

South Slave Divisional Education Council

# GRADE 9

## CURRICULUM PACKAGE

February 2012



2012



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## INTRODUCTION

This document contains grade level learning outcomes and suggested achievement indicators for Grade 9 students. The SSDEC Curriculum Grade Level Packages for K-9 are available at [www.ssdec.nt.ca](http://www.ssdec.nt.ca).

*The Grade 9 Curriculum Package is not intended to replace the complete versions of the approved NWT Curriculum. Please be advised that educators will serve their students best by engaging with full curriculum for each discipline as these provide the philosophy behind its development as well as valuable tools for delivery of concepts.*

### Dene Kede

Dene Kede, the culture-based curriculum of the NWT, serves as the heart of the NWT Curriculum. Dene Kede was developed under the guidance of Dene elders and shares, through its teachings, the knowledge, skills, and values of the Dene. These cultural understandings serve as the underpinnings for all learning in all content areas and it is expected that the teachings and knowledge contained within Dene Kede shall be woven into all lessons. In this manner our students will become more capable, more successful and better able to *walk in two worlds*.

### Required Areas of Study

- English Language Arts
- Mathematics
- Science
- Social Studies
- Health
- Physical Education
- Arts: Dance, Drama, Music and Visual Art

Additional information can be found at <http://www.ece.gov.nt.ca/> under the Kindergarten to grade 12 link, which will take you to the tab called, Curriculum Services.

### How to Use This Document

Suggested uses for this document might include, supporting:

- *Multi-graded classrooms*
- *Student Support Plans*
- *Students' understanding of where specific learning outcomes become more sophisticated and challenging*
- *Parents' understanding of where their student may currently be in their learning and what they are ready for next*

## **ACKNOWLEDGMENTS**

Teachers who provided their time and insights to the development of these packages:

- Loretta Myles, Lutsel K'e K-12 Dene School
- Cori Galbraith and Fraser McTurk, Deninu K-12 School
- Ashley West-Pratt and Darcie Vince, Harry Camsell K-3 School
- Catharine Mains, Chief Sunrise Education Center K-12 School
- Edith Bourke, Christie Soucy, Leah Desjarlais, and Michelle Brown, Joseph Burr Tyrell K-6 School
- Tara Boudreau and Dorie Hanson, Princess Alexandra 4-7 School
- Erin MacDonald, Christy Mackay, Jodi McMahon, Paul William Kaeser 7-12 School

ECE staff who guided us through this project:

- Peg Pardy
- Elaine Stewart
- John Stewart

SSDEC regional staff who supported and nurtured the ideas and the unfolding of these. Grade Level Curriculum Packages:

- Curtis Brown, Superintendent
- Brent Kaulback, Assistant Superintendent
- Janice Fehr, Project Regional Coordinator
- Pam Walsh, Regional Coordinator
- Jill Taylor, Regional Coordinator
- Cathy Canavan-McGrath, Regional Coordinator
- Sheila Kindred, Regional Coordinator

## DENE KEDE GRADE 9

### Passage to Manhood

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
<b>Major Cultural Understanding:</b> In the past, puberty for boys signified an important change.	
Discuss and understand that in the past, puberty for boys signified an important change.	<ul style="list-style-type: none"> <li>• Puberty was marked with a change in the voice of a boy.</li> <li>• In times past, the Dene believed that young boys and girls gained spiritual power, as they became adolescents.</li> <li>• Passage into puberty began a period of intense training for young boys, in preparation for manhood.</li> </ul>
<b>Major Cultural Understanding:</b> After puberty, boys began an intensive training for manhood.	
Describe ways after puberty, that boys began training for manhood.	<ul style="list-style-type: none"> <li>• Training began when boys were very young but during adolescence it became very intensive and the expectations grew considerably.</li> <li>• The boys began to accompany the adult men on hunts. With the "first kill" of a young man Elders would tear at his clothing to celebrate the emergence of a provider and to remind him that there were those with whom he should share his catch. If the first kill was a large one, the whole community celebrated and the meat would be distributed to the Elders.</li> <li>• They learned to make and repair tools, they learned about time, direction and weather as it related to travelling.</li> <li>• They learned how to work with a leader in large hunts, cooperating to ensure success.</li> <li>• They were made to go off on hunting trips alone as a test of their knowledge and skills and mental stamina and courage.</li> <li>• When the young man proved capable and self-sufficient on the land, he was recognized as a man and allowed to marry</li> </ul>
<b>Major Cultural Understanding:</b> Some tribes trained their boys in a separate camp during their passage.	
Describe and record how some tribes trained their boys in camps during their passage.	<ul style="list-style-type: none"> <li>• The boys were put through a period of training away from others.</li> <li>• They were given rigorous challenges such as sleeping by sitting upright, or working without a break right after waking.</li> <li>• These challenges were meant to condition their bodies and to develop mental stamina.</li> </ul>
<b>Major Cultural Understanding:</b> Some tribes engaged their young men in dream quests.	
Discuss what a Dream Quest might have been like for a young man	<ul style="list-style-type: none"> <li>• Stories of dream quests were told to the young people from the time they were young so that they could look forward to the time that they would begin their own quests.</li> <li>• Even today, puberty signifies an important change in boys.</li> <li>• Dream quests were sacred spiritual experiences where the young men would receive dreams or visions, which communicated their medicine powers</li> <li>• Young men were encouraged to stay in the bush, away from others in order to enable dreams.</li> <li>• There were times that dreams did not come at all to boys, and other times when boys became old men before the dreams would come to them. There were powers, which existed only in the people who showed courage and concern</li> </ul>
<b>Major Cultural Understanding:</b> As in the past, boys today can use the time of their passage to prepare themselves for manhood	
Discuss ways in which young man prepare today for manhood and record responses	<ul style="list-style-type: none"> <li>• By knowing that the changes in their bodies signify the ability to father a child</li> <li>• By recognizing the spiritual possibilities within themselves and treating themselves with respect</li> <li>• By accepting and seeking the guidance of Elders and other men</li> </ul>

## DENE KEDE GRADE 9

### Passage to Manhood

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
<b>Major Cultural Understanding:</b> Attitudes related to self development as a man	
Describe the most effective ways for men to develop to be active members of their families and communities	<ul style="list-style-type: none"> <li>• Willingness to learn from the words of Elders</li> <li>• Willingness to reflect on one's decisions and behaviors</li> <li>• Willingness to accept and begin learning the roles and responsibilities of men in their families and their community</li> </ul>
<b>Major Cultural Understanding:</b> Skills related to self development as a man	
Identify what skills would be important for a young man to know as he moved into adulthood	<ul style="list-style-type: none"> <li>• Recognizing changes in one's body and the implications of these Caring for one's body</li> <li>• Personal goal setting</li> <li>• Seeking Elders for guidance</li> <li>• Seeking opportunities to learn the skills required for manhood</li> </ul>
<b>Major Cultural Understanding:</b> Skills related to being a man in one's family and community	
Distinguish what it means to be a member of your current family; what does it mean to be a member of your community	<ul style="list-style-type: none"> <li>• As determined by family and community</li> </ul>
<b>Spirit of the Land</b>	
<b>Major Cultural Understanding:</b> Dene spirituality is attached to the land.	
Cite and write stories about your Dene Spirituality	<ul style="list-style-type: none"> <li>• Dene oral stories tell about when the world was new.</li> <li>• The Creator made the land and the animals first and then made the people.</li> <li>• The Creator gave medicine powers to all people who lived good lives to use to help others to survive. These medicine powers were spirit powers from nature.</li> <li>• Spiritual brothers were sent to the earth to bring laws to the land and to people. These laws were meant to help the Dene so that we could live with the animal creatures and with each other more peacefully.</li> <li>• Messages have been left in the form of landmarks throughout our land to remind us of the sacredness of the land and the Dene laws which are to guide our lives.</li> </ul>
<b>Major Cultural Understanding:</b> Dene prophets have seen the past and the future and have relayed messages about how to deal with the changes that are happening to the Dene.	
List examples of the ways in which the Dene prophets have seen the past and the future and have relayed messages about how to deal with the changes that are happening to the Dene. Describe how this knowledge is important in today's changing society	<ul style="list-style-type: none"> <li>• The prophets are people who have received messages for the Dene people from the Creator.</li> <li>• The prophets have communicated that changes will put great pressures upon Dene.</li> <li>• Dene prophets have seen the past and the future and have relayed messages about how to deal with the changes that are happening to the Dene</li> </ul>
<b>Major Cultural Understanding:</b> When missions and churches first arrived they tried to discourage the practice of Dene spirituality.	
Recall ways in which the missions and churches tried to discourage the practice of Dene spirituality.	<ul style="list-style-type: none"> <li>• Each community has its own stories of how their Dene spirituality was discouraged.</li> <li>• Despite the pressures to abandon Dene spirituality, many of the beliefs have persisted and are accepted into many churches.</li> </ul>
<b>Major Cultural Understanding:</b> Today, Dene people continue their spiritual ties to the land.	
Give examples of how the Dene people continue their spiritual ties to the land.	<ul style="list-style-type: none"> <li>• Belief that without the land, life is not possible.</li> <li>• Belief that the land must be honoured and protected to ensure that it continues to sustain the people.</li> <li>• Belief that in honouring the land, the Creator is being honoured.</li> <li>• Belief in the ways of respect for the land:</li> <li>• Belief that medicine powers have diminished but exist in the form of talents among people.</li> </ul>

## DENE KEDE GRADE 9

### Spirit of the Land

Outcomes	Achievement Indicators – Measurable outcomes
It is expected that students will:	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
(Continued)	<ul style="list-style-type: none"> <li>• Belief that the Elders still living who have led spiritual lives have the most to teach about the spirit of the land.</li> <li>• Much of the spiritual knowledge of the Dene is passed from mentor to specially chosen students.</li> </ul>
<b>Major Cultural Understanding:</b> Skills related to recognizing the spirit of the land	
Identify skills you will need to recognize the spirit of the land	<ul style="list-style-type: none"> <li>• Honouring the spirit of the land in Dene ways</li> <li>• Seeking Elders for teachings and guidance</li> </ul>
<b>Major Cultural Understanding:</b> Attitudes related to recognizing the spirit of the land	
Identify attitudes you will need to relate to the spirit of the land	<ul style="list-style-type: none"> <li>• Willingness to reflect on one's feelings about the land</li> <li>• Willingness to show respect to the spirit of the land</li> <li>• Willingness to learn about the spirit of the land</li> </ul>
<b>Developing out Talents</b>	
<b>Major Cultural Understanding:</b> People are born with talents and these are sacred.	
Give examples of how people are born with special talents in your community	<ul style="list-style-type: none"> <li>• Talents are gifts that come to individuals from the Creator.</li> <li>• Everyone is born with a talent but it must be discovered and developed.</li> <li>• A person's talents can be discovered when the person is very young.</li> </ul>
<b>Major Cultural Understanding:</b> A person's talent must be discovered.	
Discuss ways students can identify personal talents and talents of those around them	<ul style="list-style-type: none"> <li>• Things come easily to those with talent.</li> <li>• People in one's family may know the talents of the family members.</li> <li>• Elders are often able to see talents in the young. If the young are able to take the advice of Elders, they can discover the talents in themselves.</li> <li>• In the past young people were advised by Elders in their dream quests as they searched for their spiritual powers.</li> <li>• Elders with finely developed talents and wisdom were mentors for the young who showed talents in their areas</li> </ul>
<b>Major Cultural Understanding:</b> An Individual should share their talent.	
Identify why and ways that people in your community should share their talents.	<ul style="list-style-type: none"> <li>• Special talents and abilities are provided to individuals by the Creator in order for them to be shared.</li> <li>• Talents were meant by the Creator to help people survive and to live a better life.</li> <li>• Talents that are not shared are left unused (can't be shy or lazy). You receive back what you give away or share in the way of talents.</li> <li>• Individuals should not use talents for self-gain. One should not expect payment for the sharing of a talent.</li> <li>• Gifts should be offered in exchange for the sharing of talent in order to enable the person to maintain his or her talent.</li> </ul>
<b>Major Cultural Understanding:</b> A person with talent is humble.	
Discuss why it is important that a person with talent remain humble.	<ul style="list-style-type: none"> <li>• A person with talent must not boast of it or ridicule others who do not have it.</li> <li>• A person with talent does not speak of his talent. It is left to others to recognize and speak of the talent.</li> </ul>
<b>Major Cultural Understanding:</b> Dene talents come in many forms.	
Discuss and identify the people in your community with talents.	<ul style="list-style-type: none"> <li>• Some talents are closer to the Creator than other talents.</li> <li>• The Dene believe that certain activities are more spiritual in nature than others and when people have talents in these activities they are gifted with medicine powers and are considered very important people to the culture. Examples are midwifery, drumming and dancing.</li> <li>• Talents today come in other forms that are useful to our lives: talents such as being a good truck driver, being a good teacher or being a good mechanic.</li> </ul>



## DENE KEDE GRADE 9

### Spirit of the Land

Outcomes	Achievement Indicators – Measurable outcomes
It is expected that students will:	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
(Continued)	<ul style="list-style-type: none"> <li>• Some people are gifted with many talents. These people are encouraged to search for the one talent that they feel comfortable or easy with - that will be the one that was meant for them</li> </ul>
<b>Major Cultural Understanding:</b> Attitudes related to the development of one's talent	
Identify ways in which you can develop and strengthen your own talents and share those talents with those around you	<ul style="list-style-type: none"> <li>• Reflect on work habits relating to one's talent</li> <li>• Try new experiences and take opportunities to learn</li> <li>• Continually learn and develop skills to honour the talent</li> <li>• Spend time in the company of elders who can help in assessing one's strengths</li> <li>• Remain humble</li> <li>• Share one's talents with others</li> <li>• Seek an elder(s) for mentorship in the area of one's talent.</li> </ul>
<b>Major Cultural Understanding:</b> Development of Dene Skills	
Continue personal development of Dene skills	<ul style="list-style-type: none"> <li>• Developing Dene skills at increasing levels of complexity</li> <li>• Increasing individualization and creativity in work</li> </ul>
<b>Winter Camp</b>	
<b>Major Cultural Understanding:</b> Dene knowledge about winter weather and land conditions is important to successful and safe winter land use.	
Describe the winter weather and land conditions and identify why it is important to understand conditions	<ul style="list-style-type: none"> <li>• Use various weather indicators                             <ul style="list-style-type: none"> <li>○ Ice conditions, behaviors on lakes and rivers and</li> <li>○ Implications for land use</li> <li>○ Wind conditions and implications for land use</li> <li>○ Snow variations and implications for land use</li> <li>○ Temperature and implications for land use</li> </ul> </li> </ul>
<b>Major Cultural Understanding:</b> Dene knowledge of the winter hunting/fishing/ trapping area is important to successful and safe winter land use.	
Identify what knowledge about winter weather and land conditions is important to successful and safe winter land use.	<ul style="list-style-type: none"> <li>• Locate trap line locations on a map</li> <li>• Locate geographical features, landmarks and spiritual sites                             <ul style="list-style-type: none"> <li>○ Potentially dangerous areas in winter</li> <li>○ Historical land use information</li> <li>○ Use of area in other seasons</li> <li>○ Other resources in the area accessed by the Dene</li> </ul> </li> </ul>
<b>Major Cultural Understanding:</b> Dene knowledge about fur bearing animals is important for successful winter trapping.	
Identify what Dene knowledge about fur bearing animals is important for successful winter trapping.	<ul style="list-style-type: none"> <li>• Fur bearing animals found in area</li> <li>• Life cycles, habitat and habits of fur bearing animals</li> <li>• Where and how best to set traps based on knowledge of their habits</li> </ul>
<b>Self Government</b>	
<b>Major Cultural Understanding:</b> In contrast to the accepted Canadian perspective of political change in the Northwest Territories, the Dene have their own perspective which is the basis for their struggle for Self Government	
Compare and contrast the Canadian perspective of political change in the Northwest Territories, Identify the Dene perspective which is the basis for their struggle for Self Government	<ul style="list-style-type: none"> <li>• The northern territory is considered hinterland: remote lands owned primarily for the purpose of exploiting of its resources.</li> <li>• The aboriginal people are considered just one of many ethnic groups making up the mosaic that is Canada. Settlers who have moved to the North have as much right to the land and how it is controlled as the First Nations people.</li> <li>• Treaties in the past were acknowledgments on the part of the Dene that they were extinguishing their aboriginal or First People's rights.</li> <li>• The Canadian constitution can only recognize and give powers to provinces.</li> <li>• To encourage political growth, the NWT is being prepared for provincial status.</li> </ul>

## DENE KEDE GRADE 9

### Self Government

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
<b>Major Cultural Understanding:</b> The Dene has a tradition-based model of self-government.	
Identify and describe the Dene tradition-based model of self-government.	<ul style="list-style-type: none"> <li>• Unity and cooperation within the group is valued.               <ul style="list-style-type: none"> <li>○ Consensus style decision making:</li> <li>○ Participants who spoke were only those who had earned the right to speak. Young people were seldom involved in decision making group.</li> <li>○ When one spoke, one's words carried weight because one had earned the right to speak. The leader would take into consideration everything said and would suggest solutions or courses of action based on agreement of the whole group.</li> <li>○ Once courses of action were agreed upon, there was no continuing disagreement or subversive activity.</li> <li>○ Once the course of action was agreed upon, absolute adherence was expected.</li> <li>○ Elders have the life experience and wisdom to know what is important in a leader.</li> <li>○ Leadership requires support.</li> <li>○ Leader had helpers to administer his leadership</li> <li>○ The purpose of leadership and government was to ensure the survival of the group.</li> </ul> </li> </ul>
<b>Major Cultural Understanding:</b> The Dene are seeking Self Government as a way to control aspects of their lives that are most closely related to their survival as a people.	
Give examples of how the Dene are seeking Self Government as a way to control aspects of their lives that are most closely related to their survival as a people.	<ul style="list-style-type: none"> <li>• By seeking political rights based on their status as a "nation"</li> <li>• By seeking a style of the political leadership based on Elder's council and consensus</li> <li>• By seeking to control the management and monitoring of land and water use:</li> <li>• By seeking to control economic development:</li> <li>• By seeking to control the social institutions:</li> </ul>
<b>Major Cultural Understanding:</b> Successful Self Government will require Dene awareness and participation.	
Describe why it is important that Self Government requires Dene awareness and participation.	<ul style="list-style-type: none"> <li>• Individual awareness of all the issues that have bearing on Dene lives</li> <li>• Active participation in discussions of issues and in decision-making</li> </ul>
<b>Major Cultural Understanding:</b> Attitudes related to understanding Dene self-government.	
Identify what attitudes are important to relate to understanding Dene self-government.	<ul style="list-style-type: none"> <li>• Willingness to learn from the Dene their perspective on self-government</li> </ul>
<b>Major Cultural Understanding:</b> Attitudes related to visualizing oneself in the future.	
Describe what attitudes are important for Dene to relate to visualizing oneself in the future	<ul style="list-style-type: none"> <li>• Willingness to reflect on one's future and set goals for participation in Dene Self-Government</li> </ul>

## ELA GRADE 9

**GO #1** Students will listen, speak, read, write, view and represent to access and explore prior knowledge and experiences of self and others.

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Listen critically and integrate others' interpretations and understandings to develop personal understanding 1.1.1	<ul style="list-style-type: none"> <li>• Describes, compares and questions own observations and interpretations, including prior knowledge</li> <li>• Reflects on own observations and interpretations</li> <li>• Listens respectfully and seek others' point of view</li> <li>• Talks about relationships between own and other's observations and interpretations considering logic and multiple views</li> <li>• Uses others' ideas, perspectives, and responses to develop personal thinking and apply understanding</li> <li>• Integrates others' ideas, perspectives and responses to develop personal understanding</li> <li>• Begins to revise personal understandings and/or conclusions based on new information and supporting evidence</li> </ul>
Compare preferences for texts and genres, by particular writers, artists, storytellers, and film makers through discussions with peers 1.1.2	<ul style="list-style-type: none"> <li>• Choose appropriate texts independently and/or following recommendation</li> <li>• Make and explain connections between own and others' personal preferences</li> <li>• Compare craft and artistry of own and others' preferred genres, works, and/or authors, artists, using examples</li> </ul>
Describe, assess, monitor, and reflect on attainment of personal goals 1.1.3	<ul style="list-style-type: none"> <li>• Consider examples of, and participate in discussions about the purposeful and effective use of language</li> <li>• Collaboratively develop criteria to assess language use</li> <li>• Use strengths and challenges to set, monitor and reflect on the attainment of goals to improve language use</li> </ul>
Structure and restructure ideas and information to extend current understandings, reflect on new understanding, identify knowledge gaps, and broaden perspective of the world 1.2.1	<ul style="list-style-type: none"> <li>• Revise understandings and/or conclusions based on new info and perspectives</li> <li>• Choose, adapt and/or create and apply methods of organizing ideas and information that synthesize ideas from various sources</li> <li>• Extend questions and answers to clarify and connect and reflect on others' ideas, information and experiences</li> </ul>
Review and refine personal viewpoints through reflection, feedback and self assessment 1.2.2	<ul style="list-style-type: none"> <li>• Summarize and explain own viewpoints for the purpose of receiving feedback from a specific audience</li> <li>• Use purposefully chosen feature of oral language, visuals, and/or other media to present own views and refine ideas based on reflection and feedback</li> </ul>
<b>GO #2</b> Students will listen, speak, read, write, view and represent to comprehend and respond personally and critically to oral, print, and other media texts, through a process.	
Make, explain and evaluate connections between previous experiences, prior knowledge and texts 2.1.1	<ul style="list-style-type: none"> <li>• Explain how new ideas and information (resulting from connections between prior knowledge, texts and experiences) are integrated into own understandings</li> <li>• Use questions and paraphrasing in discussions to understand and evaluate connections others have identified</li> <li>• Compare how different connections developed from text exploration lead to different awareness</li> </ul>
Create and/or adapt and use appropriate comprehension strategies to construct, revise and explain understanding of texts 2.1.2 <i>*using texts with an appropriate complexity of content and sophistication of style</i>	<ul style="list-style-type: none"> <li>• Reflects upon and explains own reading behaviours</li> <li>• Selects, adapts and uses thinking/comprehension strategies to construct and confirm understanding</li> <li>• Monitors understanding of texts</li> <li>• Explains revised understandings of text based on new information</li> <li>• Begins to set a purpose for listening, viewing or reading to anticipate meaning</li> </ul>

## ELA GRADE 9

**GO #2** Students will listen, speak, read, write, view and represent to comprehend and respond personally and critically to oral, print, and other media texts, through a process.

