Ontario

Ministry of Education

Curriculum Expectations
GRADE 2

for

English Language
Mathematics
Science and Technology
Social Studies
Health & Physical Education
The Arts

2007

Oral Communication

Overall Expectations

2e1 1. listen in order to understand and respond appropriately in a variety of situations for a variety of purposes;

2e2 2. use speaking skills and strategies appropriately to communicate with different audiences for a variety of purposes;

2e3 3. reflect on and identify their strengths as listeners and speakers, areas for improvement, and the strategies they found most helpful in oral communication situations.

1. Listening to Understand

2e4 Purpose

1.1 identify purposes for listening in a variety of situations, formal and informal, and set personal goals for listening, initially with support and direction *(e.g., to acquire information from a presentation by a guest speaker; to exchange ideas in a small-group discussion; to enjoy and understand poetry)*

2e5 Active Listening Strategies

1.2 demonstrate an understanding of appropriate listening behaviour by using active listening strategies in a variety of situations (*e.g., demonstrate understanding of when to speak, when to listen, and how much to say; restate what the speaker has said and connect it to their own ideas; express personal interest in what has been said by asking related questions:* I like what _____ said about _____)

Teacher prompt: "When First Nations peoples use a talking stick,* a person speaks only when holding the talking stick, while the rest of the group listens. Today we are going to speak and listen in a similar way."

2e6 Comprehension Strategies

1.3 identify several listening comprehension strategies and use them before, during, and after listening in order to understand and clarify the meaning of oral texts *(e.g., listen for key words and phrases that signal important ideas; retell an oral text to a partner after a presentation; ask appropriate questions in order to make predictions about an oral text)*

2e7 Demonstrating Understanding

1.4 demonstrate an understanding of the information and ideas in oral texts by retelling the story or restating the information, including the main idea and several interesting details *(e.g., restate a partner's reflections after a think-pairshare activity; identify the important ideas in a group presentation; carry on a sustained conversation on a topic)*

2e8 Making Inferences/Interpreting Texts

1.5 use stated and implied information and ideas in oral texts to make simple inferences and reasonable predictions, and support the inferences with evidence from the text

Teacher prompt: "You predicted _____. What clues from the oral text did you use to figure that out?"

2e9 Extending Understanding

1.6 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 *(e.g., talk about their own ideas and experiences related to the topic before listening; connect ideas from oral presentations to related school and community events and/or to other texts with similar topics or themes, including multicultural texts or texts in their own first language)*

2e10 Analysing Texts

1.7 identify words or phrases that indicate whether an oral text is fact or opinion, initially with support and direction *(e.g., phrases such as* I think…I feel… *indicate an opinion rather than strictly factual information)*

2e11 Point of View

1.8 identify, initially with support and direction, who is speaking in an oral text, and demonstrate an understanding that the speaker has his or her own point of view *(e.g., people, events, and details are viewed differently by different people)*

Teacher prompts: "Does who is talking affect the way the information is presented or the way the story is told?" "How do you know what the speaker's feelings about the topic are? How does that affect you as a listener?" "How might the text change if [character X] were speaking instead?"

2e12 Presentation Strategies

1.9 identify some of the presentation strategies used in oral texts and explain how they influence the audience *(e.g., the use of facial expressions helps the listener understand what is being said)*

Teacher prompts: "How does looking at the expression on a speaker's face help you to understand what is being said?" "Does the look on the speaker's face in some way change the meaning of the actual words being spoken?"

2. Speaking to Communicate

2e13 Purpose

2.1 identify a variety of purposes for speaking *(e.g., to entertain the class; to establish positive personal and learning relationships with peers; to ask questions or explore solutions to problems in small-group and paired activities; to give directions to a partner in a shared activity; to explain to a small group the method used to solve a problem; to share ideas or information in large and small groups)*

2e14 Interactive Strategies

2.2 demonstrate an understanding of appropriate speaking behaviour in a variety of situations, including paired sharing and small- and large-group discussions *(e.g., make connections to what other group members have said; demonstrate an understanding of when to speak, when to listen, and how much to say)*

2e15 Clarity and Coherence

2.3 communicate ideas, opinions, and information orally in a clear, coherent manner using simple but appropriate organizational patterns *(e.g., give an oral account of a current event using the five W's to organize the information; restate the main facts from a simple informational text in correct sequence)*

2e16 Appropriate Language

2.4 choose a variety of appropriate words and phrases to communicate their meaning accurately and engage the interest of their audience *(e.g., use descriptive adjectives and adverbs to create vivid images for their audience)*

2e17 Vocal Skills and Strategies

2.5 identify some vocal effects, including tone, pace, pitch, and volume, and use them appropriately, and with sensitivity towards cultural differences, to help communicate their meaning *(e.g., adjust volume to suit the purpose for speaking and the size and type of audience)*

2e18 Non-Verbal Cues

2.6 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

2e19 Visual Aids
2.7 use a few different visual aids, *(e.g., photographs, artefacts, a story map)* to support or enhance oral presentations *(e.g., use a family photograph as part of an oral recount of an event; use a story map to retell a story)*

3. Reflecting on Oral Communication Skills and Strategies

2e20 Metacognition
3.1 identify, initially with support and direction, a few strategies they found helpful before, during, and after listening and speaking
Teacher prompts: "What questions can you ask yourself while listening to be sure that you understand what you hear?" "What can you do after listening to check that you have understood?" "How do you get ready to speak?" "While you are speaking, how do you check whether you are keeping the attention of your audience?"

2e21 Interconnected Skills
3.2 identify, initially with support and direction, how their skills as viewers, representers, readers, and writers help them improve their oral communication skills
Teacher prompts: "How does listening make you a better speaker?" "How does viewing texts help you when you are listening?"

Reading

Overall Expectations

2e22 1. read and demonstrate an understanding of a variety of literary, graphic, and informational texts, using a range of strategies to construct meaning;

2e23 2. recognize a variety of text forms, text features, and stylistic elements and demonstrate understanding of how they help communicate meaning;

2e24 3. use knowledge of words and cueing systems to read fluently;

2e25 4. reflect on and identify their strengths as readers, areas for improvement, and the strategies they found most helpful before, during, and after reading.

1. Reading for Meaning

2e26 Variety of Texts
1.1 read some different literary texts *(e.g., poetry, folk tales, fairy tales from diverse cultures, stories, books from home in their first language)*, graphic texts *(e.g., simple maps, charts, diagrams, graphs)*, and informational texts *(e.g.,"How to"books, non-fiction books about topics of personal interest, electronic texts, primary dictionaries)*

2e27 Purpose
1.2 identify several different purposes for reading and choose reading materials appropriate for those purposes *(e.g., picture books for entertainment or reflection, familiar favourite books to build fluency, simple factual and visual texts for research, a picture atlas for information)*

2e28 Comprehension Strategies
1.3 identify several reading comprehension strategies and use them before, during, and after reading to understand texts *(e.g., activate prior knowledge to ask questions or make predictions about the topic or story; use visualization to help clarify the sights and sounds referred to in the text; ask questions to monitor understanding during reading; identify important ideas to remember)*

2e29 Demonstrating Understanding

1.4 demonstrate understanding of a text by retelling the story or restating information from the text, with the inclusion of a few interesting details *(e.g., retell a story or restate facts in proper sequence or correct time order, with a few supporting details; restate the important ideas from a short informational text about the life cycle of a butterfly in the correct sequence)*

2e30 Making Inferences/Interpreting Texts

1.5 use stated and implied information and ideas in texts to make simple inferences and reasonable predictions about them *Teacher prompts:* "How did Carmen's actions help us to know how she was feeling in the story?" "The text describes what articles of clothing the character is wearing. How does that information help us predict what the weather conditions might be?"

2e31 Extending Understanding

1.6 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

Teacher prompts: "How is this story like the one we read last week?" "How is our school like the one we are reading about?"

2e32 Analysing Texts

1.7 identify the main idea and some additional elements of texts *(e.g., narrative:* characters, setting, problem, solution, events/episodes, resolution;*procedure:* goal, materials, method*)*

Teacher prompts: "What main idea do these two stories share?" "What elements did the author include to make the recipe interesting and still easy to follow?"

2e33 Responding to and Evaluating Texts

1.8 express personal thoughts and feelings about what has been read *(e.g., by using visual art or music to communicate their reaction)*

Teacher prompts: "Why do you think what happened to the character was fair/not fair?" "How might you express your feelings about what happened to this character?"

2e34 Point of View

1.9 identify, initially with support and direction, the speaker and the point of view presented in a text and suggest one or two possible alternative perspectives *(e.g., develop a narrative or role play to present a story from the point of view of one or two minor characters)*

Teacher prompts: "What do you think the author wants the reader to think?" "How might a different character tell this story?"

2. Understanding Form and Style

2e35 Text Forms

2.1 identify and describe the characteristics of a few simple text forms, with a focus on literary texts such as a fairy tale *(e.g., plot, characters, setting)*, graphic texts such as a primary dictionary *(e.g., words listed in alphabetical order, simple definitions accompanied by picture clues or diagrams)*, and informational texts such as a "How to" book *(e.g., materials listed in order of use, numbered steps, labels, diagrams)*

2e36 Text Patterns

2.2 recognize simple organizational patterns in texts of different types, and explain, initially with support and direction, how the patterns help readers understand the texts *(e.g., numbered steps help the reader follow a procedure or set of instructions correctly)*

2e37 Text Features

2.3 identify some text features and explain how they help readers understand texts *(e.g., table of contents, index, chart, illustrations, pictures, diagrams, icons)*

Teacher prompt: "How does the diagram help you understand the explanation?"

