/> identify questions to investigate, arising from science-related issues
	<input type="checkbox"/> select appropriate methods and tools for collecting relevant data and information (e.g., conduct a search, using a wide variety of electronic sources).
<i>Performing and Recording</i>	
Students will:	<input type="checkbox"/> research information relevant to a given issue
apply science-related performing and recording skills to conduct investigations into the relationships among observations and to gather and record data at home, in the workplace and in the community	<input type="checkbox"/> select and integrate information from two sources.
Students will:	<input type="checkbox"/> apply given criteria to evaluate evidence and sources of information
apply science-related analyzing and interpreting skills to examine data and to assess possible explanations at home, in the workplace and in the community	<input type="checkbox"/> interpret patterns in data and explain relationships among the variables (e.g., predict future stocks of fish based on long-term data).
<i>Communication and Teamwork</i>	
Students will:	<input type="checkbox"/> use appropriate vocabulary, including science and technology terminology, to communicate ideas and procedures
apply science-related communication and teamwork skills to work collaboratively on	<input type="checkbox"/> graphs, drawings and oral language (e.g., create a

problems, and use appropriate language and formats to communicate ideas and procedures at home, in the workplace and in the community	concept map linking the different stages of the water cycle)
	<input type="checkbox"/> evaluate individual and group processes used in problem solving and decision making and when completing a task.
Attitude Outcomes	
<i>Interest in Science</i>	
Students will be encouraged to:	<input type="checkbox"/> Show interest in science-related questions and issues and pursue personal interests and career possibilities within science-related fields (e.g., express an interest in conducting scientific investigations; take an interest in media reports on environmental issues)
<i>Mutual Respect</i>	
Students will be encouraged to:	<input type="checkbox"/> Appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds (e.g., show awareness of and respect for the contributions of indigenous peoples to knowledge of the environment)
<i>Scientific Inquiry</i>	
Students will be encouraged to:	<input type="checkbox"/> Use evidence when evaluating approaches to investigations, problems and issues (e.g., consider observations and ideas from a number of sources before drawing conclusions)
<i>Collaboration</i>	
Students will be encouraged to:	<input type="checkbox"/> Work collaboratively when conducting investigations and when generating and evaluating ideas (e.g., share observations with members of a group and consider alternative ideas suggested by group members)

<i>Stewardship</i>	
Students will be encouraged to:	<input type="checkbox"/> Demonstrate sensitivity when pursuing a balance between the needs of humans and the requirements for a sustainable environment (e.g., consider immediate and long-term consequences of personal and group actions)
	<input type="checkbox"/> Recognize that the traditional Aboriginal lifestyle supports a unique relationship with the environment
<i>Safety</i>	
Students will be encouraged to:	<input type="checkbox"/> demonstrate concern for safety when planning, conducting and reviewing activities (<i>e.g., manipulate materials carefully, using skills learned in class or elsewhere</i>)

Social Studies

From Isolation to Adaptation: Japan

Section	Specific Expectations
<i>Through an examination of Japan, students will demonstrate an understanding and appreciation of the ways in which beliefs, values and knowledge shape worldviews and contribute to a society's isolation or adaptation.</i>	
<i>Values and Attitudes</i>	
<input type="checkbox"/> Appreciate the roles of time and geographic location in shaping a society's worldview <input type="checkbox"/> Appreciate how a society's worldview can foster the choice to remain an isolated society <input type="checkbox"/> Appreciate how models of governance and decision making reflect a society's worldview <input type="checkbox"/> Appreciate how a society's worldview shapes individual citizenship and identity	
<i>Knowledge and Understanding</i>	
Analyze the effects of cultural isolation during the Edo period by exploring and reflecting upon the following questions and issues	<input type="checkbox"/> In what ways did Japan isolate itself from the rest of the world?
	<input type="checkbox"/> How did isolation during the Edo period lead to changes in Japan?
	<input type="checkbox"/> How did the changes resulting from isolation affect Japan economically, politically and socially during the Edo period?
	<input type="checkbox"/> How did the physical geography of Japan affect its worldview?
	<input type="checkbox"/> How did the shogun use the feudal system and the hierarchical social classes to maintain control of Japan?
Analyze the effects that rapid adaptation had on traditionally isolated Japan during the Meiji period by exploring and reflecting upon the following questions and issues:	<input type="checkbox"/> What were the motivations for the radical changes in Japan's model of organization during the Meiji period?
	<input type="checkbox"/> How did Japan adapt to changes brought on by the transition from feudal to modern models of organization?
	<input type="checkbox"/> How did the changes resulting from adaptation affect Japan economically, politically and socially during the Meiji period?
	<input type="checkbox"/> In what ways did changes resulting from isolation in the Edo period compare to changes resulting from adaptation in the Meiji period?
	<input type="checkbox"/> What challenges emerged for the Japanese in maintaining traditional cultural aspects of their society while undergoing rapid change?

Origins of a Western Worldview: Renaissance Europe

Section	Specific Expectations
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Through an examination of Renaissance Europe, students will demonstrate an understanding and appreciation of how the exchange of ideas and knowledge contributed to shaping the worldview of the Western world.

Values and Attitudes

- ☐ Appreciate how Renaissance Europe formed the basis for the worldview of the Western world
- ☐ Demonstrate a willingness to consider differing beliefs, values and worldviews
- ☐ Recognize how beliefs and values are shaped by time, geographic location and societal context

Knowledge and Understanding

Examine, critically, the factors that shaped the worldview evolving in western Europe during the Renaissance by exploring and reflecting upon the following questions and issues:

- ☐ What was the Renaissance?
- ☐ How did the Renaissance spark the growth and exchange of ideas and knowledge across Europe (i.e., astronomy, mathematics, science, politics, religion, arts)?
- ☐ How did the physical geography of Renaissance Europe affect trade and competition among European countries?
- ☐ How did increased trade lead to the emergence of powerful city-states (i.e., Florence, Venice, Genoa)?
- ☐ In what ways did thinkers and philosophers influence society in the development of a humanist worldview during the Renaissance?
- ☐ In what ways were the Age of Discovery and the rise of imperialism expressions of an expansionist worldview?
- ☐ In what ways did exploration and intercultural contact during the Renaissance affect the citizenship and identity of Europeans?

Worldviews in Conflict: The Spanish and the Aztecs

Section	Specific Expectations
<i>Through an examination of Spanish and Aztec societies, students will demonstrate an understanding and appreciation of how intercultural contact affects the worldviews of societies.</i>	
<i>Values and Attitudes</i>	
<ul style="list-style-type: none"> <input type="checkbox"/> Appreciate how a society's worldview influences the society's choices, decisions and interactions with other societies <input type="checkbox"/> Appreciate how Aztec and Spanish identities and worldviews were affected by intercultural contact <input type="checkbox"/> Appreciate and recognize how rapid adaptation can radically change a society's beliefs, 	

values and knowledge	
<i>Knowledge and Understanding</i>	
Assess, critically, how the Aztecs were affected by the Spanish worldview by exploring and reflecting upon the following questions and issues	<input type="checkbox"/> What were the key elements of the worldview of the Aztec civilization prior to contact with the Spanish?
	<input type="checkbox"/> How did the Aztec civilization's worldview influence the Aztecs' choices, decisions and customs?
	<input type="checkbox"/> What key elements of Spain's worldview led to the desire to expand the Spanish empire?
	<input type="checkbox"/> In what ways did factors such as technology and disease contribute to the dominance of the Spanish over the Aztec civilization?
	<input type="checkbox"/> To what extent were the divergent worldviews of the Spanish and Aztecs factors in the dominance of one nation over the other?