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Use textual cues to construct and confirm meaning within and across texts 2.1.3	<ul style="list-style-type: none"> <li>• Uses textual cues (organizational features and structure) to anticipate, construct, and confirm meaning within and across <b>narrative</b> texts</li> <li>• Uses textual cues (organizational features and structure) to anticipate, construct, and confirm meaning within and across <b>expository</b> texts (add: abstract or summary)</li> <li>• Uses textual cues (organizational features and structure) to anticipate, construct, and confirm meaning within and across <b>poetic</b> texts</li> </ul>
Explain how vocabulary, language structure and context help readers construct meaning of a text 2.1.4	<ul style="list-style-type: none"> <li>• Selects, adapts, and explains strategies used to construct and confirm meanings of both known and unfamiliar words</li> <li>• Evaluates the impact of text structures, punctuation, and word order on the purpose and meaning of text</li> <li>• Explains and evaluates interpretations of author’s or creator’s purpose, audience, and choice of structure or form</li> </ul>
Explore a variety of oral, print, and media texts 2.2.1	<ul style="list-style-type: none"> <li>• Sets a purpose for reading, listening to, or viewing oral, print, and other media texts from diverse cultures</li> <li>• Explores a variety of narrative, expository, and poetic texts and explains preferences for particular texts (<b>GR9 Required: satire, essays, government documents/ publications, reports, free verse, biopoem</b>)</li> </ul>
Respond to texts creatively and critically 2.2.2 * <a href="#">The distinction between grade levels is the depth of the response.</a>	<ul style="list-style-type: none"> <li>• Explains and <b>supports</b> personal responses to shared and independent listening, reading, and viewing experiences</li> <li>• Responds through creative writing and representation to shared and independent listening, reading, and viewing experiences</li> </ul>
Compare and critique ideas, points of view, and bias, in and across texts 2.2.3	<ul style="list-style-type: none"> <li>• Critiques how groups of people are portrayed in and across texts</li> <li>• Critiques bias and stereotypes in and across texts</li> <li>• Critiques portrayals of various characters, communities and/or cultures in and across texts</li> <li>• Evaluates how own and others’ understanding of cultures and communities may be influenced by different texts</li> <li>• Evaluates how similar ideas and themes are explored in texts from various cultures and communities</li> </ul>
Evaluate the relationship between genres/forms and audience/purpose 2.3.1	<ul style="list-style-type: none"> <li>• Evaluates effects of genre or form of texts on audience and purpose</li> <li>• Evaluates strengths and limits of texts based on forms and genres</li> <li>• Discusses literature in reference to sub-genres</li> </ul>

## ELA GRADE 9

**GO #2** Students will listen, speak, read, write, view and represent to comprehend and respond personally and critically to oral, print, and other media texts, through a process.

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Evaluate how techniques and elements are used in texts 2.3.2	<ul style="list-style-type: none"> <li>• Evaluates the use of elements within and across <b>narrative, expository, and poetic</b> texts (add: <b>allusion, irony</b>)</li> <li>• Evaluates the use of techniques used to support <b>narrative, expository, and poetic</b> text (add: <b>camera movements, scene transitions</b>)</li> </ul>
Evaluate effects of descriptive and figurative language and stylistic techniques within and across texts 2.3.3	<ul style="list-style-type: none"> <li>• Evaluates effectiveness of word choice and stylistic techniques within and across texts</li> <li>• Critiques the effectiveness of ways authors express voice in oral, print, and other media texts</li> <li>• Critiques effectiveness of ambiguous and/or precise language choices using contextual evidence</li> </ul>

**GO #3** Students will listen, speak, read, write, view and represent to plan and focus an inquiry or research and interpret and analyze information and ideas, through a process.

Identify prior knowledge of, and prior experiences related to, a topic to choose a focus for own and group inquiry 3.1.1	<ul style="list-style-type: none"> <li>• Summarizes prior personal and factual knowledge related to a topic of inquiry or research</li> <li>• Uses categories, gaps in knowledge and questions to plan next steps for a topic of inquiry or research</li> </ul>
Develop broad and specific questions to establish a purpose for seeking information on a topic in own and group inquiry 3.1.2	<ul style="list-style-type: none"> <li>• Develops broad and specific open-ended questions on an inquiry topic</li> </ul>
Create, and/or adapt and evaluate a plan to collect, record and synthesize information in own and group inquiry 3.1.3	<ul style="list-style-type: none"> <li>• Identifies a purpose and audience for an inquiry</li> <li>• Chooses, adapts, evaluates use of strategies for collecting and recording info</li> <li>• Chooses and/or adapts strategies and formats for organizing, synthesizing and sharing inquiry info</li> <li>• Creates a plan to meet a specified time frame for inquiry</li> <li>• Reflects on the plan during inquiry evaluates the plan and at end of inquiry</li> </ul>
Identify relevant primary and secondary sources of information to answer inquiry or research questions 3.2.1	<ul style="list-style-type: none"> <li>• Identifies primary and secondary sources of information relevant to inquiry topic</li> </ul>
Develop and use criteria to evaluate usefulness, reliability of, and perspectives and <b>biases</b> within, sources 3.2.2	<ul style="list-style-type: none"> <li>• Matches source(s) to the focus and/or purpose of inquiry, using criteria developed with peers</li> <li>• Determines reliability of and perspectives and biases within source(s) using specific criteria developed with peers</li> <li>• Determines reliability of sources using specific criteria developed with peers</li> </ul>
Use text features and references tools to identify relevant information 3.2.3	<ul style="list-style-type: none"> <li>• Uses a variety of text features, including audio and visual cues, to locate information</li> <li>• Uses the library's organizational system to locate relevant information</li> <li>• Uses the computer to locate and access information</li> <li>• Accesses information from reference materials</li> </ul>

## ELA GRADE 9

**GO #3** Students will listen, speak, read, write, view and represent to plan and focus an inquiry or research and interpret and analyze information and ideas, through a process.

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Select and monitor use of strategies to understand and relate information in texts 3.2.4	<ul style="list-style-type: none"> <li>• Monitors selection of use of prior knowledge connections, predictions, and inferences to make sense of and relate information within and across text</li> <li>• Monitors selections and use of textual cues and organizational patterns to preview and construct meaning within and across texts</li> <li>• Selects and summarizes key ideas and details from texts related to inquiry topic</li> </ul>
Organize information and ideas using a variety of strategies and techniques 3.3.1	<ul style="list-style-type: none"> <li>• Chooses and evaluates use of strategies and graphic organizers to and format to organize information</li> </ul>
Record key ideas and details; cite sources appropriately 3.3.2	<ul style="list-style-type: none"> <li>• Chooses and evaluates method of recording ideas and information from one or more sources using categories with headings</li> <li>• Cites sources of information using established criteria</li> </ul>
Explain and compare relevance, importance, perspectives, bias of, and gaps in information within and across sources 3.3.3	<ul style="list-style-type: none"> <li>• Explains and compares use of information in terms of relevance to inquiry, importance of information, and currency</li> <li>• Identifies and explains gaps in information within and across texts</li> </ul>
Reflect on new understandings, explain applications to self and society, and adapt inquiry focus and approaches 3.3.4	<ul style="list-style-type: none"> <li>• Describes how new information impacts prior knowledge of and perspectives on inquiry topic</li> <li>• Synthesizes information from a variety of sources to explain and reflect on new insights and/or point of view about inquiry topic</li> <li>• Makes reasoned judgments related to new understandings supported by evidence</li> <li>• Generates goals for next steps in inquiry or research process</li> </ul>

**GO #4** Students will listen, speak, read, write, view and represent to clarify and enhance oral, written, and visual forms of communication, through a process.

Generate ideas and develop a topic using a variety of strategies 4.1.1	<ul style="list-style-type: none"> <li>• Compares and evaluates possible ideas from a variety of sources using a variety of strategies</li> <li>• Explains choice of focus among ideas</li> <li>• Synthesizes ideas to develop a topic</li> </ul>
Use appropriate form and genre to organize ideas and information for a particular <b>audience</b> and <b>purpose</b> 4.1.2	<ul style="list-style-type: none"> <li>• Evaluates choice of form(s) and genre(s) when preparing to create texts</li> <li>• Evaluates decisions about form and organizational structure with audience and purpose in mind, when preparing to create texts</li> <li>• Evaluates choice of organizational structures needed to create texts</li> <li>• Adapts ideas and information, form, organizational structure, purpose and audience when preparing to create a variety of texts</li> </ul>
Demonstrate understanding of elements of texts when creating oral, print, and other media texts 4.1.3 <i>*The writer creates forms that are not parallel to those read</i>	<ul style="list-style-type: none"> <li>• Creates original narrative texts applying familiar narrative forms</li> <li>• Applies understanding of elements of narrative texts when creating texts (add: <b>theme</b>)</li> <li>• Creates original narrative texts applying familiar expository forms</li> <li>• Applies understanding of elements of expository texts when creating texts (add: <b>point of view</b>)</li> <li>• Creates original narrative texts applying familiar poetic forms</li> <li>• Applies understanding of elements of poetic texts when creating texts (add: <b>personification, imagery</b>)</li> <li>• Creates texts using a computer</li> </ul>

## ELA GRADE 9

**GO #4** Students will listen, speak, read, write, view and represent to clarify and enhance oral, written, and visual forms of communication, through a process.

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Reference and reflect on criteria during conversations about own and others' texts and representations 4.2.1 <i>*The criteria to guide the focussed conversations is based on Techniques, Elements and/or Content; Distinction between grades is depth of focussed conversations</i>	<ul style="list-style-type: none"> <li>• Participates in development and revision of criteria for a variety of texts and representations</li> <li>• References and elaborates on criteria when suggesting revisions for own and others' draft texts and representations</li> <li>• References criteria when suggesting revisions for own and others' draft texts and representations</li> </ul>
Revise ideas and organizational structures to meet criteria 4.2.2	<ul style="list-style-type: none"> <li>• Prioritizes selection of aspects of text to revise based on own and others' feedback and criteria</li> <li>• Evaluates effect of revisions</li> <li>• Compares revised text to criteria and repeats a personal revision process as needed</li> </ul>
Develop fluency and proficiency with keyboarding and word processing 4.2.3	<ul style="list-style-type: none"> <li>• Develops proficiency with keyboarding and word processing when composing, revising, formatting, and publishing texts</li> <li>• Develops a growing repertoire of vocabulary associated with keyboarding and word processing</li> </ul>
Experiment with language to create desired effect in oral, print, and other media text 4.2.4	<ul style="list-style-type: none"> <li>• Explains choice of descriptive and figurative language used to develop ideas and create effects</li> <li>• Explains choice of vocabulary used to develop ideas and create desired effect, sometimes taking risks with new words</li> <li>• Explains use of a variety of sentence lengths and structures to develop ideas and create effects</li> <li>• Uses a voice that is individual, expressive, and engaging with an awareness of and respect for the audience and intended purpose</li> </ul>
Use an editing process to enhance communication 4.3.1	<ul style="list-style-type: none"> <li>• Uses an editing process, with guidance, to identify grammar and usage problems that impact meaning (add: check for parallel structure, use of transitions, clarity)</li> <li>• Discusses the function of each part of speech as it impacts meaning within a sentence</li> </ul>
Apply spelling conventions to texts; participate in an editing process using a variety of strategies and resources 4.3.2	<ul style="list-style-type: none"> <li>• Spells most words conventionally so that errors do not interfere with communication</li> <li>• Uses a variety of strategies and resources when spelling unfamiliar words</li> <li>• Uses an editing process to check and correct spelling</li> </ul>

## ELA GRADE 9

**GO #4** Students will listen, speak, read, write, view and represent to clarify and enhance oral, written, and visual forms of communication, through a process.

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Use an editing process to check for punctuation and capitalization 4.3.3 <i>*language acquisition and growth in meaningful contexts is natural and more effective than through isolated exercises, such as worksheets</i>	<ul style="list-style-type: none"> <li>• Capitalizes most words conventionally so that errors do not interfere with communication</li> <li>• Applies rules for punctuation correctly in most writing so that errors do not interfere with communication</li> <li>• Uses an editing process to check and correct capitalization and punctuation</li> <li>• Edits for punctuation and capitalization with computer</li> </ul>
Present and publish texts (oral, print, and media) 4.4.1	<ul style="list-style-type: none"> <li>• Uses a variety of techniques to engage audience and present texts effectively</li> <li>• Experiments with media to enhance presentations</li> <li>• Evaluates the effectiveness of presentation of texts on audience</li> </ul>
<b>GO #5</b> Students will listen, speak, read, write, view and represent to celebrate and build community within the home, school, workplace and wider society.	
Make decisions collaboratively to modify or create group processes for specific purposes, in order to work in a variety of partnerships and groups 5.1.1	<ul style="list-style-type: none"> <li>• Modifies or creates group processes when collaborating with peers to accomplish a specific task (<b>add: advocating points of view that recognize others' ideas to advance the thinking of the group; using opportunities as a group member to contribute to group goals/extend own learning</b>)</li> <li>• Discusses, creates and selects appropriate roles for small/whole group task(s)</li> </ul>
Adjust listening, viewing, speaking behaviours according to the situation 5.1.2	<ul style="list-style-type: none"> <li>• Speaks, listens, views respectfully and critically (<b>add: asking probing or challenging questions; explaining responses and opinions in detail</b>)</li> <li>• Adjusts language to fit context (audience, purpose and situation) and explains choices</li> <li>• Discusses, compares and experiments with language features in variety of school and community contexts</li> </ul>
Establish and use criteria to evaluate group processes and personal contributions, and propose suggestions for development 5.1.3 <i>*the distinction between grade levels is in the sophistication of assessment tools and strategies that guide the reflections</i>	<ul style="list-style-type: none"> <li>• Participates in the development of criteria to assess group processes</li> <li>• Assesses the effectiveness of the group process using set criteria</li> <li>• Reflects on personal behaviours and/or learning style</li> <li>• Reflects on personal behaviours that contribute to group success to set personal and/or group goals</li> <li>• Applies peer and/or group feedback about group process and personal actions in the group</li> </ul>
Recognize that differing perspectives and unique reactions enrich understanding 5.2.1	<ul style="list-style-type: none"> <li>• Recognizes and appreciates differing perspectives of common experiences and identifies missing perspectives</li> <li>• Summarizes, compares, and synthesizes own and others responses</li> <li>• Appreciates the richness of and offers feedback on the ways others communicate ideas</li> </ul>
Identify and describe social issues related to diversity and recognize that some perspectives may be missing 5.2.2	<ul style="list-style-type: none"> <li>• Shows respect for others' talents, strengths, interests, feelings and ideas to strengthen the community</li> <li>• Expresses and explores own identity through talents, strengths, interests, feelings and ideas</li> <li>• Discusses issues of diversity in society; recognizes a range of perspectives including some that may be missing</li> <li>• Suggests and/or explores global human rights issues as they relate to diversity</li> </ul>
Select and use context-appropriate language and form to plan and participate in celebrations 5.2.3	<ul style="list-style-type: none"> <li>• Explains how context influences the selection of appropriate language and form in plans to honour and celebrate others</li> <li>• Explains selection and use of language and form in plans to celebrate others, special events or accomplishments</li> <li>• Recognizes the value of own and others' contribution to many communities</li> </ul>



## MATH GRADE 9

### Strand: Number

**General Outcome:** Develop number sense.

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<b>Achievement Indicators</b> <i>The following set of indicators <b>may</b> be used to determine whether students have met the corresponding specific outcome.</i>
1. Demonstrate an understanding of powers with integral bases (excluding base 0) and whole number exponents by: <ul style="list-style-type: none"> <li>• Representing repeated multiplication using powers</li> <li>• Using patterns to show that a power with an exponent of zero is equal to one</li> <li>• Solving problems involving powers. [C, CN, PS, R]</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate the differences between the exponent and the base by building models of a given power, such as 23 and 32.</li> <li>• Explain, using repeated multiplication, the difference between two given powers in which the exponent and base are interchanged, e.g., 103 and 310.</li> <li>• Express a given power as a repeated multiplication.</li> <li>• Express a given repeated multiplication as a power.</li> <li>• Explain the role of parentheses in powers by evaluating a given set of powers, e.g., <math>(-2)^4</math>, <math>(-24)</math> and <math>-24</math>.</li> <li>• Demonstrate, using patterns, that <math>a^0</math> is equal to 1 for a given value of a (<math>a \neq 0</math>).</li> <li>• Evaluate powers with integral bases (excluding base 0) and whole number exponents</li> </ul>
2. Demonstrate an understanding of operations on powers with integral bases (excluding base 0) and whole number exponents. [C, CN, PS, R, T]	<ul style="list-style-type: none"> <li>• Explain, using examples, the exponent laws of powers with integral bases (excluding base 0) and whole number exponents:               <ul style="list-style-type: none"> <li>○ <math>(a^m)(a^n) = a^{m+n}</math></li> <li>○ <math>a^m \div a^n = a^{m-n}, m &gt; n</math></li> <li>○ <math>(a^m)^n = a^{mn}</math></li> <li>○ <math>(ab)^m = a^m b^m</math></li> </ul> </li> <li>• Evaluate a given expression by applying the exponent laws.</li> <li>• Determine the sum of two given powers, e.g., <math>52 + 53</math>, and record the process.</li> <li>• Determine the difference of two given powers, e.g., <math>43 - 42</math>, and record the process.</li> <li>• Identify the error(s) in a given simplification of an expression involving powers.</li> </ul>
3. Demonstrate an understanding of rational numbers by: <ul style="list-style-type: none"> <li>• comparing and ordering rational numbers</li> <li>• solving problems that involve arithmetic Operations on rational numbers. [C, CN, PS, R, T, V]</li> </ul>	<ul style="list-style-type: none"> <li>• Order a given set of rational numbers, in fraction and decimal form, by placing them on a number line, e.g., <math>35</math>, <math>-0.666\dots</math>, <math>0.5</math>, <math>-5</math> 8.</li> <li>• Identify a rational number that is between two given rational numbers.</li> <li>• Solve a given problem involving operations on rational numbers in fraction form and decimal form.</li> </ul>
4. Explain and apply the order of operations, including exponents, with and without technology. [PS, T]	<ul style="list-style-type: none"> <li>• Solve a given problem by applying the order of operations without the use of technology.</li> <li>• Solve a given problem by applying the order of operations with the use of technology.</li> <li>• Identify the error in applying the order of operations in a given incorrect solution.</li> </ul>
5. Determine the square root of positive rational numbers that are perfect squares. [C, CN, PS, R, T]	<ul style="list-style-type: none"> <li>• Determine whether or not a given rational number is a square number and explain the reasoning.</li> <li>• Determine the square root of a given positive rational number that is a perfect square.</li> <li>• Identify the error made in a given calculation of a square root, e.g., Is 3.2 the square root of 6.4?</li> <li>• Determine a positive rational number given the square root of that positive rational number.</li> </ul>

## MATH GRADE 9

### Strand: Number

**General Outcome:** Develop number sense.

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<p><b>Achievement Indicators</b></p> <p><i>The following set of indicators <b>may</b> be used to determine whether students have met the corresponding specific outcome.</i></p>
6. Determine an approximate square root of positive rational numbers that are non-perfect squares. [C, CN, PS, R, T]	<ul style="list-style-type: none"> <li>• Estimate the square root of a given rational number that is not a perfect square using the roots of perfect squares as benchmarks.</li> <li>• Determine an approximate square root of a given rational number that is not a perfect square using technology, e.g., calculator, computer.</li> <li>• Explain why the square root of a given rational number as shown on a calculator may be an approximation.</li> <li>• Identify a number with a square root that is between two given numbers.</li> </ul>

### Strand: Patterns and Relations (Patterns)

**General Outcome:** Use patterns to describe the world and solve problems.

1. Generalize a pattern arising from a problem-solving context using linear equations and verify by substitution. [C, CN, PS, R, V]	<ul style="list-style-type: none"> <li>• Write an expression representing a given pictorial, oral or written pattern.</li> <li>• Write a linear equation to represent a given context.</li> <li>• Describe a context for a given linear equation.</li> <li>• Solve, using a linear equation, a given problem that involves pictorial, oral and written linear patterns.</li> <li>• Write a linear equation representing the pattern in a given table of values and verify the equation by substituting values from the table.</li> </ul>
2. Graph linear relations, analyze the graph and interpolate or extrapolate to solve problems. [C, CN, PS, R, T, V]	<ul style="list-style-type: none"> <li>• Describe the pattern found in a given graph.</li> <li>• Graph a given linear relation, including horizontal and vertical lines.</li> <li>• Match given equations of linear relations with their corresponding graphs.</li> <li>• Extend a given graph (extrapolate) to determine the value of an unknown element.</li> <li>• Interpolate the approximate value of one variable on a given graph given the value of the other variable.</li> <li>• Extrapolate the approximate value of one variable from a given graph given the value of the other variable.</li> <li>• Solve a given problem by graphing a linear relation and analyzing the graph.</li> </ul>

### Strand Patterns and Relations (Variables and Equations)

**General Outcome:** Represent algebraic expressions in multiple ways.

3. Model and solve problems using linear equations of the form: <ul style="list-style-type: none"> <li>• <math>ax = b</math></li> <li>• <math>ax = b, a \neq 0</math></li> <li>• <math>ax + b = c</math></li> <li>• <math>ax + b = c, a \neq 0</math></li> <li>• <math>ax = b + cx</math></li> <li>• <math>a(x + b) = c</math></li> <li>• <math>ax + b = cx + d</math></li> <li>• <math>a(bx + c) = d(ex + f)</math></li> <li>• <math>ax = b, x \neq 0</math></li> </ul> Where $a, b, c, d, e$ and $f$ are rational numbers. [C, CN, PS, V]	<ul style="list-style-type: none"> <li>• Model the solution of a given linear equation using concrete or pictorial representations, and record the process.</li> <li>• Determine, by substitution, whether a given rational number is a solution to a given linear equation.</li> <li>• Solve a given linear equation symbolically.</li> <li>• Identify and correct an error in a given incorrect solution of a linear equation.</li> <li>• Represent a given problem using a linear equation.</li> <li>• Solve a given problem using a linear equation and record the process.</li> </ul>
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## MATH GRADE 9