2e38 Elements of Style

2.4 identify some simple elements of style, including voice, word choice, and different types of sentences, and explain how they help readers understand texts *(e.g., descriptive adjectives help the reader visualize a setting; alliteration helps make ideas or characters stand out:* red red robin*)*

3. Reading With Fluency

2e39 Reading Familiar Words

3.1 automatically read and understand many high-frequency words, some words with common spelling patterns, and words of personal interest or significance, in a variety of reading contexts *(e.g., the same word in different graphic representations such as: on charts or posters; in shared-, guided-, and independentreading texts; in shared- and interactivewriting texts; in personal writing and the writing of their peers)*

2e40 Reading Unfamiliar Words

3.2 predict the meaning of and quickly solve unfamiliar words using different types of cues, including:

- semantic (meaning) cues *(e.g., familiar words, phrases, sentences, and visuals that activate existing knowledge of oral and written language)* ;
- syntactic (language structure) cues*(e.g., word order, language patterns, punctuation)* ;
- graphophonic (phonological and graphic) cues *(e.g., letter clusters within words; onset and rime; common spelling patterns; words within words; visual features of words such as shape or size)*

Teacher prompt (for cross-checking of cues): "The word does have the same beginning sound (*bright* and *brought*) but does it make sense in this sentence?"

2e41 Reading Fluently

3.3 read appropriate texts at a sufficient rate and with sufficient expression to convey the sense of the text to the reader and to an audience *(e.g., make oral reading sound like spoken language, with the appropriate pauses, stops, and starts indicated by the punctuation)*

Teacher prompt: "Can you make your reading sound just as if you are talking?"

4. Reflecting on Reading Skills and Strategies

2e42 Metacognition

4.1 identify, initially with support and direction, a few strategies that they found helpful before, during, and after reading

Teacher prompts: "What questions do you ask yourself to check and see whether you understand what you are reading? What do you do if you don't understand?" "When you come to a word or phrase you don't know, what strategies do you use to solve it? How do you check to see if you were right?"

2e43 Interconnected Skills

4.2 explain, initially with support and direction, how their skills in listening, speaking, writing, viewing, and representing help them make sense of what they read *(e.g., reading a text independently is easier after discussing the topic with a partner and/or talking about it in a group)*

Teacher prompt: "How do discussions before reading help you get ready to read about new topics?"

Writing

Overall Expectations

2e44 1. generate, gather, and organize ideas and information to write for an intended purpose and audience;

2e45 2. draft and revise their writing, using a variety of informational, literary, and graphic forms and stylistic elements appropriate for the purpose and audience;

2e46 3. use editing, proofreading, and publishing skills and strategies, and knowledge of language conventions, to correct errors, refine expression, and present their work effectively;

2e47 4. 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.

1. Developing and Organizing Content

2e48 Purpose and Audience

1.1 identify the topic, purpose, audience, and form for writing (*e.g., a fairy tale to entertain another class; the procedure for fire drills to inform the class; a poster to promote a favourite book or movie)*

Teacher prompts: "What is your writing about?" "Why are you writing?" "Whom are you writing for?"

2e49 Developing Ideas

1.2 generate ideas about a potential topic, using a variety of strategies and resources *(e.g., formulate and ask questions such as the five W's* [who, what, when, where, why] *to identify personal experiences, prior knowledge, and information needs; brainstorm ideas with a partner)*

2e50 Research

1.3 gather information to support ideas for writing in a variety of ways and/or from a variety of sources *(e.g., from discussions with family and friends; from a variety of texts, including teacher readalouds, mentor texts, shared-, guided-, and independent-reading texts, and media texts)*

2e51 Classifying Ideas

1.4 sort ideas and information for their writing in a variety of ways, with support and direction *(e.g., by using simple graphic organizers such as webs or a Venn diagram)*

2e52 Organizing Ideas

1.5 identify and order main ideas and supporting details, using graphic organizers *(e.g., a story grammar:* characters, setting, problem, solution; *a sequential chart:* first, then, next, finally*)* and organizational patterns *(e.g., problemsolution, chronological order)*

2e53 Review

1.6 determine whether the ideas and information they have gathered are suitable for the purpose, and gather new material if necessary *(e.g., use a graphic organizer to explain their material to a classmate and ask for feedback to identify gaps)*

2. Using Knowledge of Form and Style in Writing

2e54 Form

2.1 write short texts using several simple forms (*e.g., a friendly letter; a factual recount of a scientific or mathematical investigation; a recipe describing the procedure for cooking a favourite food; directions for playing a game; a paragraph describing the physical characteristics of an animal; an original story or an extension of a familiar story, modelled on stories read; their own variation on a patterned poem; an advertisement for a toy)*

2e55 Voice

2.2 establish a personal voice in their writing, with a focus on using familiar words that convey their attitude or feeling towards the subject or audience *(e.g., words that convey admiration for a character:* a *cool* person*)*

2e56 Word Choice

2.3 use familiar words and phrases to communicate relevant details *(e.g., a sequence of adjectives:* The *big, brown* bear…*)*

2e57 Sentence Fluency
2.4 use a variety of sentence types*(e.g., questions, statements, exclamations)*

2e58 Point of View
2.5 identify, initially with support and direction, their point of view and one or more possible different points of view about the topic
Teacher prompt: "How do you feel about this topic? How do you think other people – such as children from a different country or grandparents – might feel about this topic? How will you share these feelings in your writing?"

2e59 Preparing for Revision
2.6 identify elements of their writing that need improvement, using feedback from the teacher and peers, with a focus on content and word choice
Teacher prompts: "Do you have enough information to support your ideas?" "Are there any other words that you could use to create a better word picture for your audience?"

2e60 Revision
2.7 make simple revisions to improve the content, clarity, and interest of their written work, using several types of strategies *(e.g., reordering sentences to present information in a more logical sequence; adding linking words to connect ideas; replacing general words with concrete, specific words/phrases)*
Teacher prompt: "What linking words could you use to connect two ideas?" "What words could you add to create a more vivid picture for the reader?"

2e61 Producing Drafts
2.8 produce revised, draft pieces of writing to meet criteria identified by the teacher, based on the expectations

3. Applying Knowledge of Language Conventions and Presenting Written Work Effectively

2e62 Spelling Familiar Words
3.1 spell many high-frequency words correctly *(e.g., words from their oral vocabulary, anchor charts, the class word wall, and shared-, guided-, and independent-reading texts)*

2e63 Spelling Unfamiliar Words
3.2 spell unfamiliar words using a variety of strategies that involve understanding sound-symbol relationships, word structures, word meanings, and generalizations about spelling *(e.g., spell words out loud; segment words into clusters of letters to hear onset and rime; sort words by common sound patterns and/or letter sequences; link letters to words:* You *hear* with your *ear; follow rules for adding endings to base words when the spelling doesn't change; use word meanings to help spell simple contractions and homophones:* bear/bare*)*

2e64 Vocabulary
3.3 confirm spellings and word meanings or word choice using a few different types of resources *(e.g., locate words in alphabetical order by using first and second letters in a primary dictionary, on a word wall, or in an online picture dictionary)*

2e65 Punctuation
3.4 use punctuation to help communicate their intended meaning, with a focus on the use of: question marks, periods, or exclamation marks at the end of a sentence; commas to mark pauses; and some uses of quotation marks

2e66 Grammar
3.5 use parts of speech appropriately to communicate their meaning clearly, with a focus on the use of: proper nouns for local, provincial, and national place names and for holidays; the personal object pronouns *me, you, him, her, us, them;* adjectives to describe a noun; verbs in the simple present and past tenses; joining words *(e.g., and, but)*; simple prepositions of place and time *(e.g., under, with, before, after)*

2e67 Proofreading
3.6 proofread and correct their writing using a simple checklist or a few guiding questions developed with the teacher and posted for reference *(e.g., Does each sentence make sense? Are the ideas and information presented in a logical order? Does each sentence begin with a capital letter and end with a period, question mark, or exclamation mark? What resources can I use to check the spelling of a word if it doesn't look right?)*

2e68 Publishing
3.7 use some appropriate elements of effective presentation in the finished product, including print, different fonts, graphics, and layout *(e.g., use legible printing, spacing, margins, varied print size, and colour for emphasis; include a simple labelled diagram in a report; supply a caption for a photograph or illustration)*

2e69 Producing Finished Works
3.8 produce pieces of published work to meet criteria identified by the teacher, based on the expectations

4. Reflecting on Writing Skills and Strategies

2e70 Metacognition
4.1 identify some strategies they found helpful before, during, and after writing *(e.g., use a writer's notebook to record ideas for writing, new and interesting words, graphic organizers that could be used again)*
Teacher prompts: "How do you generate your ideas for writing?" "What helps you to get organized for writing?"

