



# Learning

# Outcomes

# Framework

April 2004

*Grade 4*



**Learning Outcomes Framework**  
**Grade 4**



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# Contents

Introduction .....	v
Core French .....	1
English Language Arts .....	4
Health Education .....	7
Mathematics .....	10
Music .....	13
Physical Education .....	15
Science .....	18
Social Studies .....	25
Visual Arts .....	26



# Introduction

The learning outcomes framework comprises a series of curriculum outcomes statements describing what knowledge, skills, and attitudes students are expected to demonstrate as a result of their cumulative learning experiences in the primary–graduation continuum. Through an ongoing process, the Department of Education is developing a learning outcomes framework for each area of the public school program.

This document provides an overview of the learning outcomes framework organized by grade level and subject area. It is intended to serve as a brief survey of expected learning outcomes and as a tool to assist teachers in program planning. The connections among learning outcomes reflect natural affinities among subject areas and facilitate the design of a balanced, integrated program.

In designing appropriate learning experiences that enable students to achieve the expected learning outcomes, teachers and administrators are expected to refer to foundation documents and related curriculum guides listed in *Public School Programs: 2002–2003*. In planning the appropriate use of information technologies as tools for learning and teaching, teachers and administrators should also refer to *Vision and Learning Outcomes for the Integration of Information Technologies within Nova Scotia Public School Programs*.

Foundation documents provide the framework for general and key-stage curriculum outcomes, outline the focus and key features of the curriculum, and describe contexts for learning and teaching. Curriculum guides elaborate on specific curriculum outcomes and describe other aspects of curriculum, such as program design and components, instructional and assessment strategies, and resources.

General curriculum outcomes are statements which identify what students are expected to know and be able to do upon completion of study in a curriculum area. Key-stage curriculum outcomes are statements which identify what students are expected to know and be able to do by the end of grades 3, 6, 9, and 12 as a result of their cumulative learning experiences in a curriculum area. Specific curriculum outcomes are statements which identify what students are expected to know and be able to do at a particular grade level.

The following overview of the learning outcomes framework notes general curriculum outcomes and specific curriculum outcomes. For some subject areas, key-stage curriculum outcomes are also included. It should be noted that specific curriculum outcomes noted for social studies and science are draft statements. While implementation of new curriculum in these subjects is not yet required, teachers may wish to consider these draft statements in planning their instructional programs.

## Elementary Program Components

Elementary schools must include, for all children in each year's program for grades primary–6, health education, language arts, mathematics, music, physical education, social studies, science, and visual arts. In English schools, core French must be offered beginning at grade 4. Where offered, Gaelic as a second language and Mi'kmaq as a second language may be introduced at grade 3. The elementary program does not include technology education as a subject area; however, the general and key-stage curriculum outcomes for technology education included in this booklet provide a framework for teachers of grades primary–6 to use in integrating technology education within learning experiences across the curriculum.



# Core French

## Key-Stage Curriculum Outcomes

*By the end of grade 6, students will be expected to*

## Specific Curriculum Outcomes

*Students will be expected to*

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### Communication

GCO: On the basis of their experience in the Core French curriculum, students will be expected to

- communicate effectively in French, both orally and in writing
- interact appropriately in a variety of situations that relate to their needs and interests

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|---|--|
| <ul style="list-style-type: none"> <li>• cope in a classroom where French is the language spoken</li> <li>• share information by using simple sentences and/or by answering questions</li> <li>• use simple questions for information</li> <li>• share their tastes, preferences, interests and feelings</li> <li>• participate in a variety of interactive activities</li> </ul> | <ul style="list-style-type: none"> <li>• follow and give directions (emerging)</li> <li>• introduce themselves, greet someone (emerging)</li> <li>• ask for and give information (emerging)</li> <li>• express and justify their wishes and preferences (emerging)</li> <li>• identify and describe objects, animals, people, events and places that are part of their environment (emerging)</li> <li>• participate in conversations, games, brain-storming, surveys and skits (emerging)</li> <li>• extend an invitation (emerging)</li> <li>• convince (emerging)</li> <li>• recognize the characteristics of different types of texts: expressive, informative, persuasive, humorous, poetic (emerging)</li> <li>• read to find specific information in newspapers, magazines, rules, directions, pamphlets, jokes, songs, comic strips and technology resources (emerging)</li> <li>• respond personally to texts through song, mime, drawing and drama (emerging)</li> <li>• compose greeting cards, letters, simple descriptions, reports, lists, legends for illustrations and maps, slogans, songs, chants, rhymes, comic strips, posters, crossword puzzles and e-mail (emerging)</li> <li>• revise and correct their text with a checklist or model (emerging)</li> </ul> |
| <ul style="list-style-type: none"> <li>• demonstrate an understanding of the main idea in a simple text</li> <li>• pick out relevant details in a simple text</li> <li>• respond personally to simple texts</li> <li>• produce a variety of simple texts, often by following a model</li> </ul>   |  |

## Key-Stage Curriculum Outcomes

*By the end of grade 6, students will be expected to*

## Specific Curriculum Outcomes

*Students will be expected to*

### Culture

GCO: On the basis of their experience in the Core French curriculum, students will be expected to