### Strand Patterns and Relations (Variables and Equations)

**General Outcome:** Represent algebraic expressions in multiple ways.

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<p><b>Achievement Indicators</b></p> <p><i>The following set of indicators <b>may</b> be used to determine whether students have met the corresponding specific outcome.</i></p>
4. Explain and illustrate strategies to solve single variable linear inequalities with rational coefficients within a problem-solving context. [C, CN, PS, R, V]	<ul style="list-style-type: none"> <li>• Translate a given problem into a single variable linear inequality using the symbols <math>\geq</math>, <math>&gt;</math>, <math>&lt;</math> or <math>\leq</math>.</li> <li>• Determine if a given rational number is a possible solution of a given linear inequality.</li> <li>• Generalize and apply a rule for adding or subtracting a positive or negative number to determine the solution of a given inequality.</li> <li>• Generalize and apply a rule for multiplying or dividing by a positive or negative number to determine the solution of a given inequality.</li> <li>• Solve a given linear inequality algebraically and explain the process orally or in written form.</li> <li>• Compare and explain the process for solving a given linear equation to the process for solving a given linear inequality.</li> <li>• Graph the solution of a given linear inequality on a number line.</li> <li>• Compare and explain the solution of a given linear equation to the solution of a given linear inequality.</li> <li>• Verify the solution of a given linear inequality using substitution for multiple elements in the solution.</li> <li>• Solve a given problem involving a single variable linear inequality and graph the solution.</li> </ul>
5. Demonstrate an understanding of polynomials (limited to polynomials of degree less than or equal to 2). [C, CN, R, V]	<ul style="list-style-type: none"> <li>• Create a concrete model or a pictorial representation for a given polynomial expression.</li> <li>• Write the expression for a given model of a polynomial.</li> <li>• Identify the variables, degree, number of terms and coefficients, including the constant term, of a given simplified polynomial expression.</li> <li>• Describe a situation for a given first degree polynomial expression.</li> <li>• Match equivalent polynomial expressions given in simplified form, e.g., <math>4x - 3x^2 + 2</math> is equivalent to <math>-3x^2 + 4x + 2</math>.</li> </ul>
6. Model, record and explain the operations of addition and subtraction of polynomial expressions, concretely, pictorially and symbolically (limited to polynomials of degree less than or equal to 2).[C, CN, PS, R, V]	<ul style="list-style-type: none"> <li>• Model addition of two given polynomial expressions concretely or pictorially and record the process symbolically.</li> <li>• Model subtraction of two given polynomial expressions concretely or pictorially and record the process symbolically.</li> <li>• Apply a personal strategy for addition and subtraction of given polynomial expressions, and record the process symbolically.</li> <li>• Identify equivalent polynomial expressions from a given set of polynomial expressions, including pictorial and symbolic representations.</li> <li>• Identify the error(s) in a given simplification of a given polynomial expression.</li> </ul>
7. Model, record and explain the operations of multiplication and division of polynomial expressions (limited to polynomials of degree less than or equal to 2) by monomials, concretely, pictorially and symbolically. [C, CN, R, V]	<ul style="list-style-type: none"> <li>• Model multiplication of a given polynomial expression by a given monomial concretely or pictorially and record the process symbolically.</li> <li>• Model division of a given polynomial expressions by a given monomial concretely or pictorially and record the process symbolically.</li> <li>• Apply a personal strategy for multiplication and division of a given polynomial expression by a given monomial.</li> <li>• Provide examples of equivalent polynomial expressions.</li> <li>• Identify the error(s) in a given simplification of a given polynomial expression.</li> </ul>

## MATH GRADE 9

### Strand: Shape and Space (Measurement)

**General Outcome:** Use direct or indirect measurement to solve problems.

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<p><b>Achievement Indicators</b>  <i>The following set of indicators <b>may</b> be used to determine whether students have met the corresponding specific outcome.</i></p>
<p>1. Solve problems and justify the solution strategy using circle properties including:</p> <ul style="list-style-type: none"> <li>• the perpendicular from the centre of a circle to a chord bisects the chord</li> <li>• the measure of the central angle is equal to twice the measure of the inscribed angle subtended by the same arc</li> <li>• the inscribed angles subtended by the same arc are congruent</li> <li>• a tangent to a circle is perpendicular to the radius at the point of tangency. [C, CN, PS, R, T, V]</li> </ul>	<ul style="list-style-type: none"> <li>• Provide an example that illustrates:               <ul style="list-style-type: none"> <li>○ The perpendicular from the centre of a circle to a chord bisects the chord</li> <li>○ The measure of the central angle is equal to twice the measure of the inscribed angle subtended by the same arc</li> <li>○ The inscribed angles subtended by the same arc are congruent</li> <li>○ A tangent to a circle is perpendicular to the radius at the point of tangency.</li> </ul> </li> <li>• Solve a given problem involving application of one or more of the circle properties.</li> <li>• Determine the measure of a given angle inscribed in a semicircle using the circle properties.</li> <li>• Explain the relationship among the centre of a circle, a chord and the perpendicular bisector of the chord.</li> </ul>
<p><b>Strand: Shape and Space (3-D Objects and 2-D Shapes)</b>  <b>General Outcome:</b> Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.</p>	
<p>2. Determine the surface area of composite 3-D objects to solve problems. [C, CN, PS, R, V]</p>	<ul style="list-style-type: none"> <li>• Determine the area of overlap in a given concrete composite 3-D object, and explain its effect on determining the surface area (limited to right cylinders, right rectangular prisms and right triangular prisms).</li> <li>• Determine the surface area of a given concrete composite 3-D object (limited to right cylinders, right rectangular prisms and right triangular prisms).</li> <li>• Solve a given problem involving surface area.</li> </ul>
<p>3. Demonstrate an understanding of similarity of polygons. [C, CN, PS, R, V]</p>	<ul style="list-style-type: none"> <li>• Determine if the polygons in a given pre-sorted set are similar and explain the reasoning.</li> <li>• Draw a polygon similar to a given polygon and explain why the two are similar.</li> <li>• Solve a given problem using the properties of similar polygons.</li> </ul>
<p>4. Draw and interpret scale diagrams of 2-D shapes. [CN, R, T, V]</p>	<ul style="list-style-type: none"> <li>• Identify an example in print and electronic media, e.g., newspapers, the Internet, of a scale diagram and interpret the scale factor.</li> <li>• Draw a diagram to scale that represents an enlargement or reduction of a given 2-D shape.</li> <li>• Determine the scale factor for a given diagram drawn to scale.</li> <li>• Determine if a given diagram is proportional to the original 2-D shape and, if it is, state the scale factor.</li> <li>• Solve a given problem that involves a scale diagram by apply the properties of similar triangles.</li> </ul>
<p>5. Demonstrate an understanding of line and rotation symmetry. [C, CN, PS, V]</p>	<ul style="list-style-type: none"> <li>• Classify a given set of 2-D shapes or designs according to the number of lines of symmetry.</li> <li>• Complete a 2-D shape or design given one half of the shape or design and a line of symmetry.</li> <li>• Determine if a given 2-D shape or design has rotation symmetry about the point at the centre of the shape or design and, if it does, state the order and angle of rotation.</li> <li>• Rotate a given 2-D shape about a vertex and draw the resulting image.</li> <li>• Identify a line of symmetry or the order and angle of rotation symmetry in a given tessellation.</li> </ul>

## MATH GRADE 9

### Strand: Shape and Space (3-D Objects and 2-D Shapes)

**General Outcome:** Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<b>Achievement Indicators</b> <i>The following set of indicators <b>may</b> be used to determine whether students have met the corresponding specific outcome.</i>
(Continued) 5.	<ul style="list-style-type: none"> <li>• Identify the type of symmetry that arises from a given transformation on the Cartesian plane.</li> <li>• Complete, concretely or pictorially, a given transformation of a 2-D shape on a Cartesian plane, record the coordinates and describe the type of symmetry that results.</li> <li>• Identify and describe the types of symmetry created in a given piece of artwork.</li> <li>• Determine whether or not two given 2-D shapes on the Cartesian plane are related by either rotation or line symmetry.</li> <li>• Draw, on a Cartesian plane, the translation image of a given shape using a given translation rule, such as <math>R_2</math>, <math>U_3</math> or <math>\begin{pmatrix} a \\ b \end{pmatrix}</math>, <math>\begin{pmatrix} a &amp; b \\ c &amp; d \end{pmatrix}</math>, label each vertex and its corresponding ordered pair and describe why the translation does not result in line or rotation symmetry.</li> <li>• Create or provide a piece of artwork that demonstrates line and rotation symmetry, and identify the line(s) of symmetry and the order and angle of rotation.</li> </ul>

### Strand: Statistics and Probability (Data Analysis)

**General Outcome:** Collect, display and analyze data to solve problems.

1. Describe the effect of: <ul style="list-style-type: none"> <li>• Bias</li> <li>• use of language</li> <li>• ethics</li> <li>• cost</li> <li>• time and timing</li> <li>• privacy</li> <li>• cultural sensitivity</li> </ul> On the collection of data. [C, CN, R, T]	<ul style="list-style-type: none"> <li>• Analyze a given case study of data collection, and identify potential problems related to bias, use of language, ethics, cost, time and timing, privacy or cultural sensitivity.</li> <li>• Provide examples to illustrate how bias, use of language, ethics, cost, time and timing, privacy or cultural sensitivity may influence the data.</li> </ul>
2. Select and defend the choice of using either a population or a sample of a population to answer a question. [C, CN, PS, R]	<ul style="list-style-type: none"> <li>• Identify whether a given situation represents the use of a sample or a population.</li> <li>• Provide an example of a situation in which a population may be used to answer a question and justify the choice.</li> <li>• Provide an example of a question where a limitation precludes the use of a population and describe the limitation, e.g., too costly, not enough time, limited resources.</li> <li>• Identify and critique a given example in which a generalization from a sample of a population may or may not be valid for the population.</li> </ul>

## MATH GRADE 9

### Strand: Statistics and Probability (Data Analysis)

**General Outcome:** Collect, display and analyze data to solve problems.

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<p><b>Achievement Indicators</b></p> <p><i>The following set of indicators <b>may</b> be used to determine whether students have met the corresponding specific outcome.</i></p>
<p>3. Develop and implement a project plan for the collection, display and analysis of data by:</p> <ul style="list-style-type: none"> <li>• formulating a question for investigation</li> <li>• choosing a data collection method that includes social considerations</li> <li>• selecting a population or a sample</li> <li>• collecting the data</li> <li>• displaying the collected data in an appropriate manner</li> <li>• drawing conclusions to answer the question. [C, PS, R, T, V]</li> </ul>	<ul style="list-style-type: none"> <li>• Create a rubric to assess a project that includes the assessment of:               <ul style="list-style-type: none"> <li>○ A question for investigation</li> <li>○ The choice of a data collection method that includes social considerations</li> <li>○ The selection of a population or a sample and justifying the choice</li> <li>○ The display of the collected data</li> <li>○ The conclusions to answer the question.</li> </ul> </li> <li>• Develop a project plan that describes:               <ul style="list-style-type: none"> <li>○ A question for investigation</li> <li>○ The method of data collection that includes social considerations</li> <li>○ The method for selecting a population or a sample</li> <li>○ The method to be used for collection of the data</li> <li>○ The methods for analysis and display of the data.</li> </ul> </li> <li>• Complete the project according to the plan, draw conclusions and communicate findings to an audience.</li> <li>• Self-assess the completed project by apply the rubric.</li> </ul>
<p><b>Strand: Statistics and Probability (Chance and Uncertainty)</b></p> <p><b>General Outcome:</b> Collect, display and analyze data to solve problems.</p>	
<p>4. Demonstrate an understanding of the role of probability in society. [C, CN, R, T]</p>	<ul style="list-style-type: none"> <li>• Provide an example from print and electronic media, e.g., newspapers, the Internet, where probability is used.</li> <li>• Identify the assumptions associated with a given probability and explain the limitations of each assumption.</li> <li>• Explain how a single probability can be used to support opposing positions.</li> <li>• Explain, using examples, how decisions based on probability may be a combination of theoretical probability, experimental probability and subjective judgment.</li> </ul>

## SCIENCE GRADE 9

### Biological Diversity

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
<b>ESSENTIAL QUESTIONS</b>	
What is <b>biological diversity</b> , and by what processes do diverse living things pass on their characteristics to future generations? What impact does human activity have on biological diversity?	
Investigate and interpret diversity among species and within species, and describe how diversity contributes to species survival	<ul style="list-style-type: none"> <li>• Observe variation in living things, and describe examples of variation among species and within species</li> <li>• Identify examples of niches, and describe the role of variation in enabling closely related living things to survive in the same ecosystem</li> <li>• Investigate and interpret dependencies among species that link the survival of one species to the survival of others</li> <li>• Identify examples of symbiotic relationships</li> <li>• Classify symbiotic relationships as mutualism, commensalism, parasitism</li> <li>• Identify the role of variation in species survival under changing environmental conditions</li> </ul>
Investigate the nature of reproductive processes and their role in transmitting species characteristics	<ul style="list-style-type: none"> <li>• Distinguish between sexual and asexual reproduction, and identify and interpret examples of asexual and sexual reproduction in different species,</li> <li>• Describe examples of variation of characteristics within a species, and identify examples of both discrete and continuous variation</li> <li>• Investigate the transmission of characteristics from parents to offspring, and identify examples of characteristics in offspring</li> <li>• Distinguish those characteristics that are heritable from those that are not heritable, and identify</li> <li>• Characteristics for which heredity and environment may both play a role</li> <li>• Identify examples of dominant and recessive characteristics and recognize that dominance and recessiveness provide only a partial explanation for the variation of characteristics in offspring</li> </ul>
Describe, in general terms, the role of genetic materials in the continuity and variation of species characteristics; and investigate and interpret related technologies	<ul style="list-style-type: none"> <li>• Describe, in general terms, the role &amp; relationship of chromosomes, genes &amp; DNA</li> <li>• Distinguish between cell division that leads to identical daughter cells, as in binary fission and mitosis, and cell division that leads to formation of sex cells, as in meiosis; and describe, in general terms, the synthesis of genetic materials that takes place during fertilization</li> <li>• Compare sexual and asexual reproduction, in terms of the advantages and disadvantages</li> <li>• Distinguish between, and identify examples of, natural and artificial selection</li> <li>• Describe, in simple terms, some genetic technologies; and identify questions and issues related to their application</li> </ul>
Identify impacts of human action on species survival and variation within species, and analyze related issues for personal and public decision making	<ul style="list-style-type: none"> <li>• Describe the relative abundance of species on earth and in different environments</li> <li>• Describe ongoing changes in biological diversity through extinction and extirpation of native species, and investigate the role of environmental factors in causing these changes</li> <li>• Evaluate the success and limitations of various local and global strategies for minimizing loss of species diversity</li> <li>• Investigate and describe the use of biotechnology in environmental, agricultural or forest management; and identify potential impacts and issues</li> </ul>

## SCIENCE GRADE 9

### Biological Diversity

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
<b>SKILLS OUTCOMES: I</b> on use of research and inquiry skills to inform the decision-making process ( <b>embed throughout unit</b> )	
<b>Initiating and Planning:</b> Ask questions about the relationships between & among observable variables, and plan investigations to address questions	<ul style="list-style-type: none"> <li>• Identify science-related issues</li> <li>• Identify questions to investigate arising from science-related issues</li> <li>• State a prediction and a hypothesis based on background information or an observed pattern of events</li> <li>• Define and delimit questions and problems to facilitate investigation</li> </ul>
<b>Performing and Recording:</b> Conduct investigations into the relationships between and among observations, and gather and record qualitative and quantitative data	<ul style="list-style-type: none"> <li>• Observe and record data, and prepare simple line drawings</li> <li>• Estimate measurements</li> <li>• Research information related to a given issue</li> </ul>
<b>Analyzing and Interpreting:</b> Analyze qualitative and quantitative data, and develop and assess possible explanations	<ul style="list-style-type: none"> <li>• Identify strengths and weaknesses of different ways of displaying data</li> <li>• Interpret patterns and trends in data, and infer and explain relationships among the variables</li> <li>• Apply given criteria for evaluating evidence and sources of information</li> <li>• Identify new questions and problems that arise from what was learned</li> </ul>
<b>Communication and Teamwork:</b> Work collaboratively on problems; and use appropriate language and formats to communicate ideas, procedures and results	<ul style="list-style-type: none"> <li>• Communicate questions, ideas, intentions, plans and results, using lists, notes in point form, sentences, data tables, graphs, drawings, oral language and other means</li> <li>• Evaluate individual and group processes used in investigating an issue and evaluating alternative decisions</li> <li>• Defend a given position on an issue, based on their findings</li> </ul>
<b>ATTITUDE OUTCOMES</b> (embed throughout unit)	
<b>Scientific Inquiry:</b> develop attitudes that support active inquiry, problem solving and decision making	<ul style="list-style-type: none"> <li>• Seek and apply evidence when evaluating alternative approaches to investigations, problems and issues</li> </ul>
<b>Collaboration:</b> develop attitudes that support collaborative activity.	<ul style="list-style-type: none"> <li>• Work collaboratively in carrying out investigations and in generating and evaluating ideas</li> </ul>
<b>Stewardship:</b> develop responsibility in the application of science and technology in relation to society and the natural environment.	<ul style="list-style-type: none"> <li>• Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment</li> </ul>
<b>Safety:</b> demonstrate a concern for safety in science and technology contexts.	<ul style="list-style-type: none"> <li>• Show concern for safety in planning, carrying out and reviewing activities</li> </ul>
<b>Matter and Chemical Change</b>	
<b>ESSENTIAL QUESTIONS:</b>	
What are the properties of materials, and what happens to them during chemical change?	
What evidence do we have of chemical change; and what ideas, theories or models help us explain that evidence?	
Investigate materials, and describe them in terms of their physical and chemical properties	<ul style="list-style-type: none"> <li>• Investigate and describe properties of materials (<i>e.g., investigate and describe the melting point, solubility and conductivity of materials observed</i>)</li> <li>• Describe and apply different ways of classifying materials based on their composition and properties, including:               <ul style="list-style-type: none"> <li>○ Distinguishing between pure substances, solutions and mechanical mixtures</li> <li>○ Distinguishing between metals and non-metals [<i>note: metalloids may also be introduced at this level but are not required.</i>]</li> <li>○ Identifying and applying other methods of classification</li> </ul> </li> </ul>



## SCIENCE GRADE 9

### Matter and Chemical Change

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
(Continued)	<ul style="list-style-type: none"> <li>• Identify conditions under which properties of a material are changed, and critically evaluate if a new substance has been produced</li> </ul>
Describe and interpret patterns in chemical reactions	<ul style="list-style-type: none"> <li>• Identify and evaluate dangers of caustic materials and potentially explosive reactions</li> <li>• Observe and describe evidence of chemical change in reactions between familiar materials, by:               <ul style="list-style-type: none"> <li>○ Describing combustion, corrosion and other reactions involving oxygen</li> <li>○ Observing and inferring evidence of chemical reactions between familiar household materials</li> </ul> </li> <li>• Distinguish between materials that react readily and those that do not (<i>e.g., compare reactions of different metals to a dilute corrosive solution</i>)</li> <li>• Observe and describe patterns of chemical change, by:               <ul style="list-style-type: none"> <li>○ Observing heat generated or absorbed in chemical reactions, and identifying examples of exothermic and endothermic reactions</li> <li>○ Identifying conditions that affect rates of reactions (<i>e.g., investigate and describe how factors such as heat, concentration, surface area and electrical energy can affect a chemical reaction</i>)</li> <li>○ Identifying evidence for conservation of mass in chemical reactions, and demonstrating and describing techniques by which that evidence is gathered.</li> </ul> </li> </ul>
Describe ideas used in interpreting the chemical nature of matter, both in the past and present, and identify example evidence that has contributed to the development of these	<ul style="list-style-type: none"> <li>• Demonstrate understanding of the origins of the periodic table, and relate patterns in the physical and chemical properties of elements to their positions in the periodic table—focusing on the first 18 elements</li> <li>• Distinguish between observation and theory, and provide examples of how models and theoretical ideas are used in explaining observations (<i>e.g., describe how observations of electrical properties of materials led to ideas about electrons and protons; describe how observed differences in the densities of materials are explained, in part, using ideas about the mass of individual atoms</i>)</li> <li>• Use the periodic table to identify the number of protons, electrons and other information about each atom; and describe, in general terms, the relationship between the structure of atoms in each group and the properties of elements in that group (<i>e.g., use the periodic table to determine that sodium has 11 electrons and protons and, on average, about 12 neutrons; infer that different rows (periods) on the table reflect differences in atomic structure; interpret information on ion charges provided in some periodic tables</i>) [<i>note: knowledge of specific orbital structures for elements and groups of elements is not required at this grade level.</i>]</li> <li>• Distinguish between ionic and molecular compounds, and describe the properties of some common examples of each</li> </ul>
Apply simplified chemical nomenclature in describing elements, compounds and chemical reactions	<ul style="list-style-type: none"> <li>• Read and interpret chemical formulas for compounds of two elements, and give the IUPAC (International Union of Pure and Applied Chemistry) name and common name of these compounds (<i>e.g., give, verbally and in writing, the name for NaCl(s) (sodium chloride), CO<sub>2</sub>(g) (carbon dioxide), MgO(s) (magnesium oxide), NH<sub>3</sub>(g) (nitrogen trihydride or ammonia), CH<sub>4</sub>(g) (carbon tetrahydride or methane), FeCl<sub>2</sub>(s) (iron(II) chloride), FeCl<sub>3</sub>(s) (iron(III) chloride)</i>)</li> <li>• Identify/describe chemicals commonly found in the home, and write the chemical symbols (<i>e.g., table salt [NaCl(s)], water [H<sub>2</sub>O(l)], sodium hydroxide [NaOH(aq)] used in household cleaning supplies</i>)</li> </ul>

## SCIENCE GRADE 9

### Matter and Chemical Change

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
<b>SKILLS OUTCOMES:</b> <i>focus</i> on scientific inquiry (embed throughout unit)	
<b>Initiating and Planning:</b> Ask questions about the relationships between & among observable variables, and plan investigations to address questions	<ul style="list-style-type: none"> <li>• Identify questions to investigate (e.g., ask questions about the reactivity of particular materials or about conditions that affect the rate of reaction, after observing that materials react at different rates)</li> <li>• Define and delimit questions and problems to facilitate investigation (e.g., reframe a general question, such as: “What affects the speed of reactions?” to become one or more specific questions, such as: “How will temperature affect the rate of reaction between materials x and y?” or “How will moisture affect the rate of reaction between x and y?”)</li> <li>• State a prediction and a hypothesis based on background information or an observed pattern of events</li> <li>• Select appropriate methods and tools for collecting data and information and for solving problems (e.g., plan and conduct a search for information about chemical elements, using appropriate print and electronic sources)</li> </ul>
<b>Performing and Recording:</b> Conduct investigations into the relationships between and among observations, and gather and record qualitative and quantitative data	<ul style="list-style-type: none"> <li>• Carry out procedures, controlling the major variables (e.g., investigate the effect of particle size on a chemical reaction, taking care to identify and control other potentially relevant variables)</li> <li>• Observe and record data, and prepare simple drawings (e.g., represent a molecule studied through a drawing)</li> <li>• Demonstrate knowledge of WHMIS standards, by using proper techniques for handling and disposing of laboratory materials</li> <li>• Research information relevant to a given question (e.g., research properties of materials)</li> </ul>
<b>Analyzing and Interpreting:</b> Analyze qualitative and quantitative data, and develop and assess possible explanations	<ul style="list-style-type: none"> <li>• Compile and display data, by hand or computer, in a variety of formats, including diagrams, flow charts, tables, bar graphs, line graphs and scatterplots (e.g., present data on different chemical substances in a form that facilitates interpretation) [Prerequisite Skill: Grade 7 Mathematics, Statistics and Probability, Specific Outcome 4; Related Skills: Grade 9 Mathematics, Statistics and Probability, Specific Outcomes 2, 3]</li> <li>• Calculate theoretical values of a variable (e.g., predict the total mass of the products of a chemical reaction, based on the mass of the reactants used) [Note: In this example, students can apply the law of conservation of mass.]</li> <li>• Identify and suggest explanations for discrepancies in data</li> <li>• State a conclusion, based on experimental data, and explain how evidence gathered supports or refutes an initial idea</li> <li>• Identify new questions and problems that arise from what was learned (e.g., identify new questions, such as: “Why do different compounds containing the same element?” or “How do atoms stick together in a molecule?”)</li> </ul>
<b>Communication and Teamwork:</b> Work collaboratively on problems; and use appropriate language and formats to communicate ideas, procedures and results	<ul style="list-style-type: none"> <li>• Receive, understand and act on the ideas of others (e.g., follow given safety procedures)</li> <li>• Evaluate individual and group processes used in planning and carrying out investigative tasks (e.g., evaluate the relative success and scientific merits of different approaches to drawing and making models of molecules)</li> </ul>