2e71 Interconnected Skills
4.2 describe, with prompting by the teacher, how some of their skills in listening, speaking, reading, viewing, and representing help in their development as writers
Teacher prompts: "How does your conventions notebook help you as a writer?" "How does listening to stories help you when you are writing?" "How might the television programs you watch help you as a writer?"

2e72 Portfolio
4.3 select pieces of writing that they think show their best work and explain the reasons for their selection

Media Literacy

Overall Expectations

2e73 1. demonstrate an understanding of a variety of media texts;

2e74 2. identify some media forms and explain how the conventions and techniques associated with them are used to create meaning;

2e75 3. create a variety of media texts for different purposes and audiences, using appropriate forms, conventions, and techniques;

2e76 4. 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.

1. Understanding Media Texts

2e77 Purpose and Audience

1.1 identify the purpose and intended audience of some simple media texts *(e.g., this television commercial is designed to sell breakfast cereal to parents or soft drinks to children or teens; this picture book of nature stories is aimed at children who are interested in animals)*

Teacher prompts: "Who would enjoy this?" "Who would learn from this?"

2e78 Making Inferences/Interpreting Messages

1.2 identify overt and implied messages in simple media texts *(e.g.,*

- *overt message of an advertisement for shoes:* Great athletes wear these shoes; *implied message:* If you want to be like these athletes, buy these shoes;
- *overt message on a billboard advertising brand-name clothing:* These attractive people wear this brand of clothing; *implied messages:* Wearing this brand of clothing will make you attractive too; clothing makes the person;
- *overt message in a superhero cartoon:* The hero is a tall, strong man; *implied message:* Tall, strong men are like heroes*)*

Teacher prompt: "What is this advertisement telling us? Do you believe its messages?" "What do the heroes and villains look like in the cartoons you watch? What does this suggest?"

2e79 Responding to and Evaluating Texts

1.3 express personal thoughts and feelings about simple media works and explain their responses *(e.g., explain why a particular DVD/video or licensed character toy or game is more or less appealing to them than another, similar product)*

Teacher prompt: "Tell me three things that make this game more fun to play than that one. Do you think both girls and boys would like both of these games?"

2e80 Audience Responses

1.4 describe how different audiences might respond to specific media texts

Teacher prompt: "Who do you think is the main audience for Saturday morning cartoons? Do your parents watch them? Who watches sporting events on television in your or your friends' families? Who seems most interested in car advertisements? Do you think some of these things are interesting to various groups of people?"

2e81 Point of View

1.5 identify, initially with support and direction, whose point of view *(e.g., that of the hero, the villain, the narrator)* is presented in a simple media text and suggest how the text might change if a different point of view were used

Teacher prompt: "Who is telling this story? How would the story be different if another character were telling the story?"

2e82 Production Perspectives

1.6 identify, initially with support and direction, who makes some of the simple media texts with which they are familiar, and why those texts are produced *(e.g., film production companies produce movies to entertain audiences and to make money; companies produce advertisements to persuade consumers to buy their products)*

Teacher prompt: "How do we know who produces the T-shirts with logos or slogans that we wear, or the dolls we like to play with?"

2. Understanding Media Forms, Conventions, and Techniques

2e83 Form

2.1 identify some of the elements and characteristics of selected media forms *(e.g., a television commercial uses speech, sound effects, and moving images to sell a product or service; a print advertisement uses words and pictures to sell a product or service; in a television news broadcast, an anchor and reporters report information about events that have actually happened, and use film or video clips from real locations around the world to illustrate those events)*

2e84 Conventions and Techniques

2.2 identify the conventions and techniques used in some familiar media forms *(e.g., cartoons use animation and sound to make fantasy characters seem real; cereal boxes use bright, strong colours, bold type, and inviting pictures of servings of the cereal to attract customers' attention)*

Teacher prompt: "What do you notice about the colours, images, and print on the cereal boxes? How might the message be different if the colours or images were changed?"

3. Creating Media Texts

2e85 Purpose and Audience

3.1 identify the topic, purpose, and audience for media texts they plan to create *(e.g., an advertisement to interest both boys and girls in buying an action toy)*

2e86 Form

3.2 identify an appropriate form to suit the purpose and audience for a media text they plan to create *(e.g., a photo essay or collage to commemorate a class event or celebration)*

Teacher prompt: "Would a photo essay or a collage tell the story best? How else could we keep a record of the event?"

2e87 Conventions and Techniques

3.3 identify conventions and techniques appropriate to the form chosen for a media text they plan to create *(e.g., a book cover with appropriate lettering for the title and author's name and a cover illustration depicting a scene or artefact from the story; sound effects or a soundtrack for a dramatization of a poem)*

2e88 Producing Media Texts

3.4 produce media texts for specific purposes and audiences, using a few simple media forms and appropriate conventions and techniques*(e.g.,*

- *an advertisement for a healthy snack food*
- *a board game based on the plot and characters of a favourite book or television show*
- *a sequence of pictures and/or photographs telling the story of a class event or celebration*
- *a story illustrated with diagrams and digital images*
- *a weather report with illustrations and captions*
- *a selection of background music and sound effects to accompany a picture book that will be read aloud to the class*
- *a role play of an interview between a reporter and a fictional character in a movie)*

4. Reflecting on Media Literacy Skills and Strategies

2e89 Metacognition

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

Teacher prompt: "How did choosing music to go with the story help you understand the story or poem better? Would you choose to do this again? Why? Why not?"

2e90 Interconnected Skills

4.2 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

Teacher prompt: "Think about your project. How many different language skills did you use?"

Mathematical Process Expectations

Problem Solving

2m1 • apply developing problem-solving strategies as they pose and solve problems and conduct investigations, to help deepen their mathematical understanding;

Reasoning And Proving

2m2 • apply developing reasoning skills (e.g., pattern recognition, classification) to make and investigate conjectures (e.g., through discussion with others);

Reflecting

2m3 • 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 to others why they think their solution is correct);

Selecting Tools and Computational Strategies

2m4 • 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

2m5 • make connections among simple mathematical concepts and procedures, and relate mathematical ideas to situations drawn from everyday contexts;

Representing

2m6 • 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;

Communicating

2m7 • communicate mathematical thinking orally, visually, and in writing, using everyday language, a developing mathematical vocabulary, and a variety of representations.

Number Sense and Numeration

Overall Expectations

2m8 • read, represent, compare, and order whole numbers to 100, and use concrete materials to represent fractions and money amounts to 100¢;

2m9 • demonstrate an understanding of magnitude by counting forward to 200 and backwards from 50, using multiples of various numbers as starting points;

2m10 • solve problems involving the addition and subtraction of one- and two-digit whole numbers, using a variety of strategies, and investigate multiplication and division.

Quantity Relationships

2m11 – represent, compare, and order whole numbers to 100, including money amounts to 100¢, using a variety of tools (e.g., ten frames, base ten materials, coin manipulatives, number lines, hundreds charts and hundreds carpets);

2m12 – read and print in words whole numbers to twenty, using meaningful contexts (e.g., storybooks, posters, signs);

2m13 – compose and decompose two-digit numbers in a variety of ways, using concrete materials (e.g., place 42 counters on ten frames to show 4 tens and 2 ones; compose 37¢ using one quarter, one dime, and two pennies) (Sample problem: Use base ten blocks to show 60 in different ways.);

2m14 – determine, using concrete materials, the ten that is nearest to a given two-digit number, and justify the answer (e.g., use counters on ten frames to determine that 47 is closer to 50 than to 40);

2m15 – determine, through investigation using concrete materials, the relationship between the number of fractional parts of a whole and the size of the fractional parts (e.g., a paper plate divided into fourths has larger parts than a paper plate divided into eighths) (Sample problem: Use paper squares to show which is bigger, one half of a square or one fourth of a square.);

2m16 – regroup fractional parts into wholes, using concrete materials (e.g., combine nine fourths to form two wholes and one fourth);

2m17 – compare fractions using concrete materials, without using standard fractional notation (e.g., use fraction pieces to show that three fourths are bigger than one half, but smaller than one whole);

2m18 – estimate, count, and represent (using the ¢ symbol) the value of a collection of coins with a maximum value of one dollar.

Counting

2m19 – count forward by 1's, 2's, 5's, 10's, and 25's to 200, using number lines and hundreds charts, starting from multiples of 1, 2, 5, and 10 (e.g., count by 5's from 15; count by 25's from 125);

2m20 – count backwards by 1's from 50 and any number less than 50, and count backwards by 10's from 100 and any number less than 100, using number lines and hundreds charts (Sample problem: Count backwards from 87 on a hundreds carpet, and describe any patterns you see.);

2m21 – locate whole numbers to 100 on a number line and on a partial number line (e.g., locate 37 on a partial number line that goes from 34 to 41).