- demonstrate an appreciation and understanding of francophone cultures, while comparing them with their own culture
- demonstrate an appreciation and understanding of Canada's multicultural reality

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|--|---|
| • identify and locate certain francophone communities locally, provincially and nationally   | • recognize and describe, both orally and in writing, the Acadian presence locally and provincially; for example, the names of families, streets, schools, restaurants and place (emerging) |
| • identify and describe certain realities of francophone cultures                            | • recognize and describe, both orally and in writing, certain aspects of the Acadian and francophone cultures in other provinces; for example, food, local festivals (emerging)             |
| • name some similarities and differences between their cultures and the francophone cultures | • compare their own culture with the Acadian culture (emerging)   |
| • identify some contemporary francophone personalities                                       | • listen to French popular music (emerging)   |
| • demonstrate an awareness of Canada's cultural mosaic                                       | • name some Acadian and Quebecois musicians, athletes, politicians, etc. (emerging)   |
| • demonstrate knowledge of authentic nursery rhymes and songs                                | • listen to/watch the media in French, including the Internet (emerging)  |
| • identify the signs of bilingualism in our society  | • identify celebrities representative of the Canadian mosaic (emerging)   |
|  | • sing "Ô Canada" (emerging)  |
|  | • sing traditional folk songs (emerging)  |
|  | • use nursery rhymes, rhyming games (emerging)  |
|  | • be aware that labels are written in both official languages (emerging)  |
|  | • recognize that Canadian advertising is done in both official languages (emerging)   |

### General Language Education

GCO: On the basis of their experience in the Core French curriculum, students will be expected to

- choose and implement strategies to facilitate their communication in French and improve their learning

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| • use learning strategies, communication strategies and social strategies to communicate in French, both orally and in writing | • anticipate the message in oral or written texts (emerging)                                   |
|  | • create connections between an oral or written text and their prior knowledge (emerging)      |
|  | • use images, graphic representations, objects, gestures and actions to communicate (emerging) |
|  | • ask one to repeat, to slow down (emerging)   |

## Key-Stage Curriculum Outcomes

*By the end of grade 6, students will be expected to*

## Specific Curriculum Outcomes

*Students will be expected to*

- make use of production model (emerging)
- use context to understand a message (emerging)
- follow the steps in the writing process (emerging)
- recognize cognates and words in the same family (emerging)
- identify key words in a text (emerging)
- listen attentively and selectively for information (emerging)
- show a tolerance for ambiguity (emerging)
- make use of a variety of resources and technologies (emerging)
- take risks and accept error (emerging)
- interact and cooperate with their peers (take turns, accept the suggestions of others, share information and materials) (emerging)
- practice (emerging)
- reflect on and evaluate their own learning (emerging)

## Language

GCO: On the basis of their experience in the Core French curriculum, students will be expected to

- recognize and use in context elements of the linguistic code, orally and in writing, to facilitate their communication in French.
- 
- recognize the vocabulary, expressions, and structures relating to the needs in the classroom and to areas of experience
  - use the vocabulary, expressions, and structures related to needs in the classroom and to areas of experience
  - introduce themselves, greet someone using simple sentences in the present tense (emerging)
  - ask for and give information using simple sentences in the present tense, the interrogative, and adjectives (emerging)
  - follow and give directions, using the imperative and infinitive (emerging)
  - infer the development and ending of a story using the verb tenses and conjunctions (emerging)
  - compose different texts using simple sentences in the present tense, the imperative, negative and interrogative (emerging)

# English Language Arts

## General Curriculum Outcomes    Specific Curriculum Outcomes

*Students will be expected to*

GCO 1: Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.

- 1.1 explore and discuss their thoughts, ideas, and experiences and consider those of their peers
- 1.2 ask and respond to questions to clarify information and explore solutions to problems (e.g., using an interview format)
- 1.3 explain personal opinions and respond to the questions and opinions of others
- 1.4 listen critically to others' ideas or opinions expressed

GCO 2: Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically.

- 2.1 contribute to conversations, small-group and whole-group discussion, showing an awareness of when to speak and when to listen
- 2.2 use word choice, tone of voice, facial expressions, and gestures appropriate to the speaking occasion
- 2.3 give and follow instructions and respond to questions and directions
- 2.4 engage in and respond to oral presentations (e.g., retell a story, sing a song)

GCO 3: Students will be expected to interact with sensitivity and respect, considering the situation, audience, and purpose.

- 3.1 show basic courtesies of conversation in group interactions
- 3.2 identify examples of prejudice and stereotyping in oral language, and use language that shows respect for all people
- 3.3 show an awareness of the kinds of language appropriate to different situations and audiences

GCO 4: Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.

- 4.1 select, with growing independence, texts appropriate to their interests and learning needs
- 4.2 read widely and experience a variety of children's literature with an emphasis in genre and authors
- 4.3 use pictures and illustrations, word structures, and text features (e.g., table of contents, headings and subheadings, glossaries, structures of narrative and expository texts, key ideas, and margin notes) to locate topics and obtain or verify understandings of information
- 4.4 use and integrate the pragmatic, semantic, syntactic, and graphophonic cueing systems (including context clues; word order; suffixes, compound words, contractions, and singular and plural words) and a variety of strategies to construct meaning
- 4.5 describe their own processes and strategies in reading and viewing

## General Curriculum Outcomes      Specific Curriculum Outcomes

*Students will be expected to*

GCO 5: Students will be expected to interpret, select, and combine information using a variety of strategies, resources, and technologies.