Skills and Processes for Grade 8 (Information and Communication Technology is infused into the Social Studies Program)

Section	Specific Expectations
<i>Dimensions of Thinking</i>	
Students will: develop skills of critical thinking and creative thinking:	<input type="checkbox"/> analyze the validity of information based on context, bias, source, objectivity, evidence and reliability to broaden understanding of a topic or an issue
	<input type="checkbox"/> evaluate ideas, information and positions from multiple perspectives
	<input type="checkbox"/> demonstrate the ability to analyze local and current affairs
	<input type="checkbox"/> re-evaluate personal opinions to broaden understanding of a topic or an issue
	<input type="checkbox"/> generate creative ideas and strategies in individual and group activities
	<input type="checkbox"/> access diverse viewpoints on particular topics by using appropriate technologies
Students will: Develop skills of historical thinking:	<input type="checkbox"/> distinguish cause, effect, sequence and correlation in historical events, including the long- and short-term causal relations
	<input type="checkbox"/> use historical and community resources to organize the sequence of historical events
	<input type="checkbox"/> analyze the historical contexts of key events of a given time

	period
	<input type="checkbox"/> create a simulation or a model by using technology that permits the making of inferences
	<input type="checkbox"/> identify patterns in organized information
Students will: Develop skills of geographic thinking:	<input type="checkbox"/> interpret historical maps to broaden understanding of historical events
	<input type="checkbox"/> use thematic maps to describe cultural and political regions
	<input type="checkbox"/> construct and interpret various maps to broaden understanding of given topics
	<input type="checkbox"/> define geographic problems and issues and pose geographic questions
	<input type="checkbox"/> use geographic tools, such as Geographic Information Systems (GIS) software, to assist in preparing graphs and maps
	<input type="checkbox"/> access and operate multimedia applications and technologies from stand-alone and online sources; e.g., GIS
Students will: Demonstrate skills of decision making and problem solving:	<input type="checkbox"/> demonstrate skills of compromise and devise strategies to reach group consensus
	<input type="checkbox"/> propose and apply new ideas and strategies, supported with facts and reasons, to contribute to problem solving and decision making
	<input type="checkbox"/> propose and apply strategies or options to solve problems and deal with issues
	<input type="checkbox"/> participate in and predict outcomes of problem-solving and decision-making scenarios
	<input type="checkbox"/> articulate clearly a plan of action to use technology to solve a problem
	<input type="checkbox"/> identify the appropriate materials and tools to use in order to accomplish a plan of action
	<input type="checkbox"/> evaluate choices and the progress in problem solving, then redefine the plan of action as appropriate
	<input type="checkbox"/> use networks to brainstorm, plan and share ideas with group members
<i>Social Participation as Democratic Practice</i>	
Students will: demonstrate skills of	<input type="checkbox"/> identify and use a variety of strategies to resolve conflicts peacefully and fairly
	<input type="checkbox"/> consider the needs and perspectives of others

cooperation, conflict resolution and consensus building:	<input type="checkbox"/> demonstrate leadership within groups where appropriate
	<input type="checkbox"/> access, retrieve and share information from electronic sources, such as common files
Students will: Develop age-appropriate behaviour for social involvement as responsible citizens contributing to their community.	<input type="checkbox"/> volunteer with organizations, projects and activities that ensure the growth and vitality of their community
<i>Research for Deliberative Inquiry</i>	
Students will: apply the research process:	<input type="checkbox"/> integrate and synthesize concepts to provide an informed point of view on a research question or an issue
	<input type="checkbox"/> develop a position that is supported by information gathered through research
	<input type="checkbox"/> draw conclusions based upon research and evidence
	<input type="checkbox"/> determine how information serves a variety of purposes and that the accuracy or relevance of information may need verification
	<input type="checkbox"/> organize and synthesize researched information
	<input type="checkbox"/> formulate new questions as research progresses
	<input type="checkbox"/> practise the responsible and ethical use of information and technology
	<input type="checkbox"/> include and organize references as part of research
	<input type="checkbox"/> plan and conduct a search, using a wide variety of electronic sources
	<input type="checkbox"/> demonstrate the advanced search skills necessary to limit the number of hits desired for online and offline databases; for example, the use of “and” or “or” between search topics and the choice of appropriate search engines for the topic
	<input type="checkbox"/> develop a process to manage volumes of information that can

	be made available through electronic sources
	<input type="checkbox"/> evaluate the relevance of electronically accessed information to a particular topic
	<input type="checkbox"/> make connections among related, organized data, and assemble various pieces into a unified message
	<input type="checkbox"/> refine searches to limit sources to a manageable number
	<input type="checkbox"/> analyze and synthesize information to create a product
	<input type="checkbox"/> access and retrieve information through the electronic network
<i>Communication</i>	
Students will: Demonstrate skills of oral, written and visual literacy:	<input type="checkbox"/> communicate in a persuasive and engaging manner through speeches, multimedia presentations and written and oral reports, taking particular audiences and purposes into consideration
	<input type="checkbox"/> use skills of informal debate to persuasively express differing viewpoints regarding an issue
	<input type="checkbox"/> elicit, clarify and respond appropriately to questions, ideas and multiple points of view presented in discussions
	<input type="checkbox"/> offer reasoned comments related to a topic of discussion
	<input type="checkbox"/> listen to others to understand their points of view
Students will: Develop skills of media literacy:	<input type="checkbox"/> examine techniques used to enhance the authority and authenticity of media messages
	<input type="checkbox"/> examine the values, lifestyles and points of view represented in a media message
	<input type="checkbox"/> analyze the impact of television, the Internet, radio and print media on a particular current affairs issue
<i>Dimensions of Thinking</i>	
Students will: Develop skills of critical	<input type="checkbox"/> use an issue-analysis model to identify an issue or question, state the question or issue, recognize different positions on an issue, offer reasons for each position, adopt a personal

and creative thinking:	position and explain the reasons for their choice
	<input type="checkbox"/> identify and re-examine their personal assumptions and opinions to broaden their understanding of a topic or issue
	<input type="checkbox"/> determine the validity of information based on context, bias, source, objectivity, evidence and reliability to broaden their understanding of a topic or issue
	<input type="checkbox"/> develop an awareness of how perspectives can shape understanding
	<input type="checkbox"/> demonstrate the ability to identify local and current events that connect to social studies issues
	<input type="checkbox"/> generate creative ideas and strategies in individual and group activities
	<input type="checkbox"/> access diverse viewpoints on a particular topic by using appropriate technologies.
Students will: Develop skills of historical thinking:	<input type="checkbox"/> distinguish cause, effect, sequence and correlations in historical events
	<input type="checkbox"/> summarize and chronologically display key events and people in selected cultures and societies, using historical and community resources, technology and other strategies as appropriate
	<input type="checkbox"/> identify patterns in organized information.
Students will: Develop skills of geographic thinking:	<input type="checkbox"/> interpret historical maps to broaden their understanding of events
	<input type="checkbox"/> use thematic maps to describe cultural and political regions
	<input type="checkbox"/> use, construct and interpret maps to broaden their understanding of given topics
	<input type="checkbox"/> investigate geographic problems and issues and create

	geographic questions
	<input type="checkbox"/> access and operate multimedia applications and technologies from stand-alone and online sources, as appropriate; e.g., Geographic Information Systems (GIS).
Students will: Demonstrate skills of decision making and problem solving:	<input type="checkbox"/> use a problem-solving model to identify the problem/issue, identify alternative solutions and their consequences and identify which action to implement
	<input type="checkbox"/> articulate clearly a plan of action to use technology to solve a problem
	<input type="checkbox"/> identify the appropriate materials and tools to use in order to accomplish a plan of action.
<i>Social Participation as a Democratic Practice</i>	
Students will: Demonstrate skills of cooperation, conflict resolution and consensus building:	<input type="checkbox"/> identify and use a variety of strategies to resolve conflicts peacefully and fairly
	<input type="checkbox"/> consider the needs and perspectives of others
	<input type="checkbox"/> reflect upon personal and others' past actions when determining future actions and choices
	<input type="checkbox"/> use networks, as appropriate, to brainstorm, plan and share ideas with group members.
Students will: Demonstrate age-appropriate behaviour for social involvement as respectful and responsible citizens contributing to their community:	<input type="checkbox"/> respond respectfully to the inherent meaning of stories told in the oral tradition and to artistic, musical, literary and other representations
	<input type="checkbox"/> use peer and self-evaluation to set attainable goals to improve learning and behaviour
	<input type="checkbox"/> demonstrate respect and acceptance of identities while participating in community partnerships and other activities.
<i>Research for Deliberative Inquiry</i>	