Operational Sense

2m22 – solve problems involving the addition and subtraction of whole numbers to 18, using a variety of mental strategies (e.g., "To add 6 + 8, I could double 6 and get 12 and then add 2 more to get 14.");

2m23 – describe relationships between quantities by using whole-number addition and subtraction (e.g., "If you ate 7 grapes and I ate 12 grapes, I can say that I ate 5 more grapes than you did, or you ate 5 fewer grapes than I did.");

2m24 – represent and explain, through investigation using concrete materials and drawings, multiplication as the combining of equal groups (e.g., use counters to show that 3 groups of 2 is equal to 2 + 2 + 2 and to 3 x 2);

2m25 – represent and explain, through investigation using concrete materials and drawings, division as the sharing of a quantity equally (e.g., "I can share 12 carrot sticks equally among 4 friends by giving each person 3 carrot sticks.");

2m26 – solve problems involving the addition and subtraction of two-digit numbers, with and without regrouping, using concrete materials (e.g., base ten materials, counters), student-generated algorithms, and standard algorithms;

2m27 – add and subtract money amounts to 100¢, using a variety of tools (e.g., concrete materials, drawings) and strategies (e.g., counting on, estimating, representing using symbols).

Measurement

Overall Expectations

2m28 • estimate, measure, and record length, perimeter, area, mass, capacity, time, and temperature, using non-standard units and standard units;

2m29 • compare, describe, and order objects, using attributes measured in non-standard units and standard units.

Attributes, Units, and Measurement Sense

2m30 – choose benchmarks – in this case, personal referents – for a centimetre and a metre (e.g., "My little finger is about as wide as one centimetre. A really big step is about one metre.") to help them perform measurement

2m31 – estimate and measure length, height, and distance, using standard units (i.e., centimetre, metre) and non-standard units;

2m32 – record and represent measurements of length, height, and distance in a variety of ways (e.g., written, pictorial, concrete) (Sample problem: Investigate how the steepness of a ramp affects the distance an object travels. Use cash-register tape for recording distances.);

2m33 – select and justify the choice of a standard unit (i.e., centimetre or metre) or a nonstandard unit to measure length (e.g., "I needed a fast way to check that the two teams would race the same distance, so I used paces.");

2m34 – estimate, measure, and record the distance around objects, using non-standard units (Sample problem: Measure around several different doll beds using string, to see which bed is the longest around.);

2m35 – estimate, measure, and record area, through investigation using a variety of non-standard units (e.g., determine the number of yellow pattern blocks it takes to cover an outlined shape) (Sample problem: Cover your desk with index cards in more than one way. See if the number of index cards needed stays the same each time.);

2m36 – estimate, measure, and record the capacity and/or mass of an object, using a variety of non-standard units (e.g., "I used the pan balance and found that the stapler has the same mass as my pencil case.");

2m37 – tell and write time to the quarter-hour, using demonstration digital and analogue clocks (e.g., "My clock shows the time recess will start [10:00], and my friend's clock shows the time recess will end [10:15].");

2m38 – construct tools for measuring time intervals in non-standard units (e.g., a particular bottle of water takes about five seconds to empty);

2m39 – describe how changes in temperature affect everyday experiences (e.g., the choice of clothing to wear);

2m40 – use a standard thermometer to determine whether temperature is rising or falling (e.g., the temperature of water, air).

Measurement Relationships

2m41 – describe, through investigation, the relationship between the size of a unit of area and the number of units needed to cover a surface (Sample problem: Compare the numbers of hexagon pattern blocks and triangle pattern blocks needed to cover the same book.);

2m42 – compare and order a collection of objects by mass and/or capacity, using non-standard units (e.g., "The coffee can holds more sand than the soup can, but the same amount as the small pail.");

2m43 – determine, through investigation, the relationship between days and weeks and between months and years.

Geometry and Spatial Sense

Overall Expectations

2m44 • identify two-dimensional shapes and three-dimensional figures and sort and classify them by their geometric properties;

2m45 • compose and decompose two-dimensional shapes and three-dimensional figures;

2m46 • describe and represent the relative locations of objects, and represent objects on a map.

Geometric Properties

2m47 – distinguish between the attributes of an object that are geometric properties (e.g., number of sides, number of faces) and the attributes that are not geometric properties (e.g., colour, size, texture), using a variety of tools (e.g., attribute blocks, geometric solids, connecting cubes);

2m48 – identify and describe various polygons (i.e., triangles, quadrilaterals, pentagons, hexagons, heptagons, octagons) and sort and classify them by their geometric properties (i.e., number of sides or number of vertices), using concrete materials and pictorial representations (e.g., "I put all the figures with five or more vertices in one group, and all the figures with fewer than five vertices in another group.");

2m49 – identify and describe various three-dimensional figures (i.e., cubes, prisms, pyramids) and sort and classify them by their geometric properties (i.e., number and shape of faces), using concrete materials (e.g., "I separated the figures that have square faces from the ones that don't.");

2m50 – create models and skeletons of prisms and pyramids, using concrete materials (e.g., cardboard; straws and modelling clay), and describe their geometric properties (i.e., number and shape of faces, number of edges);

2m51 – locate the line of symmetry in a two-dimensional shape (e.g., by paper folding; by using a Mira).

Geometric Relationships

2m52 – compose and describe pictures, designs, and patterns by combining two-dimensional shapes (e.g., "I made a picture of a flower from one hexagon and six equilateral triangles.");

2m53 – compose and decompose two-dimensional shapes (Sample problem: Use Power Polygons to show if you can compose a rectangle from two triangles of different sizes.);

2m54 – cover an outline puzzle with two-dimensional shapes in more than one way;

2m55 – build a structure using three-dimensional figures, and describe the two-dimensional shapes and three-dimensional figures in the structure (e.g., "I used a box that looks like a triangular prism to build the roof of my house.").

Location and Movement

2m56 – describe the relative locations (e.g., beside, two steps to the right of) and the movements of objects on a map (e.g., "The path shows that he walked around the desk, down the aisle, and over to the window.");

2m57 – draw simple maps of familiar settings, and describe the relative locations of objects on the maps (Sample problem: Draw a map of the classroom, showing the locations of the different pieces of furniture.);

2m58 – create and describe symmetrical designs using a variety of tools (e.g., pattern blocks, tangrams, paper and pencil).

Patterning and Algebra

Overall Expectations

2m59 • identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns;

2m60 • demonstrate an understanding of the concept of equality between pairs of expressions, using concrete materials, symbols, and addition and subtraction to 18.

Patterns and Relationships

2m61 – identify and describe, through investigation, growing patterns and shrinking patterns generated by the repeated addition or subtraction of 1's, 2's, 5's, 10's, and 25's on a number line and on a hundreds chart (e.g., the numbers 90, 80, 70, 60, 50, 40, 30, 20, 10 are in a straight line on a hundreds chart);

2m62 – identify, describe, and create, through investigation, growing patterns and shrinking patterns involving addition and subtraction, with and without the use of calculators (e.g., 3 + 1 = 4, 3 + 2 = 5, 3 + 3 = 6, …);

2m63 – identify repeating, growing, and shrinking patterns found in real-life contexts (e.g., a geometric pattern on wallpaper, a rhythm pattern in music, a number pattern when counting dimes);

2m64 – represent a given growing or shrinking pattern in a variety of ways (e.g., using pictures, actions, colours, sounds, numbers, letters, number lines, bar graphs) (Sample problem: Show the letter pattern A, AA, AAA, AAAA, … by clapping or hopping.);

2m65 – create growing or shrinking patterns (Sample problem: Create a shrinking pattern using cut-outs of pennies and/or nickels, starting with 20 cents.);

2m66 – create a repeating pattern by combining two attributes (e.g., colour and shape; colour and size) (Sample problem: Use attribute blocks to make a train that shows a repeating pattern involving two attributes.);

2m67 – demonstrate, through investigation, an understanding that a pattern results from repeating an operation (e.g., addition, subtraction) or making a repeated change to an attribute (e.g., colour, orientation).

Expressions and Equality

2m68 – demonstrate an understanding of the concept of equality by partitioning whole numbers to 18 in a variety of ways, using concrete materials (e.g., starting with 9 tiles and adding 6 more tiles gives the same result as starting with 10 tiles and adding 5 more tiles);

2m69 – represent, through investigation with concrete materials and pictures, two number expressions that are equal, using the equal sign (e.g., "I can break a train of 10 cubes into 4 cubes and 6 cubes. I can also break 10 cubes into 7 cubes and 3 cubes. This means 4 + 6 = 7 + 3.");

2m70 – determine the missing number in equations involving addition and subtraction to 18, using a variety of tools and strategies (e.g., modelling with concrete materials, using guess and check with and without the aid of a calculator) (Sample problem: Use counters to determine the missing number in the equation 6 + 7 = + 5.);

2m71 – identify, through investigation, and use the commutative property of addition (e.g., create a train of 10 cubes by joining 4 red cubes to 6 blue cubes, or by joining 6 blue cubes to 4 red cubes) to facilitate computation with whole numbers (e.g., "I know that 9 + 8 + 1 = 9 + 1 + 8. Adding becomes easier because that gives 10 + 8 = 18.");

2m72 – identify, through investigation, the properties of zero in addition and subtraction (i.e., when you add zero to a number, the number does not change; when you subtract zero from a number, the number does not change).

Data Management and Probability

Overall Expectations

2m73 • collect and organize categorical or discrete primary data and display the data, using tally charts, concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers, with labels ordered appropriately along horizontal axes, as needed;

2m74 • read and describe primary data presented in tally charts, concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers;

2m75 • describe probability in everyday situations and simple games.