- 5.1 answer, with assistance, their own and others' questions by seeking information from a variety of texts
- determine their own and community (class) needs for information
  - recognize the purpose of classification systems and basic reference materials
  - use a range of reference texts and a database or an electronic search to facilitate the selection process
  - reflect on the process of generating and responding to their own and others' questions

GCO 6: Students will be expected to respond personally to a range of texts.

- 6.1 describe, share, and discuss their personal reactions to texts
- 6.2 give reasons for their opinions about texts and types of texts and the work of authors and illustrators

GCO 7: Students will be expected to respond critically to a range of texts, applying their understanding of language, form, and genre.

- 7.1 use their background knowledge to question information presented in print and visual texts
- 7.2 identify conventions and characteristics of different types of print and media texts that help them understand what they read and view
- 7.3 respond critically to texts by
- asking questions and formulating understandings
  - discussing texts from the perspective of their own experiences
  - identifying instances where language is being used, not only to entertain, but to manipulate, persuade, or control them
  - identifying instances of prejudice and stereotyping

GCO 8: Students will be expected to use writing and other forms of representation to explore, clarify, and reflect on their thoughts, feelings, experiences, and learnings; and to use their imaginations.

- 8.1 use strategies in writing and other ways of representing to
- formulate questions and organize ideas
  - generate topics of personal interest and importance
  - discover and express personal attitudes, feelings, and opinions
  - compare their own thoughts and beliefs to those of others
  - describe feelings, reactions, values, and attitudes
  - record experiences
  - formulate goals for learning
  - practise strategies for monitoring their own learning
- 8.2 experiment with different ways of making their own notes (e.g., webbing, jot notes, matrix)
- 8.3 experiment with language, appropriate to purpose, audience, and form, that enhances meaning and demonstrates imagination in writing and other ways of representing

**General Curriculum Outcomes    Specific Curriculum Outcomes**

GCO 9: Students will be expected to create texts collaboratively and independently, using a wide variety of forms for a range of audiences and purposes.

GCO 10: Students will be expected to use a range of strategies to develop effective writing and other ways of representing and to enhance their clarity, precision, and effectiveness.

*Students will be expected to*

- 9.1 create written and media texts, collaboratively and independently, in different modes (expressive, transactional, and poetic) and in a variety of forms
  - recognize that particular forms require the use of specific features, structures, and patterns
- 9.2 demonstrate an awareness of purpose and audience
- 9.3 invite responses to early drafts of their writing/media productions
  - use audience reaction to help shape subsequent drafts
  
- 10.1 develop a range of prewriting, drafting, revising, editing, proofreading, and presentation strategies
- 10.2 demonstrate an understanding of many conventions of written language in final products
  - correctly spell many familiar and commonly used words
  - demonstrate an increasing understanding of punctuation, capitalization, and paragraphing
  - demonstrate a growing awareness of appropriate syntax
  - use references while editing (e.g., dictionaries, classroom charts, electronic spell checkers, checklists)
- 10.3 use technology with increasing proficiency in writing and other forms of representing
- 10.4 demonstrate a commitment to shaping pieces of writing and other representations through stages of development
- 10.5 select, organize, and combine relevant information from two or more sources to construct and communicate meaning

# Health Education

## General Curriculum Outcomes    Specific Curriculum Outcomes

*Students will be expected to*

### The Body: Growth and Development

GCO A: Students will be expected to demonstrate knowledge of the body, body functions, and growth and development.

- A1.1 demonstrate a knowledge of the digestive and excretory systems and their related organs
- A1.2 demonstrate a knowledge of the skeletal, muscular, and nervous systems and their related organs
- A2.1 demonstrate an understanding of how the digestive and excretory systems process food
- A2.2 demonstrate an understanding of how the skeletal, muscular, and nervous systems work together to produce movement
- A3.1 demonstrate an awareness that childhood is one stage of the life cycle
- A3.2 demonstrate an understanding that body growth and development are influenced by heredity, gender, and other factors

### Strategies for Healthy Living

GCO B: Students will be expected to demonstrate knowledge, skills, and attitudes that contribute to active, healthy living.

