

1 GRADE

The Ontario Curriculum

Expectations for Grade 1

Parent's Guide



Durham District
School Board

- These curriculum expectations have been taken directly from the **Ontario Curriculum, Grades 1-8**; as of **June 2010**, published by the Ministry of Education. The expectations are separated by grade to offer parents easy access to this information.
- The achievement charts identify four categories of knowledge and skills. The achievement chart is a standard province-wide guide to be used by teachers to guide the development of assessment tasks and tools, help teachers to plan instruction and assist in providing meaningful feedback to students. Level 3 is the provincial standard.

Dear Parents and Guardians:

At the Durham District School Board we believe that parents and guardians are partners in learning and we value involvement in your children's education. To support you, and in turn our students, we have prepared this clear and concise version of the curriculum expectations. This publication offers you a complete guide to the new Ontario Curriculum's learning expectations for Grade One.

The curriculum implemented in Durham District School Board schools includes general and specific expectations of knowledge and skills required of students in Grade One through to Grade Eight. There are eight separate publications, covering the expectations for each grade. By being familiar with the curriculum expectations, you can see what your child is learning in each grade and work with teachers to improve your child's academic success.

We also welcome you in our schools and encourage you to participate in parent-teacher conferences and school events, and to be active on school councils. Most of all, we urge you to provide your children with encouragement and support to be successful in school.

It is our hope that you will find the grade-by-grade curriculum guides helpful. Parents can also find further information on the Board's Website, www.durham.edu.on.ca in the "Parents" menu.

If you have questions or if you would like to discuss the curriculum expectations, we encourage you to contact your child's teacher or the school principal. Together, we can work in cooperation to ensure student success.

Sincerely,

*Martyn Beckett
Director of Education*

The Importance of Literacy and Language

Language development is central to students' intellectual, social, and emotional growth, and must be seen as a key element of the curriculum. When students learn to use language in the elementary grades, they do more than master the basic skills. They learn to value the power of language and to use it responsibly. They learn to express feelings and opinions and, as they mature, to support their opinions with sound arguments and research. They become aware of the many purposes for which language is used and the diverse forms it can take to appropriately serve particular purposes and audiences.

They develop an awareness of how language is used in different formal and informal situations. In sum, they come to appreciate language both as an important medium for communicating ideas and information and as a source of enjoyment.

The expectations for Grades 1 to 3 focus on the foundational knowledge and skills that students need in order to establish a strong basis for language development. These include students' oral language, prior knowledge and experience, understanding of concepts about print, phonemic awareness, understanding of letter-sound relationships, vocabulary knowledge, semantic and syntactic awareness, higher order thinking skills, and capacity for metacognition.



Oral Communication: Grade 1

Overall Expectations

By the end of Grade 1, students will:

- ▶ listen in order to understand and respond appropriately in a variety of situations for a variety of purposes

Specific Expectations

By the end of Grade 1, students will:

Listen to Understand

Purpose

- identify purposes for listening in a few different situations, formal and informal

Active Listening Strategies

- demonstrate an understanding of appropriate listening behaviour by using active listening strategies in a few different situations

Comprehension Strategies

- identify a few listening comprehension strategies and use them before, during, and after listening in order to understand and clarify the meaning of oral texts, initially with support and direction

Demonstrating Understanding

- demonstrate an understanding of the information and ideas in oral texts by retelling the story or restating the information, including the main idea

Making Inferences/Interpreting Texts

- use stated and implied information and ideas in oral texts, initially with support and direction, to make simple inferences and reasonable predictions

Extending Understanding

- extend understanding of oral texts by connecting the ideas in them to their own knowledge and experience; to other familiar texts, including print and visual texts; and to the world around them

Analysing Texts

- identify words or phrases that indicate whether an oral text is fact or fiction, initially with support and direction

Point of View

- begin to identify, with support and direction, who is speaking in an oral text and the point of view expressed by the speaker

Presentation Strategies

- begin to identify some of the presentation strategies used in oral texts and explain how they influence the audience

Overall Expectations

By the end of Grade 1, students will:

- ▶ use speaking skills and strategies appropriately to communicate with different audiences for a variety of purposes

Specific Expectations

By the end of Grade 1, students will:

Speak to Communicate

Purpose

- identify a few purposes for speaking

Interactive Strategies

- demonstrate an understanding of appropriate speaking behaviour in a few different situations, including paired sharing and small - and large group discussions

Clarity and Coherence

- communicate ideas and information orally in a clear, coherent manner

Appropriate Language

- choose appropriate words to communicate their meaning accurately and engage the interest of their audience

Vocal Skills and Strategies

- begin to identify some vocal effects, including tone, pace, pitch, and volume, and use them appropriately to help communicate their meaning

Non-Verbal Cues

- identify some non-verbal cues, including facial expression, gestures, and eye contact, and use them in oral communications, appropriately and with sensitivity towards cultural differences, to help convey their meaning

Visual Aids

- use one or more appropriate visual aids

Overall Expectations

By the end of Grade 1, students will:

- ▶ reflect on and identify their strengths as listeners and speakers, areas for improvement, and the strategies they found most helpful in oral communication situations

Specific Expectations

By the end of Grade 1, students will:

Reflect on Oral Communication

Metacognition

- begin to identify, with support and direction, a few strategies they found helpful before, during, and after listening and speaking

Interconnected Skills

- begin to identify how their skills as viewers, representers, readers, and writers help them improve their oral

Overall Expectations

By the end of Grade 1, students will:

- ▶ read and demonstrate an understanding of a variety of literary, graphic, and informational texts, using a range of strategies to construct meaning

Specific Expectations

By the end of Grade 1, students will:

Read for Meaning

Variety of Texts

- read a few different types of literary texts

Purpose

- identify a few different purposes for reading and choose reading materials appropriate for those purposes

Comprehension Strategies

- identify a few reading comprehension strategies and use them before, during, and after reading to understand texts, initially with support and direction

Demonstrating Understanding

- demonstrate understanding of a text by retelling the story or restating information from the text, including the main idea

Making Inferences/Interpreting Texts

- use stated and implied information and ideas in texts, initially with support and direction, to make simple inferences and reasonable predictions about them

Extending Understanding

- extend understanding of texts by connecting the ideas in them to their own knowledge and experience, to other familiar texts, and to the world around them

Analysing Texts

- identify the main idea and a few elements of texts, initially with support and direction

Responding to and Evaluating Texts

- express personal thoughts and feelings about what has been read

Point of View

- begin to identify, with support and direction, the speaker and the point of view presented in a text and suggest a possible alternative perspective

Overall Expectations

By the end of Grade 1, students will:

- ▶ recognize a variety of text forms, text features, and stylistic elements and demonstrate understanding of how they help communicate meaning

Specific Expectations

By the end of Grade 1, students will:

Understand Form and Style

Text Forms

- identify and describe the characteristics of a few simple text forms, with a focus on literary texts such as a simple fictional story

Text Patterns

- recognize simple organizational patterns in texts of different types and explain, initially with support and direction, how the patterns help readers understand the texts

Text Features

- identify some text features

Elements of Style

- identify some simple elements of style, including voice and word choice, and explain, initially with support and direction, how they help readers understand texts

Overall Expectations

By the end of Grade 1, students will:

- ▶ use knowledge of words and cueing systems to read fluently

Specific Expectations

By the end of Grade 1, students will:

Read With Fluency

Analysing Texts

- identify the main idea and a few elements of texts, initially with support and direction

Reading Familiar Words

- automatically read and understand some high-frequency words and words of personal interest or significance, in a variety of reading contexts to the reader

Reading: Grade 1

Reading Unfamiliar Words

- predict the meaning of and solve unfamiliar words using different types of cues, including:
 - semantic (meaning) cues
 - syntactic (language structure) cues
 - graphophonic (phonological and graphic) cues

Reading Fluently

- read appropriate, familiar texts at a sufficient rate and with sufficient expression to convey the sense of the text to the reader

Overall Expectations

By the end of Grade 1, students will:

- ▶ reflect on and identify their strengths as readers, areas for improvement, and the strategies they found most helpful before, during, and after reading

Specific Expectations

By the end of Grade 1, students will:

Reflect on Reading Skills and Strategies

Metagognition

- begin to identify, with support and direction, a few strategies they found helpful before, during, and after reading

Interconnected Skills

- explain, initially with support and direction, how their skills in listening, speaking, writing, viewing, and representing help them make sense of what they read

Writing: Grade 1

Overall Expectations

By the end of Grade 1, students will:

- ▶ generate, gather, and organize ideas and information to write for an intended purpose and audience

Specific Expectations

By the end of Grade 1, students will:

Develop and Organize Content

Purpose and Audience

- identify the topic, purpose, audience, and form for writing, initially with support and direction

Developing Ideas

- generate ideas about a potential topic, using a variety of strategies and resources

Research

- gather information to support ideas for writing in a variety of ways and/or from a variety of sources

Classifying Ideas

- sort ideas and information for their writing in a variety of ways, with support and direction

Organizing Ideas

- identify and order main ideas and supporting details, initially with support and direction, using simple graphic organizers

Review

- determine, after consultation with the teacher and peers, whether the ideas and information they have gathered are suitable for the purpose

Overall Expectations

By the end of Grade 1, students will:

- ▶ draft and revise their writing, using a variety of informational, literary, and graphic forms and stylistic elements appropriate for the purpose and audience

Specific Expectations

By the end of Grade 1, students will:

Use Knowledge of Form and Style in Writing

Form

- write short texts using a few simple forms

Voice

- begin to establish a personal voice in their writing by using pictures and words that convey their attitude or feeling towards the subject or audience

Word Choice

- use familiar words and phrases to convey a clear meaning

Sentence Fluency

- write simple but complete sentences that make sense

Point of View

- begin to identify, with support and direction, their point of view and one possible different point of view about the topic

Preparing for Revision

- identify elements of their writing that need improvement, including content, organization, and style, using feedback from the teacher and peers

Revision

- make simple revisions to improve the content, clarity, and interest of their written work, using a few simple strategies

Producing Drafts

- produce revised draft pieces of writing to meet criteria identified by the teacher, based on the expectations

Overall Expectations

By the end of Grade 1, students will:

- ▶ use editing, proofreading, and publishing skills and strategies, and knowledge of language conventions, to correct errors, refine expression, and present their work effectively

Specific Expectations

By the end of Grade 1, students will:

Apply Knowledge of Language Convention and Present Written Work Effectively

Spelling Familiar Words

- spell some high-frequency words correctly

Spelling Unfamiliar Words

- spell unfamiliar words using a variety of strategies that involve understanding sound-symbol relationships, word structures, and word meanings

Vocabulary

- confirm spellings and word meanings or word choice using one or two resources

Punctuation

- use punctuation to help communicate their intended meaning, with a focus on the use of: a capital letter at the beginning of a sentence; a period, question mark, or exclamation mark at the end

Grammar

- use parts of speech appropriately to communicate their meaning clearly, with a focus on the use of: nouns for names of people, places, and things; the personal subject pronouns **I, you, he, she, it, we, they**; verbs to tell what they do and feel; some adjectives; and simple prepositions of place

Proofreading

- proofread and correct their writing using a simple checklist or a few guiding questions posted by the teacher for reference

Publishing

- use some appropriate elements of effective presentation in the finished product, such as print, different fonts, graphics, and layout

Producing Finished Works

- produce pieces of published work to meet criteria identified by the teacher, based on the expectations

Overall Expectations

By the end of Grade 1, students will:

- ▶ reflect on and identify their strengths as writers, areas for improvement, and the strategies they found most helpful at different stages in the writing process

Specific Expectations

By the end of Grade 1, students will:

Reflect on Writing Skills and Strategies

Metacognition

- identify some strategies they found helpful before, during, and after writing

Interconnected Skills

- describe, with prompting by the teacher, how some of their skills in listening, speaking, reading, viewing, and representing help in their development as writers

Portfolio

- select pieces of writing they think show their best work and explain the reasons for their selection

Media Literacy: Grade 1

Overall Expectations

By the end of Grade 1, students will:

- ▶ demonstrate an understanding of a variety of media texts

Specific Expectations

By the end of Grade 1, students will:

Understand Media Texts

Purpose and Audience

- identify the purpose and intended audience of some simple media texts

Making Inferences/Interpreting Messages

- identify overt and implied messages, initially with support and direction, in simple media texts

Responding to and Evaluating Texts

- express personal thoughts and feelings about some simple media works

Audience Responses

- describe how different audiences might respond to specific media texts

Point of View

- begin to identify, with support and direction, whose point of view is presented in a simple media text and suggest a possible alternative perspective

Production Perspectives

- identify, with support and direction, who makes some of the simple media texts with which they are familiar, and why those texts are produced

Overall Expectations

By the end of Grade 1, students will:

- ▶ identify some media forms and explain how the conventions and techniques associated with them are used to create meaning

Specific Expectations

By the end of Grade 1, students will:

Understand Media Forms, Conventions, and Techniques

Form

- identify some of the elements and characteristics of a few simple media forms

Conventions and Techniques

- identify, initially with support and direction, the conventions and techniques used in some familiar media forms