## SCIENCE GRADE 9

### Matter and Chemical Change

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
<b>ATTITUDE OUTCOMES</b> (embed throughout unit)	
<b>Interest in Science:</b> encouraged to develop enthusiasm and continuing interest in the study of science.	<ul style="list-style-type: none"> <li>Show interest in science-related questions and issues, and confidently pursue personal interests and career possibilities within science-related fields (e.g., express a degree of satisfaction at understanding science concepts that are challenging)</li> </ul>
<b>Mutual Respect:</b> appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds.	<ul style="list-style-type: none"> <li>Appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds (<i>Show an interest in the contributions that women and men— from many cultural backgrounds and different times—have made to the development of modern science; recognize that work done to investigate chemical properties and to develop models are both important steps toward scientific understanding</i>)</li> </ul>
<b>Scientific Inquiry:</b> develop attitudes that support active inquiry, problem solving and decision making	<ul style="list-style-type: none"> <li>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 during investigations and before drawing conclusions; honestly report and record all observations, even when the evidence is unexpected)</li> </ul>
<b>Collaboration:</b> develop attitudes that support collaborative activity.	<ul style="list-style-type: none"> <li>Work collaboratively in carrying out investigations and in generating and evaluating ideas (e.g., demonstrate interest and become involved in decision making that requires full-group participation; assume responsibility for their share of the work to be done; work with other individuals)</li> </ul>
<b>Stewardship:</b> develop responsibility in the application of science and technology in relation to society and the natural environment.	<ul style="list-style-type: none"> <li>Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment (e.g., recognize that the materials people develop may have environmental consequences when people dispose of them; participate in school projects that address a chemical pollution issue)</li> </ul>
<b>Safety:</b> demonstrate a concern for safety in science and technology contexts.	<ul style="list-style-type: none"> <li>Show concern for safety in planning, carrying out and reviewing activities (e.g., read the labels of materials before using them, and ask for help if safety symbols are not clear or understood; carefully manipulate materials, using skills learned in class; wear proper safety attire without having to be reminded; ensure the proper disposal of materials; readily alter a procedure to ensure the safety of members of the group; immediately advise the teacher of spills, and use appropriate techniques and materials to clean up)</li> </ul>
<h3>Environmental Chemistry</h3> <p><b>Essential Questions:</b></p> <p>What substances do we find in local and global environments?            What role do they play, and how do changes in their concentration and distribution affect living things?</p>	
Investigate and describe, in general terms, the role of different substances in the environment in supporting or harming humans and other living things	<ul style="list-style-type: none"> <li>Identify common organic and inorganic substances that are essential to the health and growth of humans and other living things, and illustrate the roles served by these substances (e.g., identify calcium as an essential material for bones; identify minerals that are known to enhance plant growth but that limit growth if too little or too much is available)</li> <li>Describe, in general terms, the forms of organic matter synthesized by plants and animals, including carbohydrates, proteins and lipids</li> <li>Describe and illustrate processes by which chemicals are introduced to the environment or their concentrations are changed (e.g., dilution in streams, biomagnification through food chains)</li> </ul>

## SCIENCE GRADE 9

### Environmental Chemistry

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
(Continued)	<ul style="list-style-type: none"> <li>• Describe the uptake of materials by living things through ingestion or absorption, and investigate and describe evidence that some materials are difficult for organisms to break down or eliminate (e.g., DDT, mercury)</li> <li>• Identify questions that may need to be addressed in deciding what substances—in what amounts—can be safely released into the environment (e.g., identify questions and considerations that may be important in determining how much phosphate can be released into river water without significant harm to living things)</li> </ul>
Identify processes for measuring the quantity of different substances in the environment and for monitoring air and water quality	<ul style="list-style-type: none"> <li>• Identify substrates and nutrient sources for living things within a variety of environments</li> <li>• Describe and illustrate the use of biological monitoring as one method for determining environmental quality (e.g., assess water quality, by observing the relative abundance of various vertebrate and invertebrate species)</li> <li>• Identify chemical factors in an environment that might affect the health and distribution of living things in that environment (e.g., available oxygen, pH, dissolved nutrients in soil)</li> <li>• Apply and interpret measures of chemical concentration in parts per million, billion or trillion [<b>Prerequisite Skills:</b> Grade 8 Mathematics, Number, Specific Outcomes 14, 15]</li> <li>• Identify acids, bases and neutral substances, based on measures of their pH (e.g., use indicator solutions or pH meters to measure the pH of water samples)</li> <li>• Investigate, safely, and describe the effects of acids and bases on each other and on other substances (e.g., investigate and describe the reaction that results when baking powder is dissolved; describe the role of acids and bases in neutralizing each other)</li> <li>• Describe effects of acids and bases on living things (e.g., acid rain in lakes, antacids for upset stomachs, pH in shampoos and conditioners)</li> </ul>
Analyze and evaluate mechanisms affecting the distribution of potentially harmful substances within an environment	<ul style="list-style-type: none"> <li>• Describe mechanisms for the transfer of materials through air, water and soil; and identify factors that may accelerate or retard distribution (e.g., wind speed, soil porosity)</li> <li>• Describe mechanisms for biodegradation, and interpret information on the biodegradability of different materials</li> <li>• Comprehend information on the biological impacts of hazardous chemicals on local and global environments, by:               <ul style="list-style-type: none"> <li>○ Interpreting evidence for environmental changes in the vicinity of a substance release</li> <li>○ Interpreting Id50 data and other information on toxicity [note: Id50 refers to the amount of a substance found to be lethal to 50% of a population, if ingested.]</li> <li>○ Identifying concerns with the disposal of domestic wastes, such as paints and oils, and industrial wastes</li> </ul> </li> <li>• Describe and evaluate methods used to transport, store and dispose of hazardous household chemicals</li> </ul>

## SCIENCE GRADE 9

### Environmental Chemistry

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
(Continued)	<ul style="list-style-type: none"> <li>• Investigate and evaluate potential risks resulting from consumer practices and industrial processes, and identify processes used in providing information and setting standards to manage these risks (e.g., interpret and explain the significance of manufacturer’s information on how wood preservatives can be safely applied; recognize that some individuals may have greater sensitivity to particular chemical substances than do others in the general population)</li> <li>• Identify and evaluate information and evidence related to an issue in which environmental chemistry plays a major role (e.g., evaluate evidence that the use of insecticides to control mosquitoes has an effect/has no effect on bird populations)</li> </ul>
<b>SKILLS OUTCOMES:</b> <i>focus</i> on use of research and inquiry skills to inform the decision-making process ( <b>embed throughout unit</b> )	
<b>Initiating and Planning:</b> Ask questions about the relationships between & among observable variables, and plan investigations to address questions	<ul style="list-style-type: none"> <li>• Identify science-related issues (<i>e.g., identify issues regarding the use of soil fertilizers</i>)</li> <li>• Identify questions arising from practical problems and issues (<i>e.g., ask questions about the needs of different living things for nutrients and about the mechanisms by which these nutrients are obtained</i>)</li> <li>• State a prediction and a hypothesis about the concentration or dispersal of a chemical substance within an environment (<i>e.g., state a hypothesis that relates the amount of oxygen in a local water sample to the presence or absence of dissolved nutrients</i>)</li> <li>• Select appropriate methods and tools for collecting data and information and for solving problems (<i>e.g., design an investigation to compare the chemical characteristics of two soils</i>)</li> </ul>
<b>Performing and Recording:</b> Conduct investigations into the relationships between and among observations, and gather and record qualitative and quantitative data	<ul style="list-style-type: none"> <li>• Identify data and information that are relevant to the issue</li> <li>• Select and integrate information that is relevant to the issue (e.g., demonstrate proficiency in uploading and downloading text, image, audio and video files)</li> <li>• Use instruments and materials effectively and accurately for collecting data (e.g., measure and compare the pH in household products, foods and environments)</li> <li>• Organize data, using a format that is appropriate to the task or experiment • use tools and apparatus safely</li> </ul>
<b>Analyzing and Interpreting:</b> Analyze qualitative and quantitative data, and develop and assess possible explanations	<ul style="list-style-type: none"> <li>• Identify strengths and weaknesses of different ways of displaying data</li> <li>• Identify and suggest explanations for discrepancies in data (<i>e.g., identify possible reasons for variation in the measured concentration of a chemical, where one sample is very different from others or where one group has a very different result from others</i>)</li> <li>• Identify the line of best fit on a scatterplot, and interpolate or extrapolate based on the line of best fit (<i>e.g., interpret class data on the effects of acidity on mould growth, graph the data, prepare a line of best fit, and predict the amount of growth that might be expected at different acidity values</i>) [<b>Related Skills:</b> Grade 9 Mathematics, Statistics and Probability, Specific Outcomes 4, 5]</li> <li>• Apply given criteria for evaluating evidence and sources of information (<i>e.g., use scatterplot data in evaluating how strong a relationship exists between two variables; evaluate claims of environmental impacts, based on the scope and relevance of supporting evidence</i>) [<b>Related Skills:</b> Grade 9 Mathematics, Statistics and Probability, Specific Outcomes 2, 3]</li> <li>• Identify new questions and problems that arise from what was learned</li> </ul>

## SCIENCE GRADE 9

### Environmental Chemistry

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
<b>Communication and Teamwork:</b> Work collaboratively on problems; and use appropriate language and formats to communicate ideas, procedures and results	<ul style="list-style-type: none"> <li>• Work cooperatively with team members to develop and carry out a plan, and troubleshoot problems as they arise</li> <li>• Receive, understand and act on the ideas of others (<i>e.g., seek and achieve group consensus on procedures to be used in an investigative activity, and act on that consensus</i>)</li> <li>• Defend a given position on an issue or problem, based on their findings (<i>e.g., provide a clear rationale for a choice between alternative chemical products in a consumer application</i>)</li> </ul>
<b>ATTITUDE OUTCOMES</b> (embed throughout unit)	
<b>Interest in Science:</b> encouraged to develop enthusiasm and continuing interest in the study of science.	<ul style="list-style-type: none"> <li>• Show interest in science-related questions and issues, and confidently pursue personal interests and career possibilities within science-related fields (<i>e.g., actively participate in extracurricular activities, such as science fairs, science clubs, or science and technology challenges</i>)</li> </ul>
<b>Mutual Respect:</b> appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds.	<ul style="list-style-type: none"> <li>• Appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds (<i>e.g., consider more than one perspective when formulating conclusions, solving problems or making decisions on environmental quality issues</i>)</li> </ul>
<b>Scientific Inquiry:</b> develop attitudes that support active inquiry, problem solving and decision making	<ul style="list-style-type: none"> <li>• Seek and apply evidence when evaluating alternative approaches to investigations, problems and issues (<i>e.g., consider observations and ideas from a number of sources during investigations and before drawing conclusions; strive to assess a problem or situation accurately, by careful analysis of evidence gathered</i>)</li> </ul>
<b>Collaboration:</b> develop attitudes that support collaborative activity.	<ul style="list-style-type: none"> <li>• Work collaboratively in carrying out investigations and in generating and evaluating ideas (<i>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</i>)</li> </ul>
<b>Stewardship:</b> develop responsibility in the application of science and technology in relation to society and the natural environment.	<ul style="list-style-type: none"> <li>• Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment (<i>e.g., show respect for all forms of life; modify their behaviour in light of an issue related to conservation and protection of the environment; recognize that the materials people use may have environmental consequences when people dispose of them</i>)</li> </ul>
<b>Safety:</b> demonstrate a concern for safety in science and technology contexts.	<ul style="list-style-type: none"> <li>• Show concern for safety in planning, carrying out and reviewing activities (<i>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; use safety precautions without being reminded</i>)</li> </ul>
<b>Electrical Principles and Technologies</b>	
<b>Essential Questions:</b>	
How do we obtain and use electrical energy?	
What scientific principles are involved?	
What approaches can we use in selecting, developing and using energy-consuming devices that are efficient and effective in their energy use?	
Investigate and interpret the use of devices to convert various forms of energy to electrical energy, and electrical energy to other forms of energy	<ul style="list-style-type: none"> <li>• Identify, describe and interpret examples of mechanical, chemical, thermal, electrical and light energy</li> <li>• Investigate and describe evidence of energy transfer and transformation (<i>e.g., mechanical energy transformed into electrical energy, electrical energy transferred</i>)</li> </ul>

## SCIENCE GRADE 9

### Electrical Principles and Technologies

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
(Continued)	<p><i>through power grids, chemical energy converted to electrical energy and then to light energy in a flashlight, thermal energy converted to electrical energy in a thermocouple)</i></p> <ul style="list-style-type: none"> <li>• Investigate and evaluate the use of different electrodes, electrolytes and electrolytic concentrations in designing electrical storage cells</li> <li>• Construct, use and evaluate devices for transforming mechanical energy into electrical energy and for transforming electrical energy into mechanical energy</li> <li>• Modify the design of an electrical device, and observe and evaluate resulting changes (<i>e.g., investigate the effect of changes in the orientation and placement of magnets, commutator and armature in a St. Louis motor or in a personally-built model of a motor</i>)</li> </ul>
Describe technologies for transfer and control of electrical energy	<ul style="list-style-type: none"> <li>• Assess the potential danger of electrical devices, by referring to the voltage and current rating (amperage) of the devices; and distinguish between safe and unsafe activities</li> <li>• distinguish between static and current electricity, and identify example evidence of each</li> <li>• Identify electrical conductors and insulators, and compare the resistance of different materials to electric flow (<i>e.g., compare the resistance of copper wire and nickel-chromium/Nichrome wire; investigate the conduction of electricity through different solutions; investigate applications of electrical resistance in polygraph or lie detector tests</i>)</li> <li>• Use switches and resistors to control electrical flow, and predict the effects of these and other devices in given applications (<i>e.g., investigate and describe the operation of a rheostat</i>)</li> <li>• Describe, using models, the nature of electrical current; and explain the relationship among current, resistance and voltage (<i>e.g., use a hydro-flow model to explain current, resistance and voltage</i>)</li> <li>• Measure voltages and amperages in circuits (<i>e.g., determine the resistance in a circuit with a dry cell and miniature light; determine the resistances of copper, nickel-chromium/ Nichrome wire, pencil leads and salt solution</i>)               <ul style="list-style-type: none"> <li>○ Apply Ohm’s law to calculate resistance, voltage and current in simple circuits</li> </ul> <p style="margin-left: 20px;"><b>[Prerequisite Skill:</b> Grade 8 Mathematics, Patterns and Relations, Specific Outcome 5]</p> </li> <li>• Develop, test and troubleshoot circuit designs for a variety of specific purposes, based on low voltage circuits (<i>e.g., develop and test a device that is activated by a photoelectric cell; develop a model hoist that will lift a load to a given level, then stop and release its load; test and evaluate the use of series and parallel circuits for wiring a set of lights</i>)</li> <li>• Investigate toys, models and household appliances; and draw circuit diagrams to show the flow of electricity through them (<i>e.g., safely dismantle discarded devices, such as heating devices or motorized toys, and draw diagrams to show the loads, conductors and switching mechanisms</i>)</li> <li>• Identify similarities and differences between microelectronic circuits and circuits in a house (<i>e.g., compare switches in a house with transistors in a microcircuit</i>)</li> </ul>

## SCIENCE GRADE 9

### Electrical Principles and Technologies

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Identify and estimate energy inputs and outputs for example devices and systems, and evaluate the efficiency of energy conversions	<ul style="list-style-type: none"> <li>• Identify the forms of energy inputs and outputs in a device or system</li> <li>• Apply appropriate units, measures and devices in determining and describing quantities of energy transformed by an electrical device, by:               <ul style="list-style-type: none"> <li>○ Measuring amperage and voltage, and calculating the number of watts consumed by an electrical device, using the formula <math>P = IV</math> [power (in watts) = current (in amps) × voltage (in volts)]</li> <li>○ Calculating the quantity of electric energy, in joules, transformed by an electrical device, using the formula <math>E = P \times t</math> [energy (in joules) = power (in watts) × time (in seconds)] [<b>Prerequisite Skill:</b> Grade 8 Mathematics, Patterns and Relations, Specific Outcome 5]</li> </ul> </li> <li>• Apply the concepts of conservation of energy and efficiency to the analysis of energy devices (<i>e.g., identify examples of energy dissipation in the form of heat, and describe the effect of these losses on useful energy output</i>)</li> <li>• Compare energy inputs and outputs of a device, and calculate its efficiency, using the formula, percent efficiency = energy output/energy input × 100 (<i>e.g., compare the number of joules of energy used with the number of joules of work produced, given information on electrical consumption and work output of a motor-driven device</i>) [<b>Prerequisite Skills:</b> Grade 7 Mathematics, Number, Specific Outcome 18; Grade 8 Mathematics, Number, Specific Outcome 12]</li> <li>• Investigate and describe techniques for reducing waste of energy in common household devices (<i>e.g., by eliminating sources of friction in mechanical components, using more efficient forms of lighting, reducing overuse of appliances as in “overdrying” of clothes</i>)</li> </ul>
Describe and discuss the societal and environmental implications of the use of electrical energy	<ul style="list-style-type: none"> <li>• Identify and evaluate sources of electrical energy, including oil, gas, coal, biomass, wind and solar (<i>e.g., identify and evaluate renewable and nonrenewable sources for generating electricity; evaluate the use of batteries as an alternative to internal combustion engines</i>)</li> <li>• Describe the by-products of electrical generation and their impacts on the environment (<i>e.g., identify by-products and potential impacts of coal-fired electricity generation</i>)</li> <li>• Identify example uses of electrical technologies, and evaluate technologies in terms of benefits and impacts (<i>e.g., identify benefits and issues related to the use of electrical technologies for storing and transmitting personal information</i>)</li> <li>• Identify concerns regarding conservation of energy resources, and evaluate means for improving the sustainability of energy use</li> </ul>
<b>SKILLS OUTCOMES Focus</b> on problem-solving ( <b>embed throughout unit</b> )	
<b>Initiating and Planning:</b> Ask questions about the relationships between & among observable variables, and plan investigations to address questions	<ul style="list-style-type: none"> <li>• Propose alternative solutions to a given practical problem, select one, and develop a plan</li> <li>• Identify questions to investigate arising from practical problems and issues (<i>e.g., identify questions, such as: “How can the amount of electric current in a circuit be controlled?”</i>)</li> <li>• Rephrase questions in a testable form, and clearly define practical problems (<i>e.g., rephrase questions, such as: “Why do we use parallel circuits rather than series circuits in household wiring?” to become “How do series circuits and parallel circuits respond differently under load?”</i>)</li> </ul>



## SCIENCE GRADE 9

### Electrical Principles and Technologies

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
(Continued)	<ul style="list-style-type: none"> <li>• State a prediction and a hypothesis based on background information or an observed pattern of events (<i>e.g., predict the amount of current in a circuit of known resistance and applied voltage</i>)</li> <li>• Formulate operational definitions of major variables in the study of electrical circuits (<i>e.g., provide operational definitions for current, resistance, voltage, polarity</i>)</li> </ul>
<b>Performing and Recording:</b> Conduct investigations into the relationships between and among observations, and gather and record qualitative and quantitative data	<ul style="list-style-type: none"> <li>• Use tools and apparatus safely (<i>e.g., use appropriate sources of electrical energy, and follow procedures to ensure personal and group safety</i>)</li> <li>• Estimate measurements (<i>e.g., estimate the efficiency of a mechanical device</i>)</li> <li>• Use instruments effectively and accurately for collecting data (<i>e.g., use ammeters and voltmeters</i>)</li> </ul>
<b>Analyzing and Interpreting:</b> Analyze qualitative and quantitative data, and develop and assess possible explanations	<ul style="list-style-type: none"> <li>• Test the design of a constructed device or system</li> <li>• Evaluate designs and prototypes in terms of function, reliability, safety, efficiency, use of materials and impact on the environment (<i>e.g., evaluate the safety, durability, efficiency and environmental impact of a personally-constructed wet cell design</i>)</li> <li>• Identify and correct practical problems in the way a prototype or constructed device functions</li> <li>• Identify and suggest explanations for discrepancies in data (<i>e.g., measure the current in similar circuits, and provide possible explanations for differences in current flow</i>)</li> <li>• Identify potential sources of error, and determine the amount of error in a given measurement (<i>e.g., identify the precision of voltmeters and ammeters used to measure current flow</i>)</li> </ul>
<b>Communication and Teamwork:</b> Work collaboratively on problems; and use appropriate language and formats to communicate ideas, procedures and results	<ul style="list-style-type: none"> <li>• Work cooperatively with team members to develop and carry out a plan, and troubleshoot problems as they arise</li> <li>• Communicate questions, ideas, intentions, plans and results, using lists, notes in point form, sentences, data tables, graphs, drawings, oral language and other means (<i>e.g., use charts to present data on the voltage, current (amperage) and resistance found in series and parallel circuits</i>)</li> <li>• Defend a given position on an issue or problem based on their findings (<i>e.g., develop and defend a proposal on the appropriateness of an alternative energy source in a given application</i>)</li> </ul>
<b>ATTITUDE OUTCOMES</b> (embed throughout unit)	
<b>Interest in Science:</b> encouraged to develop enthusiasm and continuing interest in the study of science.	<ul style="list-style-type: none"> <li>• Show interest in science-related questions and issues, and confidently pursue personal interests and career possibilities within science-related fields (<i>e.g., actively participate in extracurricular activities, such as science fairs or science and technology challenges; pursue a science- or technology-related hobby; choose to investigate topics related to electrical technologies</i>)</li> </ul>
<b>Mutual Respect:</b> appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds.	<ul style="list-style-type: none"> <li>• Appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds (<i>e.g., show awareness of and respect for the scientific thinking, craftsmanship and collaborative effort that goes into the development of electrical devices and systems</i>)</li> </ul>
<b>Scientific Inquiry:</b> develop attitudes that support active inquiry, problem solving and decision making	<ul style="list-style-type: none"> <li>• Seek and apply evidence when evaluating alternative approaches to investigations, problems and issues (<i>e.g., strive to assess a problem or situation accurately, by</i></li> </ul>

## SCIENCE GRADE 9

### Electrical Principles and Technologies

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
(Continued)	<i>careful analysis of evidence gathered; ask questions to clarify meaning or confirm their understanding; report the limitations of their designs; continue working on a problem or research project until the best possible solutions or answers are found)</i>
<b>Collaboration:</b> develop attitudes that support collaborative activity.	<ul style="list-style-type: none"> <li>• Work collaboratively in carrying out investigations and in generating and evaluating ideas (e.g., demonstrate interest and become involved in decision making that requires full-group participation; consider alternative ideas and interpretations suggested by members of the group; share the responsibility for difficulties encountered in an activity)</li> </ul>
<b>Stewardship:</b> develop responsibility in the application of science and technology in relation to society and the natural environment.	<ul style="list-style-type: none"> <li>• Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment (e.g., objectively identify potential conflicts between responding to human wants and needs and protecting the environment)</li> </ul>
<b>Safety:</b> demonstrate a concern for safety in science and technology contexts.	<ul style="list-style-type: none"> <li>• Show concern for safety in planning, carrying out and reviewing activities (e.g., select safe methods in using electrical devices; readily alter a procedure to ensure the safety of members of the group; stay at their own work area during an activity, respecting others' space, materials and work)</li> </ul>

### Space Exploration

#### Essential Questions:

How have humans attained a presence in space?