- B1.1 demonstrate a knowledge of the personal and social factors affecting food choices
- B1.2 demonstrate an ability to select nutritious breakfast foods
- B2.1 identify and demonstrate effective ways of responding to direct and indirect pressure to use tobacco
- B3.1 identify and practise bicycle and off-road vehicle safety precautions
- B3.2 identify and practise strategies for preventing injury to the skeletal, muscular, and nervous systems
- B3.3 demonstrate knowledge needed to seek help when personal safety is threatened
- B3.4 identify and practise strategies to avoid risks associated with others' harmful involvement with tobacco, alcohol, and other drugs
- B3.5 identify the consequences of inappropriate use of the 911 service

**General Curriculum Outcomes    Specific Curriculum Outcomes**

*Students will be expected to*

- B4.1 demonstrate an understanding of ways the body protects itself from danger and disease
- B4.2 demonstrate a knowledge of the effect of medicine on the body
- B4.3 demonstrate a knowledge of ways that some long-term diseases and medical conditions can be managed
- B4.4 demonstrate an awareness of the addictive nature of nicotine
  
- B5.1 discuss gender issues in a way that reflects thoughtfulness and sensitivity
- B5.2 communicate needs and wants, and express feelings in healthy ways
  
- B6.1 demonstrate an understanding of the relationship between personal care and self-image
  
- B7.1 participate in a broad range of physical activities
- B7.2 describe the role of exercise and diet in maintaining healthy bones and muscles

**Values and Practices for Healthy Living**

GCO C: Students will be expected to demonstrate knowledge of factors that contribute to healthy living values and practices.

- C1.1 demonstrate an awareness of the influence of family practices and values on their food choices
- C1.2 demonstrate an awareness of the effect of harmful involvement with drugs and gambling on family relationships
  
- C2.1 demonstrate an awareness of ways that friends, family, and community groups can support healthy decision making
  
- C3.1 demonstrate an understanding of how society's values and behaviours related to health and sickness have changed over time
  
- C4.1 demonstrate proactive strategies for enhancing the social and environmental health of the school
  
- C5.1 demonstrate an appreciation of the cultural heritage and historical challenges of the Mi'kmaq people

## General Curriculum Outcomes    Specific Curriculum Outcomes

*Students will be expected to*

### Strategies for Positive Personal Development and Healthy Relationships

GCO D: Students will be expected to demonstrate the knowledge, skills, and attitudes necessary to live happily and productively as an individual, within a family, and within the community.

- D1.1 identify and demonstrate attitudes and behaviours that support healthy lifestyle choices
- D1.2 demonstrate an awareness of ways their needs are changing as they grow
- D1.3 engage in effective work habits at school
- D1.4 identify the causes and effects of positive and negative stress
  
- D2.1 demonstrate respect and caring in relating with classmates
- D2.2 define and demonstrate what it means to be a good friend
- D2.3 demonstrate an understanding that relationships entail both rights and responsibilities
- D2.4 identify and demonstrate effective group communication skills
  
- D3.1 identify positive and negative examples of peer influence in decision making
- D3.2 demonstrate an awareness of the effect of harmful involvement with drugs or gambling on decision making
- D3.3 demonstrate an ability to interpret and use information on food labels when making food choices
  
- D4.1 demonstrate an awareness of changing male/female roles in the family
  
- D5.1 define citizenship in the context of the school community

# Mathematics

## General Curriculum Outcomes

GCO A: Students will demonstrate number sense and apply number-theory concepts.

GCO B: Students will demonstrate operation sense and apply operation principles and procedures in both numeric and algebraic situations.

## Specific Curriculum Outcomes

*Students will be expected to*

- A1 identify and model fractions and mixed numbers
- A2 interpret and model decimal tenths and hundredths
- A3 model and record numbers to 99 999
- A4 compare and order whole numbers
- A5 compare and order fractions
- A6 rename fractions with and without the use of models
- A7 compare and order decimals with and without models
  
- B1 add and subtract decimals involving tenths and hundredths, and whole numbers to five digits
- B2 demonstrate an understanding of multiplication meanings and applications
- B3 demonstrate an understanding of the various meanings of division
- B4 multiply 2- and 3-digit numbers by single-digit numbers concretely, pictorially, and symbolically
- B5 divide 2- and 3-digit whole numbers by a single-digit divisor
- B6 use models informally to add simple fractions with common denominators
- B7 demonstrate an understanding of the use of the open frame as a place holder for a digit on some occasions and for a number on other occasions
- B8 relate multiplication and division facts, using principles of these operations
- B9 demonstrate a knowledge of multiplication facts to  $9 \times 9$
- B10 demonstrate an understanding of various treatments of remainders in division situations
- B11 solve and create word problems involving whole number computations
- B12 solve and create word problems involving adding and subtracting decimals (to hundredths)
- B13 estimate sums and differences of whole numbers and decimals
- B14 estimate the product or quotient of 2-digit or 3-digit numbers and single-digit numbers
- B15 mentally solve appropriate addition and subtraction computations
- B16 mentally multiply 2-digit numbers by 10 or 100
- B17 use technology for computations involving many decimal places or large whole numbers

## General Curriculum Outcomes    Specific Curriculum Outcomes

*Students will be expected to*

GCO C: Students will explore, recognize, represent, and apply patterns and relationships, both informally and formally.

- C1 demonstrate an understanding of the relationship between adding decimals and adding whole numbers
- C2 apply the pattern identified when multiplying by increasing powers of ten
- C3 use patterns to solve computation problems
- C4 understand how a change in either  $a$  or  $b$  in  $a + b$ ,  $a - b$ ,  $a \times b$ , or  $a \div b$  will affect the result of the computation
- C5 represent multiplication facts either in a table or graphically
- C6 complete open sentences of the form  $a \times b = \square$ ,  $a \times \square = c$ ,  $a \div b = \square$ , and  $a \div \square = c$

GCO D: Students will demonstrate an understanding of and apply concepts and skills associated with measurement.