Overall Expectations

By the end of Grade 1, students will:

- ▶ create a variety of media texts for different purposes and audiences, using appropriate forms, conventions, and techniques

Specific Expectations

By the end of Grade 1, students will:

Create Media Texts

Purpose and Audience

- identify the topic, purpose, and audience for media texts they plan to create

Form

- identify an appropriate form to suit the purpose and audience for a media text they plan to create

Conventions and Techniques

- identify conventions and techniques appropriate to the form chosen for a media text they plan to create

Producing Media Texts

- produce some short media texts for specific purposes and audiences, using a few simple media forms and appropriate conventions and techniques

Overall Expectations

By the end of Grade 1, students will:

- ▶ reflect on and identify their strengths as media interpreters and creators, areas for improvement, and the strategies they found most helpful in understanding and creating media texts

Specific Expectations

By the end of Grade 1, students will:

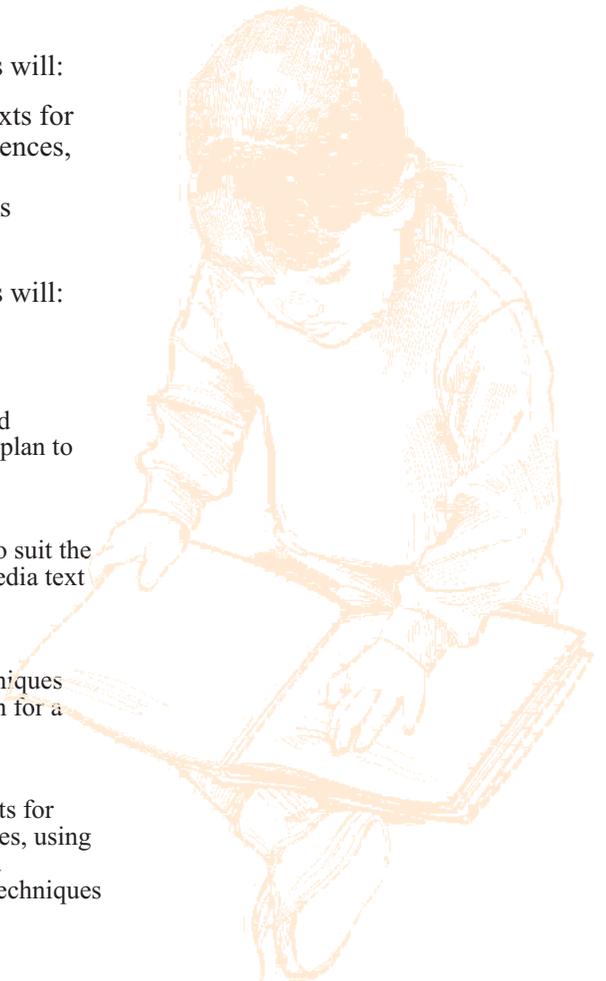
Reflect on Media Literacy Skills and Strategies

Metacognition

- identify, initially with support and direction, what strategies they found most helpful in making sense of and creating media texts

Interconnected Skills

- begin to explain, initially with support and direction, how their skills in listening, speaking, reading, and writing help them to make sense of and produce media texts



Achievement Chart - Language, - Grades 1-8

Categories	Level 1	Level 2	Level 3	Level 4
Knowledge and Understanding <i>Subject-specific content acquired in each grade (knowledge), and the comprehension of its meaning and significance (understanding)</i>				
The student:				
Knowledge of content <i>(e.g., forms of text; strategies associated with reading, writing, speaking, and listening; elements of style; terminology; conventions)</i>	→ demonstrates limited knowledge of content	→ demonstrates some knowledge of content	→ demonstrates considerable knowledge of content	→ demonstrates thorough knowledge of content
Understanding of content <i>(e.g., concepts, ideas, opinions; relationships among facts, ideas, concepts, themes)</i>	→ demonstrates limited understanding of content	→ demonstrates some understanding of content	→ demonstrates considerable understanding of content	→ demonstrates thorough understanding of content
Thinking <i>The use of critical and creative thinking skills and/or processes</i>				
The student:				
Use of planning skills <i>(e.g., generating ideas gathering information, focusing research, organizing information)</i>	→ uses planning skills with limited effectiveness	→ uses planning skills with some effectiveness	→ uses planning skills with considerable effectiveness	→ uses planning skills with a high degree of effectiveness
Use of processing skills <i>(e.g., making inferences, interpreting, analysing, detecting bias, synthesizing, evaluating, forming conclusions)</i>	→ uses processing skills with limited effectiveness	→ uses processing skills with some effectiveness	→ uses processing skills with considerable effectiveness	→ uses processing skills with a high degree of effectiveness
Use of critical/creative thinking processes <i>(e.g., reading process, writing process, oral discourse, research, critical/creative analysis, critical literacy, metacognition, invention)</i>	→ uses critical/creative thinking processes with limited effectiveness	→ uses critical/creative thinking processes with some effectiveness	→ uses critical/creative thinking processes with considerable effectiveness	→ uses critical/creative thinking processes with a high degree of effectiveness

Categories	Level 1	Level 2	Level 3	Level 4
Communication <i>The conveying of meaning through various forms</i>				
The student:				
Expression and organization of ideas and information (e.g., clear expression, logical organization) in oral, visual, and written forms including media forms	→ expresses and organizes ideas and information with limited effectiveness	→ expresses and organizes ideas and information with some effectiveness	→ expresses and organizes ideas and information with considerable effectiveness	→ expresses and organizes ideas and information with a high degree of effectiveness
Communication for different audiences and purposes (e.g., use of appropriate style, voice, point of view, tone) in oral, visual, and written forms including media forms	→ communicates for different audiences and purposes with limited effectiveness	→ communicates for different audiences and purposes with some effectiveness	→ communicates for different audiences and purposes with considerable effectiveness	→ communicates for different audiences and purposes with a high degree of effectiveness
Use of conventions (e.g., grammar, spelling, punctuation, usage) vocabulary, and terminology of the discipline in oral, visual, and written forms including media forms	→ uses conventions, vocabulary, and terminology of the discipline with limited effectiveness	→ uses conventions, vocabulary, and terminology of the discipline with some effectiveness	→ uses conventions, vocabulary, and terminology of the discipline with considerable effectiveness	→ uses conventions, vocabulary, and terminology of the discipline with a high degree of effectiveness
Application <i>The use of knowledge and skills to make connections within and between various contexts</i>				
The student:				
Application of knowledge and skills (e.g., concepts, strategies, processes) in familiar contexts	→ applies knowledge and skills in familiar contexts with limited effectiveness	→ applies knowledge and skills in familiar contexts with some effectiveness	→ applies knowledge and skills in familiar contexts with considerable effectiveness	→ applies knowledge and skills in familiar contexts with a high degree of effectiveness
Transfer of knowledge and skills (e.g., concepts, strategies, processes) to new contexts	→ transfers knowledge and skills to new contexts with limited effectiveness	→ transfers knowledge and skills to new contexts with some effectiveness	→ transfers knowledge and skills to new contexts with considerable effectiveness	→ transfers knowledge and skills to new contexts with a high degree of effectiveness
Making connections within and between various contexts (e.g., between the text and personal knowledge or experience, other texts, and the world outside the school; between disciplines)	→ makes connections within and between various contexts with limited effectiveness	→ makes connections within and between various contexts with some effectiveness	→ makes connections within and between various contexts with considerable effectiveness	→ makes connections within and between various contexts with a high degree of effectiveness

The Importance of Mathematics

Since mathematics is a key element of the curriculum, parents, students, and teachers need to understand why mathematics is important. When students learn mathematics, they do more than master basic skills; they acquire a concise and powerful means of analysis, problem solving, and communication.

Competence using mathematical language, structures, and operations within mathematical processes will help students to reason, justify their conclusions, and express ideas clearly. Students need to be able to use mathematics in connection with technology, their daily lives and eventually, in the workplace.

Mathematics is an essential learning tool. As students identify relationships between mathematical concepts and everyday situations, and make connections between mathematics and other subjects, they gain the ability to extend and apply their knowledge in other curriculum areas (such as science, music and language).”

Grade 1: Mathematical Process Expectations

The mathematical process expectations are to be integrated into student learning associated with all the strands.

Throughout Grade 1, students will:

Problem Solving

- ▶ apply developing problem-solving strategies as they pose and solve problems and conduct investigations, to help deepen their mathematical understanding;

Reasoning and Proving

- ▶ apply developing reasoning skills (e.g., pattern recognition, classification) to make and investigate conjectures (e.g., through discussion with others);

Reflecting

- ▶ demonstrate that they are reflecting on and monitoring their thinking to help clarify their understanding as they complete an investigation or solve a problem (e.g., by explaining others why they think their solution is correct);

Selecting Tools and Computational Strategies

- ▶ select and use a variety of concrete, visual, and electronic learning tools and appropriate computational strategies to investigate mathematical ideas and to solve problems;

Connecting

- ▶ make connections among simple mathematical concepts and procedures, and relate mathematical ideas to situations drawn from everyday contexts;

Representing

- ▶ create basic representations of simple mathematical ideas (e.g., using concrete materials; physical actions, such as hopping or clapping; pictures; numbers; diagrams; invented symbols), make connections among them, and apply them to solve problems;

Communication

- ▶ communicate mathematical thinking orally, visually, and in writing, using everyday language, a developing mathematical vocabulary, and a variety of representations.

Getting Involved

- ✓ Play the game “Concentration” using hand-made cards. For example, for number sense and numeration use cards such as these:



Number Sense and Numeration: Grade 1

Overall Expectations

By the end of Grade 1, students will:

- ▶ read, represent, compare, and order whole numbers to 50, and use concrete materials to investigate fractions and money amounts;
- ▶ demonstrate an understanding of magnitude by counting forward to 100 and backwards from 20;
- ▶ solve problems involving the addition and subtraction of single-digit whole numbers, using a variety of strategies.

Specific Expectations

By the end of Grade 1, students will:

Quantity Relationships

- represent, compare, and order whole numbers to 50, using a variety of tools (e.g., connecting cubes, ten frames, base ten materials, number lines, hundreds charts) and contexts (e.g., real-life experiences, number stories);
- read and print in words whole numbers to ten, using meaningful contexts (e.g., storybooks, posters);
- demonstrate, using concrete materials, the concept of conservation of number (e.g., 5 counters represent the number 5, regardless whether they are close together or far apart);
- relate numbers to the anchors of 5 and 10 (e.g., 7 is 2 more than 5 and 3 less than 10);
- identify and describe various coins (i.e., penny, nickel, dime, quarter, \$1 coin, \$2 coin), using coin manipulatives or drawings, and state their value (e.g., the value of a penny is one cent; the value of a toonie is two dollars);
- represent money amounts to 20¢, through investigation using coin manipulatives;
- estimate the number of objects in a set, and check by counting (e.g., “I guessed that there were 20 cubes in the pile. I counted them and there were only 17 cubes. 17 is close to 20.”);
- compose and decompose numbers up to 20 in a variety of ways, using concrete materials (e.g., 7 can be decomposed using connecting cubes into 6 and 1, or 5 and 2, or 4 and 3);
- divide whole objects into parts and identify and describe, through investigation, equal-sized parts of the whole, using fractional names (e.g., halves; fourths or quarters).

Counting

- demonstrate, using concrete materials, the concept of one-to-one correspondence between number and objects when counting;

- count forward by 1’s, 2’s, 5’s, and 10’s to 100, using a variety of tools and strategies (e.g., move with steps; skip count on a number line; place counters on a hundreds chart; connect cubes to show equal groups; count groups of pennies, nickels, or dimes);
 - count backwards by 1’s from 20 and any number less than 20 (e.g., count backwards from 18 to 11), with and without the use of concrete materials and number lines;
 - count backwards from 20 by 2’s and 5’s, using a variety of tools (e.g., number lines, hundreds charts);
 - use ordinal numbers to thirty-first in meaningful contexts (e.g., identify the days of the month on a calendar).
- ### Operational Sense
- solve a variety of problems involving the addition and subtraction of whole numbers to 20, using concrete materials and drawings (e.g., pictures, number lines) (**Sample problem:** Miguel has 12 cookies. Seven cookies are chocolate. Use counters to determine how many cookies are not chocolate.);
 - solve problems involving the addition and subtraction of single-digit whole numbers, using a variety of mental strategies (e.g., one more than, one less than, counting on, counting back, doubles);
 - add and subtract money amounts to 10¢, using coin manipulatives and drawings.
- ### Measurement Relationships
- construct, using a variety of strategies, tools for measuring lengths, heights, and distances in non-standard units (e.g., footprints on cash register tape or on connecting cubes);
 - estimate, measure (i.e., by minimizing overlaps and gaps), and describe area, through investigation using non-standard units (e.g., “It took about 15 index cards to cover my desk, with only a little bit of space left over.”);
 - estimate, measure, and describe the capacity and/or mass of an object, through investigation using non-standard units (e.g., “My journal has the same mass as 13 pencils.” “The juice can has the same capacity as 4 pop cans.”);
 - estimate, measure, and describe the passage of time, through investigation using non-standard units (e.g., number of sleeps; number of claps; number of flips of a sand timer);
 - read demonstration digital and analogue clocks, and use them to identify benchmark times (e.g., times for breakfast, lunch, dinner; the start and end of school; bedtime) and to tell and write time to the hour and half-hour in everyday settings;
 - name the months of the year in order, and read the date on a calendar;
 - relate temperature to experiences of the seasons (e.g., “In winter, we can skate because it’s cold enough for there to be ice.”).