What technologies have been developed and on what scientific ideas are they based? How has the development of these technologies contributed to the exploration, use and understanding of space and to benefits on Earth?

Investigate and describe ways that human understanding of Earth and space has depended on technological development	<ul style="list-style-type: none"> <li>• Identify different ideas about the nature of Earth and space, based on culture and science (e.g., compare geocentric and heliocentric models [Note: knowledge of epicycles is not required]; describe Aboriginal views of space and those of other cultures; describe the role of observation in guiding scientific understanding of space)</li> <li>• Investigate and illustrate the contributions of technological advances—including optical telescopes, spectral analysis and space travel—to a scientific understanding of space</li> <li>• Describe, in general terms, the distribution of matter in star systems, galaxies, nebulae and the universe as a whole</li> <li>• Identify evidence for, and describe characteristics of, bodies that make up the solar system; and compare their composition and characteristics with those of Earth</li> <li>• Describe and apply techniques for determining the position and motion of objects in space, including:               <ul style="list-style-type: none"> <li>○ Constructing and interpreting drawings and physical models that illustrate the motion of objects in space (e.g., represent the orbit of comets around the sun, using a looped-string model)</li> <li>○ Describing in general terms how parallax and the doppler effect are used to estimate distances of objects in space and to determine their motion</li> <li>○ Describing the position of objects in space, using angular coordinates (e.g., describe the location of a spot on a wall, by identifying its angle of elevation and its bearing or azimuth; describe the location of the Sun and other stars using altitude-azimuth coordinates, also referred to as horizon coordinates or local coordinates) [Note: A description of star positions based on right</li> </ul> </li> </ul>
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## SCIENCE GRADE 9

### Space Exploration

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
(Continued)	<p><i>ascension and declination is not required.] [Prerequisite Skills: Grade 7 Mathematics, Shape and Space, Specific Outcomes 11, 13; Related Skills: Grade 9 Mathematics, Shape and Space, Specific Outcomes 13, 14]</i></p> <ul style="list-style-type: none"> <li>• Investigate predictions about the motion, alignment and collision of bodies in space (e.g., investigate predictions about eclipses; identify uncertainties in predicting and tracking meteor showers)</li> </ul>
Identify problems in developing technologies for space exploration, describe technologies developed for life in space, and explain the scientific principles involved	<ul style="list-style-type: none"> <li>• Analyze space environments, and identify challenges that must be met in developing life-supporting systems (e.g., <i>analyze implications of variations in gravity, temperature, availability of water, atmospheric pressure and atmospheric composition</i>)</li> <li>• Describe technologies for life-support systems, and interpret the scientific principles on which they are based (e.g., <i>investigate systems that involve the recycling of water and air</i>)</li> <li>• Describe technologies for space transport, and interpret the scientific principles involved (e.g., <i>describe the development of multistage rockets, shuttles and space stations; build a model vehicle to explore a planet or moon</i>)</li> <li>• Identify materials and processes developed to meet needs in space, and identify related applications (e.g., <i>medicines, remote sensing, microelectronics, polymers, medical imaging, wireless communication technologies, synthesis of fuels</i>)</li> <li>• Describe the development of artificial satellites, and explain the major purposes for which they are used (e.g., <i>communication, GPS—global positioning system, weather observation</i>)</li> </ul>
Describe and interpret the science of optical and radio telescopes, space probes and remote sensing technologies	<ul style="list-style-type: none"> <li>• Explain, in general terms, the operation of optical telescopes, including telescopes that are positioned in space environments</li> <li>• Explain the role of radio and optical telescopes in determining characteristics of stars and star systems</li> <li>• Describe and interpret, in general terms, the technologies used in global positioning systems and in remote sensing (e.g., <i>use triangulation to determine the position of an object, given information on the distance from three different points</i>) [note: this example involves the use of geometric approaches rather than mathematical calculations.]</li> </ul>
Identify issues and opportunities arising from the application of space technology, identify alternatives involved, and analyze implications	<ul style="list-style-type: none"> <li>• Recognize risks and dangers associated with space exploration (e.g., <i>space junk, fuel expenditure, satellites burning up in the atmosphere, solar radiation</i>)</li> <li>• Describe Canadian contributions to space research and development and to the astronaut program (e.g., <i>Canadarm</i>)</li> <li>• Identify and analyze factors that are important to decisions regarding space exploration and development (e.g., <i>identify examples of costs and potential benefits that may be considered; investigate and describe political, environmental and ethical issues related to the ownership and use of resources in space</i>)</li> </ul>
<b>SKILLS OUTCOMES</b> <i>Focus</i> on problem-solving ( <b>embed throughout unit</b> )	
<b>Initiating and Planning:</b> Ask questions about the relationships between & among observable variables, and plan investigations to address questions	<ul style="list-style-type: none"> <li>• Identify practical problems (e.g., <i>identify problems that must be addressed in developing a life supporting space environment</i>)</li> <li>• Propose alternative solutions to a given practical problem, select one, and develop a plan (e.g., <i>design and describe a model of a technology to be used in a space station</i>)</li> </ul>

## SCIENCE GRADE 9

### Space Exploration

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
(Continued)	<ul style="list-style-type: none"> <li>• State a prediction and a hypothesis based on background information or an observed pattern of events (e.g., predict the next appearance of a comet, based on past observations; develop a hypothesis about the geologic history of a planet or its moon, based on recent data)</li> </ul>
<b>Performing and Recording:</b> Conduct investigations into the relationships between and among observations, and gather and record qualitative and quantitative data	<ul style="list-style-type: none"> <li>• Research information relevant to a given problem</li> <li>• Select and integrate information from various print and electronic sources or from several parts of the same source (e.g., compile and compare information about two exploratory missions)</li> <li>• Organize data, using a format that is appropriate to the task or experiment (e.g., maintain a log of observed changes in the night sky; prepare a data table to compare various planets)</li> </ul>
<b>Analyzing and Interpreting:</b> Analyze qualitative and quantitative data, and develop and assess possible explanations	<ul style="list-style-type: none"> <li>• Test the design of a constructed device or system (e.g., <i>create and test a model device for remote manipulation of materials</i>)</li> <li>• Identify and correct practical problems in the way a prototype or constructed device functions (e.g., <i>identify and correct problems in the functioning of a model “remote transportation device” that they have designed and built</i>)</li> <li>• Identify the strengths and weaknesses of different methods of collecting and displaying data (e.g., <i>compare Earth-based observations with those made from spacecraft</i>)</li> <li>• Identify new questions and problems that arise from what was learned (e.g., <i>identify questions to guide further investigation, such as: “What limits the travelling distance and duration of space exploration?”, “How old are the planets, and how did they form?”</i>)</li> </ul>
<b>Communication and Teamwork:</b> Work collaboratively on problems; and use appropriate language and formats to communicate ideas, procedures and results	<ul style="list-style-type: none"> <li>• Receive, understand and act on the ideas of others (e.g., <i>take into account advice provided by other students or individuals in designing a model space suit or space vehicle</i>)</li> <li>• Work cooperatively with team members to develop and carry out a plan, and troubleshoot problems as they arise (e.g., <i>write and act out a skit to demonstrate tasks carried out by astronauts on a mission</i>)</li> <li>• Defend a given position on an issue or problem, based on their findings (e.g., <i>conduct appropriate research to justify their position on the economic costs or benefits of space exploration</i>)</li> </ul>
<b>ATTITUDE OUTCOMES</b> (embed throughout unit)	
<b>Interest in Science:</b> encouraged to develop enthusiasm and continuing interest in the study of science.	<ul style="list-style-type: none"> <li>• Show interest in science-related questions and issues, and confidently pursue personal interests and career possibilities within science-related fields (e.g., <i>express interest in and describe media programs on space science and technology; take an interest in directly observing and interpreting space environments and in personal and group excursions to a space science centre</i>)</li> </ul>
<b>Mutual Respect:</b> appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds.	<ul style="list-style-type: none"> <li>• <i>Appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds (e.g., show an interest in the contributions that women and men from many cultural backgrounds have made to the development of modern science and technology)</i></li> </ul>
<b>Scientific Inquiry:</b> develop attitudes that support active inquiry, problem solving and decision making	<ul style="list-style-type: none"> <li>• Seek and apply evidence when evaluating alternative approaches to investigations, problems and issues (e.g., <i>seek accurate data that is based on appropriate methods of investigation; consider observations and ideas from a number of sources before drawing conclusions</i>)</li> </ul>

## SCIENCE GRADE 9

### Space Exploration

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
<b>Collaboration:</b> develop attitudes that support collaborative activity.	<ul style="list-style-type: none"> <li>• Work collaboratively in carrying out investigations and in generating and evaluating ideas (e.g., <i>work with others to identify problems and explore possible solutions; share observations and ideas with other members of the group, and consider alternative ideas suggested by other group members; share the responsibility for carrying out decisions</i>)</li> </ul>
<b>Stewardship:</b> develop responsibility in the application of science and technology in relation to society and the natural environment.	<ul style="list-style-type: none"> <li>• Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment (e.g., <i>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>)</li> </ul>
<b>Safety:</b> demonstrate a concern for safety in science and technology contexts.	<ul style="list-style-type: none"> <li>• Show concern for safety in planning, carrying out and reviewing activities (e.g., <i>select safe methods and tools for collecting evidence and solving problems; readily alter a procedure to ensure the safety of members of the group</i>)</li> </ul>

## SOCIAL STUDIES GRADE 9

### Attitudes (embed throughout all units)

Outcomes	Achievement indicators – measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Acquire and develop skills, attitudes, insights, and become competent in processes that lead to thinking, feeling and acting as knowledgeable, purposeful, and responsible citizens in a rapidly changing society	<ul style="list-style-type: none"> <li>• Respect, tolerance, and understanding toward individuals, groups, and cultures in one’s own community and in other communities (local, regional, territorial, national, global)</li> <li>• Positive and realistic attitudes about one’s self</li> <li>• Positive attitudes about learning</li> <li>• Positive attitudes about democracy, including an appreciation of the rights, privileges, and responsibilities of citizenship</li> <li>• Attitude of responsibility toward the environment and community (local, regional, territorial, national, global)</li> <li>• An appreciation of change as a common feature of life in all societies</li> <li>• An empathy for people who have been significantly impacted by change</li> <li>• An appreciation of the contributions made by past generations to the wellbeing of today’s people</li> <li>• An awareness that developments in technology can raise important issues</li> <li>• An appreciation of the historical context in which issues arise</li> <li>• An appreciation that social issues are complex and may take time to resolve</li> <li>• A habit of critical thinking, analyzing pros and cons</li> <li>• Open-mindedness, delaying judgment until evidence is considered</li> <li>• A habit of making tentative judgments, then remaining open to new evidence</li> <li>• A sensitivity to other points of view, combined with an ability to identify and reject irrational and unethical positions</li> <li>• An appreciation for the way in which knowledge of the past helps people to understand the present and see possibilities for the future</li> <li>• Better understand themselves, their cultural heritage; others cultural heritage</li> <li>• Better understand the nature of social and ecological interdependence</li> <li>• Become aware of, to analyze critically/constructively, the values of their society</li> <li>• Gain cooperation and conflict resolution skills</li> <li>• Interact positively and productively with their physical and social environments</li> <li>• Cope critically/creatively with current social/political phenomena and problems</li> <li>• Make rational decisions so they can take effective action to influence events</li> </ul>
<b>Processing Skills (embed throughout all units)</b>	
Develop skills that help one acquire, evaluate and use information and ideas	<ul style="list-style-type: none"> <li>• Identify possible sources and locations of information (print and non-print as well as knowledgeable individuals)</li> <li>• Create a timeline to show a sequence of historical events</li> <li>• Identify cause and effect relationships in historical world changes</li> <li>• Make notes that outline the main and related ideas from reading, listening and observing</li> <li>• Draw inferences, make generalizations and reach tentative conclusions from evidence about our changing world</li> <li>• Relate past to present in the study of human continuity and change</li> <li>• Venture predictions about the direction of future social change</li> <li>• Identify values underlying various positions taken on an issue</li> <li>• Distinguish between well-founded and ill-founded opinions</li> <li>• Identify fact, opinion, bias and propaganda</li> <li>• Identify the purpose, message and intended audience of visual communications</li> </ul>

## SOCIAL STUDIES GRADE 9

### Processing Skills (embed throughout all units)

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
(Continued)	<ul style="list-style-type: none"> <li>• Identify and evaluate alternative answers, conclusions, solutions or decisions regarding issues used for inquiry and research</li> <li>• Construct graphs or charts to illustrate changes in society</li> </ul>

### Communication Skills (embed throughout all units)

Develop skills that help one express and present information and ideas	<ul style="list-style-type: none"> <li>• Interpret opinions presented by visual means</li> <li>• Convey thoughts, feelings and information in a speech on an issue</li> <li>• Organize written material under topical headings</li> <li>• Support an opinion with factual information</li> <li>• Prepare and organize questions for an interview</li> <li>• Write an essay on an issue from several points of view and with sensitivity to more than one perspective</li> <li>• Document sources of information and ideas</li> <li>• Prepare and deliver a speech to the class</li> </ul>
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### Participation Skills (embed throughout all units)

Develop skills that help one interact with others	<ul style="list-style-type: none"> <li>• Contribute to a group discussion as a member, recorder, or leader</li> <li>• Observe the courtesies of a group discussion</li> <li>• Express disagreement, yet remain courteous and constructive</li> <li>• Resolve conflict through compromise and cooperation</li> <li>• Present information and explain ideas to others orally</li> <li>• Work independently without supervision</li> <li>• Recognize personal strengths and weaknesses and seek help when required</li> <li>• Understand, evaluate and accept constructive criticism</li> </ul>
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### GEOGRAPHY OF CANADA

#### CENTRAL QUESTION

In what way have geographical factors impacted the development of Canada as a country and as a political and economic power?

Relate ways that Canada is a land of diverse physical regions	<ul style="list-style-type: none"> <li>• Physical geography of Canada</li> </ul>
Describe ways that the physical features of geography affect economic activities and settlement patterns.	<ul style="list-style-type: none"> <li>• Major economic resources of each physical region</li> <li>• Settlement patterns of the country &amp; effects that geography has determining them</li> </ul>
Explain how geographic features have influenced political, economic and military decision-making throughout Canadian history	<ul style="list-style-type: none"> <li>• Political regions of Canada</li> <li>• Names and locations of major cities</li> </ul>

### CANADA: HISTORY TO THE TWENTIETH CENTURY

#### CENTRAL QUESTION

What elements of Canada's history have contributed to the challenges Canada faces as a nation today?

Explain how geographic features have influenced political, economic and military decision-making throughout Canadian history	<ul style="list-style-type: none"> <li>• Settlement patterns of the country and the effects that geography has had in determining them</li> </ul>
Describe ways in which the French and British imperialism that shaped Canada was motivated by social, economic and political considerations	<ul style="list-style-type: none"> <li>• Settlement patterns of the country and the effects that geography has had in determining them</li> <li>• Factors that influenced original colonization &amp; settlement of Canada by Europeans</li> </ul>
Explain how Canada's settlement and growth were a direct result of government policies	<ul style="list-style-type: none"> <li>• Factors that influenced original colonization &amp; settlement of Canada by Europeans</li> </ul>

## SOCIAL STUDIES GRADE 9

### CANADA: HISTORY TO THE TWENTIETH CENTURY (Continued)

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Explore and describe how Confederation was a response to internal and external political and economic factors	<ul style="list-style-type: none"> <li>• Factors that motivated Confederation</li> <li>• Foundation, growth and development of Canada as a nation</li> </ul>
Explain how the BNA Act and all ensuing constitutional documents are attempts to tie together diverse peoples and regions in Canada	<ul style="list-style-type: none"> <li>• Names of the most important British, French, Aboriginal and other Canadian leaders in Canadian history</li> </ul>
Describe ways in which Canada's two official languages result from the nation's unique history	<ul style="list-style-type: none"> <li>• Special provisions that have been made for Aboriginal peoples and the French in Canadian history</li> </ul>
Explain how many of Canada's laws, institutions, customs and practices are inherited from the First Peoples and from the nations that established colonies in Canada	<ul style="list-style-type: none"> <li>• Essence of conflicts between colonial peoples and the British government</li> </ul>
Explore and explain the presence of Aboriginal peoples, colonial practices, and subsequent immigration policies have made Canada a cultural mosaic	<ul style="list-style-type: none"> <li>• Origins, identities and distributions of Canada's first people</li> <li>• Special provisions that have been made for Aboriginal peoples and the French in Canadian history</li> </ul>

### CANADA: INTERNATIONAL CONNECTIONS

#### CENTRAL QUESTIONS

To what extent are Canada's security and prosperity dependent upon the policies and actions of the USA?

Are Canada's international policies adequate to prepare the nation to meet the 21<sup>st</sup> century?

Describe ways that Canada's close ties the USA have a foundation in geographical, historical and cultural factors	<ul style="list-style-type: none"> <li>• Essential elements of Canada's relations with the USA through history</li> <li>• Main issues Canada faces in its relations with the USA</li> </ul>
Explain the extensive and profound impact the USA has had on Canada's economy and culture	<ul style="list-style-type: none"> <li>• Essential elements of Canada's relations with the USA through history</li> <li>• Main issues Canada faces in its relations with the USA</li> </ul>
Identify various times in history, Canada has had ties to different countries and has affiliated itself formally with different international organizations	<ul style="list-style-type: none"> <li>• Essential elements of Canada's trade relations with other nations through history</li> <li>• Main issues Canada faces in its relations with the USA</li> </ul>
Identify how international ties benefit Canada culturally, politically, militarily and economically	<ul style="list-style-type: none"> <li>• Essential elements of Canada's trade relations with other nations through history</li> </ul>



## HEALTH GRADE 9

### MENTAL AND EMOTIONAL WELL BEING

Big Ideas: Career and life preparation, lifestyle

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Examine and describe personal interests, abilities, attitudes and opportunities influence career and life choices	<ul style="list-style-type: none"> <li>• Define career</li> <li>• Identify personal interests, abilities and attitudes that influence career and life choices</li> <li>• Identify career and life choices that correlate with personal interests, abilities and attitudes</li> <li>• Examine the requirements for a variety of career and life choices</li> </ul>
Describe ways to search for and keep a job involves specific steps	<ul style="list-style-type: none"> <li>• Identify the different steps involved in actively searching for a job</li> <li>• Demonstrate the different steps involved in actively searching for a job</li> <li>• Identify specific behaviours which help people keep a job</li> </ul>
Identify positive lifestyle practices to promote health	<ul style="list-style-type: none"> <li>• Describe the components of a personal lifestyle</li> <li>• Assess the components of their own mental and emotional lifestyle</li> <li>• Design a personal program to promote or maintain a healthy mental and emotional lifestyle</li> <li>• Evaluate the effectiveness of the program</li> </ul>
<b>GROWTH AND DEVELOPMENT</b>	
Big Ideas: body systems, disease prevention, lifestyle and health care systems/careers	
Explain how the immune system helps protect the body from disease	<ul style="list-style-type: none"> <li>• Describe how germs enter the body</li> <li>• Describe the body's first two lines of defence</li> <li>• Describe how the immune system helps protect the body from disease</li> <li>• Describe common problem conditions related to the immune system</li> </ul>
Describe how body systems work together to promote health	<ul style="list-style-type: none"> <li>• Classify the body systems according to function</li> <li>• Explain the inter-relationship of the body systems</li> </ul>
Explain ways in which non-communicable diseases may be prevented or reduced by positive lifestyle behaviours	<ul style="list-style-type: none"> <li>• Identify common non-communicable diseases</li> <li>• Identify the nature and causes of common non-communicable diseases</li> <li>• Identify lifestyle behaviours which prevent non-communicable diseases</li> </ul>
Illustrate how positive lifestyle practices promote health	<ul style="list-style-type: none"> <li>• Identify positive lifestyle practices that promote healthy growth and development</li> <li>• Design a personal program to promote healthy growth and development</li> <li>• Evaluate the effectiveness of the program</li> </ul>
Explore and identify ways in which each person is responsible for appropriate use of the health care system	<ul style="list-style-type: none"> <li>• Describe the health care system in the N.W.T.</li> <li>• Illustrate the cost of health care in the N.W.T.</li> <li>• Describe responsible use of the health care system</li> </ul>
Describe how the health care system offers many opportunities for health careers	<ul style="list-style-type: none"> <li>• Identify health career opportunities in the N.W.T.</li> </ul>
Identify ways in which males and females have equal potential	<ul style="list-style-type: none"> <li>• Describe male and female gender role stereotyping</li> <li>• Identify factors that contribute to changes in gender role stereotyping</li> </ul>
Describe how family members play an important role in meeting the needs of a newborn	<ul style="list-style-type: none"> <li>• Describe the needs of a newborn</li> <li>• Explain the roles of family members in meeting the needs of a newborn</li> </ul>
Explore and identify how effective parenting enhances family living	<ul style="list-style-type: none"> <li>• Describe effective parenting</li> <li>• Demonstrate the parenting skill of encouragement</li> <li>• Demonstrate the parenting skill of effective communication</li> <li>• Demonstrate the parenting skill of logical consequences</li> </ul>

## HEALTH GRADE 9

### FAMILY LIFE

Big Ideas: families, human development and reproduction, teen decisions and lifestyle