- D1 recognize and demonstrate that objects of various shapes can have the same area
- D2 recognize and demonstrate that objects of the same area can have different perimeters
- D3 measure volume, using non-standard units
- D4 estimate and determine the volume of rectangular prisms, using centimetre cubes
- D5 recognize that the measure of an angle indicates an amount of turn
- D6 estimate and measure angles, using non-standard units
- D7 use a thermometer to read temperatures
- D8 estimate and measure in millimetres, centimetres, decimetres, metres, and kilometres
- D9 estimate and measure area in square centimetres
- D10 solve relevant problems involving millilitres and litres, grams and kilograms
- D11 relate dimensions and areas of rectangles to factors and products

GCO E: Students will demonstrate spatial sense and apply geometric concepts, properties, and relationships.

- E1 draw various nets for rectangular prisms and cubes
- E2 construct models for various cylinders, cones, prisms, and pyramids
- E3 construct shapes given isometric drawings
- E4 explore relationships among 3-D shapes
- E5 find all possible composite figures that can be made from a given set of figures
- E6 recognize, name, describe, and construct acute and obtuse angles
- E7 recognize, name, describe, and construct equilateral, isosceles, and scalene triangles
- E8 make generalizations about the angle, side length, and parallel side properties of the various quadrilaterals
- E9 sort quadrilaterals under property headings

**General Curriculum Outcomes    Specific Curriculum Outcomes**

*Students will be expected to*

GCO F: Students will solve problems involving the collection, display, and analysis of data.

- E10 make generalizations about the number of vertices, edges, and faces of various prisms, pyramids, cones, and cylinders
- E11 predict and confirm the results of various 2-D figures under slides, reflections, and quarter/half turns
- E12 make generalizations about the reflective symmetry property of the various quadrilaterals
  
- F1 recognize and use a variety of methods for the collection and organization of data
- F2 describe data maxima, minima, range, and frequency
- F3 read and interpret bar graphs, line graphs, pictographs, and stem-and-leaf plots
- F4 display position, using ordered pairs on a grid
- F5 construct bar graphs, pictographs, and stem-and-leaf plots
- F6 interpolate data from a display
- F7 describe data, using the mean
- F8 explore real-world issues of interest to students and for which data collection is necessary to determine an answer

GCO G: Students will represent and solve problems involving uncertainty.

- G1 predict probabilities as either close to 0, near 1, or near  $\frac{1}{2}$
- G2 cite examples of everyday events with very high or very low probabilities
- G3 predict whether one simple outcome is more or less likely than another
- G4 use fractions to describe experimental probabilities

# Music

## General Curriculum Outcomes      Specific Curriculum Outcomes

GCO 1: Students will be expected to explore, challenge, develop, and express ideas, using the skills, language, techniques, and processes of the arts.

GCO 2: Students will be expected to create and/or present, collaboratively and independently, expressive products in the arts for a range of audiences and purposes.

GCO 3: Students will be expected to demonstrate critical awareness of and value for the role of the arts in creating and reflecting culture.

*Students will be expected to*

- 1.1.1 sing alone and with others, with emphasis on expressive singing, phrasing, range, and more complex textures including two- and three-part rounds and canons
- 1.2.1 identify ways that the elements of music are used to express thoughts, experiences, and feelings in their own and others' work
- 1.2.2 demonstrate an awareness of rhythmic/melodic concepts, form, and texture through language, movement, and performance
- 1.3.1 sight read simple melodies from traditional notation with emphasis on stepwise movement and dynamics
- 1.4.1 create and notate short musical works to express musical thoughts and ideas with an emphasis on question and answer phrases
- 2.1.1 improvise simple rhythmic variations and simple melodic embellishments on familiar melodies
- 2.2.1 use specific materials, techniques, and forms to create, make and present music
- 2.2.2 sing alone and with others, with emphasis on expressive singing, phrasing, range and more complex textures
- 2.3.1 participate in large and small ensemble music making
- 3.1.1 demonstrate an awareness of places in their community where they can learn about and experience music, including music of other cultures
- 3.2.1 describe their music making experiences in their community
- 3.3.1 identify, describe, and compare instruments from a variety of cultural and historical contexts.

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**General Curriculum Outcomes    Specific Curriculum Outcomes**

GCO 4: Students will be expected to respect the contributions to the arts of individuals and cultural groups in local and global contexts, and value the arts as a record of human experience and expression.

GCO 5: Students will be expected to examine the relationship among the arts, societies, and environments.

GCO 6: Students will be expected to apply critical thinking and problem-solving strategies to reflect on and respond to their own and others' expressive works.

GCO 7: Students will be expected to understand the role of technologies in creating and responding to expressive works.

GCO 8: Students will be expected to analyse the relationship between artistic intent and the expressive work.