<p>Students will:</p> <p>Apply research processes:</p>	<input type="checkbox"/> create and categorize questions to direct inquiry and research processes
	<input type="checkbox"/> demonstrate responsible and ethical use of information and technology
	<input type="checkbox"/> locate information by using various parts of an information source; e.g., the glossary, table of contents, index and home page of a Web site
	<input type="checkbox"/> access and select information from a variety of sources; e.g., documents, art, songs, artifacts, narratives and oral stories
	<input type="checkbox"/> plan and conduct a search, using a wide variety of electronic sources as appropriate
	<input type="checkbox"/> refine searches to limit sources to a manageable number
	<input type="checkbox"/> access, retrieve and share information from electronic sources; e.g., common files
	<input type="checkbox"/> identify the main ideas in information sources
	<input type="checkbox"/> recognize that information serves a variety of purposes and that accuracy or relevance may require verification
	<input type="checkbox"/> compare various interpretations of events using a variety of evidence; e.g., photographs, artifacts, interviews and media reports
	<input type="checkbox"/> reflect on the ways in which shared stories connect to personal experiences
	<input type="checkbox"/> make generalizations about the significance of the art, drama and literature of an ancient society as an expression of worldview and beliefs
	<input type="checkbox"/> connect newly learned concepts to previously learned concepts to broaden understanding

	<input type="checkbox"/> draw conclusions based on research and evidence
	<input type="checkbox"/> recognize the need to reflect upon and evaluate their point of view, decision or inference, based on new evidence
	<input type="checkbox"/> evaluate the relevance of electronically accessed information to a particular topic
	<input type="checkbox"/> organize and analyze information to create a product.
<i>Communication</i>	
Students will: demonstrate skills of oral, visual and textual literacy:	<input type="checkbox"/> use communication skills to clarify, respond and interact appropriately with others during discussions and other group activities
	<input type="checkbox"/> listen to others to understand their perspectives
	<input type="checkbox"/> use strategies, e.g., summarizing and giving examples, to determine understanding • communicate ideas and actions using a variety of strategies, e.g., speeches, multimedia presentations, written and oral reports, and consider particular audiences and purposes
	<input type="checkbox"/> access available databases for images to support communication
	<input type="checkbox"/> create a multimedia presentation, incorporating visual images (clip art, video clips), sounds (live recordings, sound clips) and animated images, as appropriate to a specific audience and purpose.
Students will: Develop skills of media literacy:	<input type="checkbox"/> identify techniques used to enhance the authority and authenticity of media messages
	<input type="checkbox"/> examine the values, lifestyles and points of view represented in media messages
	<input type="checkbox"/> recognize the impact of television, the Internet, radio and print media on a particular current affairs issue.

Isolation and Adaptation

Section	Specific Expectations
<i>Through an exploration of Japan, students will demonstrate an understanding and appreciation of the ways in which beliefs, values and knowledge shape worldviews and contribute to a society's isolation and adaptation.</i>	
<i>Values and Attitudes</i>	
<input type="checkbox"/> appreciate the roles of time and geographic location in shaping a society's worldview	
<input type="checkbox"/> appreciate how a society's worldview can foster the choice to remain an isolated society	
<input type="checkbox"/> appreciate how models of governance and decision making reflect a society's worldview	
<input type="checkbox"/> appreciate how a society's/community's worldview shapes individual citizenship and identity	
<i>Knowledge and Understanding</i>	
Students will:	<input type="checkbox"/> In what ways was Japan isolated?
Explore aspects of the cultural isolation of a community by examining the following questions and issues	<input type="checkbox"/> How did the physical geography of Japan affect its worldview?
Students will:	What factors motivated Japan to change?
Explore the effects that rapid adaptation has had on traditionally isolated Japan, examining the following questions and issues	<input type="checkbox"/> How did the community adapt to change brought on by exposure to another culture?
	<input type="checkbox"/> How did the changes resulting from adaptation affect Japan economically, politically and socially?
	<input type="checkbox"/> What challenges emerged for Japan in maintaining traditional cultural aspects while undergoing change; e.g., maintaining language, religion, spiritual beliefs, music, art
	<input type="checkbox"/> What challenges and opportunities emerged for the Japanese as a result of change?
	<input type="checkbox"/> Explore the ways in which First Nations, Métis and Inuit worldviews been influenced by other worldviews; e.g., language, spiritual belief, relationship to land, contemporary examples

Exploring the Origins of a Western Worldview

Section	Specific Expectations
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Through an exploration of Renaissance Europe, students will demonstrate an understanding and appreciation of the ways in which the exchange of ideas and knowledge contributed to the shaping of the worldview of the western world.

Values and Attitudes

- ☐ appreciate how Renaissance Europe formed the basis for the worldview of the western world
- ☐ demonstrate a willingness to consider differing beliefs, values and worldviews
- ☐ recognize how beliefs and values are shaped by time, geographic location and societal context

Knowledge and Understanding

<p>Students will:</p> <p>Explore the factors that shaped the European worldview by examining the following questions and issues:</p>	<input type="checkbox"/> What was the Renaissance?
	<input type="checkbox"/> How did the Renaissance spark the growth and exchange of ideas and knowledge across Europe; e.g., astronomy, mathematics, science, politics, religion, arts?
	<input type="checkbox"/> How did the physical geography of Renaissance Europe impact trade among and competition between European countries?
	<input type="checkbox"/> In what ways did exploration and intercultural contact during the Renaissance, through trade, affect the citizenship and identity of Europeans; e.g., government; family structure; roles of men, women and children; technology; transportation; occupations/livelihood; religion; language?

Contact Among Cultures in the Americas

Section	Specific Expectations
<p><i>Through an exploration of Spanish and Aztec societies, students will demonstrate an understanding and appreciation of the ways in which intercultural contact impacts the worldviews of societies.</i></p>	
<i>Values and Attitudes</i>	
<input type="checkbox"/> appreciate how a society's worldview influences its choices, decisions and interactions with others	
<input type="checkbox"/> appreciate how identities and worldviews were impacted by intercultural contact	
<input type="checkbox"/> appreciate and recognize how rapid adaptation can radically change a society's beliefs, values and knowledge	
<i>Knowledge and Understanding</i>	
<p>Students will:</p> <p>Explore how the Aztecs</p>	<input type="checkbox"/> What were the key elements of the worldview of the Aztec civilization prior to contact with the Spanish?

were affected by the Spanish worldview by examining the following questions and issues:	<input type="checkbox"/> How were the key elements of the Aztec worldview expressed; e.g., livelihood, art, literature, religion, economics, government, communication, transportation, family life?
	<input type="checkbox"/> What key elements of Spain's worldview led to a desire to expand its empire?
	<input type="checkbox"/> In what ways did technology and disease contribute to the dominance of the Spanish over the Aztec civilization?
	<input type="checkbox"/> How did the beliefs, identity and practices of the Aztec civilization change as a result of contact; e.g., livelihood, spirituality, language, health, education, politics, economics, communication, transportation?