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Identify many support systems in the community that are available to families	<ul style="list-style-type: none"> <li>• Identify family support systems in the community</li> <li>• Identify the roles of family support systems</li> <li>• Describe how to effectively use the systems</li> </ul>
Describe how the union and development of reproductive cells determine the characteristics of an off-spring	<ul style="list-style-type: none"> <li>• Describe how the characteristics of an offspring are determined</li> <li>• Describe how inherited traits determine personal uniqueness</li> <li>• Describe how the sex of an offspring is determined</li> <li>• identify how multiple births are determined</li> </ul>
Describe how a female's body undergoes physical changes during pregnancy	<ul style="list-style-type: none"> <li>• Describe the signs of pregnancy</li> <li>• Describe some characteristics of the three trimesters of pregnancy</li> <li>• Describe the stages of labour</li> </ul>
Identify and explain how positive health behaviours during pregnancy promote maternal and child health	<ul style="list-style-type: none"> <li>• Describe positive health behaviours during pregnancy that</li> <li>• Promote maternal and child health</li> </ul>
Discuss/explore various opinions on how to deal with unplanned pregnancy	<ul style="list-style-type: none"> <li>• Identify alternatives in dealing with unplanned pregnancy</li> <li>• Describe how to prevent unplanned pregnancy health</li> </ul>
Describe ways that positive lifestyle practices promote good health and family life	<ul style="list-style-type: none"> <li>• Identify positive lifestyle practices that promote healthy sexuality and family relationships</li> </ul>
<b>Nutrition</b>	
Big Ideas: food choice and health	
Describe how food choices and habits are influenced by many factors	<ul style="list-style-type: none"> <li>• Identify factors that influence food choices and habits</li> <li>• Explain how food customs have changed in the NWT</li> <li>• Describe some of the consequences of changes in food customs in the NWT</li> </ul>
Identify how family needs and preferences influence the planning and preparation of nutritious meals	<ul style="list-style-type: none"> <li>• Plan a menu for a feast that is suitable for family members of various ages</li> <li>• Prepare a feast that is suitable for family members of all ages</li> <li>• Demonstrate a willingness to participate in the fest</li> </ul>
Identify ways in which positive nutrition lifestyle practices promote health	<ul style="list-style-type: none"> <li>• List some nutrition concerns in the NWT and Canada</li> <li>• Describe some nutrition concerns in the NWT</li> <li>• Identify preventive behaviours related to nutrition</li> <li>• Identify the four Canadian Nutrition and Dietary Recommendations</li> <li>• Identify positive behaviours that reflect the four Canadian Nutrition and Dietary Recommendations</li> <li>• Design a personal nutrition program based on a behaviour which promotes one of the recommendations</li> <li>• Evaluate the effectiveness of the program</li> </ul>
<b>Dental Health</b>	
Big Ideas: Oral health, careers, lifestyle	
Identify various behaviours promote oral and dental health	<ul style="list-style-type: none"> <li>• Identify behaviours/factors that promote oral and dental health</li> </ul>
Explain how career planning in dental health involves personal assessment, career opportunities and decision making	<ul style="list-style-type: none"> <li>• Examine a variety of dental health careers and their requirements</li> </ul>
Describe positive lifestyle practices promote healthy teeth for a lifetime	<ul style="list-style-type: none"> <li>• Teach positive lifestyle practices related to dental health</li> </ul>

## HEALTH GRADE 9

### Safety and First Aid

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Explain how artificial respiration supplies oxygen to a person who is not breathing	<ul style="list-style-type: none"> <li>• Give examples of common causes of breathing difficulties</li> <li>• Demonstrate how to assess breathing</li> <li>• Demonstrate how to give assistance in a breathing emergency</li> </ul>
Describe how choking is a breathing emergency that can be prevented	<ul style="list-style-type: none"> <li>• Give examples of common causes of choking</li> <li>• Demonstrate the universal distress sign of choking</li> <li>• Differentiate between partially obstructed airway and complete obstruction of airway</li> <li>• Demonstrate first aid for partially obstructed and completely obstructed airway</li> <li>• Outline safety rules to follow that prevent choking</li> </ul>
Explain why external and internal bleeding require immediate first aid	<ul style="list-style-type: none"> <li>• Give examples of common causes of bleeding</li> <li>• Distinguish between external and internal bleeding</li> <li>• Demonstrate first aid for external bleeding from a wound without an embedded object</li> <li>• Demonstrate first aid for external bleeding from a wound with an embedded object</li> <li>• Explain limited first aid for internal bleeding</li> </ul>
Provide reasons shock requires immediate first aid to prevent serious complications	<ul style="list-style-type: none"> <li>• Explain what shock is</li> <li>• Describe the signs and symptoms of shock</li> <li>• List common causes of shock</li> <li>• Explain first aid for shock</li> <li>• Demonstrate how to place a person into the recovery position</li> </ul>
Provide reasons why unconsciousness requires immediate first aid to restore the blood supply to the brain	<ul style="list-style-type: none"> <li>• Explain what unconsciousness is</li> <li>• Give examples of common causes of unconsciousness</li> <li>• Demonstrate first aid for unconsciousness</li> </ul>
Explain why fractures and sprains and dislocations require first aid to minimize the injuries to bones, joints and surrounding tissues	<ul style="list-style-type: none"> <li>• Explain what a fracture is</li> <li>• Describe the signs and symptoms of an open (compound) fracture</li> <li>• Describe the signs and symptoms of a closed (simple) fracture</li> <li>• Demonstrate first aid for each type of fracture</li> <li>• Name two common types of joint injuries</li> <li>• Explain what a sprain is</li> <li>• Describe the signs and symptoms of a sprain</li> <li>• Demonstrate first aid for a sprain</li> <li>• Explain what a dislocation is</li> <li>• Describe the signs and symptoms of a dislocation</li> <li>• Demonstrate first aid for a dislocation</li> <li>• Demonstrate first aid rescue carries</li> </ul>
Discuss and explain how heart attack and strokes can be prevented by risk reduction behaviours and minimized by applying first aid	<ul style="list-style-type: none"> <li>• Distinguish between a heart attack and a stroke</li> <li>• Identify risk behaviours that can prevent and reduce heart attack and stroke</li> <li>• List the signs and symptoms that might be indicators of a heart attack</li> <li>• Demonstrate initial first aid for a suspected heart attack</li> <li>• List the signs and symptoms that may be indicators of a stroke</li> <li>• Demonstrate initial first aid for a suspected stroke</li> </ul>

## HEALTH GRADE 9

### Safety and First Aid (continued)

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Explain why poisoning requires immediate first aid to minimize injuries	<ul style="list-style-type: none"> <li>• Identify four ways that poisons enter the body</li> <li>• Give example of common hazardous household products that may result in poisoning</li> <li>• Explain safety rules to follow that prevent poisoning</li> <li>• Demonstrate first aid for each type of poisoning</li> <li>• Prepare a first aid poison prevention manual</li> </ul>
<b>Alcohol and Other Drugs</b>	
Big Ideas: laws, regulations, drug groups & characteristics,	
Identify laws regulating the use, sale and purchase of alcohol	<ul style="list-style-type: none"> <li>• Identify the two levels of laws which relate to alcohol</li> <li>• Identify those parts of the N.W.T. liquor act which affect youth who decide to drink alcohol</li> <li>• Identify when an offence is being committed</li> <li>• Determine the number of drinks leading to illegal blood</li> <li>• Alcohol level (B.A.L.) - may be new legislation</li> <li>• Explain the laws relating to drinking alcohol and driving</li> </ul>
Identify how alcohol the use of alcohol by youth is regulated under the young offender's act	<ul style="list-style-type: none"> <li>• Explain that youth are treated differently than adults under the law</li> <li>• Explain the dispositions for young offenders</li> </ul>
Explain ways that local communities may control the availability of alcohol	<ul style="list-style-type: none"> <li>• Explain the process of local options</li> <li>• Explain why some people wish to have alcohol controlled in their community and why some people do not</li> </ul>
Explain how different drug groups have different characteristics	<ul style="list-style-type: none"> <li>• Identify the main groups of drugs</li> <li>• Identify the main characteristics for each drug group</li> </ul>
Identify possible consequences associated with drug use	<ul style="list-style-type: none"> <li>• Identify possible consequences of drug use</li> <li>• Explain that any drug may produce a side-effect</li> </ul>
Identify laws regulating the possession, use and sale of drugs	<ul style="list-style-type: none"> <li>• Identify the two laws relating to drugs</li> <li>• Identify the legal categories of drugs</li> <li>• Distinguish the three types of criminal acts in the legal system</li> <li>• Identify the main offences related to drugs</li> <li>• Explain the penalties associated with each offence</li> <li>• Identify situations in which an offence is being committed</li> </ul>

## CAREER DEVELOPMENT GRADE 9

### Competencies

NWT Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
<b>Build and maintain a positive self-image</b>	<ul style="list-style-type: none"> <li>• Discover how behaviours and attitudes influence the feelings and behaviours of others 1.2.1</li> <li>• Understand how the environment influences attitudes and behaviours 1.2.3</li> <li>• Understand the concepts of values and beliefs, and explore their influence on self-image 1.2.4</li> <li>• Discover the importance of developing a realistic and positive self-image, and the consequences of developing an erroneous one 1.2.5</li> <li>• Discover how a realistic and positive self-image contributes to self-fulfilment, both personally and professionally 1.2.6</li> <li>• Describe one’s self-image 1.2.7</li> <li>• Adopt behaviours that reflect a positive attitude about self 1.2.8</li> <li>• Evaluate the impact of one’s self-image on self and others 1.2.9</li> <li>• Transform behaviours and attitudes in order to improve one’s self-image and in turn contribute positively to one’s life and work. 1.2.10</li> </ul>
<b>Interact positively and effectively with others</b>	<ul style="list-style-type: none"> <li>• Explore the concept of diversity as it relates to respect, tolerance, flexibility and openness towards others 2.2.1</li> <li>• Explore interpersonal and group communication skills 2.2.3</li> <li>• Explore personal management skills such as time management, problem solving, stress management, life-work balance, etc 2.2.4</li> <li>• Explore helping skills such as facilitating, problem solving, tutoring and guiding 2.2.5</li> <li>• Demonstrate respect for the feelings and beliefs of others 2.2.6</li> <li>• Demonstrate tolerance and flexibility in interpersonal and group situations 2.2.7</li> <li>• Demonstrate effective social and group membership skills, knowledge and attitudes 2.2.9</li> <li>• Demonstrate openness to the diversity of cultures, lifestyles, as well as mental and physical abilities 2.2.10</li> <li>• Demonstrate helping skills such as problem solving, tutoring and guiding 2.2.11</li> <li>• Demonstrate dependability and honesty towards others 2.2.12</li> <li>• Demonstrate personal management skill such as time management, problem solving, stress management, life/work balance, etc. 2.2.13</li> <li>• Acknowledge and appreciate the similarities and differences among people 2.2.14</li> <li>• Re-examine one’s respect, tolerance, flexibility, openness, dependability and honesty towards others and determine at what degree they are influencing the development of positive relationships in one’s life 2.2.15</li> <li>• Integrate personal management skills such as time management, problem solving, stress management and life/work balance to one’s daily life 2.2.16</li> <li>• Engage in further learning experiences that help build positive relationships in one’s life 2.2.17</li> </ul>

## CAREER DEVELOPMENT GRADE 9

### Competencies

NWT Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
<b>Change and grow throughout one’s life</b>	<ul style="list-style-type: none"> <li>• Explore how feelings are influenced by significant experiences 3.2.1</li> <li>• Understand the concept of stress and its impact on mental and physical well-being 3.2.2</li> <li>• Discover changes that occur in the physical, psychological, social and emotional development of an individual 3.2.4</li> <li>• Understand how physiological and psychological changes impact on life and work 3.2.5</li> <li>• Explore the importance of work, family and leisure activities to mental, emotional, physical and economic well-being 3.2.6</li> <li>• Identify what cause stress on one’s own mental and physical well-being 3.2.7</li> <li>• Demonstrate effective communication skills in stressful situations (assertiveness, conflict resolution, problem solving, etc.) 3.2.8</li> <li>• Identify one’s own physical, psychological, social and emotional changes 3.2.9</li> <li>• Re-examine one’s communication skills and adopt those that are truly effective in stressful situations 3.2.10</li> <li>• Examine one’s work, family and leisure activities and acknowledge their impact on one’s mental, emotional, physical and economic well-being 3.2.11</li> <li>• Improve on communication skills used in stressful situations 3.2.12</li> <li>• Engage in further work, family and leisure activities that contribute to one’s mental, emotional, physical and economic well-being 3.2.13</li> </ul>
<b>Participate in life-long learning supportive of life/work goals</b>	<ul style="list-style-type: none"> <li>• Explore life-long learning strategies 4.2.1</li> <li>• Demonstrate life-long learning strategies 4.2.11</li> <li>• Improve and engage in life-long learning strategies supportive of one’s life/work scenarios 4.2.17</li> </ul>
<b>Locate and understand life/work information</b>	<ul style="list-style-type: none"> <li>• Discover differences between work, jobs, occupations and careers 5.2.1</li> <li>• Discover how occupations, work roles and work alternatives (e.g. self-employment, contracting, multitasking) can be classified 5.2.2</li> <li>• Explore various work settings and roles in the community 5.2.6</li> <li>• Explore various work settings 5.2.7</li> <li>• Use school and community settings and resources to learn about work roles and work alternatives 5.2.8</li> <li>• Demonstrate how one’s interests, knowledge, skills, beliefs and attitudes are transferable to various work roles 5.2.9</li> <li>• Identify working conditions for oneself 5.2.10</li> <li>• Assess life/work information and determine its pertinence for oneself 5.2.11</li> <li>• Improve one’s strategies for locating, understanding and using life/work information 5.2.12</li> </ul>

## CAREER DEVELOPMENT GRADE 9

### Competencies

NWT Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
<b>Understand the relationship between Work and society/economy</b>	<ul style="list-style-type: none"> <li>• Understand how organizations operate 6.2.1</li> <li>• Explore the importance of work to a community 6.2.2</li> <li>• Understand the relationships between work, community and the economy 6.2.3</li> <li>• Understand how the community, the economy and technological advances impact work and work roles 6.2.5</li> <li>• Evaluate how one can contribute to the community through work 6.2.7</li> </ul>
<b>Secure/create and maintain work</b>	<ul style="list-style-type: none"> <li>• Explore personal qualities (e.g. dependability, punctuality, getting along with others) that are needed to get and keep work 7.2.1</li> <li>• Understand the language describing employment and other work opportunities 7.2.3</li> <li>• Explore work search tools and skills required to find/create and maintain work (application forms, resumes, cover letters, portfolios, job interviewing, proposals, etc.) 7.2.4</li> <li>• Demonstrate personal qualities that are needed to get and keep work 7.2.5</li> <li>• Demonstrate the ability to complete application forms 7.2.6</li> <li>• Demonstrate work search tools required to find and maintain work (e.g. resume, portfolio, proposals, cover letters) 7.2.7</li> <li>• Identify one’s transferable academic and practical skills and experience a new task by using them 7.2.8</li> <li>• Acknowledge one’s personal qualities and academic/practical skills and determine which to build into one’s life/work scenarios 7.2.9</li> <li>• Create and engage in new work experiences (e.g. at home, at school, in the community) that acknowledges one’s personal qualities and use one’s transferable skills 7.2.10</li> </ul>
<b>Make life/work enhancing decisions</b>	<ul style="list-style-type: none"> <li>• Understand how personal beliefs and attitudes affect decision-making 8.2.1</li> <li>• Explore the requirements for secondary and post secondary programs 8.2.8</li> <li>• Understand how uncertainties about the future may lead to creative or alternative choices 8.2.9</li> <li>• Demonstrate how one’s beliefs and attitudes influence one’s decision-making process 8.2.10</li> <li>• Compare advantages and disadvantages of various secondary and post secondary programs for the attainment of career goals 8.2.12</li> <li>• Develop creative or alternative choices reflective of the changing world of work 8.2.14</li> <li>• Evaluate how one’s decisions (about school, family, leisure, work, etc.) impact one’s life, and affect other decisions 8.2.15</li> <li>• Evaluate the impact of personal decisions on self and others 8.2.17</li> <li>• Engage in decision-making respectful of oneself and supportive of one’s goals 8.2.18</li> </ul>

## CAREER DEVELOPMENT GRADE 9

### Competencies

NWT Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
<b>Maintain balanced life and work roles</b>	<ul style="list-style-type: none"> <li>• Understand how different work and family roles require varying kinds of energy, participation, motivation and abilities 9.2.1</li> <li>• Examine how personal goals can be satisfied through a combination of work, community, social and family roles 9.2.3</li> <li>• Understand how personal leisure choices relate to lifestyle 9.2.4</li> <li>• Understand how various life and work roles impact the attainment of future goals 9.2.5</li> <li>• Explore the advantages and disadvantages of various life role scenarios 9.2.6</li> <li>• Explore the interrelationships among family, work and leisure decisions 9.2.7</li> <li>• Plan and experience leisure activities that relate to one’s considered or preferred lifestyle 9.2.8</li> <li>• Examine the type of lifestyle one wants 9.2.10</li> <li>• Determine the type of life and work roles that best impact one’s life 9.2.11</li> </ul>
<b>Understand the changing nature of life/work roles</b>	<ul style="list-style-type: none"> <li>• Identify non-traditional life/work scenarios 10.2.1</li> <li>• Investigate advantages and challenges of entering non-traditional work 10.2.2</li> <li>• Explore the advantages of experiencing personal interests, even if they are most often considered non-traditional (<i>to one’s gender</i>) 10.2.3</li> <li>• Understand the concepts of stereotypes, biases and discriminatory behaviours 10.2.4</li> <li>• Experience personal interests, even if they are most often considered non-traditional to one’s gender 10.2.5</li> <li>• Identify stereotypes, biases and discriminatory behaviours that may limit opportunities for women and men in certain work roles 10.2.6</li> <li>• Acknowledge one’s own stereotypes, biases and discriminatory behaviours that may limit opportunities for oneself or others in certain work roles 10.2.7</li> <li>• Develop attitudes and engage in behaviours that are non-discriminatory 10.2.8</li> </ul>
<b>Understand, engage in and manage one’s own life/work building process</b>	<ul style="list-style-type: none"> <li>• Explore the concept every decision is a life/work decision 11.2.1</li> <li>• Understand the difference between career planning and life/work building 11.2.3</li> <li>• Understand the importance of developing flexible and adaptable short-term action plans within the life/work building process 11.2.4</li> <li>• Understand the concept of a preferred future as part of the life/work building process 11.2.5</li> <li>• Understand the concept and importance of a life/work portfolio 11.2.6</li> <li>• Define one’s preferred future 11.2.7</li> <li>• Develop short-term action plans in step with one’s preferred future 11.2.8</li> <li>• Create and maintain one’s life/work portfolio 11.2.9</li> <li>• Re-examine and assess one’s preferred future using as criteria newly acquired information about self and the world of work 11.2.10</li> <li>• Take steps to move towards one’s preferred future 11.2.11</li> <li>• Adjust one’s preferred future as experience changes one’s knowledge of oneself 11.2.12</li> </ul>



## ART GRADE 9

### Dance

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
<b>Creative/Productive (CP) K-12 Goal:</b> Students will inquire, create, and communicate through dance, drama, music, and visual art.	
Create dance compositions that express perspectives and raise awareness about a topic of concern to youth. CP9.1	<ul style="list-style-type: none"> <li>● Use inquiry in dance to express ideas about topics of importance to youth.               <ul style="list-style-type: none"> <li>○ Generate key questions to guide inquiry in dance (e.g., Why does the media often portray youth in a negative light? How could dance help to raise awareness or bring about change on a topic of concern? In what ways could we represent through dance the positive contributions of today’s youth to life in Saskatchewan?).</li> <li>○ Determine depth and breadth of personal knowledge to identify possible areas of inquiry.</li> <li>○ Generate additional relevant questions for exploration.</li> <li>○ Use the Internet and other sources (e.g., print, digital, community) to gather ideas for dance making.</li> <li>○ Use the dance-making process to explore the central inquiry questions and ideas (e.g., How can we show through movement the determination that youth must possess to improve the future?).</li> <li>○ Keep a record of dance phrases using invented and/or traditional notation symbols, and video where possible, to explore, record, and reconstruct movements.</li> <li>○ Reflect, analyze, and make connections between the original topic or inquiry question and subsequent dance explorations.</li> </ul> </li> <li>● Investigate how a single idea can be developed in many ways and directions (e.g., How can we represent through movement the differing perspectives on this topic?).</li> <li>● Reflect on how movement, dance elements, and principles of composition can be organized to convey meaning in dance (e.g., What message or main idea does our dance communicate about our topic of concern?).</li> <li>● Document the inquiry and creative process (e.g., journal entries, video, photography, blog, or digital diary).</li> <li>● Collaborate on a youth-driven and teacher/community-supported plan to raise awareness through the arts about a topic of concern to youth:               <ul style="list-style-type: none"> <li>○ Propose ways of including community members and artists who share the same concerns, and develop a collaborative action plan to share some parts of entire dances with others.</li> </ul> </li> </ul>
Investigate and use choreographic processes (e.g., individual and collaborative choreography). CP9.2	<ul style="list-style-type: none"> <li>● Analyze, individually and with peers, how dance elements and principles of composition work together to express ideas in own dances.</li> <li>● Demonstrate efficient, purposeful, expressive movements.</li> <li>● Investigate ways of using spatial designs, individually and with peers.</li> <li>● Demonstrate expressive use of focus, individually, in pairs, and groups.</li> <li>● Investigate different ways of manipulating the element of relationships in individual and collaborative choreography.</li> <li>● Develop seamless transitions that sequence dance phrases in ways that exemplify the intended idea.</li> <li>● Use improvisation to explore and develop a dance idea.</li> <li>● Extend understanding of sequencing of dance phrases for expressive purposes.</li> <li>● Use tension and resolutions purposefully in dance.</li> </ul>

## ART GRADE 9

### Dance

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
(Continued)	<ul style="list-style-type: none"> <li>• Use design (e.g., costumes, sets, lighting, sound) and technology, where possible, in addition to dance elements and composition principles to enhance expression</li> </ul>
Choreograph duo or small group work. CP9.3	<ul style="list-style-type: none"> <li>• Generate ideas for movement exploration and development by collaborating in duo and small group work.</li> <li>• Demonstrate leadership as a choreographer by offering ideas and guidance to dancers during development of composition.</li> <li>• Collaborate with others to explore and refine dance phrases and organize into appropriate form (e.g., ABA, collage, chance, organic) to achieve meaning and expression.</li> <li>• Demonstrate self-awareness in decision making about movement choices.</li> <li>• Encourage other dancers to demonstrate efficient movement related to centre of gravity and body alignment in dance.</li> <li>• Record dance phrases (e.g., notation and/or video) to further explore and reconstruct movements.</li> <li>• Support duo or small group in repeating movement phrases and sequences with accuracy and expression during development, rehearsal, and sharing of work.</li> <li>• Reflect on composition process and describe ideas, strengths, and areas for potential improvement.</li> </ul>