Measurement: Grade 1

Overall Expectations

By the end of Grade 1, students will:

- ▶ estimate, measure, and describe length, area, mass, capacity, time, and temperature, using non-standard units of the same size;
- ▶ compare, describe, and order objects, using attributes measured in non-standard units.

Specific Expectations

By the end of Grade 1, students will:

Attributes, Units, and Measurement Sense

- demonstrate an understanding of the use of non-standard units of the same size
- (e.g., straws, index cards) for measuring (**Sample problem:** Measure the length of your desk in different ways; for example, by using several different non-standard units or by starting measurements from opposite ends of the desk. Discuss your findings.);
- estimate, measure (i.e., by placing non-standard units repeatedly, without overlaps or gaps), and record lengths, heights, and distances (e.g., a book is about 10 paper clips wide; a pencil is about 3 toothpicks long);
- compare two or three objects using measurable attributes (e.g., length, height, width, area, temperature, mass, capacity), and describe the objects using relative terms (e.g., *taller*, *heavier*, *faster*, *bigger*, *warmer*; “If I put an eraser, a pencil, and a metre stick beside each other, I can see that the eraser is shortest and the metre stick is longest.”);
- compare and order objects by their linear measurements, using the same non-standard unit (**Sample problem:** Using a length of string equal to the length of your forearm, work with a partner to find other objects that are about the same length.);
- use the metre as a benchmark for measuring length, and compare the metre with non-standard units (**Sample problem:** In the classroom, use a metre stick to find objects that are taller than one metre and objects that are shorter than one metre.);
- describe, through investigation using concrete materials, the relationship between the size of a unit and the number of units needed to measure length (**Sample problem:** Compare the numbers of paper clips and pencils needed to measure the length of the same table.)

Geometry & Spatial Sense: Grade 1

Overall Expectations

By the end of Grade 1, students will:

- ▶ identify common two-dimensional shapes and three-dimensional figures and sort and classify them by their attributes;*
- ▶ compose and decompose common two-dimensional shapes and three-dimensional figures;
- ▶ describe the relative locations of objects using positional language.

Specific Expectations

By the end of Grade 1, students will:

Geometric Properties

- identify and describe common two-dimensional shapes (e.g., circles, triangles, rectangles, squares) and sort and classify them by their attributes (e.g., colour; size; texture; number of sides), using concrete materials and pictorial representations (e.g., “I put all the triangles in one group. Some are long and skinny, and some are short and fat, but they all have three sides.”);
- trace and identify the two-dimensional faces of three-dimensional figures, using concrete models (e.g., “I can see squares on the cube.”);
- identify and describe common three-dimensional figures (e.g., cubes, cones, cylinders, spheres, rectangular prisms) and sort and classify them by their attributes (e.g., colour; size; texture; number and shape of faces), using concrete materials and pictorial representations (e.g., “I put the cones and the cylinders in the same group because they all have circles on them.”);
- describe similarities and differences between an everyday object and a three-dimensional figure (e.g., “A water bottle looks like a cylinder, except the bottle gets thinner at the top.”);
- locate shapes in the environment that have symmetry, and describe the symmetry.

Geometric Relationships

- compose patterns, pictures, and designs, using common two-dimensional shapes (**Sample problem:** Create a picture of a flower using pattern blocks.);

- identify and describe shapes within other shapes (e.g., shapes within a geometric design);
- build three-dimensional structures using concrete materials, and describe the two-dimensional shapes the structures contain;
- cover outline puzzles with two-dimensional shapes (e.g., pattern blocks, tangrams) (**Sample problem:** Fill in the outline of a boat with tangram pieces.).

Location and Movement

- describe the relative locations of objects or people using positional language (e.g., *over, under, above, below, in front of, behind, inside, outside, beside, between, along*);
- describe the relative locations of objects on concrete maps created in the classroom (**Sample problem:** Work with your group to create a map of the classroom in the sand table, using smaller objects to represent the classroom objects. Describe where the teacher’s desk and the bookshelves are located.);
- create symmetrical designs and pictures, using concrete materials (e.g., pattern blocks, connecting cubes, paper for folding), and describe the relative locations of the parts.

Patterning & Algebra: Grade 1

Overall Expectations

By the end of Grade 1, students will:

- ▶ identify, describe, extend, and create repeating patterns;
- ▶ demonstrate an understanding of the concept of equality, using concrete materials and addition and subtraction to 10.

Specific Expectations

By the end of Grade 1, students will:

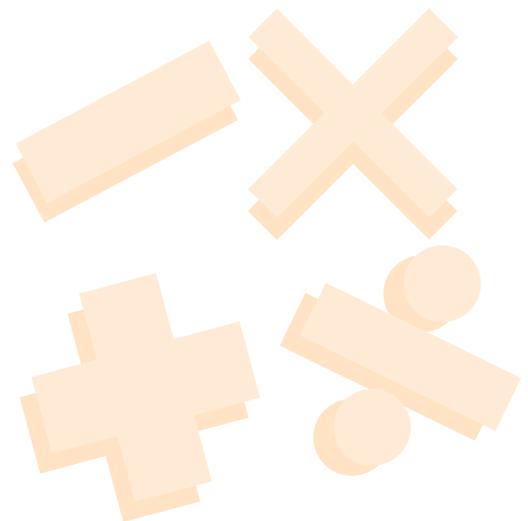
Patterns and Relationships

- identify, describe, and extend, through investigation, geometric repeating patterns involving one attribute (e.g., colour, size, shape, thickness, orientation);
- identify and extend, through investigation, numeric repeating patterns (e.g., 1, 2, 3, 1, 2, 3, 1, 2, 3, ...);
- describe numeric repeating patterns in a hundreds chart;
- identify a rule for a repeating pattern (e.g., “We’re lining up boy, girl, boy, girl, boy, girl.”);

- create a repeating pattern involving one attribute (e.g., colour, size, shape, sound) (**Sample problem:** Use beads to make a string that shows a repeating pattern involving one attribute.);
- represent a given repeating pattern in a variety of ways (e.g., pictures, actions, colours, sounds, numbers, letters) (**Sample problem:** Make an ABA, ABA, ABA pattern using actions like clapping or tapping.).

Expressions and Equality

- create a set in which the number of objects is greater than, less than, or equal to the number of objects in a given set;
- demonstrate examples of equality, through investigation, using a “balance” model (**Sample problem:** Demonstrate, using a pan balance, that a train of 7 attached cubes on one side balances a train of 3 cubes and a train of 4 cubes on the other side.);
- determine, through investigation using a “balance” model and whole numbers to 10, the number of identical objects that must be added or subtracted to establish equality (**Sample problem:** On a pan balance, 5 cubes are placed on the left side and 8 cubes are placed on the right side. How many cubes should you take off the right side so that both sides balance?).



* For the purposes of student learning in Grade 1, “attributes” refers to the various characteristics of two-dimensional shapes and three-dimensional figures, including geometric properties. Students learn to distinguish attributes that are geometric properties from attributes that are not geometric properties in Grade 2.

Data Management & Probability: Grade 1

Overall Expectations

By the end of Grade 1, students will:

- ▶ collect and organize categorical primary data and display the data using concrete graphs and pictographs, without regard to the order of labels on the horizontal axis;
- ▶ read and describe primary data presented in concrete graphs and pictographs;
- ▶ describe the likelihood that everyday events will happen.

Specific Expectations

By the end of Grade 1, students will:

Collection and Organization Data

- demonstrate an ability to organize objects into categories by sorting and classifying objects using one attribute (e.g., colour, size), and by describing informal sorting experiences (e.g., helping to put away groceries)
(Sample problem: Sort a collection of attribute blocks by colour. Re-sort the same collection by shape.);
- collect and organize primary data (e.g., data collected by the class) that is categorical (i.e., that can be organized into categories based on qualities such as colour or hobby), and display the data using one-to-one correspondence, prepared templates of concrete graphs and pictographs (with titles and labels), and a variety of recording methods (e.g., arranging objects, placing stickers, drawing pictures, making tally marks) *(Sample problem:* Collect and organize data about the favourite fruit that students in your class like to eat.).

Data Relationships

- read primary data presented in concrete graphs and pictographs, and describe the data using comparative language (e.g., more students chose summer than winter as their single favourite season);
- pose and answer questions about collected data *(Sample problem:* What was the most popular fruit chosen by the students in your class?).

Probability

- describe the likelihood that everyday events will occur, using mathematical language (i.e., *impossible, unlikely, less likely, more likely, certain*) (e.g., “It’s unlikely that I will win the contest shown on the cereal box.”).



Achievement Chart - Mathematics, Grades 1-8

Categories	Level 1	Level 2	Level 3	Level 4
Knowledge and Understanding <i>Subject-specific content acquired in each grade (knowledge), and the comprehension of its meaning and significance (understanding)</i>				
The student:				
Knowledge of content (e.g., facts, terms, procedural skills, use of tools)	→ demonstrates limited knowledge of content	→ demonstrates some knowledge of content	→ demonstrates considerable knowledge of content	→ demonstrates thorough knowledge of content
Understanding of mathematical concepts	→ demonstrates limited understanding of concepts	→ demonstrates some understanding of concepts	→ demonstrates considerable understanding of concepts	→ demonstrates thorough understanding of concepts
Thinking <i>The use of critical and creative thinking skills and/or processes*</i>				
The student:				
Use of planning skills ▶ understanding the problem (e.g., formulating and interpreting the problem, making conjectures) ▶ making a plan for solving the problem	→ uses planning skills with limited effectiveness	→ uses planning skills with some effectiveness	→ uses planning skills with considerable effectiveness	→ uses planning skills with a high degree of effectiveness
Use of processing skills* ▶ carrying out a plan (e.g., collecting data, questioning, testing, revising, modelling, solving, inferring, forming conclusions) ▶ looking back at the solution (e.g., evaluating reasonableness, making convincing arguments, reasoning, justifying, proving, reflecting)	→ uses processing skills with limited effectiveness	→ uses processing skills with some effectiveness	→ uses processing skills with considerable effectiveness	→ uses processing skills with a high degree of effectiveness
Use of critical/creative thinking processes* (e.g., problem solving, inquiry)	→ uses of critical/creative thinking process with limited effectiveness	→ uses of critical/creative thinking process with some effectiveness	→ uses of critical/creative thinking process with considerable effectiveness	→ uses of critical/creative thinking process with a high degree of effectiveness

* The processing skills and critical/creative thinking processes in the Thinking category include some but not all aspects of the *mathematical processes* described in the Ministry document. Some aspects of the mathematical processes relate to the other categories of the achievement chart.

Categories**Level 1****Level 2****Level 3****Level 4****Communication** *The conveying of meaning through various forms***The student:**

Expression and organization of ideas and mathematical thinking (e.g., clarity of expression, logical organization), using oral, visual, and written forms (e.g., pictorial, graphic, dynamic, numeric, algebraic forms; concrete materials)

→ expresses and organizes mathematical thinking with limited effectiveness

→ expresses and organizes mathematical thinking with some effectiveness

→ expresses and organizes mathematical thinking with considerable effectiveness

→ expresses and organizes mathematical thinking with a high degree of effectiveness

Communication for different audiences (e.g., peers, teachers) and purposes (e.g., to present data, justify a solution, express a mathematical argument) in oral, visual, and written forms

→ communicates for different audiences and purposes with limited effectiveness

→ communicates for different audiences and purposes with some effectiveness

→ communicates for different audiences and purposes with considerable effectiveness

→ communicates for different audiences and purposes with a high degree of effectiveness

Use of conventions, vocabulary, and terminology of the discipline (e.g., terms, symbols) in oral, visual, and written forms

→ uses conventions, vocabulary, and terminology of the discipline with limited effectiveness

→ uses conventions, vocabulary, and terminology of the discipline with some effectiveness

→ uses conventions, vocabulary, and terminology of the discipline with considerable effectiveness

→ uses conventions, vocabulary, and terminology of the discipline with a high degree of effectiveness

Application *The use of knowledge and skills to make connections within and between various contexts***The student:**

Application of knowledge and skills in familiar contexts

→ applies knowledge and skills in familiar contexts with limited effectiveness

→ applies knowledge and skills in familiar contexts with some effectiveness

→ applies knowledge and skills in familiar contexts with considerable effectiveness

→ applies knowledge and skills in familiar contexts with a high degree of effectiveness

Transfer of knowledge and skills to new contexts

→ transfers knowledge and skills to new contexts with limited effectiveness

→ transfers knowledge and skills to new contexts with some effectiveness

→ transfers knowledge and skills to new contexts with considerable effectiveness

→ transfers knowledge and skills to new contexts with a high degree of effectiveness

Making connections within and between various contexts (e.g., connections between concepts, representations, and forms within mathematics; connections involving use of prior knowledge and experience; connections between mathematics, other disciplines, and the real world)

→ makes connections within and between various contexts with limited effectiveness

→ makes connections within and between various contexts with some effectiveness

→ makes connections within and between various contexts with considerable effectiveness

→ makes connections within and between various contexts with a high degree of effectiveness

The Goals of the Science and Technology Program

A scientifically and technologically literate person is one who can read and understand common media reports about science and technology, critically evaluate the information presented, and confidently engage in discussions and decision-making activities that involve science and technology.