Collection and Organization of Data

2m76 – demonstrate an ability to organize objects into categories, by sorting and classifying objects using two attributes simultaneously (e.g., sort attribute blocks by colour and shape at the same time);

2m77 – gather data to answer a question, using a simple survey with a limited number of responses (e.g., What is your favourite season?; How many letters are in your first name?);

2m78 – collect and organize primary data (e.g., data collected by the class) that is categorical or discrete (i.e., that can be counted, such as the number of students absent), and display the data using one-to-one correspondence in concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers (e.g., tally charts, diagrams), with appropriate titles and labels and with labels ordered appropriately along horizontal axes, as needed (Sample problem: Record the number of times that specific words are used in a simple rhyme or poem.).

Data Relationships

2m79 – read primary data presented in concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers (e.g., tally charts, diagrams), and describe the data using mathematical language (e.g., "Our bar graph shows that 4 more students walk to school than take the bus.");

2m80 – pose and answer questions about class-generated data in concrete graphs, pictographs, line plots, simple bar graphs, and tally charts (e.g., Which is the least favourite season?);

2m81 – distinguish between numbers that represent data values (e.g., "I have 4 people in my family.") and numbers that represent the frequency of an event (e.g., "There are 10 children in my class who have 4 people in their family.");

2m82 – demonstrate an understanding of data displayed in a graph (e.g., by telling a story, by drawing a picture), by comparing different parts of the data and by making statements about the data as a whole (e.g., "I looked at the graph that shows how many students were absent each month. More students were away in January than in September.").

Probability

2m83 – describe probability as a measure of the likelihood that an event will occur, using mathematical language (i.e., impossible, unlikely, less likely, equally likely, more likely, certain) (e.g., "If I take a new shoe out of a box without looking, it's equally likely that I will pick the left shoe or the right shoe.");

2m84 – describe the probability that an event will occur (e.g., getting heads when tossing a coin, landing on red when spinning a spinner), through investigation with simple games and probability experiments and using mathematical language (e.g., "I tossed 2 coins at the same time, to see how often I would get 2 heads. I found that getting a head and a tail was more likely than getting 2 heads.") (Sample problem: Describe the probability of spinning red when you spin a spinner that has one half shaded yellow, one fourth shaded blue, and one fourth shaded red. Experiment with the spinner to see if the results are what you expected.).

Science and Technology Expectations (2007) Grade 2

UNDERSTANDING LIFE SYSTEMS: Growth and Changes in Animals

Overall Expectations

2s1 **CR2007**	1. assess ways in which animals have an impact on society and the environment, and waysin which humans have an impact upon animals and the places where they live;
2s2 **CR2007**	2. investigate similarities and differences in the characteristics of various animals;
2s3 **CR2007**	3. demonstrate an understanding that animals grow and change and have distinct characteristics.

1. Relating Science and Technology to Society and the Environment

2s4 **CR2007**	1.1 identify positive and negative impacts that animals have on humans (society) and the environment, form an opinion about one of them, and suggest ways in which the impact can be minimized or enhanced Sample prompts: Because interacting with dogs can have a calming effect on humans (e.g., lowering blood pressure and relieving tension), dog visits are used in hospitals and retirement homes as therapy for the patients/ residents. Dogs and monkeys can be trained to be the eyes and ears of visually and hearing impaired people. Birds can destroy crops such as blueberries and apples.
2s5 **CR2007**	1.2 identify positive and negative impacts that different kinds of human activity have on animals and where they live (e.g., actions of animal lovers and groups that protect animals and their rights, the home owner who wants a nice lawn, people who visit zoos and wildlife parks, pet owners), form an opinion about one of them, and suggest ways in which the impact can be minimized or enhanced Sample prompts: Humans try to protect endangered and/or sensitive species by minimizing pollution and protecting the places where they live. Humans raise a variety of animals on farms, for food. Humans use pesticides on their lawns and gardens and to kill insects such as black flies and mosquitos. Humans use lands where animals live to build houses for themselves. Humans take animals, some of which may be endangered, from the wild and put them in zoos. Humans use animal skin and fur for clothing, for furniture, and for decoration. Humans create animal shelters for unwanted pets. Humans provide protected parks or wildlife reserves as special places for animals to live.

2. Developing Investigation and Communication Skills

2s6 **CR2007**	2.1 follow established safety procedures and humane practices specific to the care and handling of live animals, where appropriate, during science and technology investigations (e.g., make the teacher aware of any allergies; handle animals gently or know when it is better not to handle them at all; wash hands after handling animals)
2s7 **CR2007**	2.2 observe and compare the physical characteristics (e.g., fur or feathers; two legs or no legs) and the behavioural characteristics (e.g., predator or prey) of a variety of animals, including insects, using student-generated questions and a variety of methods and resources (e.g., observation of live animals in the schoolyard; books, videos/DVDs, CD-ROMs, and/or Internet sources that depict animals in a positive light)
2s8 **CR2007**	2.3 investigate the life cycle of a variety of animals (e.g., butterflies, frogs, chickens), using a variety of methods and resources (e.g., observation of live animals in the classroom and in the schoolyard; books, videos/DVDs, CD-ROMs, and/or the Internet)
2s9 **CR2007**	2.4 observe and compare changes in the appearance and activity of animals as they go through a complete life cycle (e.g., frog, butterfly)
2s10 **CR2007**	2.5 investigate the ways in which a variety of animals adapt to their environment and/or to changes in their environment, using various methods (e.g., read simple non-fiction texts and Aboriginal stories; observe animal activity in the schoolyard and surrounding areas, and record findings)
2s11 **CR2007**	2.6 use scientific inquiry/research skills (see page 15), and knowledge acquired from previous investigations, to investigate the basic needs, characteristics, behaviour, and adaptations of an animal of their choice
2s12 **CR2007**	2.7 use appropriate science and technology vocabulary, including life cycle, migration, adaptation, body coverings, and classify, in oral and written communication
2s13 **CR2007**	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 a model constructed of modelling clay and a tree branch to explain how a caterpillar feeds)

3. Understanding Basic Concepts

2s14 **CR2007**	3.1 identify and describe major physical characteristics of different types of animals (e.g., insects, mammals, reptiles)
2s15 **CR2007**	3.2 describe an adaptation as a characteristic body part, shape, or behaviour that helps a plant or animal survive in its environment (e.g., some birds migrate to a warmer climate for the winter; the design of a whale's flipper allows the whale to turn, steer, and balance; the cecropia moth has the pattern of a snake's head on its wings: the hypothesis is that this is to frighten its predators away)
2s16 **CR2007**	3.3 identify ways in which animals are helpful to, and ways in which they meet the needs of, living things, including humans, to explain why humans should protect animals and the places where they live (e.g., bats control mosquito populations; birds and wildlife provide pleasurable viewing experiences; the buffalo provided some Aboriginal people with everything they needed to survive: food, shelter, clothing, tools, ornamentation, and weapons; horses can be used for labour; cats and dogs provide companionship for humans; animals, including humans, disperse plant seeds)
2s17 **CR2007**	3.4 identify ways in which animals can be harmful to humans (e.g., some people have an allergic reaction to bee and wasp venom when they are stung; deer, moose, and bears on roads can pose a hazard to people driving at night)

UNDERSTANDING STRUCTURES AND MECHANISMS: Movement

Overall Expectations

2s18 **CR2007**	1. assess the impact on society and the environment of simple machines and mechanisms;
2s19 **CR2007**	2. investigate mechanisms that include simple machines and enable movement;
2s20 **CR2007**	3. demonstrate an understanding of movement and ways in which simple machines help to move objects.

1. Relating Science and Technology to Society and the Environment

2s21 **CR2007**	1.1 assess the impact on society and the environment of simple machines that allow movement Sample prompts: Some simple machines add enjoyment to our lives (e.g., the wheel and axle on devices such as skateboards, the lever on devices such as teeter totters and the keys on a piano). Common mechanisms and simple machines make it easier to carry out tasks that require movement because less force is needed (e.g., using a pulley makes it easier to lift a load), and make it possible for people with disabilities to lead a more active life (e.g., using a wheelchair allows people with disabilities to be more independent; using a ramp allows people in wheelchairs to move from one level to another). The use of simple machines to make life easier has created a more sedentary lifestyle that has created health problems for many humans. Some mechanisms use a lot of energy and pollute the air and water. Some mechanisms are a source of danger to humans and animals.