The Arts

Drama

Section	Specific Expectations
Orientation Orientation is the introduction of basic concepts, skills and attitudes in drama, which should be addressed before commencing more in-depth work in the five disciplines covered in the junior high program. Orientation must be taught at all three grade levels. It is recommended that orientation be the first area of study covered. Orientation can be integrated with disciplines, or used as an approach to planning and executing the complete program.	<input type="checkbox"/> Demonstrate a willingness to take calculated and reasonable risks.
	<input type="checkbox"/> Share ideas confidently with others.
	<input type="checkbox"/> Focus concentration on one task at a time.
	<input type="checkbox"/> Listen effectively.
	<input type="checkbox"/> Meet deadlines and follow through on individual and group commitments.
	<input type="checkbox"/> Demonstrate trust by becoming comfortable, physically and emotionally, with others.
	<input type="checkbox"/> Work cooperatively and productively with all members of the class in pairs, small groups and large groups.
	<input type="checkbox"/> Support positively the work of others.
	<input type="checkbox"/> Offer and accept constructive criticism, given specific guidelines, with a desire to improve.
	<input type="checkbox"/> Recognize the purposes of and participate in warm up activities.
	<input type="checkbox"/> Communicate through use of voice and body.
	<input type="checkbox"/> Move in a variety of ways.
	<input type="checkbox"/> Respond to directions without breaking concentration — side coaching.
	<input type="checkbox"/> Speak, move, and generate ideas spontaneously.
	<input type="checkbox"/> Investigate a variety of roles and situations.
	<input type="checkbox"/> Show awareness of story sequence.
	<input type="checkbox"/> Understand that technical elements enhance verbal/physical communication.
	<input type="checkbox"/> Recognize that there is an historical and cultural aspect of drama/theatre.

	<input type="checkbox"/> Demonstrate awareness of the multidisciplinary nature of drama/theatre.
Movement Movement is non-verbal physical expression. The development of a responsive and expressive body is enhanced when the movement elements of energy, focus and control work together. The student will be able to:	<input type="checkbox"/> extend body flexibility
	<input type="checkbox"/> display clarity of movement and gesture.
	<input type="checkbox"/> use exaggerated movement and gesture.
	<input type="checkbox"/> plan, repeat and combine movement patterns.
	<input type="checkbox"/> plan movement for audience visibility and spatial limitations.
	<input type="checkbox"/> communicate environment, character, and situation non-verbally.
Speech Speech is the exploration of talking and speaking to meet the demands of verbal communication. It examines interpretation, the mechanisms of control of vocal delivery, and acknowledges the importance of listening critically. The focus of speech instruction in junior high is on the effective communication of ideas, rather than on the technical aspects of speech. The student will be able to:	<input type="checkbox"/> use volume, articulation and projection to achieve clarity.
	<input type="checkbox"/> demonstrate effects of intonation, rate, pause and phrasing on the meaning of words.
	<input type="checkbox"/> use pitch to affect quality of voice production.
	<input type="checkbox"/> demonstrate a stage whisper.
	<input type="checkbox"/> able to use voice to communicate mood and emotion.
	<input type="checkbox"/> use a variety of character voices.
Improvisation/Acting Improvisation/acting is the “acting out” of an idea or situation, using spontaneous improvisation, planned improvisation and text. Spontaneous	<input type="checkbox"/> recognize the techniques of offering, accepting, advancing and blocking
	<input type="checkbox"/> use varied stimuli for character development.
	<input type="checkbox"/> use the body and body language to enhance characterization.
	<input type="checkbox"/> demonstrate economy in movement and speech.
	<input type="checkbox"/> select and use language appropriate to a given character and situation.

<p>improvisation involves unplanned action and/or dialogue. Planned improvisation involves planned, rehearsed or polished action and/or dialogue. Text refers to written material. The student will be able to:</p>	<input type="checkbox"/> use voice variety to enhance a character.
	<input type="checkbox"/> discover how feelings affect a character.
	<input type="checkbox"/> enter and exit in character.
	<input type="checkbox"/> sustain a character throughout an exercise or scene.
	<input type="checkbox"/> create business appropriate to character and situation.
	<input type="checkbox"/> demonstrate understanding of character motivation.
	<input type="checkbox"/> recognize that relationships exist between characters in given situations
<p>Theatre Studies</p> <p>Theatre studies is the introductory exploration of teacher selected elements of drama and theatre that foster an appreciation of theatre as an historical and cultural art form. Within this discipline, the student will examine the following components: performance analysis, theatre history, the script. The student will be able to:</p>	<input type="checkbox"/> demonstrate understanding of focus and the processes of sharing, giving and taking.
	<input type="checkbox"/> recognize that drama exists in every culture.
	<input type="checkbox"/> recognize that “theatre is a mirror of society”.
<p>Technical Theatre</p> <p>Technical theatre is the appropriate selection, construction, and manipulation of those staging variables that visually and aurally support the performer and the needs of the production. Students will demonstrate the concepts, skills and attitudes of the</p>	<input type="checkbox"/> show awareness of selected periods and playwrights.
	<i>Awareness</i>
	<input type="checkbox"/> recognize the basic terminology associated with the component being studied.
	<input type="checkbox"/> demonstrate understanding of the basic functions of the component being studied.
	<input type="checkbox"/> show awareness of the importance of research.
	<input type="checkbox"/> show awareness of available resources pertaining to the component being studied; e.g. supplies, libraries and theatre companies.
	<input type="checkbox"/> demonstrate understanding of the various conventions of the component being studied.

<p>technical theatre discipline through a different component at each level. Possible components of study include: lighting, sound, makeup, costume, set, properties, puppetry, mask, visual media, and management (stage/house/business). Students will be able to:</p>	<i>Readiness</i>
	<input type="checkbox"/> demonstrate understanding of the importance of planning and organization
	<input type="checkbox"/> select a project appropriate to the component being studied.
	<input type="checkbox"/> demonstrate understanding of the use of colour, shape and texture to achieve a desired effect.
	<input type="checkbox"/> use sketching to explore ideas for the project.
	<input type="checkbox"/> demonstrate understanding of and use appropriate methods and tools for designing the project; e.g., makeup charts, cue sheets, working drawings.
	<input type="checkbox"/> arrange and sequence time, ideas, information, materials and/or personnel for achievement of the project.
	<i>Application</i>
	<input type="checkbox"/> demonstrate understanding of and apply appropriate regulations, procedures and precautions to ensure safe working conditions.
	<input type="checkbox"/> determine and acquire necessary supplies or substitutes to construct the planned project
	<input type="checkbox"/> use appropriate tools and skills to assemble or construct the planned project.
	<input type="checkbox"/> use the project.
	<input type="checkbox"/> demonstrate the integration of technical theatre with other disciplines in order to enhance dramatic communication.