Science Co-ordinators' and Consultants' Association of Ontario (SCCAO) and Science Teachers' Association of Ontario (STAO/APSO), "Position Paper: The Nature of Science" (2006), p. 1

During the twentieth century, science and technology played an increasingly important role in the lives of all Canadians. Science and technology underpin much of what we take for granted, including clean water, the places in which we live and work, and the ways in which we communicate with others. The impact of science and technology on our lives will continue to grow. Consequently, scientific and technological literacy for all has become the overarching objective of science and technology education throughout the world.

Achievement of both excellence and equity underlies the three major goals of the science and technology program at the elementary level. Accordingly, *The Ontario Curriculum, Grades 1–8: Science and Technology, 2007* outlines the skills and knowledge that students will develop, as well as the attitudes that they need to develop in order to use their knowledge and skills responsibly. The three goals are the following:

1. to relate science and technology to society and the environment
2. to develop the skills, strategies, and habits of mind required for scientific inquiry and technological problem solving
3. to understand the basic concepts of science and technology

Fundamental Concepts

Fundamental concepts are key ideas that provide a framework for the acquisition of all scientific and technological knowledge. They also help students to integrate scientific and technological knowledge with knowledge in other subject areas, such as mathematics and social studies.

These fundamental concepts are described in the following chart.

Fundamental Concepts	
Matter	Matter is anything that has mass and occupies space. Matter has particular structural and behavioural characteristics.
Energy	Energy comes in many forms, and can change forms. It is required to make things happen (to do work). Work is done when a force causes movement.
Systems and Interactions	A system is a collection of living and/or non-living things and processes that interact to perform some function. A system includes inputs, out-puts, and relationships among system components. Natural and human systems develop in response to, and are limited by, a variety of environmental factors.
Structure and Function	This concept focuses on the interrelationship between the function or use of a natural or human-made object and the form that the object takes.
Sustainability and Stewardship	Sustainability is the concept of meeting the needs of the present without compromising the ability of future generations to meet their needs. Stewardship involves understanding that we need to use and care for the natural environment in a responsible way and making the effort to pass on to future generations no less than what we have access to ourselves. Values that are central to responsible stewardship are: using non-renewable resources with care; reusing and recycling what we can; switching to renewable resources where possible.
Change and Continuity	Change is the process of becoming different over time, and can be quantified. Continuity represents consistency and connectedness within and among systems over time. Interactions within and among systems result in change and variations in consistency.

Understanding Life Systems

Needs and Characteristics of Living Things

Fundamental Concepts	Big Ideas
Sustainability and Stewardship	<p>Living things grow, take in food to create energy, make waste, and reproduce. (Overall expectations 2 and 3)</p> <p>Plants and animals, including people, are living things. (Overall expectations 2 and 3)</p> <p>Living things have basic needs (air, water, food, and shelter) that are met from the environment. (Overall expectations 1, 2, and 3)</p> <p>Different kinds of living things behave in different ways. (Overall expectations 2 and 3)</p> <p>All living things are important and should be treated with care and respect. (Overall expectations 1, 2, and 3)</p>

Understanding Life Systems - Needs and Characteristics of Living Things: Grade 1

Overall Expectations

By the end of Grade 1, students will:

1. assess the role of humans in maintaining a healthy environment;
2. investigate needs and characteristics of plants and animals, including humans;
3. demonstrate an understanding of the basic needs and characteristics of plants and animals, including humans.

Specific Expectations

By the end of Grade 1, students will:

Relating Science and Technology to Society and the Environment

1.1 identify personal action that they themselves can take to help maintain a healthy environment for living things, including humans (e.g., walk to school instead of being driven in the car; be careful what they put down the drain at

home; practise cleanliness to reduce the spread of germs when helping in the kitchen; show care and concern for all living things)

1.2 describe changes or problems that could result from the loss of some kinds of living things that are part of everyday life (e.g., if we lost all the cows, all the insects, all the bats, all the trees, all the grasses), taking different points of view into consideration (e.g., the point of view of farmers, children, parents)

Specific Expectations

By the end of Grade 1, students will:

Developing Investigation and Communication Skills

2.1 follow established safety procedures and humane practices during science and technology investigations (e.g., show care and concern when handling animals)

2.2 investigate and compare the basic needs of humans and other living things, including the need for air, water, food, warmth, and space, using a variety of methods and resources (e.g., prior knowledge, personal experience, discussion, books, videos/DVDs, CD-ROMs)

2.3 investigate and compare the physical characteristics of a variety of plants and animals, including humans (e.g., some plants produce flowers and some do not; most plants have roots; some animals have two legs, while others have four; all animals have sense organs)

2.4 investigate the physical characteristics of plants (e.g., basic parts, size, shape, colour) and explain how they help the plant meet its basic needs (e.g., roots anchor the plant and help provide the plant with food and water; some plants have brightly coloured flowers to attract bees), using a variety of methods and resources (e.g., direct observation of live plants in the classroom and in the school yard, prior knowledge, personal experience, diagrams and/or charts)

2.5 investigate characteristics of parts of the human body, including the five sense organs, and explain how those characteristics help humans meet their needs and explore the world around them (e.g., our hands have fingers and a thumb that are flexible to allow us to pick up food; our legs have the two biggest bones in our bodies, to carry us around to do the things we need to do; our tongue has bumps that help us to determine if our food is too hot, too cold, or tastes bad; our ears are shaped like cones to catch sounds that warn us that

danger is near and to hear the beautiful sounds of nature), using a variety of methods and resources (e.g., observation of themselves and other animals, outdoor experiences, prior knowledge, personal experience, diagrams and/or charts)

2.6 use appropriate science and technology vocabulary, including investigation, explore, needs, space, and food, in oral and written communication

2.7 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes (e.g., create a diorama to illustrate the basic needs of plants and animals, including humans)

Specific Expectations

By the end of Grade 1, students will:

Understanding Basic Concepts

3.1 identify environment as the area in which something or someone exists or lives

3.2 identify the physical characteristics (e.g., size, shape, colour, common parts) of

a variety of plants and animals (e.g., sunflowers are tall, with a long stalk, leaves, and big, round, yellow flowers with hundreds of seeds; dogs can be big or small, come in many shapes and colours, have four legs, and usually have a tail and are covered with fur)

3.3 identify the location and function of major parts of the human body, including sense organs (e.g., lungs are in my chest and are used for breathing; teeth are in my mouth and are used for eating; hair is on my head for protection from the cold; ears are on the sides of my head and are used for hearing)

3.4 describe the characteristics of a healthy environment, including clean air and water and nutritious food, and explain why it is important for all living things to have a healthy environment

3.5 describe how showing care and respect for all living things helps to maintain a healthy environment (e.g., leaving all living things in their natural environment; feeding birds during cold winter months; helping to plant and care for plants in the gardens that

attract birds and butterflies; caring for the school and the school-yard as an environment)

3.6 identify what living things provide for other living things (e.g., trees produce the oxygen that other living things breathe; plants such as tomatoes and apple trees and animals such as cows and fish provide food for humans and for other animals; a tree stump provides a home for a chipmunk; porcupines chew off the tips of hemlock limbs, providing food for deer in winter)

3.7 describe how the things plants and animals use to meet their needs are changed by their use and are returned to the environment in different forms (e.g., the food animals eat and the water they drink are returned to the earth as scat and urine)

Understanding Structures and Mechanisms Materials, Objects, and Everyday Structures

Fundamental Concepts	Big Ideas
<p>Structure and Function</p> <p>Matter</p>	<p>Objects have observable characteristics and are made from materials. <i>(Overall expectation 3)</i></p> <p>Materials have specific properties. <i>(Overall expectations 2 and 3)</i></p> <p>An object is held together by its structure. <i>(Overall expectation 2)</i></p> <p>The materials and structure of an object determine its purpose. <i>(Overall expectations 1 and 3)</i></p> <p>Humans make choices related to their use of objects and materials that have a direct effect on the environment. <i>(Overall expectation 1)</i></p>

Understanding Structures and Mechanisms - Materials, Objects, and Everyday Structures: Grade 1

Overall Expectations

By the end of Grade 1, students will:

1. assess the impact on people and the environment of objects and structures and the materials used in them;
2. investigate structures that are built for a specific purpose to see how their design and materials suit the purpose;
3. demonstrate an understanding that objects and structures have observable characteristics and are made from materials with specific properties that determine how they are used.

Specific Expectations

By the end of Grade 1, students will:

Relating Science and Technology to Society and the Environment

- 1.1 identify the kinds of waste produced in the classroom, and plan and carry out a classroom course of action for minimizing waste, explaining why each action is important
- 1.2 assess objects in their environment that are constructed for similar purposes (e.g., chairs at home and at school; different kinds of shoes; different kinds of floor coverings) in terms of the type of materials they are made from, the source of these materials, and what happens to these objects when they are worn out or no longer needed

Specific Expectations

By the end of Grade 1, students will:

Developing Investigation and Communication Skills

- 2.1 follow established safety procedures during science and technology investigations (e.g., wear safety goggles when using saws and hammers)
- 2.2 investigate characteristics of various objects and structures, using their senses

2.3 investigate, through experimentation, the properties of various materials (e.g., the best materials for absorbing or repelling water, for flexibility, for strength: the flexibility of plastic makes plastic wrap useful for covering food in order to keep it fresh; the impermeability of rubber enables rubber boots to keep feet dry)

2.4 use technological problem-solving skills and knowledge acquired from previous investigations, to design, build, and test a structure for a specific purpose (e.g., a tent, a model of a swing set or other playground equipment, a bird feeder, a wigwam for people who need to move throughout the year)

2.5 use appropriate science and technology vocabulary, including experiment, explore, purpose, rigid, flexible, solid, and smooth, in oral and written communication

2.6 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes (e.g., orally explain their choices of materials and design decisions when presenting their structures)

Specific Expectations

By the end of Grade 1, students will:

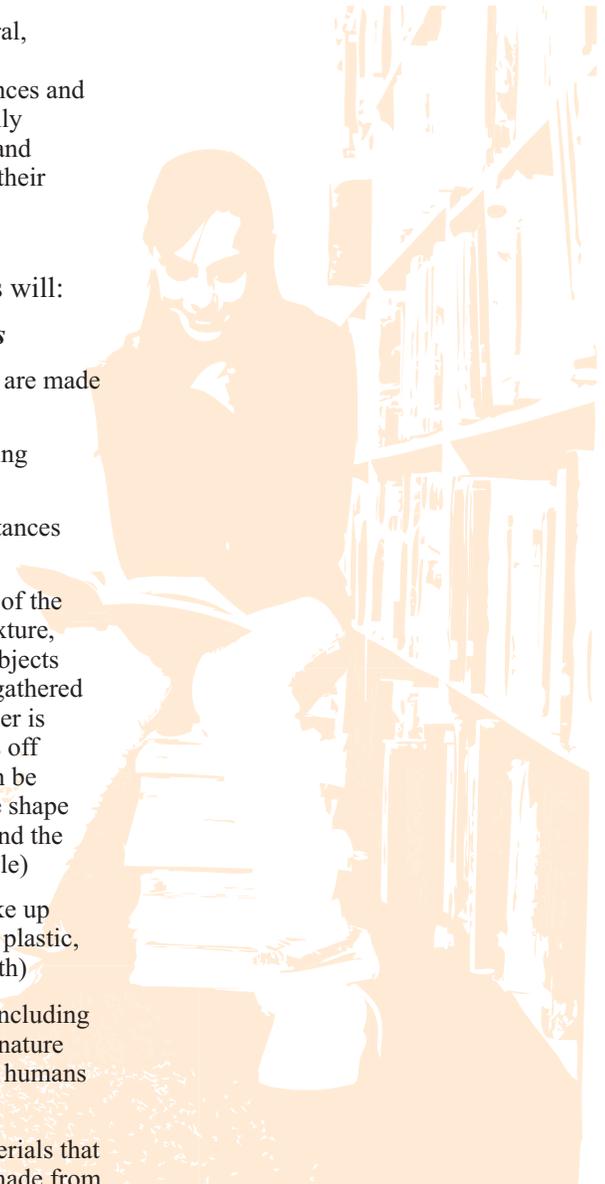
Understanding Basic Concepts

- 3.1 describe objects as things that are made of one or more materials
- 3.2 describe structures as supporting frameworks
- 3.3 describe materials as the substances from which something is made
- 3.4 describe the function/purpose of the observable characteristics (e.g., texture, height, shape, colour) of various objects and structures, using information gathered through their senses (e.g., sandpaper is rough to help take the rough edges off wood; a traffic light is tall so it can be easily seen; a stop sign is the same shape and colour in many countries around the world to make it easily recognizable)
- 3.5 identify the materials that make up objects and structures (e.g., wood, plastic, steel, paper, polystyrene foam, cloth)
- 3.6 distinguish between objects (including structures) and materials found in nature (e.g., tree: sap) and those made by humans (e.g., toy: plastic)
- 3.7 describe the properties of materials that enable the objects and structures made from

them to perform their intended function

3.8 list different kinds of fasteners (e.g., tape, glue, button, zipper), and describe the uses of each

3.9 identify the sources in nature of some common materials that are used in making structures (e.g., paper and rubber come from trees; plastic comes from petroleum; steel comes from metals and minerals in the ground)



Understanding Matter and Energy

Energy in our Lives

Fundamental Concepts	Big Ideas
Energy Sustainability and Stewardship	Everything that happens is a result of using some form of energy. <i>(Overall expectations 1,2,and 3)</i> The sun is the principal source of energy for the earth. <i>(Overall expectation 3)</i> Humans need to be responsible for the way in which we use energy. <i>(Overall expectations 1 and 2)</i>

Understanding Matter and Energy - Energy and our Lives: Grade 1

Overall Expectations

By the end of Grade 1, students will:

1. assess uses of energy at home, at school, and in the community, and suggest ways to use less energy;
2. investigate how different types of energy are used in daily life;
3. demonstrate an understanding that energy is something that is needed to make things happen, and that the sun is the principal source of energy for the earth.