2. Developing Investigation and Communication Skills

2s22 **CR2007**	2.1 follow established safety procedures during science and technology investigations (e.g., return tools to their designated area when they are done with them; carry tools and materials safely)
2s23 **CR2007**	2.2 investigate and describe different kinds of movement (e.g., by observing how toys and other everyday objects move)
2s24 **CR2007**	2.3 investigate the structure and function of simple machines (e.g., by building a wheel and axle for a toy car; by exploring the effects of changing the slope of a ramp)

2s25 **CR2007**	2.4 use technological problem-solving skills (see page 16), and knowledge and skills acquired from previous investigations, to design, build, and test a mechanism that includes one or more simple machines (e.g., a toy, a model vehicle) Sample guiding questions: What is the purpose of your mechanism? What simple machine(s) does it use? Explain how it does what it does.What kind of movement does it demonstrate? What were some of the challenges in designing and making your mechanism? Based on the tests you conducted, what might you change about your mechanism?
2s26 **CR2007**	2.5 use appropriate science and technology vocabulary, including push, pull, beside, above, wheel, axle, and inclined plane, in oral and written communication
2s27 **CR2007**	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 to the class the process they followed in building a mechanism that

3. Understanding Basic Concepts

2s28 **CR2007**	3.1 describe different ways in which objects move (e.g., turning, spinning, swinging, bouncing, vibrating, rolling)
2s29 **CR2007**	3.2 identify ways in which the position of an object can be changed (e.g., by pushing, by pulling, by dropping)
2s30 **CR2007**	3.3 identify the six basic types of simple machines – lever; inclined plane; pulley; wheel and axle, including gear; screw; and wedge – and give examples of ways in which each is used in daily life to make tasks easier
2s31 **CR2007**	3.4 describe how each type of simple machine allows humans to move objects with less force than otherwise would be needed (e.g., an inclined plane allows a heavy object to be moved upwards more easily than if it were lifted and carried up stairs; a wheel and axle allow an object to roll, which creates less friction than if it were dragged; a lever activated by a piano key strikes [pushes] a string, which vibrates to make a sound)
2s32 **CR2007**	3.5 identify simple machines used in devices that move people (e.g., the wheel and axle on a bicycle or a car; the pulleys on an elevator; the inclined planes of moving ramps in parking garages and malls)

UNDERSTANDING MATTER AND ENERGY: Properties of Liquids and Solids

Overall Expectations

2s33 **CR2007**	1. assess ways in which the uses of liquids and solids can have an impact on society and the environment;
2s34 **CR2007**	2. investigate the properties of and interactions among liquids and solids;
2s35 **CR2007**	3. demonstrate an understanding of the properties of liquids and solids.

1. Relating Science and Technology to Society and the Environment

2s36 **CR2007**	1.1 assess the ways in which liquids and solids in the home are used, stored, and disposed of in terms of the effect on personal safety and the health of the environment, and suggest responsible actions to replace inappropriate practices Sample prompts: Directions for the use of medicines and cleaning products should be followed carefully. Medicines should be used only by the person for whom they are prescribed. Cleaning products should be stored in the original container and kept out of reach of young children. Old paint and pesticides should be taken to an appropriate waste disposal depot.
2s37 **CR2007**	1.2 assess the impacts of changes in state of solids and liquids on individuals and society Sample prompts: Rain turns to sleet or freezing rain when the temperature near the ground is cold enough. Freezing rain makes walking and driving dangerous. If layers of ice build up on power lines, the lines can fall, leaving people without power to their homes. Tree branches coated with this ice can also fall.

2. Developing Investigation and Communication Skills

2s38 **CR2007**	2.1 follow established safety procedures during science and technology investigations (e.g., clean up spills as soon as they happen)
2s39 **CR2007**	2.2 investigate the properties of liquids (e.g., conduct experiments to compare the rate at which different liquids flow) and solids (e.g., conduct experiments to find out ways in which solids can be changed)
2s40 **CR2007**	2.3 investigate, through experimentation, interactions that occur as a result of mixing and/or dissolving liquids and solids (e.g., salt and water, sand and water), liquids and liquids (e.g., oil and water), and solids and solids (e.g., salt and sand)
2s41 **CR2007**	2.4 use scientific inquiry/experimentation skills (see page 12) to investigate liquids and solids in terms of their capacity for buoyancy (e.g., wood floats, coins sink) and/or absorption (e.g., paper towel absorbs liquid, plastic wrap repels liquid) Sample guiding questions: What question are you trying to answer about buoyancy or absorption? What steps did you follow to carry out your experiment? What did you predict will happen? What did you find out? What conclusions can you make from this information? How might you share the things that you learned? How might someone use the information that you gathered from your experiments?
2s42 **CR2007**	2.5 use technological problem-solving skills (see page 16), and knowledge acquired from previous investigations, to design, build, and test a structure that involves interactions between liquids and solids (e.g., an object that floats) Sample guiding questions: What did you build? How does it use the properties of liquids and solids? What changes might you make based on the testing that you did on your object? Who might find this information useful?
2s43 **CR2007**	2.6 use appropriate science and technology vocabulary, including clear, opaque, runny, hard, greasy, and granular, in oral and written communication
2s44 **CR2007**	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., use a simple drawing program to write a booklet for the school library describing class experiments in investigating liquids and solids)

3. Understanding Basic Concepts

2s45 **CR2007**	3.1 identify objects in the natural and built environment as solids (e.g., sand, ice, rocks, tables, sidewalks, walls) or liquids (e.g., water, tree sap, milk, gasoline)
2s46 **CR2007**	3.2 describe the properties of solids (e.g., they maintain their shape and cannot be poured) and liquids (e.g., they take the shape of the container they are in and can be poured)
2s47 **CR2007**	3.3 describe the characteristics of liquid water (e.g., it takes the shape of the container it is in) and solid water (e.g., ice floats), and identify the conditions that cause changes from one to the other (e.g., water turns to ice when the temperature goes below zero; ice turns to water when heated)
2s48 **CR2007**	3.4 identify conditions in which the states of liquids and solids remain constant (e.g., solids remain solid when broken; liquids remain liquid when poured) and conditions that can cause their states to change (e.g., liquids may freeze when the temperature drops; solids may melt when heated)
2s49 **CR2007**	3.5 describe some ways in which solids and liquids can be combined to make useful substances (e.g., flour and water make paste; milk and chocolate powder make chocolate milk)
2s50 **CR2007**	3.6 explain the meaning of international symbols that give us information on the safety of substances (e.g., a skull-and-crossbones symbol means that the substance is poisonous; a flame inside a hexagon means that the substance is flammable)

UNDERSTANDING EARTH AND SPACE SYSTEMS: Air and Water in the Environment

Overall Expectations

2s51 **CR2007**	1. assess ways in which the actions of humans have an impact on the quality of air and water, and ways in which the quality of air and water has an impact on living things;

2s52 **CR2007**	2. investigate the characteristics of air and water and the visible/invisible effects of and changes to air and/or water in the environment;
2s53 **CR2007**	3. demonstrate an understanding of the ways in which air and water are used by living things to help them meet their basic needs.

1. Relating Science and Technology to Society and the Environment

2s54 **CR2007**	1.1 assess the impact of human activities on air and water in the environment, taking different points of view into consideration (e.g., the point of view of parents, children, other community members), and plan a course of action to help keep the air and water in the local community clean Sample prompts: “On the weekend, after my mom and I washed the car, we poured the soapy water down the drain at the corner of our street.” “I wanted to walk with my dad to the library, but he wanted to drive because it is faster.”
2s55 **CR2007**	1.2 assess personal and family uses of water as responsible/efficient or wasteful, and create a plan to reduce the amount of water used, where possible Sample prompts: Many people do not realize how much water they use, because it seems so easy to get water. We shouldn’t waste water, for the same reasons that we shouldn’t waste food – for example, because others don’t have enough and it costs money. In what ways do you and your family use water at home (e.g., flushing the toilet, drinking, bathing, washing dishes, watering the lawn)? What does it mean to use water excessively? How might your use of water change if you had to carry it from a central source into your house or apartment? What responsible/efficient wateruse practices does your family use already (e.g., fixing leaky faucets or toilets quickly; turning off the water while you brush your teeth or soap up your hands and face; watering the lawn early in the morning to reduce evaporation; running the dishwasher only with a full load)? What are some other strategies that you and your family might implement in the future (e.g., installing low-flow shower heads and a water-saver flush kit in the toilet; not splashing lots of water out of swimming pools; keeping a bottle of drinking water in the refrigerator rather than letting your tap run to get cold water when you want a drink)?

2. Developing Investigation and Communication Skills

2s56 **CR2007**	2.1 follow established safety procedures during science and technology investigations (e.g., use caution around hot kettles and the steam they produce; clean up water spills as soon as they happen)
2s57 **CR2007**	2.2 investigate, through experimentation, the characteristics of air (e.g., air takes up space, has mass) and its uses (e.g., living things breathe air to stay alive; air makes certain activities possible: helps keep a kite flying and a sailboat moving)
2s58 **CR2007**	2.3 investigate, through experimentation, the characteristics of water (e.g., water takes up space, flows or moves when not contained, has mass) and its uses (e.g., living things need water to stay alive; water makes things move: spins a water wheel; water makes certain activities possible: keeps a white-water raft afloat)
2s59 **CR2007**	2.4 investigate the stages of the water cycle, including evaporation (e.g., heat water in a kettle), condensation (e.g., collect the water vapour from the kettle on an overturned mirror), precipitation (e.g., allow the water vapour on the overturned mirror to collect, cool, and drop), and collection (e.g., let the dripping water accumulate in a container)
2s60 **CR2007**	2.5 investigate water in the natural environment (e.g., observe and measure precipitation; observe and record cloud formations; observe water flow and describe where it goes; observe a puddle over time and record observations) Sample guiding questions: Where does the water come from? Where does it go? What happens to snow when it disappears? What do you notice about the sky when it is raining/ snowing? How does fog feel?
2s61 **CR2007**	2.6 use appropriate science and technology vocabulary, including solid, liquid, vapour, evaporation, condensation, and precipitation, in oral and written communication
2s62 **CR2007**	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 posters or media ads that encourage care and concern for water and air in the community)