*Students will be expected to*

4.1.1 use their knowledge and experience to respect and value the musical contributions of cultural groups in their own community

4.2.1 explore the role music plays in the indigenous cultures of Canada

4.3.1 explore the work of various composers and musicians and their contribution to society, past and present

5.1.1 explore a range of ways that music may be used to reflect themes and ideas

5.1.2 explore and identify the relationship between work/working environment and music, past and present

5.2.1 identify connections between music and movement, including drama and dance

6.1.1 identify problems and possible solutions in the music making process

6.2.1 use musical criteria to evaluate performance of classroom repertoire with emphasis on melody and harmony

6.2.2 use knowledge of music elements to describe the music they hear

6.3.1 demonstrate respect for others' responses to music

7.1.1 recognize common orchestral and keyboard instruments by sight and sound

7.2.1 experiment with available technologies while creating and making music

7.3.1 explore the effects of changing technologies on common instruments

8.2.1 investigate the source of ideas for the music they listen to and make

8.3.1 explore their own musical work in light of what they intended

# Physical Education

## General Curriculum Outcomes

*Students will be expected to*

### Knowing

- demonstrate an understanding of the concepts that support human movement
- demonstrate a knowledge of the components and processes needed to develop and maintain a personal level of functional fitness

### Doing

- demonstrate motor skills in all movement categories using efficient and effective body mechanics
- participate regularly in a variety of activities that develop and maintain personal physical fitness
- demonstrate creativity in all movement categories

### Valuing

- demonstrate positive personal and social behaviours and interpersonal relationships
- demonstrate positive attitudes toward and an appreciation of physical activity through participation
- demonstrate awareness of career and occupational opportunities related to physical activities

## Specific Curriculum Outcomes

*Students will be expected to*

### Active Living

- demonstrate an understanding of the importance and benefits of warm-up and cool-down activities
- demonstrate knowledge of the location of the body's large muscle groups and use them to increase strength
- perform locomotor activities of low-, medium-, and high-intensity (e.g., walking, jogging, running)
- develop a variety of skipping skills for use in an aerobic activity
- demonstrate a willingness to participate in an intramural activity at lunch time or after school
- identify and list benefits resulting from participation in different forms of physical activities
- participate with and show respect for persons of like and different skill levels
- identify good and bad foods and their effect on the body

### Alternative Environments

- experience using a community resource to participate in physical activity (e.g., pool, rink)
- experience an outdoor activity in each of the four seasons
- select appropriate clothing for different types of weather
- participate in a schoolyard clean up program
- participate in a walking or jogging program in preparation for hiking, orienteering, cross-country skiing
- follow directions and symbols on a map of the school grounds, locating specific landmarks

### Dance

- demonstrate ways to travel, changing speed and direction, in response to a variety of rhythms
- perform simple rhythmic actions to songs
- demonstrate ways to mirror and match the movements of a travelling partner to form sequences and dances
- demonstrate ways to combine two or more movement patterns based on sets of either three or four beats into repeatable sequences or to music

**General Curriculum Outcomes    Specific Curriculum Outcomes**

*Students will be expected to*

- perform a folk dance for a group (e.g., younger students, parents, senior citizens)
- identify and describe how culture is reflected in folk dance
- identify and compare the use of a variety of types of music used in dance, and appreciate and respect the place of each

**Educational Gymnastics**

- apply appropriate safe spotting procedures for gymnastics activities
- perform balance in a variety of positions using one, two, three, four, or five bases of support and demonstrating various shapes and body control (wide, narrow, curled)
- demonstrate ways to travel, jump, land, and roll over low equipment (starting the roll with or without hands on the floor)
- demonstrate a variety of rolls (e.g., shoulder, forward, back) using correct technique
- experience using small equipment (e.g., hoops, ropes) to create a sequence of various gymnastic skills
- create and perform simple sequences alone or with a partner involving rolling, weight transfers, and balances

**Skill Development**

- throw balls of various sizes and weights to an appropriate target or partner using a smooth overhand motion
- perform dodging skills
- dribble with feet and hands in a group in a restricted area without colliding with others
- strike a lightweight ball in succession using at least two different body parts, keeping it in self-space
- strike a ball to a wall or a partner, with a paddle, using forehand and backhand strokes
- strike a softly thrown, lightweight ball back to a partner using a variety of body parts and combinations of body parts (e.g., the bump volley as in volleyball, the thigh as in soccer)
- demonstrate ways to avoid or catch an individual or object while travelling
- demonstrate ways to keep an object in the air using a variety of body parts and implements in a small group (e.g., ball, scoops, paddles, head, hands, feet)

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**General Curriculum Outcomes    Specific Curriculum Outcomes**

*Students will be expected to*

- identify and demonstrate the techniques of basic games skills (throw, catch) and practise independently to improve skill level
- demonstrate an understanding of the basic rules of the games played in class
- demonstrate an appreciation of the differences between co-operative and competitive activities and the role of each in physical education
- demonstrate ways to toss/catch three scarves in own space

# Science

## General Curriculum Outcomes

### STSE/Knowledge

GCO 1: Students will develop an understanding of the nature of science and technology, of the relationships between science and technology, and of the social and environmental contexts of science and technology. (STSE)

GCO 3: Students will construct knowledge and understandings of concepts in life science, physical science, and Earth and space science, and apply these understandings to interpret, integrate, and extend their knowledge. (Knowledge)

### Skills

GCO 2: Students will develop the skills required for scientific and technological inquiry, for solving problems, for communicating scientific ideas and results, for working collaboratively, and for making informed decisions.