Specific Expectations

By the end of Grade 1, students will:

Relating Science and Technology to Society and the Environment

1.1 describe their own and their family's uses of energy (e.g., to operate lights, video games, cars, computers); identify ways in which these uses are efficient or wasteful, taking different points of view into consideration (e.g., the point of view of a parent, a sibling, a member of their extended family); suggest ways to reduce personal energy consumption; and explain why it is important for people to make these choices.

1.2 describe how the everyday lives of different people and other living things would be affected if electrical energy were no longer available (e.g., families, farmers, businesses and stores, a company that offers alternative energy sources such as solar-powered devices, the plants in a hydroponic greenhouse, the tropical animals in a Canadian zoo)

Specific Expectations

By the end of Grade 1, students will:

Developing Investigation and Communication Skills

2.1 follow established safety procedures during science and technology investigations (e.g., keep work spaces neat and tidy by putting all tools, materials, and equipment back where they belong)

2.2 investigate how the sun affects the air, land, and/or water, using a variety of methods (e.g., standing outside on a sunny and a cloudy day and noting the differences; putting a dish of water in the sun and the shade and observing what happens) and resources (e.g., books, videos/DVDs, CD-ROMs, the Internet)

2.3 design and construct a device that uses energy to perform a task (e.g., a kite that flies using the wind; a musical instrument that uses human energy to make sounds)

2.4 investigate and compare seasonal differences in the ways we use energy and the types of energy we use (e.g., we keep warm in winter by wearing a sweater and using furnaces and wood stoves; we stay cool in summer by sitting in the shade or going to places that are air conditioned; we adjust the amount of light we need by opening or closing the curtains and turning lights on or off)

2.5 use scientific inquiry/experimentation skills, and knowledge acquired from previous investigations, to explore the effects of light and heat from the sun (e.g., by growing plants in the presence and absence of sunlight; by feeling the temperature of dark papers that have been in the sun and in the shade; by covering a portion of a piece of coloured paper and exposing the paper to the sun)

2.6 investigate how the sun's energy allows humans to meet their basic needs, including

the need for food (e.g., trace the flow of energy from the sun, which provides energy to plants, which make food for animals to eat, and then from plants and animals, which provide food for humans to eat)

2.7 use appropriate science and technology vocabulary, including explore, investigate, design, energy, and survival, in oral and written communication

2.8 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes (e.g., use labelled diagrams to show what happened when plants were grown in varying light conditions)

Specific Expectations

By the end of Grade 1, students will:

Understanding Basic Concepts

3.1 demonstrate an understanding that energy is what makes the things they do or see happen

3.2 demonstrate an understanding that the sun, as the earth's principal source of energy, warms the air, land, and water; is a source of light for the earth; and makes it possible to grow food

3.3 identify food as a source of energy for themselves and other living things

3.4 identify everyday uses of various sources of energy (e.g., food to help animals, including humans, survive and move; natural gas to heat homes and schools; petroleum to power cars and buses; electricity to power lights; batteries to power toys)

3.5 demonstrate an understanding that humans get the energy resources they need from the world around them (e.g., the wood, oil, and gas to heat our homes and cook our food) and that the supply of many of these resources is limited so care needs to be taken in how we use them

Understanding Earth and Space Systems

Daily and Seasonal Changes

Fundamental Concepts	Big Ideas
Change and Continuity	<p>Changes occur in daily and seasonal cycles. (Overall expectations 1, 2, and 3)</p> <p>Changes in daily and seasonal cycles affect living things. (Overall expectations 1 and 3)</p>

Understanding Earth and Space Systems - Daily and Seasonal Changes: Grade 1

Overall Expectations

By the end of Grade 1, students will:

1. assess the impact of daily and seasonal changes on living things, including humans;
2. investigate daily and seasonal changes;
3. demonstrate an understanding of what daily and seasonal changes are and of how these changes affect living things.

Specific Expectations

By the end of Grade 1, students will:

Relating Science and Technology to Society and the Environment

1.1 assess the impact of daily and seasonal changes on human outdoor activities (e.g., farming, gardening, swimming, skating, soccer) and identify innovations that allow for some of these activities to take place indoors out of season (e.g., greenhouses allow farming and gardening to happen in cold weather; arenas can make ice in all seasons for skating and hockey; community centres can provide warm places in all seasons for swimming)

1.2 assess ways in which daily and seasonal changes have an impact on society and the environment (e.g., In winter, some people suffer from seasonal disorders because there is less light from the sun than in summer. When the weather gets cold, people turn on heat in their homes; when the weather gets hotter they turn on fans, air conditioners, and pool heaters and pumps, all of which means that more energy is

being used. At night in winter, when people get home from work and school, they all turn on appliances at around the same time [peak hours], which puts a strain on the power supplies. In summer, people increase their use of water to wash their cars and water their lawns and gardens; unless there is plenty of rain, this usage of water puts a strain on water supplies. In winter, it is harder for birds that do not migrate and animals that do not hibernate to find food and water. Some plants die when summer is over; others undergo changes, such as losing their leaves and going dormant until spring. The Anishinaabe people tell their stories only in the winter when there is snow on the ground.)

Specific Expectations

By the end of Grade 1, students will:

Developing Investigation and Communication Skills

2.1 follow established safety procedures during science and technology investigations (e.g., never look directly at the sun; wear a hat and sunscreen when working outdoors)

2.2 investigate the changes in the amount of light from the sun that occur throughout the day and year (e.g., compare the amount of light observed at bedtime during summer vacation with the amount observed at bedtime during winter vacation)

2.3 investigate the changes in the amount of heat from the sun that occur throughout the day and in the various seasons (e.g., use their prior experience of the sun's warmth, and measure, record, and compare outdoor temperatures at different times of day and in different months of the year)

2.4 use scientific inquiry/research skills, including generating questions and knowledge acquired from previous investigations, to identify daily and/or seasonal changes and their effects (e.g., the

sun shines during the day, and the moon and stars are visible at night; leaves change colour in the fall; there are fewer birds in winter; dogs' fur gets thicker in winter; trees and flowers bloom in spring)

2.5 use appropriate science and technology vocabulary, including investigate, temperature, hibernate, dormant, energy, and survival, in oral and written communication

2.6 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes (e.g., contribute to a class book about their observations of seasonal changes; keep a weekly pictorial journal in which they record and describe the weather through the seasons)

Specific Expectations

By the end of Grade 1, students will:

Understanding Basic Concepts

3.1 identify the sun as Earth's principal source of heat and light

3.2 define a cycle as a circular sequence of events

3.3 describe changes in the amount of heat and light from the sun that occur throughout the day and the seasons

3.4 describe and compare the four seasons (e.g., in terms of amount of daylight, type of precipitation, temperature)

3.5 describe changes in the appearance or behaviour of living things that are adaptations to seasonal changes (e.g., in fall, some plants shed their leaves and some birds migrate; in winter some animals change colour)

3.6 describe how humans prepare for and/or respond to daily and seasonal changes (e.g., by wearing appropriate clothing, carrying an umbrella, turning on an air conditioner or heater)

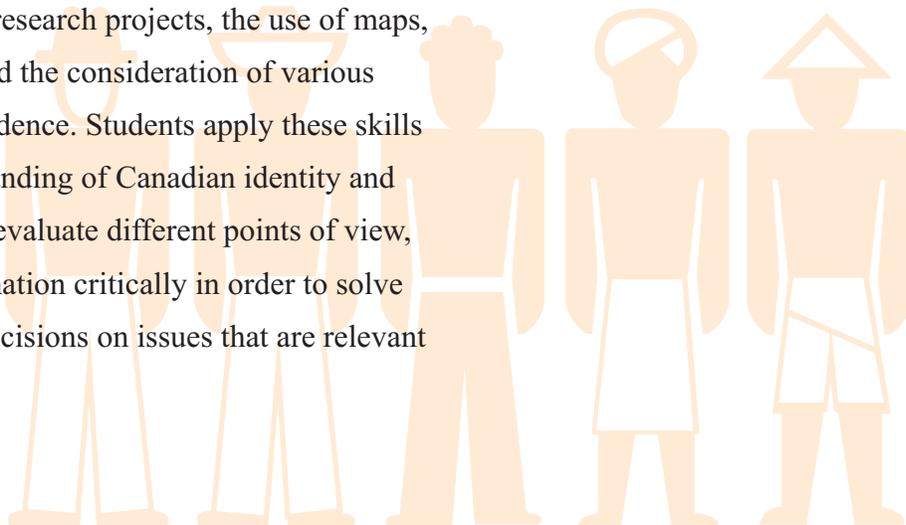
Achievement Chart - Science and Technology, - Grades 1-8

Categories	Level 1	Level 2	Level 3	Level 4
Knowledge and Understanding <i>Subject-specific content acquired in each grade (knowledge), and the comprehension of its meaning and significance (understanding)</i>				
The student:				
Knowledge of content <i>(e.g., facts; terminology; definitions; safe use of tools, equipment, and materials)</i>	→ demonstrates limited knowledge of content	→ demonstrates some knowledge of content	→ demonstrates considerable knowledge of content	→ demonstrates thorough knowledge of content
Understanding of content <i>(e.g., concepts, ideas, theories, principles, procedures, processes)</i>	→ demonstrates limited understanding of content	→ demonstrates some understanding of content	→ demonstrates considerable understanding of content	→ demonstrates thorough understanding of content
Thinking and Investigation - <i>The use of critical and creative thinking skills and inquiry and problem solving skills and/or processes</i>				
The student:				
Use of initiating and planning skills and strategies <i>(e.g., formulating questions, identifying the problem, developing hypotheses, scheduling, selecting strategies and resources, developing plans)</i>	→ uses initiating and planning skills and strategies with limited effectiveness	→ uses initiating and planning skills and strategies with some effectiveness	→ uses initiating and planning skills and strategies with considerable effectiveness	→ uses initiating and planning skills and strategies with a high degree of effectiveness
Use of processing skills and strategies <i>(e.g., performing and recording, gathering evidence and data, observing, manipulating materials and using equipment safely, solving equations, proving)</i>	→ uses processing skills and strategies with limited effectiveness	→ uses processing skills and strategies with some effectiveness	→ uses processing skills and strategies with considerable effectiveness	→ uses processing skills and strategies with a high degree of effectiveness
Use of critical/creative thinking processes, skills, and strategies <i>(e.g., analysing interpreting, problem solving, evaluating, forming and justifying conclusions on the basis of evidence)</i>	→ uses critical/creative thinking processes, skills, and strategies with limited effectiveness	→ uses critical/creative thinking processes, skills, and strategies with some effectiveness	→ uses critical/creative thinking processes, skills, and strategies with considerable effectiveness	→ uses critical/creative thinking processes, skills, and strategies with a high degree of effectiveness
Communication <i>The conveying of meaning through various forms</i>				
The student:				
Expression and organization of ideas and information <i>(e.g., clear expression, logical organization) in oral, visual, and/or written forms</i> <i>(e.g., diagrams, models)</i>	→ expresses and organizes ideas and information with limited effectiveness	→ expresses and organizes ideas and information with some effectiveness	→ expresses and organizes ideas and information with considerable effectiveness	→ expresses and organizes ideas and information with a high degree of effectiveness