3. Understanding Basic Concepts

2s63 **CR2007**	3.1 identify air as a gaseous substance that surrounds us and whose movement we feel as wind

2s64 **CR2007**	3.2 identify water as a clear, colourless, odourless, tasteless liquid that exists in three states and that is necessary for the life of most animals and plants
2s65 **CR2007**	3.3 describe ways in which living things, including humans, depend on air and water (e.g., most animals, including humans breathe air to stay alive; wind generates energy, disperses seeds; all living things need to drink or absorb water to stay alive; water is used for washing and bathing, transportation, energy generation)
2s66 **CR2007**	3.4 identify sources of water in the natural and built environment (e.g., natural: oceans, lakes, ponds, streams, springs, water tables; human-made: wells, sewers, watersupply systems, reservoirs, water towers)
2s67 **CR2007**	3.5 identify the three states of water in the environment, give examples of each (e.g., solid – visible as ice, snow, sleet, hail, frost; liquid – visible as rain, dew; gas – visible as fog, water vapour), and show how they fit into the water cycle when the temperature of the surrounding environment changes (e.g., heat – evaporation; cooling – condensation and precipitation)
2s68 **CR2007**	3.6 state reasons why clean water is an increasingly scarce resource in many parts of the world

HC: Traditions and Celebrations

Overall Expectations

2z1 • demonstrate an understanding that Canada is a country of many cultures;

2z2 • use a variety of resources and tools to gather, process, and communicate information about similarities and differences among family traditions and celebrations;

2z3 • explain how the various cultures of individuals and groups contribute to the local community.

Knowledge and Understanding

2z4 – demonstrate an understanding that communities may be made up of people from many cultures;

2z5 – outline traditions of various cultures that are passed down from earlier generations (e.g., celebrations, names);

2z6 – identify ways in which heritage and traditions are passed on (e.g., stories; community celebrations; special days such as Remembrance Day, Canada Day, Aboriginal Solidarity Day, and religious holidays; the Canadian flag; music, crafts, dance, food, recreation, clothing);

2z7 – identify the origins and features of various families (e.g., nationality, culture, size, structure);

2z8 – explain the significant traditions and celebrations of families from a variety of cultural traditions.

Inquiry/Research and Communication Skills

2z9 – ask simple questions to gain information and seek clarification (e.g.,What are the similarities and differences in celebrations among cultures? How are they the same? How are they different?);

2z10 – use primary and secondary sources to locate simple information about family history and traditions (e.g., *primary sources:* interviews, eyewitness visitors, class trips; *secondary sources*: maps, illustrations, print materials, videos);

2z11 – use illustrations, key words, and simple sentences (e.g., timeline of major family events, simple family tree) to sort, classify, and record basic information about family history and traditions;

2z12 – make and read a variety of graphs, charts, diagrams, maps, and models to understand information about cultural or religious traditions and share it with members of the class (e.g., Festivals of Lights, First Nation powwows, toys from various cultures);

2z13 – use appropriate vocabulary (e.g., *culture, celebrations, heritage, traditions*) to communicate the results of inquiries and observations about family traditions and celebrations.

Application

2z14 – identify examples that show the participation of various cultures in the community (e.g., restaurants, places of worship, styles of dress);

2z15 – identify community celebrations that reflect their own heritage and/or their Canadian identity (e.g., Remembrance Day, Canada Day, Victoria Day, Aboriginal Solidarity Day, Chinese New Year).

CWC: Features of Communities Around the World

Overall Expectations

2z16 • demonstrate an understanding that the world is made up of countries, continents, and regions and that people's lifestyles may differ from country to country;

2z17 • use a variety of resources and tools to gather, process, and communicate geographic information about the countries studied;

2z18 • explain how the environment affects people's lives and the ways in which their needs are met.

Knowledge and Understanding

2z19 – recognize that the world is made up of countries, continents, and regions, including Canada in the continent of North America;

2z20 – demonstrate an understanding of the relationship between location and climate (e.g., warmer climates occur near the equator);

2z21 – describe some similarities and differences in the ways communities around the world meet their needs (e.g., with respect to food, clothing, shelter, recreation);

2z22 – identify similarities and differences (e.g., in food, clothing, homes, recreation, land use, transportation, language) between their community and a community in another part of the world.

Inquiry/Research and Communication Skills

2z23 – ask questions and use factual texts (e.g., illustrated dictionaries and encyclopedias) to obtain information about communities around the world;

2z24 – interpret data and draw simple conclusions (e.g., establish connections between climate and clothing, or among artefacts, games, and celebrations);

2z25 – sort and classify information using more than one criterion (e.g., how environment affects the ways needs are met);

2z26 – use appropriate vocabulary (e.g., *globe, model, distance, sphere, hemisphere, culture, countries, equator, North Pole, South Pole*) to communicate the results of inquiries and observations about communities around the world.

Map, Globe, and Graphic Skills *

2z27 – recognize and use pictorial symbols (e.g., for homes, roads), colour (e.g., blue line/river), legends, and cardinal directions (i.e., N, S, E,W) on maps of Canada and other countries;

2z28 – identify the earth as a sphere and half the earth as a hemisphere;

2z29 – demonstrate an understanding that the globe is a model of the earth;

2z30 – find the equator and the poles on a map and/or globe;

2z31 – locate on a globe or map their local community in Ontario; Canada; and the various countries and continents studied;

2z32 – construct and read a variety of graphs, charts, diagrams, maps, and models to clarify and display information (e.g., make graphs to compare the homes in various world communities).

Application

2z33 – present information about children around the world (e.g., country of origin, language, food, clothing, homes, games);

2z34 – compare how people living in different climates (e.g., near the poles and near the equator) meet their needs for food, shelter, clothing, and recreation.

Healthy Living

Overall Expectations

2p1 • identify healthy eating practices and use a decision-making model to make healthy food choices;

2p2 • describe parts of the human body, the functions of these parts, and behaviours that contribute to good health;

2p3 • outline safety rules and safe practices;

2p4 • describe the effects on the body of appropriate and inappropriate uses of medicines.

Healthy Eating

2p5 – identify a balanced diet and apply decision-making skills to create menus for healthy meals;

2p6 – describe the importance of food to the body (e.g., for energy and growth);

2p7 – explain the negative effects of poor nutrition on healthy teeth and the importance of regular brushing and visits to the dentist;

Growth and Development

2p8 – distinguish the similarities and differences between themselves and others (e.g., in terms of body size or gender);

2p9 – describe how germs are transmitted and how this relates to personal hygiene (e.g., using tissues, washing hands before eating);

2p10 – identify the five senses and describe how each functions;

Personal Safety / Injury Prevention

2p11 – identify safety rules to be followed in the home, school, and community (e.g., electrical safety, schoolyard rules, bus safety);

2p12 – describe types of verbal and physical violence (e.g., name calling, kicking, hitting);

2p13 – explain the importance of being able to say no to exploitative behaviours (e.g., improper touching), and describe how to seek help;

Substance Use / Abuse

2p14 – describe the difference between prescription and non-prescription medicines;

2p15 – outline the safe use of medicines (e.g., the need for an adult to supervise the administration of medicines, taking proper dosages);

2p16 – use decision-making skills to identify healthy alternatives to drug use (e.g., fresh air and exercise can help relieve headaches).

Fundamental Movement Skills

Overall Expectations

2p17 • perform the basic movement skills required to participate in physical activities: locomotion/travelling (e.g., skipping, hopping), manipulation (e.g., throwing, bouncing), and stability (e.g., balancing, twisting);

2p18 • demonstrate the principles of movement (e.g., at various levels, in relationship to equipment, using different body parts) using locomotion/travelling, manipulation, and stability skills.

Locomotion / Travelling Skills

2p19 – travel and change from one kind of locomotion/travelling movement to another (e.g., hopping to skipping);

2p20 – travel in a variety of ways, changing pathways and directions (e.g., in creative dance, dances from other countries);

Manipulation Skills

2p21 – kick a stationary ball, using either foot, to a partner or to a large target;

2p22 – dribble a ball over a short distance, using their feet;

2p23 – bounce a ball while moving, using either hand;

Stability Skills

2p24 – jump and land safely, using take-off combinations of one or two feet;

2p25 – balance on a variety of body parts, on and off equipment, while stationary and moving (e.g., balancing on a bench without moving, walking forward on a bench);

2p26 – transfer their body weight over low equipment in a variety of ways (e.g., from feet to hands to feet).

Active Participation

Overall Expectations

2p27 • participate on a regular basis in physical activities that maintain or improve physical fitness (e.g., games, gymnastics, dance);

2p28 • recognize the personal benefits of being physically active;

2p29 • acquire living skills (e.g., basic problem-solving, decision-making, goal-setting, and interpersonal skills) through physical activities (e.g., games, gymnastics, dance, outdoor pursuits);

2p30 • follow safety procedures related to physical activity, equipment, and facilities.