### Drama

Demonstrate how roles may be developed and how dramatic characters communicate meaning to an audience. CP9.4	<ul style="list-style-type: none"> <li>• Assume and develop different kinds of roles in drama work.</li> <li>• Analyze how the various roles assumed interact with others and help to further the drama work.</li> <li>• Demonstrate how roles may be developed (e.g., through interaction with others, through improvisation and research).</li> <li>• Investigate ways that dramatic characters communicate meaning to others.</li> <li>• Demonstrate focus and concentration in role.</li> <li>• Collaborate with other students to explore inquiry questions to develop roles and characters (What if your character came to school in the morning and heard that ...?).</li> <li>• Recognize how research contributes to the authenticity and significance of role and character work.</li> <li>• Use language and drama strategies to achieve dramatic purpose and communicate meaning to an audience.</li> <li>• Use technology to enhance or clarify dramatic intentions (e.g., videotape improvisations, create lighting and sound effects).</li> </ul>
Manipulate drama strategies and theatrical elements (e.g., story, character, design, space) to achieve dramatic purpose. CP9.5	<ul style="list-style-type: none"> <li>• Propose how best to incorporate various drama strategies to achieve intentions.</li> <li>• Demonstrate awareness of how focus is maintained and shifts as the drama unfolds.</li> <li>• Reflect on sources and function of tension in the drama work.</li> <li>• Examine how contrast functions within the drama work.</li> <li>• Negotiate skillfully and work toward consensus in dramatic work.</li> <li>• Recognize and refine how roles and characters function in drama work.</li> <li>• Propose ideas for use of symbols in drama work.</li> <li>• Manipulate tension, focus, contrast, and symbol to help achieve intention.</li> <li>• Propose when to use different strategies to communicate ideas effectively.</li> <li>• Collaborate on development of technical theatre elements to support dramatic purpose (e.g., lighting, set, costume, sound design).</li> </ul>

## ART GRADE 9

### Drama

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Express perspectives and raise awareness about a topic of concern to youth in a collective creation. CP9.6	<ul style="list-style-type: none"> <li>• Brainstorm and negotiate with other students to determine a topic of mutual concern to address through a collective creation.</li> <li>• Collaborate on a youth-driven and teacher/community-supported plan to raise awareness through drama about a topic of concern to youth:               <ul style="list-style-type: none"> <li>○ Propose ways of including community members and theatre artists who share the same concerns, and develop a collaborative action plan to share some parts or entire dramatic expressions with others.</li> <li>○ Create and maintain reflective records to document the work (e.g., journal, photos, blog, video).</li> </ul> </li> <li>• Investigate how fictional situations and dramatic episodes related to the chosen topic might be explored (e.g., using structured improv, drawing on different theatrical genres or cultural drama traditions).</li> <li>• Collaborate on exploration and development of the collective creation through developing various roles and characters and incorporating a range of drama strategies.</li> <li>• Research different theatrical genres and cultural traditions, and investigate and explore how some of these conventions may be incorporated into the collective creation (e.g., Indonesian shadow puppet theatre, Greek tragedy, vaudeville, improvisational theatre).</li> <li>• Create and incorporate imagery, sound, and visual effects in collective creation.</li> <li>• Use technology as a tool during the creative process and as part of a presentation, where appropriate.</li> <li>• Analyze and describe the effectiveness of own drama to express perspectives.</li> </ul>
<b>Music</b>	
Use voice, instruments, and technologies to express musical ideas. CP9.7	<ul style="list-style-type: none"> <li>• Demonstrate innovative use of vocal improvisation in song and speech.</li> <li>• Create and improvise with an instrument of choice.</li> <li>• Experiment with the voice and instruments by creating and imitating sounds.</li> <li>• Extend singing skills, and understand and be sensitive to the ways voices change with age and musical experiences.</li> <li>• Examine the use of the voice in improvisation in a diverse range of cultural and social contexts.</li> <li>• Examine improvisation within a diverse range of instrumental music from around the world.</li> <li>• Demonstrate capability with electronic and technological mediums of musical expression (e.g., computer-generated sound/music).</li> <li>• Prepare, rehearse, and present structured compositions and improvisations.</li> <li>• Use technology to explore and record improvisation.</li> </ul>
Combine the elements of music and principles of composition to express unified musical ideas. CP9.8	<ul style="list-style-type: none"> <li>• Pose questions to initiate and guide inquiry into how best to combine elements of music and principles of composition to express musical ideas (e.g., How could we combine the rhythms that we've learned to create a Latin feel in this piece?).</li> <li>• Investigate ways that beat, accent, and metre can be used to create a specific 'feel' in music.</li> <li>• Investigate ways that tempo, rhythm, melody, harmonic structure, or tonality can be used to express an idea or emotional quality in music.</li> <li>• Use silence effectively in music.</li> </ul>

## ART GRADE 9

### Music

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
(Continued)	<ul style="list-style-type: none"> <li>• Demonstrate understanding of how music elements and composition principles create form and structure in music.</li> <li>• Analyze how elements of music and principles of composition are used in combination to create unified compositions and apply this understanding in own work.</li> </ul>
Compose and perform sound compositions to express perspectives and raise awareness about a topic of concern to youth. CP9.9	<ul style="list-style-type: none"> <li>• Examine how musicians and composers express ideas about the world around them and comment on society in their work.</li> <li>• Brainstorm and negotiate with other students to determine a process for music inquiry and composing processes.</li> <li>• Contribute to the creation of a plan to document the research and composing process (e.g., audio recordings, video, blog, wiki, or web-based audio journal).</li> <li>• Collaborate on the creation of sound compositions (e.g., songs, bands, drum circles, techno, hip hop, scratching, new musical forms) as part of a youth-driven and teacher/community-supported plan to raise awareness through music about a topic of concern to youth:               <ul style="list-style-type: none"> <li>○ Propose ways of including community members and musicians who share the same concerns, and develop a collaborative action plan to share music expressions with others.</li> </ul> </li> <li>• Generate musical ideas from both internal and external sources, developing these ideas to achieve meaning and expression.</li> <li>• Use the Internet and other sources to research music styles associated with youth subcultures throughout different periods in history (e.g., rock, jazz, fusion, hip hop, punk, rave cultures).</li> <li>• Investigate uses of new technologies in music (e.g., new electronic music).</li> <li>• Incorporate technology in innovative ways for creating and/or documenting the creative process.</li> <li>• Compose music using digital technologies where possible (e.g., electronic keyboards, online composing, mixing, and editing tools).</li> </ul>

### Visual Art

Create visual art works to express perspectives and raise awareness about a topic of concern to youth. CP9.10	<ul style="list-style-type: none"> <li>• Propose topics for inquiry into issues of importance to students (e.g., select a topic of current concern to students and/or community).</li> <li>• Design, with other students, a plan to guide the visual art inquiry and document the creative process.</li> <li>• Collaborate on a youth-driven and teacher/community-supported plan to raise awareness through visual art about a topic of concern to youth:               <ul style="list-style-type: none"> <li>○ Propose ways of including community members and artists who share the same concerns, and develop an action plan to share parts or entire visual art expressions with others.</li> </ul> </li> <li>• Generate ideas for art works through internal and external sources, developing these ideas to achieve meaning and expression.</li> <li>• Expand upon an idea to achieve more depth of meaning and expression.</li> </ul>
Select and use appropriate forms, technologies, images, and art-making processes to convey ideas about a topic of concern to youth. CP9.11	<ul style="list-style-type: none"> <li>• Select visual art forms (e.g., mixed media installation, sculpture) to express ideas about a topic of concern to youth.</li> <li>• Demonstrate effective use of visual art tools, materials, and techniques.</li> <li>• Create portfolios (e.g., traditional and/or digital) of works in progress and completed work.</li> <li>• Use digital photography or other means to document inquiry and the creative process.</li> </ul>

## ART GRADE 9

### Visual Art

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
(Continued)	<ul style="list-style-type: none"> <li>• Analyze application of the elements of art, principles of design, images, and techniques in own and peers' art works.</li> <li>• Demonstrate skills of observation and increased ability to include detailed information in own depictions.</li> <li>• Demonstrate awareness of various health and safety hazards and procedures in visual art.</li> </ul>
Solve visual art problems in new and unfamiliar ways. CP9.12	<ul style="list-style-type: none"> <li>• Take risks by working in unfamiliar ways (e.g., new ideas, techniques, or media).</li> <li>• Experiment with new ways of using symbols and manipulation of images.</li> <li>• Solve visual art challenges or problems in innovative ways (e.g., imaginative use of point of view, perspective, colour theory, proportion, exaggeration, or distortion).</li> <li>• Describe own decision-making and problem-solving processes, and reflect on the effectiveness of choices made.</li> </ul>
<h3>Dance, Drama, Music, Visual Art</h3> <p><b>CRITICAL/RESPONSIVE (CR) K-12 Goal:</b> Students will respond to artistic expressions of Saskatchewan, Canadian, and International artists using critical thinking, creativity, research, and collaborative inquiry.</p>	
Respond to professional dance, drama, music, and visual art works through individual or collaborative inquiry and the creation of own arts expressions. CR9.1	<ul style="list-style-type: none"> <li>• Use individual or collaborative inquiry to develop questions and learn about a selected arts expression.</li> <li>• Create an individual or collaborative plan to investigate the inquiry questions, document the inquiry process, and share findings with others.</li> <li>• Create own work in response to a selected professional arts expression, and describe how the new work is inspired or influenced by the original.</li> </ul>
Investigate and identify ways that today's arts expressions can inspire change. CR9.2	<ul style="list-style-type: none"> <li>• Investigate how arts expressions can inspire change in different ways.</li> <li>• Examine and describe how new technology has changed the arts and arts careers.</li> <li>• Investigate and describe ways in which various arts movements (e.g., impressionism, cubism, 1950s rock and roll, 1920s dance crazes, guerilla street theatre, site specific performances) often broke the rules of the establishment and reflected change during that time.</li> <li>• Examine a variety of new and non-traditional art forms.</li> <li>• Describe how arts expressions can initiate or support social change (e.g., raising awareness about environmental issues, raising money for African famine relief, commenting on social injustice or other controversial topics).</li> </ul>
Investigate and identify how arts expressions can challenge thinking about values, ideas, and beliefs. CR9.3	<ul style="list-style-type: none"> <li>• Describe how the arts can transmit or question values, ideas, and beliefs.</li> <li>• Examine the intentions, development, and interpretations of own arts expressions in relation to own experience, values, and perspectives.</li> <li>• Examine societal issues and their influence on current arts expressions (e.g., arts as social or political commentary).</li> <li>• Collaborate with peers on development of criteria for assessing the expression of ideas in own arts expressions.</li> <li>• Describe how art works are expressions of individual and collective viewpoints.</li> <li>• Demonstrate interest in the ideas and work of today's artists, and appreciate original thought.</li> <li>• Investigate and explain why some arts expressions were considered to be controversial at different times in history.</li> </ul>

## ART GRADE 9

### Dance, Drama, Music, Visual Art

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
<b>CULTURAL HISTORICAL (CH) K-12 Goal:</b> Students will investigate the content and aesthetics of the arts within cultural, historical, and contemporary contexts and understand the connection between the arts and human experience.	
Investigate and discuss the role of artists in raising awareness or taking action on topics of concern. CH9.1	<ul style="list-style-type: none"> <li>• Research and describe how artists often raise awareness about local or global issues.</li> <li>• Examine how artists used popular culture to express unique ideas and to comment on society.</li> <li>• Recognize and discuss the value of original thought as well as technical proficiency in arts expressions.</li> <li>• Investigate arts expressions that raise awareness or inspire community action.</li> </ul>
Use the arts to raise awareness on topics of concern to Indigenous artists in dance, drama, music, and visual arts. CH9.2	<ul style="list-style-type: none"> <li>• Use inquiry to investigate topics of concern to Indigenous peoples:               <ul style="list-style-type: none"> <li>○ Generate key questions to guide inquiry (e.g., What are topics of concern to Indigenous artists?).</li> <li>○ Create a plan to document the inquiry process.</li> <li>○ Research topics addressed by artists (e.g., examine messages and lyrics of a variety of artists such as Buffy Ste. Marie, Floyd Crow Westerman, Eekwol, Reddnation, and Rezofficial).</li> <li>○ Analyze topics presented by artists in relation to own understanding, value, and experiences.</li> <li>○ Summarize research findings to identify central themes (e.g., colonization) and topics (e.g., residential schools).</li> <li>○ Identify gaps in knowledge that may limit understanding.</li> <li>○ Use the Internet and other sources (e.g., print, digital, community) to gather additional information.</li> <li>○ Determine central focus and questions to explore independently and collaboratively (e.g., How could we use the arts to help people understand that we are all Treaty people?).</li> <li>○ Reflect, analyze, and make connections between the original topic or inquiry question and subsequent arts expressions.</li> </ul> </li> <li>• Create a plan of action to use the arts to increase understanding on this topic of concern (e.g., develop a collective creation/play about racism to increase knowledge and mutual understanding).</li> <li>• Share arts expressions with younger &amp; older students and community, where possible.</li> </ul>
Investigate diversity of artistic ideas, styles, and media in contemporary arts expressions. CH9.3	<ul style="list-style-type: none"> <li>• Demonstrate an awareness of key historical developments in relation to contemporary arts expressions (i.e., the term contemporary typically includes arts expressions of the late 20th and 21st centuries).</li> <li>• Research and describe the work of contemporary Saskatchewan and Canadian artists.</li> <li>• Extend knowledge of artistic styles across a range of cultural contexts.</li> <li>• Investigate how function and purpose influence artistic decision making.</li> <li>• Describe how environmental, historical, and social factors influence artists.</li> <li>• Research various career avenues in the arts.</li> </ul>
Create interdisciplinary arts expressions individually or through collaboration with peers, and examine the work of artists who create interdisciplinary expressions (e.g., sound and poetry, performance art, audio visual installations). CH9.4	<ul style="list-style-type: none"> <li>• Identify ways that various arts expressions combine more than one arts discipline.</li> <li>• Examine the impact of technology on interdisciplinary art works (e.g., audio visual installations, performance art).</li> <li>• Examine a variety of new and non-traditional art forms that integrate disciplines.</li> <li>• Investigate connections that exist among the arts, and incorporate more than one art form into own work or collaborative project.</li> <li>• Demonstrate leadership and support peers during collaborative processes.</li> <li>• Critically examine and assess individual work and contributions to collaborative work.</li> </ul>

## PHYSICAL EDUCATION GRADE 9

### Activity

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Apply and refine locomotor skills and concepts to a variety of activities with increased control to improve personal performance A9–1	<ul style="list-style-type: none"> <li>• Perform various swimming strokes and then demonstrate them in aquatic games; e.g., water polo. (Alternate Environment)</li> </ul>
Apply and refine locomotor skills by using elements of body and space awareness, effort and relationships to improve personal performance A9–2	<ul style="list-style-type: none"> <li>• Demonstrate ways in which various skills and mechanics are transferred from activity to activity; e.g., compare running skills in long jump to sprinting. (Individual Activities)</li> </ul>
Apply and refine nonlocomotor skills and concepts to a variety of activities with increased control to improve personal performance A9–3	<ul style="list-style-type: none"> <li>• Using music of different cultures, explore both locomotor and nonlocomotor movements; e.g., focus upon turns, hand movements, body percussions and gestures to enhance performance. (Dance)</li> </ul>
Apply and refine nonlocomotor skills by using elements of body and space awareness, effort and relationships, to improve personal performance A9–4	<ul style="list-style-type: none"> <li>• While hanging from a horizontal bar with two or three other students, pass a ball back and forth between feet as many times as possible, as a means of developing core body strength. (Types of Gymnastics)</li> </ul>
Apply and refine ways to receive, retain and send an object with increased speed, accuracy and distance in skills specific to an activity A9–5	<ul style="list-style-type: none"> <li>• Use a variety of objects and implements; e.g., balls, racquets, quoits and sticks, to practise activity-specific motor skills, such as dribbling, cradling, passing, catching and serving in game-like situations. (Games)</li> </ul>
Apply and refine manipulative skills by using elements of space awareness, effort and relationships, with and without objects, to improve performance A9–6	<ul style="list-style-type: none"> <li>• Use ribbons, hoops, balls or clubs to create rhythmic gymnastics routines; e.g., ribbon movement on various planes, combined with complementary body movement. (Types of Gymnastics)</li> </ul>
Apply and refine activity-specific skills in a variety of environments; e.g., hiking, wall climbing A9–7	<ul style="list-style-type: none"> <li>• Perform locomotor and nonlocomotor skills as they relate to alternative-environment activities, such as route finding and map reading for orienteering (Alternate Environment)</li> </ul>
Create, refine and present a variety of dance sequences; e.g., jazz, square, social and novelty, alone and with others A9–8	<ul style="list-style-type: none"> <li>• Perform dance steps in specific formations; e.g., couple, circle, line (Dance)</li> </ul>
Choreograph and perform dance sequences, using the elements of movement and basic dance steps and patterns A9–9	<ul style="list-style-type: none"> <li>• Perform various dance steps; e.g., slap leather, waltz and jiffy mixer, that have been taught through teacher or peer demonstrations. (Dance)</li> </ul>
Apply and refine activity-specific basic skills in a variety of games A9–10	<ul style="list-style-type: none"> <li>• Apply motor skills, mechanics and strategies to small- and large-group game activities; e.g., modified, cooperative or competitive games, such as cricket, badminton and soft lacrosse. Receive feedback and continue to work at applying these skills in a variety of situations. (Games)</li> </ul>
Create and plan activities that emphasize specific strategies and tactics that coordinate effort with others; e.g., team/fair play, in order to achieve a common activity goal A9–11	<ul style="list-style-type: none"> <li>• Create a game that incorporates the importance of creating space. After playing the game, introduce a defensive strategy to try and prevent the other team from creating space. (Games)</li> </ul>

## PHYSICAL EDUCATION GRADE 9

### Activity

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Apply and refine 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 A9–12	<ul style="list-style-type: none"> <li>• With a partner, create and perform a floor/mat sequence based upon the theme “assisted flight.” (Types of Gymnastics)</li> </ul>
Apply and refine activity-specific skills in a variety of individual pursuits; e.g., fitness activities A9–13	<ul style="list-style-type: none"> <li>• Demonstrate and discuss the techniques used in various activities, such as field events; e.g., discus, and target activities; e.g., golf, archery, darts. (Individual Activities)</li> </ul>
<b>Benefits Health</b>	
Design, monitor and personally analyze nutrition programs that will affect physical performance B9–1	<ul style="list-style-type: none"> <li>• Design a nutritional plan appropriate for a specific activity; e.g., cross-country running, weight lifting or aerobics, and keep a journal of nutritional intake in relation to energy expenditure. (Individual Activities)</li> <li>• Compare fat content and carbohydrate levels of the top brands of nutritional supplement beverages to determine the most appropriate beverage for the current activity. (Dance)</li> </ul>
Demonstrate, monitor and analyze ways to achieve a personal functional level of physical fitness B9–2	<ul style="list-style-type: none"> <li>• In a group, create a 5-minute aerobic dance routine for other students. Analyze the functional components of fitness required. (Dance)</li> </ul>
Design and implement a personal fitness and activity plan, using the principles of training: frequency, intensity, duration B9–3	<ul style="list-style-type: none"> <li>• Demonstrate how to use various pieces of fitness equipment available at school or local fitness centres, in order to implement a personal program. (Individual Activities)</li> </ul>
Acknowledge and analyze the media and peer influences on body image B9–4	<ul style="list-style-type: none"> <li>• Using fundamental themes of gymnastics—statics, balances, locomotion, landings—appreciate how this activity is not limited only to individuals who fit the typical body type of artistic gymnasts as seen through the media. (Types of Gymnastics)</li> </ul>
Discuss the effects of performance enhancing substances on body type and body image as a part of physical activity B9–5	<ul style="list-style-type: none"> <li>• Identify potential benefits of common performance-enhancing substances; e.g., caffeine, creatine. Present facts on a chart, and identify known risk factors associated with each substance. Reflect on long-term health versus quick results. (Games)</li> </ul>
Analyze and explain the effects that nutrition, fitness and physical activity have on body systems before, during and after exercise B9–6	<ul style="list-style-type: none"> <li>• Compare the demands among different types of games and the effect on heart rates. For example, plot the average heart rates of the class after playing basketball, bowling, baseball and badminton. Discuss the energy needed to play these different games. (Games)</li> <li>• Plan a day hike that takes into consideration physical abilities and nutritional requirements to successfully complete the trip. Identify such things as equipment needs, preparatory activities, safety considerations, environmental concerns and food. Compare the demands of the trip to typical daily requirements. (Alternate Environments)</li> </ul>



## PHYSICAL EDUCATION GRADE 9

### Benefits Health

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Monitor, analyze and assess fitness changes as a result of physical activity B9–7	<ul style="list-style-type: none"> <li>Identify, perform and monitor the effectiveness of various exercises and drills that help prepare for activities in alternative settings; e.g., exercises to strengthen the quadriceps for skiing activities, stretching and running activities for hiking and orienteering, upper-body exercises for canoeing or hiking. (Alternate Environments)</li> </ul>
Select and perform appropriate physical activities for personal stress management and relaxation B9–8	<ul style="list-style-type: none"> <li>Execute progressive relaxation techniques or yoga exercises as a way to relieve stress and promote relaxation. Share personal active relaxation strategies. (Individual Activities)</li> <li>Plan and participate in gymnastic-like activities, such as stretching and twisting, that help reduce stress in daily routines (Types of Gymnastics)</li> </ul>
<b>Cooperation</b>	
Communicate thoughts and feelings in an appropriate respectful manner as they relate to participation in physical activity C9–1	<ul style="list-style-type: none"> <li>Using self-created poetry, pictures or photographs as a stimulus, create and perform dance sequences. Exhibit appropriate audience behaviours when watching classmates. (Dance)</li> <li>Identify the characteristics of effective and enjoyable group work; e.g., listen to everyone’s ideas; critique the idea, not the person; agree to try it out before judging it. Practise respectful behaviour while working in groups. (Types of Gymnastics)</li> </ul>
Identify and discuss the positive behaviours that are demonstrated by active living role models C9–2	<ul style="list-style-type: none"> <li>Listen to and participate with a guest gymnastics instructor or group from the community as they demonstrate a gymnastics session. Discuss with the guest the personal benefits of being active in gymnastics. (Types of Gymnastics)</li> </ul>
Demonstrate etiquette and fair play C9–3	<ul style="list-style-type: none"> <li>Call a “let” when a shot is interfered with, when playing net and wall games. (Games)</li> </ul>
Describe, apply, monitor and practise leadership and followership skills related to physical activity C9–4	<ul style="list-style-type: none"> <li>Plan and lead activities during a one-day field trip for such things as cross-country skiing, rock climbing, mountain biking and hiking. (Alternate Environments)</li> <li>Working in pairs, use a checklist based on predetermined criteria to analyze each other’s performance of specific skills. (Individual Activities)</li> </ul>
Develop practices that contribute to teamwork C9–5	<ul style="list-style-type: none"> <li>In small groups, create a competitive or cooperative game. While participating, focus on ensuring that all team members feel like they are part of the game; and ensure that appropriate, positive language is used. (Games)</li> </ul>
Identify and demonstrate positive behaviours that show respect for self and others C9–6	<ul style="list-style-type: none"> <li>Assist in planning a trip to participate in tipi camping. Learn the significance, importance and traditions of a specific Aboriginal culture through the teachings of Elders. (Alternate Environments)</li> <li>Research dances from various cultures; e.g., Métis, First Nations and Inuit, and prepare a presentation for the class.(Dance)</li> </ul>
<b>Do It...Daily for Life!</b>	
Participate regularly in, and realize the benefits of, an active lifestyle D9–1	<ul style="list-style-type: none"> <li>Listen to and participate in activities provided by guests that lead active lifestyles, as a kick-off to a two-month fitness program. Create a personal fitness log that includes specific exercises, incorporating the principles of training—frequency, intensity, time, type (FITT). (Individual Activities)</li> <li>Work with a partner or in small groups to create a dance and perform with others. Select music, make up a name for the dance, select a formation and create the steps. (Dance)</li> </ul>
Develop a personal plan that encourages participation and continued motivation D9–2	<ul style="list-style-type: none"> <li>Through brainstorming and research, identify factors that might affect physical activity choices throughout life; e.g., community resources, physical needs, career choices, climate, cost. Role play to discover personal resolutions to any barriers. (Alternate Environments)</li> </ul>