Categories	Level 1	Level 2	Level 3	Level 4
Communication (continued)				
The student:				
Communication for different audiences (e.g., peers, adults) and purposes (e.g., to inform, to persuade) in oral, visual, and/or written forms	→ communicates for different audiences and purposes with limited effectiveness	→ communicates for different audiences and purposes with some effectiveness	→ communicates for different audiences and purposes with considerable effectiveness	→ communicates for different audiences and purposes with a high degree of effectiveness
Use of conventions, vocabulary, and terminology of the discipline in oral, visual, and/or written forms (e.g., symbols, formulae, scientific notation, SI units)	→ uses conventions, vocabulary, and terminology of the discipline with limited effectiveness	→ uses conventions, vocabulary, and terminology of the discipline with some effectiveness	→ uses conventions, vocabulary, and terminology of the discipline with considerable effectiveness	→ uses conventions, vocabulary, and terminology of the discipline with a high degree of effectiveness
Application <i>The use of knowledge and skills to make connections within and between various contexts</i>				
The student:				
Application of knowledge and skills (e.g., concepts and processes, safe use of equipment and technology, investigation skills) in familiar contexts	→ applies knowledge and skills in familiar contexts with limited effectiveness	→ applies knowledge and skills in familiar contexts with some effectiveness	→ applies knowledge and skills in familiar contexts with considerable effectiveness	→ applies knowledge and skills in familiar contexts with a high degree of effectiveness
Transfer of knowledge and skills (e.g., concepts and processes, safe use of equipment and technology, investigation skills) to unfamiliar contexts	→ transfers knowledge and skills to unfamiliar contexts with limited effectiveness	→ transfers knowledge and skills to unfamiliar contexts with some effectiveness	→ transfers knowledge and skills to unfamiliar contexts with considerable effectiveness	→ transfers knowledge and skills to unfamiliar contexts with a high degree of effectiveness
Making connections between science, technology, society, and the environment (e.g., assessing the impact of science and technology on people, other living things, and the environment)	→ makes connections between science, technology, society, and the environment with limited effectiveness	→ makes connections between science, technology, society, and the environment with some effectiveness	→ makes connections between science, technology, society, and the environment with considerable effectiveness	→ makes connections between science, technology, society, and the environment with a high degree of effectiveness
Proposing courses of practical action to deal with problems relating to science, technology, society, and the environment	→ proposes courses of practical action of limited effectiveness	→ proposes courses of practical action of some effectiveness	→ proposes courses of practical action of considerable effectiveness	→ proposes highly effective courses of practical action

The Importance of Social Studies

Students, their parents, friends, teachers and all citizens are part of a variety of communities from local to global in scale. Social studies courses allow students to discover and appreciate the various heritages and nature of citizenship within these communities. Through the year students gain a knowledge of key social studies concepts, including change, culture, environment, power and basic economic forces within the marketplace. They learn about Canada and the role of citizens in a democratic society and its connections around the globe. This social studies course also helps students acquire skills of inquiry and communication through field studies, research projects, the use of maps, globes and models, and the consideration of various forms of historical evidence. Students apply these skills to develop an understanding of Canadian identity and democratic values, to evaluate different points of view, and to examine information critically in order to solve problems and make decisions on issues that are relevant to their lives.



Getting Involved

- ✓ Encourage your child to ask questions about the world.
- ✓ Stimulate your child's interest in current events and issues.
- ✓ Become familiar with the course expectations to better discuss your child's work.
- ✓ Communicate regularly with your child's teacher.
- ✓ Encourage your child to participate in activities that develop responsible citizenship.

Heritage & Citizenship: Relationships, Rules & Responsibilities: Grade 1

Overview:

Students identify the relationships, rules, and responsibilities in their home, school, and community in order to understand the basis of citizenship. They draw conclusions about why rules and responsibilities are important in the relationships of their daily lives. Students also explain how and why relationships, rules, and responsibilities may change over time, and in different places.

Overall Expectations

By the end of Grade 1, students will:

- ▶ identify people with whom they have significant relationships, and the rules and responsibilities associated with people, places, and events in their lives and communities;
- ▶ use a variety of resources and tools to gather, process, and communicate information about the rules people follow in daily life and the responsibilities of family members and other people in their school and community;
- ▶ explain how and why relationships, rules and responsibilities may change over time, and in different places.



Canada & World Connections - The Local Community: Grade 1

Overview:

Students investigate the physical features and community facilities in their local area. Using basic techniques of inquiry and mapping, they investigate how people live and interact within their community. As they learn more about these interactions, students begin to recognize the role that community plays in meeting human needs.

Overall Expectations

By the end of Grade 1, students will:

- ▶ recognize that communities consist of various physical features and community facilities that meet human needs;
- ▶ use a variety of resources and tools to gather, process, and communicate information about the distinguishing physical features and community facilities in their area;
- ▶ describe how people in the community interact with each other and the physical environment to meet human needs.

Achievement Chart for Social Studies, History, and Geography - Grades 1-8

Categories	Level 1	Level 2	Level 3	Level 4
Knowledge and Understanding <i>Subject-specific content acquired in each grade (knowledge), and the comprehension of its meaning and significance (understanding)</i>				
The student:				
Knowledge of content (e.g., facts, terms, definitions)	→ demonstrates limited knowledge of content	→ demonstrates some knowledge of content	→ demonstrates considerable knowledge of content	→ demonstrates thorough knowledge of content
Understanding of content (e.g., Concepts, ideas, theories, procedures, processes, methodologies, and/or technologies)	→ demonstrates limited understanding of content	→ demonstrates some understanding of content	→ demonstrates considerable understanding of content	→ demonstrates thorough understanding of content
Thinking <i>The use of critical and creative thinking skills and/or processes</i>				
The student:				
Use of planning skills (e.g., Focusing research, gathering information, organizing an inquiry, asking questions, setting goals)	→ uses planning skills with limited effectiveness	→ uses planning skills with some effectiveness	→ uses planning skills with considerable effectiveness	→ uses planning skills with a high degree of effectiveness
Use of processing skills (e.g., analyzing, generating, integrating, synthesizing, evaluating, detecting point of view and bias)	→ uses processing skills with limited effectiveness	→ uses processing skill with some effectiveness	→ uses processing skills with considerable effectiveness	→ uses processing skills with a high degree of effectiveness
Use of critical/creative thinking processes (e.g., Inquiry process, problem-solving process, decision-making process, research process)	→ uses critical/creative thinking processes with limited effectiveness	→ uses critical/creative thinking processes with some effectiveness	→ uses critical/creative thinking processes with considerable effectiveness	→ uses critical/creative thinking processes with a high degree of effectiveness
Communication <i>The conveying of meaning through various forms</i>				
The student:				
Expression and organization of ideas and information (e.g., clear expression, logical organization) in oral, visual, and written forms	→ expresses and organizes ideas and information with limited effectiveness	→ expresses and organizes ideas and information with some effectiveness	→ expresses and organizes ideas and information with considerable effectiveness	→ expresses and organizes ideas and information with a high degree of effectiveness

Categories	Level 1	Level 2	Level 3	Level 4
Communication <i>The conveying of meaning through various forms</i>				
The student:				
Communication for different audiences (e.g., peers, adults) and purposes (e.g., to inform, to persuade) in oral, visual, and written forms	→ communicates for different audiences and purposes with limited effectiveness	→ communicates for different audiences and purposes with some effectiveness	→ communicates for different audiences and purposes with considerable effectiveness	→ communicates for different audiences and purposes with a high degree of effectiveness
Use of conventions (e.g., conventions of form, map conventions), vocabulary, and terminology of the discipline in oral, visual, and written forms	→ uses conventions, vocabulary, and terminology of the discipline with limited effectiveness	→ uses conventions, vocabulary, and terminology of the discipline with some effectiveness	→ uses conventions, vocabulary, and terminology of the discipline with considerable effectiveness	→ uses conventions, vocabulary, and terminology of the discipline with a high degree of effectiveness
Application <i>The use of knowledge and skills to make connections within and between various contexts</i>				
The student:				
Application of knowledge and skills (e.g., Concepts, procedures, processes, and/or technologies) in familiar contexts	→ applies knowledge and skills in familiar contexts with limited effectiveness	→ applies knowledge and skills in familiar contexts with some effectiveness	→ applies knowledge and skills in familiar contexts with considerable effectiveness	→ applies knowledge and skills in familiar contexts with a high degree of effectiveness
Transfer of knowledge and skills (e.g., concepts, procedures, methodologies, technologies) to new contexts	→ transfers knowledge and skills to new contexts with limited effectiveness	→ transfers knowledge and skills to new contexts with some effectiveness	→ transfers knowledge and skills to new contexts with considerable effectiveness	→ transfers knowledge and skills to new contexts with a high degree of effectiveness
Making connections within and between various contexts (e.g., Past, present, and future; environment; social; cultural; spatial; personal; multidisciplinary)	→ makes connections within and between various contexts with limited effectiveness	→ makes connections within and between various contexts with some effectiveness	→ makes connections within and between various contexts with considerable effectiveness	→ makes connections within and between various contexts with a high degree of effectiveness

The Importance of Health & Physical Education in the Curriculum

The health and physical education curriculum helps students develop an understanding of what they need in order to make a commitment to lifelong healthy, active living and develop the capacity to live satisfying, productive lives. Healthy, active living benefits both individuals and society in many ways – for example, by increasing productivity and readiness for learning, improving morale, decreasing absenteeism, reducing health-care costs, decreasing anti-social behaviour such as bullying and violence, promoting safe and healthy relationships, and heightening personal satisfaction. Research has shown a connection between increased levels of physical activity and better academic achievement, better concentration, better classroom behaviour, and more focused learning. Other benefits include improvements in psychological well-being, physical capacity, self-concept, and the ability to cope with stress. The expectations that make up this curriculum also provide the opportunity for students to develop social skills and emotional well-being. This practical, balanced approach will help students move successfully through elementary and secondary school and beyond. In health and physical education, students will learn the skills needed to be successful in life as active, socially responsible citizens.

Living Skills: Grade 1

Overall Expectations:

By the end of Grade 1, students will:

- ▶ demonstrate personal and interpersonal skills and the use of critical and creative thinking processes as they acquire knowledge and skills in connection with the expectations in the Active Living, Movement Competence, and Healthy Living strands for this grade.

Specific Expectations:

By the end of Grade 1, students will:

Personal Skills:

- ▶ use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living
- ▶ use adaptive, management, and coping skills to help them respond to the various challenges they encounter as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living

Interpersonal Skills:

- ▶ communicate effectively, using verbal or non-verbal means, as appropriate, and interpret information accurately as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living
- ▶ apply relationship and social skills as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living to help them interact positively with others, build healthy relationships, and become effective group or team members

Critical and Creative Thinking:

- ▶ use a range of critical and creative thinking skills and processes to assist them in making connections, planning and setting goals, analysing and solving problems, making decisions, and evaluating their choices in connection with learning in health and physical education

Active Living: Grade 1

Overall Expectations:

By the end of Grade 1, students will:

- ▶ participate actively and regularly in a wide variety of physical activities and identify how regular physical activity can be incorporated into their daily lives;
- ▶ demonstrate an understanding of the importance of being physically active and apply physical fitness concepts and practices that contribute to healthy, active living;
- ▶ demonstrate responsibility for their own safety and the safety of others as they participate in physical activities.

Specific Expectations:

By the end of Grade 1, students will:

- ▶ actively participate in a wide variety of program activities, according to their capabilities, while applying behaviours that enhance their readiness and ability to take part
- ▶ demonstrate an understanding of factors that contribute to their personal enjoyment of being active as they participate in a wide variety of individual and small-group activities
- ▶ identify a variety of ways to be physically active at school and at home

Physical Fitness:

- ▶ Daily physical activity (DPA): participate in sustained moderate to vigorous physical activity, with appropriate warm-up and cool-down activities, to the best of their ability for a minimum of twenty minutes each day
- ▶ demonstrate an understanding of how being active helps them to be healthy
- ▶ identify the physical signs of exertion during a variety of physical activities

Safety:

- ▶ demonstrate behaviours and apply procedures that maximize their safety and that of others during physical activity
- ▶ identify environmental factors that pose safety risks during their participation in physical activity, and describe ways of preparing themselves to enjoy outdoor activities safely

Movement Competence: Skills, Concepts, and Strategies: Grade 1

Overall Expectations:

By the end of Grade 1, students will:

- ▶ perform movement skills, demonstrating awareness of the basic requirements of the skills and applying movement concepts as appropriate, as they engage in a variety of physical activities;
- ▶ apply movement strategies appropriately, demonstrating an understanding of the components of a variety of physical activities, in order to enhance their ability to participate successfully in those activities.

Specific Expectations:

By the end of Grade 1, students will:

- ▶ perform a variety of static balances, using different body parts at different levels
- ▶ demonstrate the ability to move and stop safely and in control, with an awareness of people and equipment around them
- ▶ perform a variety of locomotor movements, travelling in different directions and using different body parts
- ▶ send objects of different shapes and sizes at different levels and in different ways, using different body parts
- ▶ receive objects of different shapes and sizes at different levels and in different ways, using different body parts

Movement Strategies:

- ▶ demonstrate an understanding that different physical activities have different components, and apply this understanding as they participate in and explore a variety of individual and small-group activities
- ▶ apply a variety of simple tactics to increase their chances of success while participating in and exploring physical activities

Healthy Living: Grade 1

Overall Expectations:

By the end of Grade 1, students will:

- ▶ demonstrate an understanding of factors that contribute to healthy development;
- ▶ demonstrate the ability to apply health knowledge and living skills to make reasoned decisions and take appropriate actions relating to their personal health and well-being;
- ▶ demonstrate the ability to make connections that relate to health and well-being – how their choices and behaviours affect both themselves and others, and how factors in the world around them affect their own and others' health and well-being.