### Attitudes

GCO 4: Students will be encouraged to develop attitudes that support the responsible acquisition and application of scientific and technological knowledge to the mutual benefit of self, society, and the environment.

## Specific Curriculum Outcomes

*Students will be expected to*

### Life Science: Habitats

#### Habitats and Populations

- use the terms habitat, population, and community in appropriate contexts (104-6)
- identify questions to investigate about the types of plants and/or animals at a local habitat, and the conditions under which they live (204-1)
- identify various methods for finding answers to questions related to their local habitat, and select one that is appropriate (204-6)
- make observations and collect information related to local habitats and their associated populations of plants and animals (205-5, 302-1)
- identify their own and their families' impact on habitats, and describe how personal actions help conserve habitats (108-6, 108-3)
- compile and display the data collected in the habitat study using tallies, tables, and/or bar graphs (206-2)
- present the procedures and results of their habitat studies (207-2)
- compare their results with those of other class members, recognizing that results may vary, and suggest explanations for these discrepancies (104-4, 206-3)

#### Collecting Scientific Information using Models of Natural Habitats

- construct and/or maintain a model of a natural habitat, and use it to make observations and collect information about organisms in this habitat (205-10, 205-5)
- suggest improvements to the model of the natural habitat to make it more realistic and habitable for organisms (206-6)

**General Curriculum Outcomes****Specific Curriculum Outcomes**

*Students will be expected to*

**Behavioural and Structural Features of Animals That Enable Them to Survive in Their Habitat**

- compare the external features and behavioural patterns of various animals and relate these features to the r ability to meet their basic needs in their natural habitats (302-2, 300-1)
- carry out procedures and ensure a fair test to explore how appearance affects visibility (205-1)
- predict the structural and/or behavioural adaptations needed for an animal to live in a particular habitat, real or imagined (204-3)

**Structural Features of Plants That Enable Them to Survive in Their Habitat**

- using appropriate terminology compare the structural features of plants that enable them to thrive in different kings of places (300-2, 104-6)
- describe how scientists' knowledge of plant growth has led to agricultural innovations and techniques (106-4)
- describe current investigations into local or regional habitat issues (105-1)

**Food Chains**

- classify organisms according to their role in a food chain and draw a diagram to illustrate the food chain (302-3, 104-6, 206-1)
- predict how the removal of a plant or animal population affects the rest of the community (301-1)
- relate habitat loss to the endangerment or extinction of plants and animals (301-2)

**The Impact of Technology on Natural Habitats**

- identify examples of positive and negative effects of technological developments on natural habitats (108-1)

## General Curriculum Outcomes

## Specific Curriculum Outcomes

*Students will be expected to*

### Life Science: Light

#### Optical Devices

- describe that knowledge of the properties of light has led to the development of optical devices that extend our ability to observe (106-1, 106-4)
- compare how light interacts with a variety of optical devices (107-1, 303-8)
- construct an optical device that performs a specific function (205-10)
- identify women and men in their community who have careers that deal directly with lenses, mirrors, and prisms (107-10)

#### Sources of Light

- distinguish between objects that emit their own light and those that require an external source to be seen (303-3)
- make observations and collect information during investigations to determine if an object emits its own light, and draw conclusions based on the evidence gathered (205-5, 206-5)
- provide examples of how human-made sources of light have been designed to solve problems in the home and at school (107-4)
- identify positive and negative effects of exposure to light (108-1)
- identify ways of conserving energy through conservative use of home lighting (108-6)

#### Light Radiates from a Source

- make observations about how light is dispersed from a variety of light sources (205-5)
- demonstrate that light travels in all directions away from a source (303-2)
- conclude that light travels in a straight line based on evidence gathered through their own research and observation (206-5)

**General Curriculum Outcomes****Specific Curriculum Outcomes**

*Students will be expected to*

**Objects that Absorb, Transmit, and/or Reflect Light**

- investigate how light interacts with a variety of objects, in order to determine whether the objects cast shadows, allow light to pass, and/or reflect light (303-4)
- classify objects as opaque, transparent, or translucent (206-1)
- provide changes in the location, shape, and relative size of a shadow when an object is placed in different positions and orientations relative to the light source and screen (303-5)
- plan a procedure and make observations to determine changes in a shadow's location, shape, and relative size when an object is placed in different positions and orientations relative to a light source and screen (204-7, 205-5)
- make observations and collect information about the reflective properties of surfaces of different shapes and textures (205-5)

**Bending Light**

- demonstrate and describe how a variety of media can be used to change the direction of light (303-6)
- make observations and collect information about the refractive properties of materials of different shapes (205-5)

**Dispersion of Light**

- demonstrate that white light can be separated into colours, and use the term “dispersion” for this process (303-7, 104-6)
- follow a set of procedures to make and use a colour wheel (205-3)
- communicate and listen to others during investigations with colour wheels (207-1)

**Life Science: Sound****Objects that Make Sounds**

- identify by the sounds they make (303-9)