Physical Activity

2p31 – participate vigorously in all aspects of the program (e.g., individual and group activities, dancing to music, co-operative games);

2p32 – identify the reasons for participating in regular physical activity;

2p33 – display readiness to participate in the instructional program (e.g., taking out and putting away equipment, joining in readily, wearing appropriate clothing, and applying sun protection when necessary);

2p34 – stay on task, follow instructions, pay attention, and see tasks through to completion;

Physical Fitness

2p35 – participate in moderate to vigorous physical activity (e.g., an aerobics routine) for a minimum of twenty minutes each day, including appropriate warm-up and cool-down procedures;

2p36 – explain the importance of stretching the large muscle groups through warm-ups before physical activity;

2p37 – recognize that the body needs activity for sustained amounts of time to improve the strength of the heart and lungs;

2p38 – assess their degree of exertion in physical activities (e.g., by calculating their heart beat or breathing rate);

Living Skills

2p39 – participate in personal or group goal setting related to physical activity (e.g., to bring proper clothing for gymnastics, to bench step for two minutes);

2p40 – demonstrate appropriate interpersonal skills and respectful behaviour (e.g., displaying etiquette, playing fairly, co-operating) in physical activities;

2p41 – provide help to and ask for help from group members.

Music

Overall Expectations

2a1 • demonstrate an understanding of the basic elements of music specified for this grade (see below) through listening to, performing, and creating music;

2a2 • recognize a variety of sound sources and use some in performing and creating music;

2a3 • use correctly the vocabulary and musical terminology associated with the specific expectations for this grade;

2a4 • identify and perform music from various cultures and historical periods;

2a5 • communicate their response to music in ways appropriate for this grade (e.g., through visual arts, drama, creative movement, language).

Knowledge of Elements

2a6 – identify examples of beat in their environment and in music (e.g., ticking of clocks, steady pulse in rhymes or songs);

2a7 – identify rhythmic patterns (e.g., clap the pattern of syllables in nursery rhymes);

2a8 – distinguish between beat and rhythm in a variety of pieces of music;

2a9 – identify higher- and lower-pitched sounds in a familiar melody;

2a10 – reproduce specific pitches in call-and-response activities (e.g., singing games);

2a11 – identify examples of dynamics in pieces of music and describe how the loudness and softness are achieved (e.g., loudness results when a drum is struck with more force);

2a12 – identify the tempo of various pieces of music;

2a13 – identify the four families of orchestral instruments (strings, woodwinds, brass, percussion).

Creative Work

2a14 – sing music from a variety of cultures and historical periods (e.g., folk songs);

2a15 – create rhythmic and melodic patterns (e.g., ostinati), using a variety of sounds (e.g., vocal and instrumental sounds);

2a16 – create simple patterned movement to familiar music, using their knowledge of beat and rhythm;

2a17 – sing simple, familiar songs in tune in unison;

2a18 – sing expressively, showing an understanding of the text;

2a19 – accompany songs in an expressive way, using appropriate rhythm instruments, body percussion, or “found” instruments;

2a20 – create and perform musical compositions, applying their knowledge of the elements of music and patterns of sound;

2a21 – create short songs and instrumental pieces, using a variety of sound sources;

2a22 – produce a specific effect (e.g., create a soundscape as background for a story or poem), using various sound sources (e.g., the voice, the body, instruments).

Critical Thinking

2a23 – express their response to music from a variety of cultures and historical periods (e.g., “Largo al factotum della città” from The Barber of Seville by Rossini, “Lunatic Menu” by Ippu Do);

2a24 – communicate their thoughts and feelings about the music they hear, using language and a variety of art forms and media (e.g., create a dance, dramatize a song);

2a25 – recognize that mood can be created through music (e.g., in a work such as Carnival of the Animals by Saint-Saëns);

2a26 – explain, using basic musical terminology, their preference for specific songs or pieces of music;

2a27 – recognize and explain the effects of different musical choices (e.g., slow music that is loud can be dramatic or ceremonial whereas slow music that is soft can suggest thoughtfulness).

Visual Arts

Overall Expectations

2a28 • produce two- and three-dimensional works of art that communicate ideas (thoughts, feelings, experiences) for specific purposes and to familiar audiences;

2a29 • use the elements of design (colour, line, shape, form, space, texture), in ways appropriate for this grade, when producing and responding to works of art;

2a30 • describe how the ideas in a variety of art works relate to their own knowledge and experience and to other works they have studied;

2a31 • use correctly vocabulary and art terminology associated with the specific expectations for this grade.

Knowledge of Elements

2a32 – recognize and name the secondary colours of pigment (purple, orange, green);

2a33 – describe how the secondary colours can be created by mixing the primary colours (e.g., blue and yellow make green);

2a34 – identify types of lines in art works and in the environment (e.g., horizontal, vertical, diagonal);

2a35 – identify the characteristics of symmetrical shapes and forms (e.g., show that all sides of square objects are the same in length);

2a36 – identify and describe a variety of textures (e.g., rough: tree bark; smooth: plastics; ridged: corduroy fabrics);

2a37 – identify the elements of design in a variety of familiar objects (e.g., colour in clothing, symmetrical forms in buildings) and in works of art;

2a38 – describe different ways in which a variety of art materials, tools, and techniques can be used (e.g.,construction paper can be fringed with scissors, used as a background for paintings, cut into shapes to make pictures), and demonstrate understanding of their safe and proper use.

Creative Work

2a39 – make artistic choices in their work, using at least two of the elements of design specified for this grade for a specific purpose (e.g., sharp, jagged lines to depict a bulldozer tearing up trees);

2a40 – produce two- and three-dimensional works of art (i.e., works involving media and techniques used in drawing, painting, sculpting, printmaking) that communicate their thoughts and feelings on familiar topics (e.g., using pencil crayons, make a drawing of a tree after observing real trees and trees in works by Emily Carr, Tom Thomson, and Vincent van Gogh)

2a41 – identify, in a plan, their specific choices of subject matter and tools, materials, and techniques (e.g., a plan to make a picture of their family in which they will use paint and fabric);

2a42 – identify strengths and areas for improvement in their own and others' art work, and explain their choice (e.g., "I did a good job of cutting out the circles. Next time I will choose a background colour that makes the circles stand out more").

Critical Thinking

2a43 – describe the subject matter of a variety of art works from various cultures and periods and in various styles (e.g., Child and Dog by Alex Colville and The Sleeping Gypsy by Henri Rousseau, which depict animals);

2a44 – describe, using appropriate vocabulary, how artists use the elements of design to create a specific effect (e.g., diagonal lines to suggest movement);

2a45 – describe the relationship between an art work and their own experiences (e.g., explain how the images used by an artist to represent winter are similar to or different from images that they would use to depict their own experiences of winter).

Drama & Dance

Overall Expectations

2a46 • describe some of the basic elements of drama and dance (e.g., time, space);

2a47 • interpret the meaning of stories, poems, and other material drawn from a variety of sources and cultures, using several basic drama and dance techniques (e.g., tableaux);

2a48 • create short dance pieces, using techniques learned in this grade;

2a49 • communicate understanding of works in drama and dance through discussion, writing, movement, and visual art work;

2a50 • solve problems in various situations through role playing and movement in drama and dance.

Knowledge of Elements

2a51 – identify and use some key elements of drama and dance in exploring source materials (e.g., move at different speeds and different levels to music or to the words of a poem);

2a52 – use the vocabulary, tone of voice, and body movements appropriate for a specific character when role playing;

2a53 – write in role as characters in a story, using the vocabulary and portraying the attitudes of the characters;

2a54 – describe their own and others' work, using drama and dance vocabulary (e.g., identify the tableau as a way of crystallizing a moment of importance in a story);

2a55 – identify and describe symbols that are relevant to the meaning of stories and poems (e.g., the heart as a symbol of love);

2a56 – distinguish between real and imaginary situations in drama and dance;

2a57 – recognize and demonstrate movement sequences used by specific characters or found in their natural surroundings (e.g., the sequence of movements of a knight donning armour; the sequence of movements of a butterfly emerging from a cocoon);

2a58 – identify parts of the body and describe the variety of movements that can be done by each of them.

Creative Work

2a59 – speak in role as characters in a story, assuming the attitude and gestures of the people they are playing (e.g., as a courtier, bow to the king and use appropriate language when speaking to him);

2a60 – demonstrate the ability to move and control their bodies in space and time (e.g., by creating tableaux in small groups);

2a61 – use language and non-verbal means of communication effectively for a variety of purposes both in and out of role (e.g., explain why a character in a story or drama should not leave home);

2a62 – perform a "soundscape" or sound collage based on a theme or topic studied in another area of the curriculum (e.g., portray wind and moving water studied in science);

2a63 – interpret songs, music, poetry, or images, using elements of movement (e.g., rhythm, space).

Critical Thinking

2a64 – compare what they experience through drama and dance presentations with their experience of daily life;

2a65 – ask and respond appropriately to relevant questions, in and out of role, about characters and dramatic situations being explored (e.g., “Do we have the necessary equipment to go down into the mine?”);

2a66 – compare, while working with others, some possible solutions to problems identified through drama and dance (e.g., finding the way home when lost in the forest);

2a67 – identify specific aspects (e.g., movements, words) of their work and that of others that were effective (e.g., the scary way the dancer stopped and turned).