Specific Expectations:

By the end of Grade 1, students will:

Understanding Health Concepts:

Healthy Eating

- ▶ explain why people need food to have healthy bodies

Personal Safety and Injury Prevention

- ▶ demonstrate an understanding of essential knowledge and practices for ensuring their personal safety

Making Healthy Choices:

Healthy Eating

- ▶ describe how the food groups in Canada's Food Guide (i.e., vegetables and fruit, grain products, milk and alternatives, meat and alternatives) can be used to make healthy food choices
- ▶ know and recognize cues to hunger, thirst, and the feeling of fullness, and explain how they can use these cues to develop healthy eating habits

Personal Safety and Injury Prevention

- ▶ demonstrate the ability to recognize caring behaviours and exploitive behaviours and describe the feelings associated with each
- ▶ apply their knowledge of essential safety practices to take an active role in their own safety at school

Making Connections for Healthy Living:

By the end of Grade 1, students will:

Personal Safety and Injury Prevention

- ▶ demonstrate an understanding of how to stay safe and avoid injuries to themselves and others in a variety of situations, using knowledge about potential risks at home, in the community, and outdoors

Substance Use, Addictions, and Related Behaviours

- ▶ identify habits and behaviours (e.g., excessive screen time or video game usage, smoking) that can be detrimental to health, and explain how people can be encouraged to adopt healthier alternatives



Achievement Chart for Health and Physical Education - Grades 1-8

Categories	Level 1	Level 2	Level 3	Level 4
Knowledge and Understanding <i>Subject-specific content acquired in each grade (knowledge), and the comprehension of its meaning and significance (understanding)</i>				
The student:				
Knowledge of content (e.g., facts, definitions, skills, principles and strategies, safe practices and procedures)	→ demonstrates limited knowledge of content	→ demonstrates some knowledge of content	→ demonstrates considerable knowledge of content	→ demonstrates thorough knowledge of content
Understanding of content (e.g., processes, techniques, ideas, relationships between concepts)	→ demonstrates limited understanding of content	→ demonstrates some understanding of content	→ demonstrates considerable understanding of content	→ demonstrates thorough understanding of content
Thinking <i>The use of critical and creative thinking skills and/or processes</i>				
The student:				
Use of planning skills (e.g., identifying the problem, formulating questions and ideas, gathering and organizing information; developing fitness plans; selecting strategies)	→ uses planning skills with limited effectiveness	→ uses planning skills with some effectiveness	→ uses planning skills with considerable effectiveness	→ uses planning skills with a high degree of effectiveness
Use of processing skills (e.g., synthesizing information, evaluating risk and determining appropriate safety measures, revising fitness goals, detecting bias)	→ uses processing skills with limited effectiveness	→ uses processing skills with some effectiveness	→ uses processing skills with considerable effectiveness	→ uses processing skills with a high degree of effectiveness
Use of critical/creative thinking processes (e.g., goal setting, decision making, problem solving; analysing movement skills, strategizing, reflecting on learning and determining steps for improvement, critiquing)	→ uses critical/creative thinking processes with limited effectiveness	→ uses critical/creative thinking processes with some effectiveness	→ uses critical/creative thinking processes with considerable effectiveness	→ uses critical/creative thinking processes with a high degree of effectiveness
Communication <i>The conveying of meaning through various forms</i>				
The student:				
Expression and organization of ideas and information in oral, visual, and/or written forms (e.g., demonstrations, role plays, conferences, presentations, posters, pamphlets, journals)	→ expresses and organizes ideas and information with limited effectiveness	→ expresses and organizes ideas and information with some effectiveness	→ expresses and organizes ideas and information with considerable effectiveness	→ expresses and organizes ideas and information with a high degree of effectiveness
Communication for different audiences (e.g., peers, teammates, adults) and purposes (e.g., to inform, instruct, promote) and in oral, visual, and/or written forms	→ communicates for different audiences and purposes with limited effectiveness	→ communicates for different audiences and purposes with some effectiveness	→ communicates for different audiences and purposes with considerable effectiveness	→ communicates for different audiences and purposes with a high degree of effectiveness

Categories	Level 1	Level 2	Level 3	Level 4
Communication <i>The conveying of meaning through various forms</i>				
The student:				
Use of health and physical education conventions, vocabulary, and terminology (e.g., using and interpreting signals and body language; using correct terminology to discuss parts of the body, health-related components of fitness, phases of movement [preparation, execution, follow-through]) in oral, visual and/or written forms	→ uses conventions, vocabulary, and terminology with limited effectiveness	→ uses conventions, vocabulary, and terminology with some effectiveness	→ uses conventions, vocabulary, and terminology with considerable effectiveness	→ uses conventions, vocabulary, and terminology with a high degree of effectiveness
Application <i>The use of knowledge and skills to make connections within and between various contexts</i>				
The student:				
Application of knowledge and skills (e.g., movement skills, concepts, principles, strategies; training principles; health concepts; safe practices; personal and interpersonal skills, including teamwork, fair play, etiquette, leadership) in familiar contexts (e.g., physical activities, healthy living discussions)	→ applies knowledge and skills in familiar contexts with limited effectiveness	→ applies knowledge and skills in familiar contexts with some effectiveness	→ applies knowledge and skills in familiar contexts with considerable effectiveness	→ applies knowledge and skills in familiar contexts with a high degree of effectiveness
Transfer of knowledge and skills to new contexts (e.g., transfer of movement skills, strategies, and tactics from a familiar physical activity to a new activity, transfer of planning skills to contexts such as fitness, healthy eating, healthy sexuality)	→ applies knowledge and skills in familiar contexts with a high degree of effectiveness	→ transfers knowledge and skills to new contexts with some effectiveness	→ transfers knowledge and skills to new contexts with considerable effectiveness	→ transfers knowledge and skills to new contexts with a high degree of effectiveness
Making connections within and between various contexts (e.g., between active participation, learning in the health and physical education program, and healthy, active living; between health and physical education, other subjects, and personal experiences in and beyond school)	→ makes connections within and between various contexts with limited effectiveness	→ makes connections within and between various contexts with some effectiveness	→ makes connections within and between various contexts with considerable effectiveness	→ makes connections within and between various contexts with a high degree of effectiveness

Physical Literacy

Individuals who are physically literate move with competence in a wide variety of physical activities that benefit the development of the whole person.

Health Literacy

Health literacy involves the skills needed to get, understand and use information to make good decisions for health. The Canadian Public Health Association’s Expert Panel on Health Literacy defines it as the ability to access, understand, evaluate and communicate information as a way to promote, maintain and improve health in a variety of settings across the life-course.



Health and Physical Education: Strands, Subgroups, and Living Skills

Living Skills

Personal Skills

- Self-awareness and self-monitoring skills
- Adaptive, management, and coping skills

Interpersonal Skills

- Communication skills
- Relationship and social skills

Critical and Creative Thinking

- Planning
- Processing
- Drawing conclusions/presenting results
- Reflecting/evaluating

Active Living

Active Participation

- Regular participation, variety, lifelong activity
- Enjoyment, motivation

Physical Fitness

- Fitness development through daily physical activity, personal fitness plans

Safety

- Personal safety and safety of others during physical activity

Movement Competence: Skills, Concepts, Strategies

Movement Skills and Concepts

- Movement skills – stability, locomotion, manipulation
- Movement concepts – body awareness, effort, spatial awareness, relationships
- Movement principles

Movement Strategies

- Components of physical activities
- Strategies and tactics in all physical activities

Healthy Living

Understanding Health Concepts

- Understanding the factors that contribute to healthy growth and development

Making Healthy Choices

- Applying health knowledge, making decisions about personal health and well-being

Making Connections for Healthy Living

- Making connections to link personal health and well-being to others and the world around them

Expectations in the Healthy Living strand focus on the following four health topics. Positive behaviours in relation to each topic area contribute to overall mental health and emotional well-being.

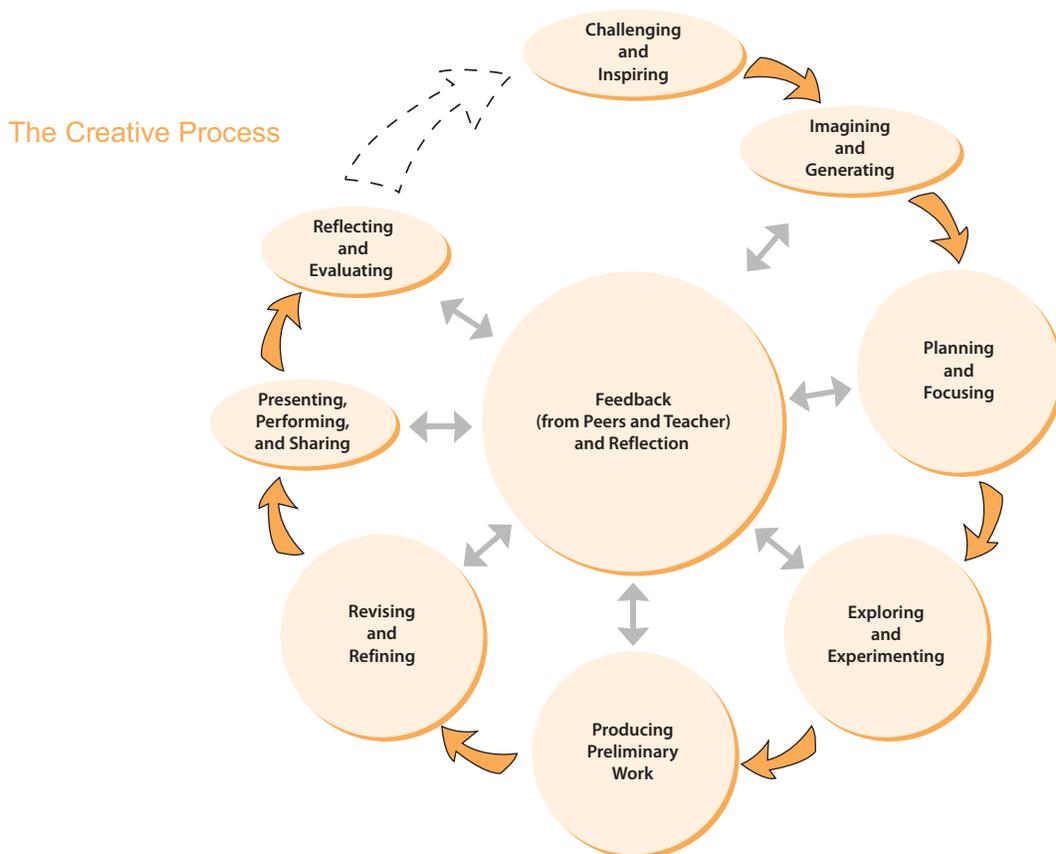
- Healthy Eating
- Personal Safety and Injury Prevention
- Substance Use, Addictions, and Related Behaviours
- Human Development and Sexual Health

Mental Health and Emotional Well-being

The Importance of the Arts

Education in the arts is essential to students' intellectual, social, physical, and emotional growth and well-being. Experiences in the arts – in dance, drama, music, and visual arts – play a valuable role in helping students to achieve their potential as learners and to participate fully in their community and in society as a whole. The arts provide a natural vehicle through which students can explore and express themselves and through which they can discover and interpret the world around them. Participation in the arts contributes in important ways to students' lives and learning – it involves intense engagement, development of motivation and confidence, and the use of creative and

dynamic ways of thinking and knowing. It is well documented that the intellectual and emotional development of children is enhanced through study of the arts. Through the study of dance, drama, music, and visual arts, students develop the ability to think creatively and critically. The arts nourish and stimulate the imagination, and provide students with an expanded range of tools, techniques, and skills to help them gain insights into the world around them and to represent their understandings in various ways. Study of the arts also provides opportunities for differentiation of both instruction and learning environments.