Music

Section	Specific Expectations
<i>Overall Goals</i>	
	<input type="checkbox"/> To develop skills in listening, performing and using notational systems
	<input type="checkbox"/> To make students aware of the history of music and the implications of music in our society
	<input type="checkbox"/> To encourage students to strive for musical excellence, individually and as members of groups
	<input type="checkbox"/> To enable students to understand, evaluate and appreciate a

	variety of music
	<input type="checkbox"/> To provide experiences that will foster the development of self-expression, creativity and communication through music

Choral Music Program

Section	Goals
<i>Singing</i>	
	<input type="checkbox"/> To discover, develop and evaluate their talents and abilities relative to singing, and to establish and reinforce correct vocal techniques and skills
<i>Reading</i>	
	<input type="checkbox"/> To interpret rhythm, melody, harmony, form and expression as they appear in musical notation through both cognitive and psychomotor responses
<i>Listening</i>	
	<input type="checkbox"/> To develop the ability to make aesthetic judgments based on critical listening and analysis of music.
<i>Creating</i>	
	<input type="checkbox"/> To develop an additional avenue of self expression by composing, improvising and interpreting music
<i>Valuing</i>	
	<input type="checkbox"/> To become aware of the history of music and the implications of music in our society with respect to music careers, its avocational and leisure uses, and to grow in the appreciation, understanding, and enjoyment of music as a source of personal fulfillment.
<i>Playing</i>	
	<input type="checkbox"/> To develop functional instrumental skills as an aid to

	individualized vocal practice.
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General Music Program

Section	Goals
<i>Singing</i>	
	<input type="checkbox"/> To explore and develop musical skills, using a wide variety of traditional and contemporary music.
<i>Listening</i>	
	<input type="checkbox"/> To develop the ability to make aesthetic judgments based on critical listening and analysis of music.
<i>Creating</i>	
	<input type="checkbox"/> To learn how music is organized through improvising, arranging and composing for a personal musical experience
<i>Valuing</i>	
	<input type="checkbox"/> To make students aware of the implications of music in our society with respect to music careers; its avocational and leisure uses; and to grow in the appreciation, understanding and enjoyment of music as a source of personal fulfillment.

Visual Arts

Section	Concepts
<i>Drawing</i>	
Record: Students will examine and simplify basic shapes and spaces:	<input type="checkbox"/> Shapes may be organic or geometric
	<input type="checkbox"/> Geometric and organic shapes can be used to create positive and negative spaces.
Investigate: Students will employ space, proportion and relationships for image making:	<input type="checkbox"/> The size of depicted figures or objects locates those objects in relationship to the ground or picture plane.
	<input type="checkbox"/> Overlapping figures or objects create an illusion of space in two-dimensional works.
	<input type="checkbox"/> The amount of detail depicted creates spatial depth in two-dimensional works.
	<input type="checkbox"/> Parallel lines meeting at a vanishing point create linear perspective in two-dimensional works.
	<input type="checkbox"/> Proportion can be analyzed by using a basic unit of a subject as a measuring tool.
	<input type="checkbox"/> The principles of repetition or emphasis can be applied to achieve unity in two-dimensional works.
Communicate: Students will use expressiveness in their use of elements in the making of images:	<input type="checkbox"/> Line can be used freely and rhythmically to add mood or movement to a two-dimensional image.
	<input type="checkbox"/> Points of view can be developed to express certain ideas such as mood or proximity in two-dimensional works.
	<input type="checkbox"/> Scale drawings and simple systems can communicate architectural ideas in drawing form.
Articulate and Evaluate: Students will use the vocabulary of art criticism to develop a positive analysis of their work:	<input type="checkbox"/> Identifying and describing techniques and media is part of learning to talk about art.
	<input type="checkbox"/> Dominant elements and principles or applications of media can be discussed by students in relationship to the effective solving of their visual problems.
	<input type="checkbox"/> Discussing the most appealing or favorite part of a student's own work is part of learning to talk about art.
<i>Compositions</i>	
Component 1: Students will create	<input type="checkbox"/> Two-dimensional tableaux can be used to depict groups of people in action

compositions in both two- and three-dimensions:	<input type="checkbox"/> Low relief tableaux can be used to depict groups of people in action.
	<input type="checkbox"/> Man-made or natural objects can be represented in a variety of three-dimensional media.
Component 2: Students will experiment with the transformation of space in compositions:	<input type="checkbox"/> Three-dimensional figures or units may be presented as open forms.
	<input type="checkbox"/> Value or colour can emphasize negative space over positive space.
	<input type="checkbox"/> Space can be altered or distorted for special effects in two-dimensional works.
Relationship 1: Students will investigate the use of pattern and emphasis in the creation of compositions:	<input type="checkbox"/> A pattern or motif can be repeated to create certain spatial effects.
	<input type="checkbox"/> Motifs can be designed to convey personal identity as in popular or folk-art images.
Relationship 2: Students will use the vocabulary of art criticism to develop a positive analysis of their work	<input type="checkbox"/> Techniques and media that students have used to make their images can be identified and described.
	<input type="checkbox"/> Dominant elements and principles of media applications can be discussed by students in relation to the effective solving of their visual problems.
	<input type="checkbox"/> Discussing the most appealing or favorite part of a student's own work is part of learning to talk about art
Organizations Objectives and Concepts: Students will experiment with value, light, atmosphere and colour selection to reflect mood in composition:	<input type="checkbox"/> Mood in composition can be affected by proximity or similarity of selected figures or units.
	<input type="checkbox"/> Mood in composition can be affected by the selection of various colour schemes such as intense, aggressive schemes or harmonious, pastel schemes.
	<input type="checkbox"/> Mood in composition can be enhanced by the intensity of the light source and the value of the rendered shading.
<i>Encounters</i>	
Sources of Images: Students will investigate form and structure of natural and man-made objects as sources of images:	<input type="checkbox"/> Skeletal structure affects the shape and surface of an object, artifact or the human figure.
	<input type="checkbox"/> Mass structure has an affect on the shape and form of an object or artifact.

Transformations through Time: Students will compare varying interpretations of natural forms and man-made artifacts through time and across cultures:	<input type="checkbox"/> Comparisons between natural forms and architectural systems illustrate the functional aspects of natural structure
	<input type="checkbox"/> Natural forms and structures have been interpreted by artists of various cultures for decorative and artistic purposes.
Impact of Images: Students will consider the impact of man-made structures upon human activity in the modern world:	<input type="checkbox"/> Natural forms and structures provide sources for environmental design in the modern world.
	<input type="checkbox"/> Structural design of shelters may enhance or inhibit human activities.
	<input type="checkbox"/> Decorative and functional works enhance public and private buildings.

Health & Physical Education

Wellness Choices

Section	Specific Expectations
<i>Personal Health</i>	
Students will:	<input type="checkbox"/> examine the relationship between choices and resulting consequences; e.g., how choosing to smoke affects how one looks, feels and performs
	<input type="checkbox"/> analyze the impact of positive and changing choices on health throughout the lifespan; e.g., need for varying amounts of sleep, calcium
	<input type="checkbox"/> recognize and accept that individuals experience different rates of physical, emotional, sexual and social development
	<input type="checkbox"/> develop personal strategies to deal with pressures to have a certain look/lifestyle; e.g., accept individual look
	<input type="checkbox"/> evaluate personal food choices, and identify strategies to maintain optimal nutrition when eating away from home; e.g., eating healthy fast foods
	<input type="checkbox"/> analyze possible negative consequences of substance use and abuse; e.g., fetal alcohol syndrome, drinking and driving

Section	Specific Expectations
<i>Safety and Responsibility</i>	
Students will:	<input type="checkbox"/> determine the signs, methods and consequences of various types of abuse; e.g., neglect, physical, emotional, sexual abuse
	<input type="checkbox"/> identify potentially unsafe situations in the community, and begin to develop strategies to reduce risk; e.g., dark parking lots, lack of railway crossing lights
	<input type="checkbox"/> describe rights and responsibilities of employers and employees in relation to workplace safety
	<input type="checkbox"/> develop strategies to effectively access health information and health services in the community; e.g., health hotline, family doctor, public health unit
	<input type="checkbox"/> identify and develop personal resiliency skills; e.g., planning skills, social competence

	<input type="checkbox"/> identify and describe the responsibilities and consequences associated with involvement in a sexual relationship
	<input type="checkbox"/> describe symptoms, effects, treatments and prevention for common sexually transmitted diseases; i.e., chlamydia, HPV, herpes, gonorrhea, hepatitis B/C, HIV
	<input type="checkbox"/> identify and describe basic types of contraceptives; i.e., abstinence, condom, foam, birth control pills