## PHYSICAL EDUCATION GRADE 9

### Do It...Daily for Life!

Outcomes	Achievement Indicators – Measurable outcomes
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
Select and apply rules, routines and procedures for safety in a variety of activities from all movement dimensions D9–3	<ul style="list-style-type: none"> <li>• Check the playing area and equipment before use; e.g., when warming up on a field, look for glass and potholes, and check that goal posts are properly secured.(Games)</li> </ul>
Analyze, design and perform warm-up and cool-down activities D9–4	<ul style="list-style-type: none"> <li>• In groups, at the beginning of class, design and present a warm-up that will prepare the body for the activity to be performed in class; e.g., if doing rolls, the warm-up should include stretches. Review safety considerations for warm-ups. (Types of Gymnastics)</li> </ul>
Design safe movement experiences that promote an active, healthy lifestyle; e.g., student-created games D9–5	<ul style="list-style-type: none"> <li>• In a cross-country running unit, come prepared with proper gear; e.g., sunscreen, light clothing, water bottle, correct footwear. (Individual Activities)</li> </ul>
Determine and articulate challenging personal and team goals based on interests and abilities D9–6	<ul style="list-style-type: none"> <li>• Use task cards to outline movement challenges on small and large apparatus; e.g., create a three-part sequence on the bench, showing three balances at two different levels. (Types of Gymnastics)</li> <li>• Establish and evaluate personal goals related to fitness, motor abilities and the maintenance of a healthy lifestyle. Use active health labs, personal fitness assessments or computer spreadsheets to monitor progress.(Games)</li> <li>• Complete a safe cycling orienteering course throughout the community that uses clues to provide individual and team challenges. (Alternate Environments)</li> </ul>
Evaluate different ways to achieve an activity goal, and determine personal and team approaches that are challenging for both the individual and the group D9–7	<ul style="list-style-type: none"> <li>• Brainstorm the rules, risks and challenges presented in inline skating or skateboarding prior to going onto a shared play area. Work toward an individual and/or group activity goal; e.g., different levels of obstacle courses. (Alternate Environments)</li> </ul>
Evaluate community programs that promote physically active lifestyles and how they meet local needs D9–8	<ul style="list-style-type: none"> <li>• Listen to a guest instructor from a local program or a traditional First Nations dance instructor teach a dance.(Dance)</li> </ul>
Develop strategies to counteract influences that limit involvement in physical activity D9–9	<ul style="list-style-type: none"> <li>• Take part in an activity that shows inefficient use of time; e.g., long line-ups, few targets, small space. Then participate in the same activity, using short line-ups, more targets and larger space. Brainstorm various influences that limit physical activity. (Individual Activities)</li> </ul>

## ICT - GRADE 9 - EXPANDING (GRADE 6 to ADULT)

### Cognitive Domain

Outcomes		Achievement Indicators
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>	
	<b>Plan and Question</b>	<b>Supporting Skills</b>
<b>Knows – Comprehends</b> (Become aware)	<ul style="list-style-type: none"> <li>• Recalls and or records prior knowledge and asks topic-related questions</li> <li>• Follows given plans</li> </ul>	
<b>Analyze – Apply</b> (Believe)	<ul style="list-style-type: none"> <li>• Constructs how and why questions, predictions, hunches, educated guesses and hypotheses and identifies information needs</li> </ul>	
	<ul style="list-style-type: none"> <li>• Adapts given electronic plans</li> </ul>	<ul style="list-style-type: none"> <li>• Moves text and images</li> <li>• Inserts and edits text, data, images, sound, video and or formulas</li> <li>• Formats text, images, graphs, and tables using toolbar icons, menu options, and or keyboard shortcuts</li> <li>• Edits text using spell check, dictionary, thesaurus, grammar check, and or track changes</li> <li>• Formats page layout</li> <li>• Customizes the template of a graphic organizer, table, multimedia presentation, spreadsheet, and/or database</li> </ul>
<b>Synthesize – Evaluate</b> (Value)	<ul style="list-style-type: none"> <li>• Evaluates original inquiry questions and creates new questions for future inquiry</li> </ul>	
	<ul style="list-style-type: none"> <li>• Designs own electronic plans</li> </ul>	<ul style="list-style-type: none"> <li>• Manages electronic files and folders</li> <li>• Moves data between applications</li> <li>• Constructs graphic organizers, tables, spreadsheets, databases, multimedia presentations, and/or web pages</li> </ul>

## ICT - GRADE 9 - EXPANDING (GRADE 6 to ADULT)

### Cognitive Domain

Outcomes		Achievement Indicators
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>	
	Gather and Make Sense	Supporting Skills
<b>Knows – Comprehends</b> (Become aware)	<ul style="list-style-type: none"> <li>Finds and collects information from given media sources</li> </ul>	<ul style="list-style-type: none"> <li>Logs on and off ICT devices</li> <li>Opens applications and files</li> <li>Saves files Prints files</li> <li>Navigates within an application</li> <li>Browses multimedia</li> <li>Navigates within a website</li> <li>Searches the Internet using teacher-selected search engines and keywords</li> <li>Sends and receives text messages and electronic files using rules of etiquette</li> <li>Manipulates input devices</li> <li>Selects and uses peripherals to find, record, manipulate, save, print and/or display information</li> </ul>
	<ul style="list-style-type: none"> <li>Identifies sources of information and provides bibliographic/reference data</li> </ul>	<ul style="list-style-type: none"> <li>Recognizes and presses keys on the keyboard</li> <li>Inserts hyperlinks to electronic sources</li> </ul>
	<ul style="list-style-type: none"> <li>Records data or makes notes on gathered information and ideas using given categories and given ICT</li> </ul>	<ul style="list-style-type: none"> <li>Logs on and off ICT devices</li> <li>Opens applications and files</li> <li>Saves files</li> <li>Navigates within an application</li> <li>Moves data between applications</li> <li>Recognizes and presses keys on the keyboard</li> <li>Inserts and edits text, data, images, sound video and/or formulas</li> </ul>
	<ul style="list-style-type: none"> <li>Collects primary data using electronic devices</li> </ul>	<ul style="list-style-type: none"> <li>Captures digital data</li> </ul>
	<ul style="list-style-type: none"> <li>Questions whether information from media sources is real, useful, and/or distracting</li> </ul>	
<b>Analyze – Apply</b> (Believe)	<ul style="list-style-type: none"> <li>Refines information searches using a variety of media sources</li> </ul>	<ul style="list-style-type: none"> <li>Navigates within an application</li> <li>Browses the Internet</li> <li>Chooses /uses search engines &amp; own keywords</li> <li>Refines searches using Boolean logic</li> </ul>
	<ul style="list-style-type: none"> <li>Analyzes textual, numerical, aural, and visual information gathered from media sources, applying established criteria</li> </ul>	<ul style="list-style-type: none"> <li>Investigates currency, authorship of electronic sources such as websites, email, CD-ROMs, syndications, blogs, wikis, podcasts, and broadcast media</li> </ul>
	<ul style="list-style-type: none"> <li>Categorizes information using the ICT suitable for the purpose</li> </ul>	<ul style="list-style-type: none"> <li>Navigates within an application</li> <li>Moves data between applications</li> <li>Transfers ICT knowledge to new applications</li> </ul>
	<ul style="list-style-type: none"> <li>Analyzes if info from media sources is sufficient, suitable for purpose/audience</li> </ul>	
	<ul style="list-style-type: none"> <li>Analyzes whether information from media sources has been manipulated</li> </ul>	
<b>Synthesize Evaluate</b> (Value)	<ul style="list-style-type: none"> <li>Incorporates new information with prior knowledge and adjusts inquiry strategies</li> </ul>	
	<ul style="list-style-type: none"> <li>Assesses textual, numerical, aural, and visual info, and sources of the media, to verify context, perspective, bias, motive</li> </ul>	

## ICT - GRADE 9 - EXPANDING LEARNER (Grade 6 to Adult)

### Cognitive Domain

Outcomes		Achievement Indicators
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>	
	Produce to Show Understanding	Supporting Skills
<b>Knows – Comprehends</b> (Become aware)	<ul style="list-style-type: none"> <li>• Participates in establishing criteria for student – created electronic work</li> <li>• Composes text, records, sound, sketches images, graphs, data, and/or creates video</li> </ul>	<ul style="list-style-type: none"> <li>• Logs on and off ICT devices</li> <li>• Opens applications and files</li> <li>• Saves files</li> <li>• Navigates within an application</li> <li>• Manipulates input devices</li> <li>• Recognizes and presses keys on the keyboard</li> <li>• Moves text and images</li> <li>• Draws images using electronic tools</li> <li>• Inserts and edits texts, data, images, sound, video, and/or formulas</li> <li>• Recalls ICT vocabulary in context</li> <li>• Uses ICT vocabulary in context</li> </ul>
	<ul style="list-style-type: none"> <li>• Edits electronic work according to established criteria, conventions, and/or standards</li> </ul>	<ul style="list-style-type: none"> <li>• Prints files</li> <li>• Navigates between applications</li> <li>• Sends and receives text messages and electronic files using rules of etiquette</li> <li>• Transfers ICT knowledge to new applications</li> <li>• Inserts and edits texts, data, images, sound, video, and/or formulas</li> <li>• Formats text, images, graphs, tables using toolbar icons, menu options, keyboard shortcuts</li> <li>• Edits text using spell check, dictionary, thesaurus, grammar check, and/or track changes</li> <li>• Constructs graphic organizers, tables, spreadsheets, databases, multimedia presentations, and/or web pages</li> </ul>
<b>Analyze – Apply</b> (Believe)	<ul style="list-style-type: none"> <li>• Selects suitable ICT application and/or device to create electronic work and explains the selection</li> </ul>	<ul style="list-style-type: none"> <li>• Recognizes and presses keys on the keyboard</li> </ul>
	<ul style="list-style-type: none"> <li>• Revises electronic work to improve organization and clarity, enhance content and artistry, and meet audience needs, according to established criteria, feedback and personal preferences</li> </ul>	<ul style="list-style-type: none"> <li>• Logs on and off ICT devices</li> <li>• Opens applications and files</li> <li>• Saves files</li> <li>• Formats text, images, graphs, and tables using toolbar icons, menu options, and/or keyboard shortcuts</li> <li>• Edits text using spell check, dictionary, thesaurus, grammar check, and or track changes</li> <li>• Inserts hyperlinks to electronic sources</li> <li>• Formats page layout</li> <li>• Customizes template of graphic organizer, table, multimedia presentation, spreadsheet, database</li> <li>• Analyzes the intended use of images/video, and edits images/video using photo/video-editing software</li> <li>• Constructs graphic organizers, tables, spreadsheets, databases, multimedia presentations, and/or web pages</li> </ul>

## ICT - GRADE 9 - EXPANDING LEARNER (Grade 6 to Adult)

### Cognitive Domain

Outcomes		Achievement Indicators
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>	
Produce to Show Understanding		Supporting Skills
<b>Analyze – Apply</b> (Believe) cont.	<ul style="list-style-type: none"> <li>Solves problems, reaches conclusions, makes decisions, and/or proposes answers to questions by analyzing data/information and concepts using ICT devices and/or applications</li> </ul>	<ul style="list-style-type: none"> <li>Navigates within an application</li> <li>Moves data between applications</li> <li>Transfers ICT knowledge to new applications</li> </ul>
<b>Synthesize – Evaluate</b> (Value)	<ul style="list-style-type: none"> <li>Designs and creates non-sequenced ICT representations</li> </ul>	<ul style="list-style-type: none"> <li>Moves data between applications</li> </ul>
	<ul style="list-style-type: none"> <li>Self-assesses ICT representations to go beyond established criteria by enhancing meaning and/or artistry, according to topic, audience, purpose and occasion</li> </ul>	
	<ul style="list-style-type: none"> <li>Designs and creates simulations and models using ICT application</li> </ul>	
Communicate		Supporting Skills
<b>Knows Comprehends</b> (Become aware)	<ul style="list-style-type: none"> <li>Displays and/or discusses electronic work</li> </ul>	<ul style="list-style-type: none"> <li>Logs on and off ICT devices</li> <li>Opens applications and files</li> <li>Navigates within an application</li> <li>Manages electronic files and folders</li> <li>Manipulates input devices</li> <li>Recognizes and presses keys on the keyboard</li> <li>Selects and uses peripherals to find, record, manipulate, save, print, and/or display information</li> </ul>
<b>Analyze – Apply</b> (Believe)	<ul style="list-style-type: none"> <li>Discusses information, ideas, and/or electronic work using tools for electronic communication</li> </ul>	<ul style="list-style-type: none"> <li>Sends and receives text messages and electronic files using rules of etiquette</li> </ul>
<b>Synthesize Evaluate</b> (Value)	<ul style="list-style-type: none"> <li>Adjusts communication based on self-evaluation and feedback from a global audience</li> </ul>	
Reflect		Supporting Skills
<b>Knows Comprehends</b> (Become aware)	<ul style="list-style-type: none"> <li>Participates in guided conferences to think about using ICT to learn</li> </ul>	<ul style="list-style-type: none"> <li>Uses ICT vocabulary in context</li> </ul>
<b>Analyze – Apply</b> (Believe)	<ul style="list-style-type: none"> <li>Invites and shares constructive feedback, related to established criteria, to reflect on using ICT to learn</li> </ul>	
<b>Synthesize - Evaluate</b> (Value)	<ul style="list-style-type: none"> <li>Self-monitors learning goals, reflects on the value of ICT to complete learning tasks, and sets personal goals for using ICT to learn</li> </ul>	

## ICT - GRADE 9 - EXPANDING LEARNER (Grade 6 to Adult)

### Affective Domain

Outcomes	Achievement Indicators
<i>It is expected that students will:</i>	<i>The following set of indicators is used to assess student achievement for each related specific learning outcome. Students who have fully met the specific learning outcomes are able to:</i>
<b>Ethics and Responsibility</b>	
<b>Knows Comprehends</b> (Become aware)	<ul style="list-style-type: none"> <li>• Respects ICT equipment and personal technology space of other ICT users</li> <li>• Recognizes guidelines for safety and security</li> <li>• Recognizes the need to acknowledge authorship of intellectual property</li> <li>• Identifies possible health issues associated with using ICT</li> </ul>
<b>Analyze – Apply</b> (Believe) cont.	<ul style="list-style-type: none"> <li>• Applies school division’s acceptable-use policy for ICT</li> <li>• Applies safety guidelines when communicating electronically</li> <li>• Explains consequences of unethical behaviour</li> <li>• Applies guidelines for ethical and responsible use of ICT</li> </ul>
<b>Synthesize – Evaluate</b> (Value)	<ul style="list-style-type: none"> <li>• Evaluates effects of personal ICT behaviour on others</li> <li>• Weights personal benefits and risks of using ICT</li> </ul>
<b>Social Implications</b>	
<b>Knows Comprehends</b> (Become aware)	<ul style="list-style-type: none"> <li>• Identifies uses of ICT at home, at school, at work, and in the community</li> <li>• Relates societal consequences of ethical and unethical use of ICT</li> <li>• Chooses appropriate times and places to use wireless games and/or communication devices</li> </ul>
<b>Analyze – Apply</b> (Believe) cont.	<ul style="list-style-type: none"> <li>• Analyzes current trends in ICT to predict effects of emerging technologies</li> <li>• Analyzes various ICT skill and competency requirements’ for personal career choices</li> <li>• Analyzes advantages and disadvantages of ICT use in society</li> </ul>
<b>Synthesize – Evaluate</b> (Value)	<ul style="list-style-type: none"> <li>• Weighs society’s right to information access against right to individual privacy</li> <li>• Weighs benefits versus risks to society of creating new ICTs</li> </ul>
<b>Collaboration</b>	
<b>Knows Comprehends</b> (Become aware)	<ul style="list-style-type: none"> <li>• Works with others in teacher-directed learning tasks using ICT and assists others with ICT knowledge and procedures</li> </ul>
<b>Analyze – Apply</b> (Believe) cont.	<ul style="list-style-type: none"> <li>• Collaborates with peers to accomplish self-directed learning with ICT in various settings</li> <li>• Collaborates with others over distance using ICT</li> </ul>
<b>Synthesize – Evaluate</b> (Value)	<ul style="list-style-type: none"> <li>• Leads a group in the process of collaborative learning</li> <li>• Weighs benefits and challenges of collaborating on learning with ICT</li> </ul>
<b>Motivation and Confidence</b>	
<b>Knows Comprehends</b> (Become aware)	<ul style="list-style-type: none"> <li>• Demonstrates confidence and self-motivation while doing ICT tasks alone and with others</li> <li>• Recognizes ICT problems and seeks assistance to solve them</li> <li>• Recalls prior knowledge of procedures for troubleshooting and attempts to solve ICT problems</li> </ul>
<b>Analyze – Apply</b> (Believe) cont.	<ul style="list-style-type: none"> <li>• Investigates ICT problems and applies strategies to solve them</li> <li>• Preserves in working through complex ICT problems using higher-level thinking skills</li> </ul>
<b>Synthesize – Evaluate</b> (Value)	<ul style="list-style-type: none"> <li>• Synthesizes knowledge and information to solve unique ICT problems</li> </ul>

## AAT

<b>AAT Part A Narrative Writing –Test Blueprint</b>		
<b>Reporting Category</b>	<b>Looking For...</b>	<b>Description of Writing Assignments</b>
<b>Content</b> (selecting ideas and details to achieve a purpose)	Students respond to a given topic by writing a narrative or an essay. Students establish their purpose, select ideas and supporting details to achieve the purpose, and communicate in a manner appropriate to their audience.	The Narrative / Essay Writing Assignment requires students to respond to a prompt that consists of a topic, as well as a collection of materials that students may use if they wish. These materials include graphics, quotes, and short literary excerpts. Students may use ideas from previous experience and/or reading. Students are to respond by writing a narrative or an essay.
<b>Organization</b> (organizing ideas and details into a coherent whole)	Students organize their ideas to produce a unified and coherent narrative or essay that links events, details, sentences, and paragraphs, and that supports the purpose.	
<b>Sentence Structure</b> (structuring sentences effectively)	Students control sentence structure and use a variety of sentence types, sentence beginnings, and sentence lengths to enhance communication.	
<b>Vocabulary</b> (selecting and using words and expressions correctly and effectively)	Students choose specific words and expressions that are appropriate for their audience and effective in establishing a voice/tone that will help to achieve their purpose.	
<b>Conventions</b> (using the conventions of written language correctly and effectively)	Students use conventions accurately and effectively to communicate.	
<b>Content and Organization are weighted to be worth twice as much as each of the other categories</b>		
<b>AAT Part A Function Writing –Test Blueprint</b>		
<b>Reporting Category</b>	<b>Looking For...</b>	<b>Description of Writing Assignments</b>
<b>Content*</b> (thought and detail)	Students develop, organize, and evaluate ideas for a specified purpose and audience.	The Functional Writing Assignment requires students to write to a specified audience in the context of a business letter. They are also required to address a blank envelope correctly.
<b>Content Management*</b> (using the conventions of written language correctly and effectively)	Students communicate accurately and effectively by selecting words and phrases appropriate to their purpose. Students demonstrate control of sentence structure, usage, mechanics, and format.	



## AAT

### AAT Part B Reading – Grade 9: Test Blueprint

Reporting Category	Looking For...	Types of Reading Passages
<b>Identifying and Interpreting Ideas and Details</b>	Students construct meaning by interpreting ideas and details pertaining to setting / atmosphere / context / character / narrator / speaker (actions, motives, values, conflict, and events)	<p>There are various types of reading passages on the AAT: informational texts and narrative/poetic texts. Stories and poems comprise almost 60% of the test.</p>
<b>Interpreting Text Organization</b> (Students identify and analyze literary genres)	Students identify and analyze the text creator’s choice of form, tone, point of view, organizational structure, style, diction, rhetorical techniques (e.g., repetition, parallelism), text features (e.g., alliteration, onomatopoeia, imagery, foreshadowing, suspense), and conventions.	
<b>Associating Meaning</b>	Students use contextual clues to determine the denotative and connotative meaning of words, phrases, and figurative language (e.g., simile, metaphor, hyperbole, personification, irony, symbolism).	
<b>Synthesizing Ideas</b>	Students draw conclusions and make generalizations by integrating information in order to identify the tone, purpose, theme, main idea, or mood of a passage.	

**AAT MATH GRADE 9  
TEST BLUEPRINT**

<b>Multiple Choice (MC) and Numerical Response (NR)</b>			
<b>Item Type</b>	<b>Number of Items</b>	<b>Number of Marks</b>	<b>Percentage of Test</b>
<b>MC</b>	40	40	80%
<b>NR</b>	10	10	20%
<b>TOTAL</b>	50	50	100%
<b>Content Domain of Test</b>			
<b>Strand</b>		<b>Percentage of Items on Test</b>	
Number		25 – 35%	
Patterns and Relations		30 - 40%	
Shape and Space		15– 25%	
Statistics and Probability		10 – 20%	
<b>Cognitive Domain of Test</b>			
<b>Complexity Level</b>		<b>Percentage of Items on Test</b>	
Low		30 – 40%	
Moderate		40 – 50%	
High		15 – 25%	