Achievement Chart - The Arts, Grades 1–8

Categories	Level 1	Level 2	Level 3	Level 4
Knowledge and Understanding <i>Subject-specific content acquired in each grade (knowledge), and the comprehension of its meaning and significance (understanding)</i>				
The student:				
Knowledge of content <i>(e.g., facts, genres, terms, definitions, techniques, elements, principles, forms, structures, conventions)</i>	→ demonstrates limited knowledge of content	→ demonstrates some knowledge of content	→ demonstrates considerable knowledge of content	→ demonstrates thorough knowledge of content
Understanding of content <i>(e.g., concepts, ideas, procedures, processes, themes, relationships among elements, informed opinions)</i>	→ demonstrates limited understanding of content	→ demonstrates some understanding of content	→ demonstrates considerable understanding of content	→ demonstrates thorough understanding of content
Thinking <i>The use of critical and creative thinking skills and/or processes</i>				
The student:				
Use of planning skills <i>(e.g., formulating questions, generating ideas, gathering information, focusing research, outlining, organizing an arts presentation or project, brainstorming/ bodystorming, blocking, sketching, using visual organizers, listing goals in a rehearsal log, inventing notation)</i>	→ uses planning skills with limited effectiveness	→ uses planning skills with some effectiveness	→ uses planning skills with considerable effectiveness	→ uses planning skills with a high degree of effectiveness
Use of processing skills <i>(e.g., analysing, evaluating, inferring, interpreting, editing, revising, refining, forming conclusions, detecting bias, synthesizing)</i>	→ uses processing skills with limited effectiveness	→ uses processing skills with some effectiveness	→ uses processing skills with considerable effectiveness	→ uses processing skills with a high degree of effectiveness
Use of critical/creative thinking processes <i>(e.g., creative and analytical processes, design process, exploration of the elements, problem solving, reflection, elaboration, oral discourse, evaluation, critical literacy, metacognition, invention, critiquing, reviewing)</i>	→ uses critical/creative thinking processes with limited effectiveness	→ uses critical/creative thinking processes with some effectiveness	→ uses critical/creative thinking processes with considerable effectiveness	→ uses critical/creative thinking processes with a high degree of effectiveness

Categories

Level 1

Level 2

Level 3

Level 4

Communication *The conveying of meaning through various forms*

The student:

Expression and organization of ideas and understandings in art forms (*dance, drama, music, and the visual arts*), including media/multimedia forms (*e.g., expression of ideas and feelings using visuals, movements, the voice, gestures, phrasing, techniques*), and **in oral and written forms** (*e.g., clear expression and logical organization in critical responses to art works and informed opinion pieces*)

- expresses and organizes ideas and understandings with limited effectiveness

- expresses and organizes ideas and understandings with some effectiveness

- expresses and organizes ideas and understandings with considerable effectiveness

- expresses and organizes ideas and understandings with a high degree of effectiveness

Communication for different audiences (*e.g., peers, adults, younger children*) and **purposes through the arts** (*e.g., drama presentations, visual arts exhibitions, dance and music performances*) and **in oral and written forms** (*e.g., debates, analyses*)

- communicates for different audiences and purposes with limited effectiveness

- communicates for different audiences and purposes with some effectiveness

- communicates for different audiences and purposes with considerable effectiveness

- communicates for different audiences and purposes with a high degree of effectiveness

Use of conventions in dance, drama, music, and the visual arts (*e.g., allegory, narrative or symbolic representation, style, articulation, drama conventions, choreographic forms, movement vocabulary*) and **arts vocabulary and terminology in oral and written forms**

- uses conventions, vocabulary, and terminology of the arts with limited effectiveness

- uses conventions, vocabulary, and terminology of the arts with some effectiveness

- uses conventions, vocabulary, and terminology of the arts with considerable effectiveness

- uses conventions, vocabulary, and terminology of the arts with a high degree of effectiveness

Application *The use of knowledge and skills to make connections within and between various contexts*

The student:

Application of knowledge and skills (*e.g., performance skills, composition, choreography, elements, principles, processes, technologies, techniques, strategies, conventions*) **in familiar contexts** (*e.g., guided improvisation, performance of a familiar work, use of familiar forms*)

- applies knowledge and skills in familiar contexts with limited effectiveness

- applies knowledge and skills in familiar contexts with some effectiveness

- applies knowledge and skills in familiar contexts with considerable effectiveness

- applies knowledge and skills in familiar contexts with a high degree of effectiveness

Transfer of knowledge and skills (*e.g., concepts, strategies, processes, techniques*) **to new contexts** (*e.g., a work requiring stylistic variation, an original composition, student-led choreography, an interdisciplinary or multidisciplinary project*)

- transfers knowledge and skills to new contexts with limited effectiveness

- transfers knowledge and skills to new contexts with some effectiveness

- transfers knowledge and skills to new contexts with considerable effectiveness

- transfers knowledge and skills to new contexts with a high degree of effectiveness

Making connections within and between various contexts (*e.g., between the arts; between the arts and personal experiences and the world outside the school; between cultural and historical, global, social, and/or environmental contexts; between the arts and other subjects*)

- makes connections within and between various contexts with limited effectiveness

- makes connections within and between various contexts with some effectiveness

- makes connections within and between various contexts with considerable effectiveness

- makes connections within and between various contexts with a high degree of effectiveness

Dance: Grade 1

Overall Expectations

By the end of Grade 1, students will:

- ▶ **Creating and Presenting:** apply the creative process to the composition of simple dance phrases, using the elements of dance to communicate feelings and ideas;
- ▶ **Reflecting, Responding, and Analysing:** apply the critical analysis process to communicate their feelings, ideas, and understandings in response to a variety of dance pieces and experiences;
- ▶ **Exploring Forms and Cultural Contexts:** demonstrate an understanding of a variety of dance forms and styles from the past and present, and their social and/or community contexts.

Dance: Fundamental Concepts for Grade 1

Students in Grade 1 will develop understanding of the following concepts through participation in various dance experiences (e.g., connecting and altering familiar movements), with particular emphasis on body and space.

ELEMENTS OF DANCE

- **body:** body awareness (e.g., awareness of where one is in space in relation to objects in class, awareness of position), use of body zones (e.g., whole body [versus various body parts], upper body only, lower body only), use of body parts (e.g., arms, legs, head), body shapes (e.g., big, small, angular, twisted, curved, straight, closed), locomotor movements (e.g., galloping, skipping, rolling), non-locomotor movements (e.g., arm movements such as swimming/waving, hopping on one foot, jumping on two feet, kicking, bending knees, melting to the ground, stretching, growing, spinning, folding, bowing), body bases (e.g., feet as body base, hands and knees as body base)
- **space:** levels (e.g., low to high by reaching; high to low by falling, crouching), directions (e.g., forwards, backwards, sideways), general and personal
- **time:** tempo (e.g., fast/slow, movement versus freeze), rhythm (e.g., even, uneven)
- **energy:** quality (e.g., melting, twitching, slumping, percussive, sustained [as in a held stretch])
- **relationship:** with a partner (e.g., slow-motion mirroring)

Drama: Grade 1

Overall Expectations

By the end of Grade 1, students will:

- ▶ **Creating and Presenting:** apply the creative process to dramatic play and process drama, using the elements and conventions of drama to communicate feelings, ideas, and stories;
- ▶ **Reflecting, Responding, and Analysing:** apply the critical analysis process to communicate feelings, ideas, and understandings in response to a variety of drama works and experiences;
- ▶ **Exploring Forms and Cultural Contexts:** demonstrate an understanding of a variety of drama and theatre forms and styles from the past and present, and their social and/or community contexts.

Drama: Fundamental Concepts for Grade 1

Students in Grade 1 will develop an understanding of the following concepts through participation in various drama experiences.

ELEMENTS OF DRAMA

• **role/character:** adopting the attitude, voice, or emotional state of a fictional character

• **relationship:** listening and responding in role to other characters in role

• **time and place:** pretending to be in the established setting of the drama

• **tension:** being aware of a sense of mystery or of a problem to be solved

• **focus and emphasis:** being aware of the main idea or issue in the drama

Music: Grade 1

Overall Expectations

By the end of Grade 1, students will:

► **Creating and Performing:** apply the creative process to create and perform music for a variety of purposes, using the elements and techniques of music;

► **Reflecting, Responding, and Analysing:** apply the critical analysis process to communicate their feelings, ideas, and understandings in response to a variety of music and musical experiences;

► **Exploring Forms and Cultural Contexts:** demonstrate an understanding of a variety of musical genres and styles from the past and present, and their social and/or community contexts.

Music: Fundamental Concepts for Grade 1

Students will be introduced to the elements of music and related musical concepts that are appropriate for Grade 1. They will develop understanding of these concepts through participation in various musical experiences (e.g., listening, singing, moving, playing musical instruments). These experiences will include reading simple rhythmic or stick notation while listening to the sounds it represents, interpreting simple visual prompts (e.g., solfège hand signs*), and representing elements with manipulatives (e.g., Popsicle sticks, math cubes).

ELEMENTS OF MUSIC

• **duration:** fast and slow *tempi*; rhythm versus beat; two and four beats per bar (and metres); quarter note (oral prompt: “ta”), eighth note(s) (oral prompt: “ti-ti”), quarter rest; simple rhythmic ostinato (e.g., “ta, ta, ti-ti, ta”)

• **pitch:** high and low sounds; unison; melodic contour; simple melodic patterns using the notes “mi”, “so”, and “la” (e.g., the “so-mi-la-so-mi” pitch pattern in some children’s songs)

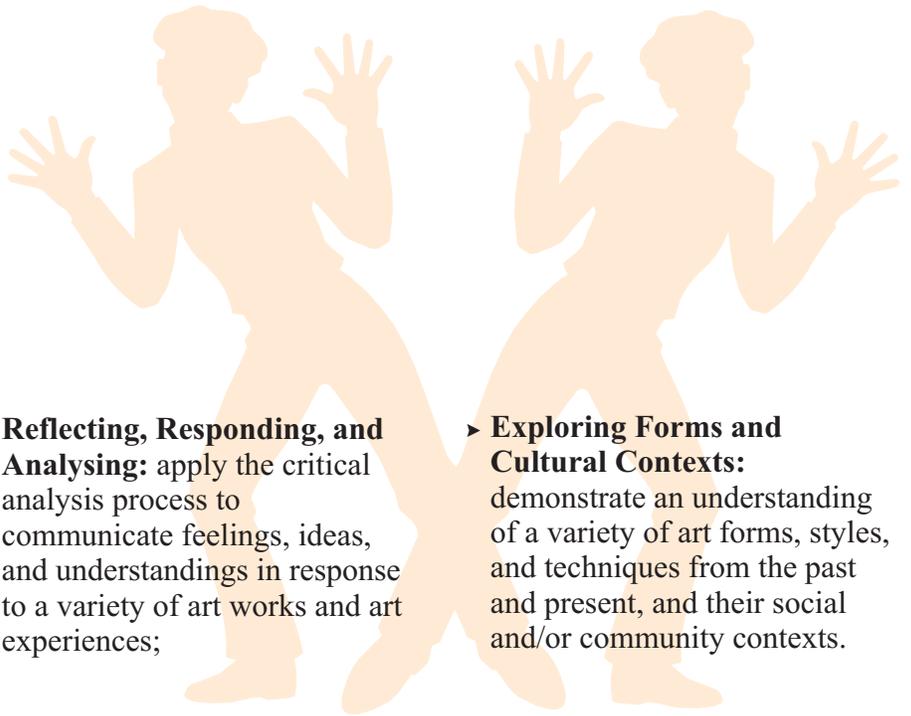
• **dynamics and other expressive controls:** loud, soft; a strong sound for a note or beat (accent); smooth and detached articulation

• **timbre:** vocal quality (e.g., speaking voice, singing voice), body percussion, sound quality of instruments (e.g., non-pitched and pitched percussion), environmental and found sounds

• **texture/harmony:** single melodic line in unison (monophony)

• **form:** phrase, call and response

Visual Arts: Grade 1



Overall Expectations

By the end of Grade 1, students will:

- ▶ **Creating and Presenting:** apply the creative process to produce a variety of two- and three-dimensional art works, using elements, principles, and techniques of visual arts to communicate feelings, ideas, and understandings;
- ▶ **Reflecting, Responding, and Analysing:** apply the critical analysis process to communicate feelings, ideas, and understandings in response to a variety of art works and art experiences;
- ▶ **Exploring Forms and Cultural Contexts:** demonstrate an understanding of a variety of art forms, styles, and techniques from the past and present, and their social and/or community contexts.

Visual Arts: Fundamental Concepts for Grade 1

Students in Grade 1 will develop understanding of the following concepts through participation in a variety of hands-on, open-ended visual arts experiences.

ELEMENTS OF DESIGN

Students will develop understanding of all elements of design.

- **line:** jagged, curved, broken, dashed, spiral, straight, wavy, zigzag lines; lines in art and everyday objects (natural and human-made)
- **shape and form:** geometric and organic shapes and forms of familiar objects (e.g., geometric: circles, blocks; organic: clouds, flowers)
- **space:** depiction of objects in the distance as smaller and closer to the top of the art paper; shapes and lines closer together or farther apart; horizon line; spaces through, inside, and around shapes or objects
- **colour:** mixing of primary colours (red, yellow, blue); identification of warm (e.g., red, orange) and cool (e.g., blue, green) colours
- **texture:** textures of familiar objects (e.g., fuzzy, prickly, bumpy, smooth); changes in texture; a pattern of lines to show texture (e.g., the texture of a snake's skin); transfer of texture (e.g., placing a piece of paper over a textured surface and then rubbing the paper with wax crayon)
- **value:** light, dark

PRINCIPLES OF DESIGN

Students will develop understanding of all principles of design (that is, contrast, repetition and rhythm, variety, emphasis, proportion, balance, unity and harmony, and movement), but the focus in Grade 1 will be on contrast.

- **contrast:** light/dark; large/small; pure/mixed colour