Relationship Choices

Section	Specific Expectations
<i>Understanding and Expressing Feelings</i>	
Students will:	<input type="checkbox"/> describe characteristics of persistent negative feeling states; e.g., depression, mood disorders
	<input type="checkbox"/> describe signs associated with suicidal behaviour, and identify interventional strategies
	<input type="checkbox"/> evaluate the relationship between risk management and stress management; e.g., managing risks effectively reduces stress, managing stress can reduce impulsive behaviours
	<input type="checkbox"/> analyze the effects of self-concept on personal communication
<i>Interactions</i>	
Students will:	<input type="checkbox"/> develop strategies for maintaining healthy relationships
	<input type="checkbox"/> describe and provide examples of ethical behaviour in relationships; e.g., integrity
	<input type="checkbox"/> develop and demonstrate strategies for promoting peaceful relationships; e.g., find common ground in conflicts
<i>Group Processes</i>	
	<input type="checkbox"/> describe and explain the positive and negative aspects of conformity and dissent as they relate to individuals in a group or on a team
	<input type="checkbox"/> describe the characteristics of, and demonstrate skills of, an effective leader and group member

Life Learning Choices

Section	Specific Expectations
<i>Learning Strategies</i>	
Students will:	<input type="checkbox"/> determine and develop time management strategies/skills to establish personal balance; e.g., the use of time and energy in family, school, leisure and volunteer activities, rest
	<input type="checkbox"/> examine learning priorities, and implement a learning plan
	<input type="checkbox"/> identify components of ethical decision making, and apply these concepts to personal decision making
	<input type="checkbox"/> begin to develop goals and priorities related to learning and future career paths, based on personal interests, aptitudes and skills
<i>Life Roles and Career Development</i>	
	<input type="checkbox"/> update a personal portfolio to show evidence of a range of interests, assets and skills; and relate evidence to knowledge and skills required by various career paths
	<input type="checkbox"/> investigate, interpret and evaluate career information and opportunities, using a variety of sources; e.g., Internet, informational interviews, mentors, media
Students will:	<input type="checkbox"/> relate personal knowledge and skills to potential opportunities for volunteering and providing service to others in the community
	<input type="checkbox"/> investigate the characteristics of a mentor, and practise mentorship in a group setting

Activity

Section	Specific Expectations
<i>Basic Skills- Locomotor</i>	
Students will:	<input type="checkbox"/> select, combine and perform specific locomotor skills in a variety of activities to improve personal performance
	<input type="checkbox"/> select, combine and perform locomotor skills by using elements of body and space awareness, effort and relationships to improve personal performance

<i>Basic Skills- Nonlocomotor</i>	
Students will:	<input type="checkbox"/> select, combine and perform specific nonlocomotor skills in a variety of activities to improve personal performance
	<input type="checkbox"/> select, combine and perform non locomotor skills by using elements of body and space awareness, effort and relationships, to improve personal performance
<i>Basic Skills- Manipulative</i>	
	<input type="checkbox"/> demonstrate ways to receive, retain and send an object with varying speeds, accuracy and distance in skills specific to an activity
	<input type="checkbox"/> select, combine and perform manipulative skills by using elements of space awareness, effort and relationships, with and without objects, to improve performance
<i>Application of Basic Skills in an Alternative Environment</i>	
Students will:	<input type="checkbox"/> apply activity-specific skills in a variety of environments and using various equipment; e.g., cross-country skiing, skating
<i>Application of Basic Skills in Dance</i>	
Students will:	<input type="checkbox"/> select, refine and present a variety of dance sequences; e.g., jazz, square, social and novelty, alone and with others
	<input type="checkbox"/> choreograph and perform dance sequences, using the elements of movement and basic dance steps and patterns
<i>Application of Basic Skills in Games</i>	
Students will:	<input type="checkbox"/> select, combine and perform activity-specific basic skills in a variety of games
	<input type="checkbox"/> be able to identify and evaluate specific strategies and tactics that coordinate effort with others; e.g., team/fair play, in order to achieve a common activity goal
<i>Application of Basic Skills in Types of Gymnastics</i>	
Students will:	<input type="checkbox"/> select and perform ways to improve the functional and expressive qualities of movements, that combine basic skills in a variety of gymnastic experiences individually, with a partner, or in a group; e.g., educational, rhythmic and artistic

<i>Application of Basic Skills in Individual Activities</i>	
Students will:	<input type="checkbox"/> select, perform and refine activity-specific skills in a variety of individual pursuits; e.g. wrestling

Benefits Health

Section	Specific Expectations
<i>Functional Fitness</i>	
Students will:	<input type="checkbox"/> monitor and analyze a personal nutrition plan that affects physical performance
	<input type="checkbox"/> demonstrate and monitor ways to achieve a personal functional level of physical fitness
	<input type="checkbox"/> explain fitness components and principles of training, and formulate individual plans for personal physical fitness
<i>Body Image</i>	
	<input type="checkbox"/> acknowledge the perceptions that occur as a result of media influence on body types in relation to physically active images
	<input type="checkbox"/> discuss performance-enhancing substances and how they can affect body type in relation to physical activity
<i>Well Being</i>	
	<input type="checkbox"/> analyze the personal effects of exercise on the body systems before, during and after exercise
	<input type="checkbox"/> monitor, analyze and assess fitness changes as a result of physical activity
	<input type="checkbox"/> describe and perform appropriate physical activities for personal stress management and relaxation

Co-operation

Section	Specific Expectations
<i>Communication</i>	
Students will:	<input type="checkbox"/> communicate thoughts and feelings in an appropriate respectful manner as they relate to participation in physical activity

	<input type="checkbox"/> discuss positive active living role models
<i>Fairplay</i>	
	<input type="checkbox"/> demonstrate etiquette and fair play
<i>Leadership</i>	
	<input type="checkbox"/> describe, apply and practise leadership and followership skills related to physical activity
<i>Teamwork</i>	
	<input type="checkbox"/> recommend practices that contribute to teamwork
	<input type="checkbox"/> identify and demonstrate positive behaviours that show respect for self and others

Do it Daily ... for Life!

Section	Specific Expectations
<p>By the end of Grade 8, students will:</p> <p>-assume responsibility to lead an active way of life.</p>	<i>Effort</i>
	<input type="checkbox"/> participate regularly in, and identify and describe the benefits of, an active lifestyle
	<input type="checkbox"/> develop a personal plan that encourages participation and continued motivation
	<i>Safety</i>
	<input type="checkbox"/> select and apply rules, routines and procedures for safety in a variety of activities
	<input type="checkbox"/> design and perform warm-up and cool-down activities
	<input type="checkbox"/> appraise or judge movement experiences for safety that promote an active, healthy lifestyle; e.g., safe use of equipment
	<i>Goal Setting/Personal Challenge</i>
	<input type="checkbox"/> monitor, revise and refine personal goals based on interests and abilities <input type="checkbox"/> evaluate different ways to achieve an activity goal, and determine personal and team approaches that are challenging for both the individual and the group

	<i>Active Living in the Community</i>
	<input type="checkbox"/> analyze community programs that promote a physically active lifestyle
	<input type="checkbox"/> analyze factors that affect choices of physical activity for life, and create personal strategies to overcome barriers

French

Given the following fields of experience and the subfields within each field:

1. Animals

- choice of pet
- pet care
- animal families
- wild animals
- animals in zoos
- animal adoption

2. Clothing

- clothing choices
- clothing design
- clothing care

3. Food

- food and nutrition
- food preparation
- ethnic cuisine
- cuisine of the Francophone world
- food and celebrations

4. Four Holidays and Celebrations

- origins of the four holidays and celebrations
- traditions associated with the four holidays and celebrations

5. And other Areas of Interest....

....students will engage in various language activities, based on the context, the communicative task and the different information and communication technologies available, in order to meet the following specific expectations:

Communication

Section	Specific Expectations
<i>Listening Comprehension</i>	
<input type="checkbox"/> understand, in guided situations, by identifying key words or expressions previously taught, the main idea(s) or isolated details about a variety of concrete topics contained in authentic or adapted oral texts. For example:	
	<input type="checkbox"/> Identify the reason behind eating a healthy breakfast [Le corps a besoin d'énergie le matin.] <input type="checkbox"/> pull out two foods that comprise a healthy breakfast [un fruit, un liquide froid ou chaud]
<i>Reading Comprehension</i>	
<input type="checkbox"/> understand, in guided situations, by identifying key words or expressions previously taught, the main idea(s) or isolated details about a variety of concrete topics contained in authentic or adapted written texts. For example:	
	<input type="checkbox"/> identify the colour "blue" [le bleu] and pull out two personality traits of someone who likes to wear blue [personne généreuse, créative] <input type="checkbox"/> two symbols associated with this colour [le bleu représente le ciel et les grands espaces]
<i>Oral Production</i>	
<input type="checkbox"/> name, list, encourage, describe, explain, ask and answer questions, give simple commands, directions, instructions or advice, express needs, desires, wishes and preferences, make suggestions, give compliments, orally, providing some details, in a defined, structured and modelled fashion, with limited spontaneity, resulting in a prepared message expressed in the present, that is comprehensible and accurate. For example:	
	<input type="checkbox"/> itemize and describe one's wardrobe
	<input type="checkbox"/> give someone directions to a specific area of the zoo
	<input type="checkbox"/> list the ingredients and describe the steps to follow for a favourite family recipe)

<i>Written Production</i>	
name, label, list, encourage, describe, explain, ask and answer questions, give simple commands, directions, instructions or advice, express needs, desires, wishes and preferences, make suggestions, in written form, providing some details, in a defined, structured and modelled fashion, resulting in a prepared message expressed in the present, that is comprehensible and accurate. For example:	
	<input type="checkbox"/> write a list of grocery items needed for a Moroccan recipe
	<input type="checkbox"/> give nutritional advice in the form of a game
	<input type="checkbox"/> describe an animal in the form of an information card

Language

Section	Specific Expectations
<i>Knowledge of Language Concepts</i>	
Students will: Continue to develop knowledge of the following concepts:	<input type="checkbox"/> nouns
	<input type="checkbox"/> gender
	<input type="checkbox"/> number
	<input type="checkbox"/> articles- definite and indefinite
	<input type="checkbox"/> possession
	<input type="checkbox"/> possessive adjectives
	<input type="checkbox"/> adjectives
	<input type="checkbox"/> adjectival agreements
	<input type="checkbox"/> prepositions and prepositional phrases
	<input type="checkbox"/> the infinitive as a verb identifier
	<input type="checkbox"/> personal subject pronouns
	<input type="checkbox"/> verbs
	<input type="checkbox"/> conjugation
	<input type="checkbox"/> the present tense
	<input type="checkbox"/> conjugation pattern of regular -er verbs in the present tense

	<input type="checkbox"/> negation
	<input type="checkbox"/> the interrogative
	<input type="checkbox"/> global expressions using faire and avoir
	<input type="checkbox"/> the contractions for à and de + definite article
	<input type="checkbox"/> interjections
	<input type="checkbox"/> cardinal and ordinal numbers
	<input type="checkbox"/> the sound–symbol system
	<input type="checkbox"/> pronunciation
	<input type="checkbox"/> word order at the phrase level
	<input type="checkbox"/> construction of simple sentences
Acquire knowledge of the following concepts:	
	<input type="checkbox"/> determiners
	<input type="checkbox"/> demonstrative adjectives
	<input type="checkbox"/> exclamatory adjectives
	<input type="checkbox"/> the partitive
	<input type="checkbox"/> quantity
	<input type="checkbox"/> adverbs and adverbial expressions
	<input type="checkbox"/> different verb groupings (–er, –ir, –re)
	<input type="checkbox"/> irregular verb conjugation patterns in the present tense
	<input type="checkbox"/> pronominal versus non pronominal verbs
	<input type="checkbox"/> verb + infinitive
	<input type="checkbox"/> the imperative
	<input type="checkbox"/> negative expressions
	<input type="checkbox"/> punctuation

Application of Vocabulary and Language Concepts

	<ul style="list-style-type: none"> □ use, with a higher level of accuracy, in oral and written form, linguistic elements defined in grades 4–7, needed to communicate a message
<ul style="list-style-type: none"> □ use, with some consistency, in oral and written form, the following linguistic elements needed to communicate a message: 	
	<ul style="list-style-type: none"> □ vocabulary associated with the fields of experience and their subfields
	<ul style="list-style-type: none"> □ demonstrative adjectives—ce, cet, cette, ces
	<ul style="list-style-type: none"> □ possessive adjectives—notre, nos; votre, vos; leur, leurs
	<ul style="list-style-type: none"> □ exclamatory adjectives (e.g., Quel animal!/Quelle belle chemise!)
	<ul style="list-style-type: none"> □ the question word pourquoi
	<ul style="list-style-type: none"> □ the partitive articles—du, de la, de l', des
	<ul style="list-style-type: none"> □ vocabulary associated with the fields of experience and their subfields
	<ul style="list-style-type: none"> □ expressions of quantity (e.g., une boîte de, un kilo de)
	<ul style="list-style-type: none"> □ expressions with avoir (e.g., Tu as peur des serpents?/J'ai besoin de.../ J'ai faim/soif.)
	<ul style="list-style-type: none"> □ expressions with faire (e.g., Le chef fait sauter les oignons.)
	<ul style="list-style-type: none"> □ present tense of regular and irregular –er, –ir, –re verbs with all personal subject pronouns in affirmative and negative sentences
	<ul style="list-style-type: none"> □ the imperative in the affirmative and in the negative with regular and irregular –er, –ir, –re verbs (e.g., Choisis le bleu./Ne mettez pas trop de sel.)
	<ul style="list-style-type: none"> □ adverbs of manner (e.g., bien, fort, lentement), of time (e.g., demain, bientôt, parfois, souvent, tard), of quantity and intensity (e.g., assez, beaucoup, très, trop) and of place (e.g., à droite, autour, ici, là-bas, loin)
	<ul style="list-style-type: none"> □ adverbs and adverbial expressions of negation (e.g., rien, jamais, ne... jamais, ne... plus, ne... rien)

	<input type="checkbox"/> parce que as an oral sentence starter
	<input type="checkbox"/> appropriate punctuation marks.
Culture	
Section	Specific Expectations
	<input type="checkbox"/> identify, with teacher assistance, concrete facts that reflect the way of life of various Francophone peoples (e.g., Per capita, the French consume the most mineral water in the world.)
	<input type="checkbox"/> recognize and understand how the French language has evolved and is evolving (e.g., le rôle des emprunts et des anglicismes)
	<input type="checkbox"/> recognize regional variations in expressions used by different Francophone groups in a similar context (e.g., petit déjeuner, déjeuner, dîner [France] versus déjeuner, dîner, souper [Canada]; slip [France] versus caleçon [Canada])
	<input type="checkbox"/> seek out information about Francophone cultures from authentic sources (e.g., French language recipe books, zoo maps)
	<input type="checkbox"/> compare and contrast, with teacher assistance, their own way of life with the way of life of individuals or groups from various Francophone cultures as a means of developing an appreciation of these cultures (e.g., eating-out patterns)
	<input type="checkbox"/> compare and contrast, with teacher assistance, the way of life of individuals or groups from various Francophone cultures as a means of developing an appreciation of these cultures (e.g., the use of animal words in expressions that are similar in English—être fort comme un taureau = to be as strong as a bull, or are not similar—avoir un chat dans la gorge = to have a frog in one's throat)
	<input type="checkbox"/> reflect, with teacher assistance, upon the way of life of individuals or groups from various Francophone cultures as a means of developing an appreciation of these cultures
	<input type="checkbox"/> access appropriate Web sites using French language search engines

	<input type="checkbox"/> cite copyrighted French language sources when using information from digital technologies
<input type="checkbox"/> demonstrate knowledge of the cultural characteristics of the French language by using the following sociolinguistic conventions:	
	<input type="checkbox"/> the sociolinguistic conventions listed in grades 4–7
	<input type="checkbox"/> appropriate spacing between sets of digits in large numbers (e.g., 1 500 000)
	<input type="checkbox"/> the appropriate convention for a written title (e.g., l'entretien des vêtements)
	<input type="checkbox"/> the appropriate abbreviations or symbols for measurement (e.g., km, g, kg, °C, ml, l)
	<input type="checkbox"/> the appropriate abbreviations or symbols for Canadian and foreign currencies (e.g., \$ can., €)
	<input type="checkbox"/> the appropriate placement and spacing of the currency symbol and the comma (e.g., 1,50 \$)
	<input type="checkbox"/> the appropriate conventions for punctuation (e.g., The typographical symbol « » represents les guillemets français.)
	<input type="checkbox"/> the appropriate conventions for spacing (e.g., There is one space before and after le deux-points.).
Comprehension Strategies- Cognitive	
Section	Specific Expectations
	<input type="checkbox"/> develop and use comprehension strategies to facilitate the understanding of an oral or written message
	<input type="checkbox"/> guess the meaning of an unknown word or expression
	<input type="checkbox"/> use words around the unknown word to guess meaning
	<input type="checkbox"/> associate a gesture, a symbol or an illustration with a message
	<input type="checkbox"/> identify cognates and word families
	<input type="checkbox"/> anticipate information from the context/situation
	<input type="checkbox"/> activate prior knowledge and experiences

	<input type="checkbox"/> activate first language listening and reading skills
	<input type="checkbox"/> use contextual clues relating to who, what, where, when and why
	<input type="checkbox"/> use visual clues (e.g., pictures, gestures, illustrations) and auditory clues (e.g., street noises, intonation, sighs)
	<input type="checkbox"/> use highlighting or underlining to identify known words or expressions
	<input type="checkbox"/> represent meaning by using mental images, illustrations or graphic representations
	<input type="checkbox"/> categorize concrete information
	<input type="checkbox"/> use repetition (e.g., listen to again or read again a part of a text that was causing difficulty)
	<input type="checkbox"/> use a bilingual dictionary to verify word meaning or find unknown words
	<input type="checkbox"/> focus attention on the required information
	<input type="checkbox"/> use strategies defined in grades 4–6
<i>Comprehension- Socio-affective</i>	
	<input type="checkbox"/> take the risk to listen to or read a new text in French
	<input type="checkbox"/> take the risk to listen to authentic texts of varying lengths made available through different information and communication technologies
	<input type="checkbox"/> take the risk to read authentic documents of varying lengths made available through different information and communication technologies
	<input type="checkbox"/> ask questions, in the first language, to clarify or verify that a message has been understood
	<input type="checkbox"/> tolerate ambiguity—accept that it is not necessary to understand every word in order to glean meaning
	<input type="checkbox"/> collaborate with others to build confidence and exchange information
	<input type="checkbox"/> use strategies defined in grades 4–6

<i>Comprehension- Metacognitive</i>	
	<input type="checkbox"/> identify a strategy that can be or was used to facilitate comprehension of a text
	<input type="checkbox"/> focus attention on the task
	<input type="checkbox"/> focus attention on what is known and ignore what is unknown
	<input type="checkbox"/> use self-talk to build confidence in listening and reading skills
	<input type="checkbox"/> evaluate own ability to understand the message
	<input type="checkbox"/> use strategies defined in grades 4–6

Production Strategies

Section	Specific Expectations
<i>Cognitive</i>	
	<input type="checkbox"/> identify patterns or language features, such as verb endings or gender
	<input type="checkbox"/> repeat a word, an expression, a pattern, a presentation, etc.
	<input type="checkbox"/> combine new learning with previous learning (e.g., knowledge of the conjugation of the verb avoir and adding avoir expressions to the language repertoire)
	<input type="checkbox"/> practise a word, an expression, a pattern, a presentation, etc.
	<input type="checkbox"/> use models of texts to help map out ideas
	<input type="checkbox"/> use models to analyze the structure of a text
	<input type="checkbox"/> use models to create a similar text
	<input type="checkbox"/> apply knowledge of a text type to follow its format and content
	<input type="checkbox"/> apply knowledge of multimedia presentations to facilitate the communication of a message

	<input type="checkbox"/> apply knowledge of word processing to produce a message
	<input type="checkbox"/> create simple personal reference materials (e.g., vocabulary lists, grammar notes)
	<input type="checkbox"/> use reference materials (e.g., a bilingual dictionary in either a print or an electronic format, verb charts, databases) to improve the message
	<input type="checkbox"/> use brainstorming techniques to stimulate ideas
	<input type="checkbox"/> activate prior knowledge and experiences
	<input type="checkbox"/> organize ideas using schemata (e.g., mind maps, T-charts)
	<input type="checkbox"/> prepare a draft of the message
	<input type="checkbox"/> plan and conduct a search using French language Internet search engines
	<input type="checkbox"/> use strategies defined in grades 4–6
Socio-affective	<input type="checkbox"/> take the risk to say or write something in French
	<input type="checkbox"/> ask questions to clarify understanding
	<input type="checkbox"/> ask the speaker to repeat the message
	<input type="checkbox"/> ask the speaker to explain what was said
	<input type="checkbox"/> ask the speaker to speak more slowly
	<input type="checkbox"/> ask the speaker to spell out or draw the unknown word
	<input type="checkbox"/> indicate to the speaker that the message was not understood
	<input type="checkbox"/> use facial expressions or mime to get the message across
	<input type="checkbox"/> seek assistance from the teacher or a peer to clarify instructions, word meaning, etc.
	<input type="checkbox"/> collaborate with others to brainstorm, resolve problems, rehearse and communicate messages
	<input type="checkbox"/> accept errors as a natural part of learning

	<input type="checkbox"/> use self-talk to build confidence in oral and written production skills
	<input type="checkbox"/> use strategies defined in grades 4–6
Metacognitive	<input type="checkbox"/> prepare for the task (e.g., organize materials, go over the instructions, read through the checklist)
	<input type="checkbox"/> use checklists, written mainly in English, to verify the work
	<input type="checkbox"/> reflect on and articulate what they have learned and can demonstrate in French
	<input type="checkbox"/> use a learning log to monitor and evaluate their own learning
	<input type="checkbox"/> reflect on the use of different information and communication technologies to produce a message in French
	<input type="checkbox"/> reflect on the use and choice of technology as a means of improving the communication of a message
	<input type="checkbox"/> use strategies defined in grades 4–6
Memory Strategies develop and use memory strategies to learn, recall or retain vocabulary or grammatical structures	<input type="checkbox"/> use rehearsal techniques (e.g., write or repeat the word over and over; teach the word to a partner; review words frequently)
	<input type="checkbox"/> use organizational techniques (e.g., classify words by themes; use word webs, T-charts or vocabulary cards)
	<input type="checkbox"/> play with language (e.g., create word searches, calligrams, riddles, charades)
	<input type="checkbox"/> use elaboration techniques (e.g., associate a new word or a concept with a familiar concept or with other personally meaningful information; reuse vocabulary and expressions in new contexts or situations; use visualization)
	<input type="checkbox"/> use strategies defined in grades 4–6.