## General Curriculum Outcomes

## Specific Curriculum Outcomes

*Students will be expected to*

- describe examples of sound technologies that are used by people to meet their everyday needs (107-1)

### Sound Vibrations

- relate vibrations to sound production (303-10)
- compare how vibrations travel differently through a variety of solids and liquids and through air (303-11)

### Pitch, Loudness, and Sound Technology

- identify and rephrase questions about ways to change pitch and loudness in a testable form (104-6, 204-1, 204-2)
- state a prediction and hypothesis about the effect a modification will have on the pitch and loudness of the sound produced, based on the pattern of sounds produced (204-3)
- demonstrate and describe how the pitch and loudness of sounds can be modified (301-3)
- use the term “decibels” in descriptions of sound intensity (104-6)
- demonstrate processes for solving technology problems by designing and constructing a device which has the ability to create sounds of variable pitch and loudness (104-1, 205-2)
- evaluate personally constructed musical devices with respect to their ability to vary their pitch and loudness (206-7)
- identify an use a variety of sources and technologies to gather pertinent information about Canadians who have contributed to sound technology (107-12, 205-8)

### The Ear, Hearing Loss, and Noise Pollution

- describe and illustrate how the human ear is designed to detect vibrations (300-3)
- compare the range of sounds heard by humans to that heard by some animals (300-4)
- describe examples of devices that enhance our abilities to hear and collect sound data, such as hearing aids, sonar, amplifiers, oscilloscopes, and ultrasound (106-1)

## General Curriculum Outcomes

## Specific Curriculum Outcomes

*Students will be expected to*

- demonstrate processes for investigating the extent of noise pollution in their surroundings, and work with group members to evaluate the processes used in investigating noise pollution (104-1, 207-6)
- identify the positive and negative effects of technological devices that produce loud sounds and identify the need for protection from and prevention of hearing loss (108-1, 206-9)
- describe specific personal actions or products that can help reduce this noise pollution (108-3)
- identify examples of current research related to sound (105-1)

### **Life Science: Rocks, Minerals, and Erosion**

#### **Collecting and Comparing Rocks and Minerals**

- demonstrate respect for the habitats of animals and the local environment when collecting rocks and/or minerals from their local area (108-3)
- describe the distinction between minerals and rocks (104-6)

#### **Properties of Rocks and Minerals**

- using appropriate tools make observations and collect information in order to describe rocks and minerals according to physical properties (204-8, 205-5, 200-6)
- record observations of their rocks and minerals in chart form, and/or using notes in point form (205-7)
- compare different rocks and/or minerals from their local area with those from other places (300-5)
- classify their rocks and minerals according to several properties and create a chart or diagram that show the method of classifying (206-1, 207-2)
- compare their classification schemes of the rocks/minerals to those of others and recognize that results may vary (104-4)

#### **Uses for Rocks and Minerals**

- describe how rocks and minerals are used (107-1)
- relate the characteristics of rocks and minerals to their uses (300-8)

**General Curriculum Outcomes****Specific Curriculum Outcomes**

*Students will be expected to*

- using appropriate terms, describe some positive and negative effects of the extraction and/or utilization of rocks and minerals (104-6, 108-1)

**Erosion and Weathering**

- describe effects of wind, water, and ice on the landscape (301-5)
- demonstrate a variety of methods of weathering and erosion (301-6)

**Soil Formation and Composition**

- describe ways in which soil is formed from rocks (301-4)

**Records in Rocks**

- identify and describe rocks that contain records of Earth's history (300-7)

**Sudden and Significant Changes in the Land**

- describe natural phenomena that cause sudden and significant changes to the landscape (301-7)

# Social Studies

## General Curriculum Outcomes

### Citizenship, Power, and Governance

GCO: Students will be expected to demonstrate an understanding of the rights and responsibilities of citizenship and the origins, functions, and sources of power, authority, and governance.

### Culture and Diversity

GCO: Students will be expected to demonstrate an understanding of culture, diversity, and world view, recognizing the similarities and differences reflected in various personal, cultural, racial, and ethnic perspectives.

### Individuals, Societies, and Economic Decisions

GCO: Students will be expected to demonstrate the ability to make responsible economic decisions as individuals and as members of society.

### Interdependence

GCO: Students will be expected to demonstrate an understanding of the interdependent relationship among individuals, societies, and the environment—locally, nationally, and globally—and the implications for a sustainable future.

### People, Place, and Environment

GCO: Students will be expected to demonstrate an understanding of the interactions among people, places, and the environment.

### Time, Continuity, and Change

GCO: Students will be expected to demonstrate an understanding of the past and how it affects the present and the future.

## Specific Curriculum Outcomes

NOTE: The specific curriculum outcomes for social studies listed below are draft outcomes as of September 2003, developed through APEF. They are provided for your information only. Until this new curriculum is field-tested, piloted, and implemented, the current curriculum is to be followed.

### Conceptual Organizer: Explorations

*Students will be expected to*

#### Unit One: Introduction: Explorations

- 4.1.1 demonstrate an understanding of the concept of exploration
- 4.1.2 demonstrate an understanding of the relationship between exploration and innovation

#### Unit Two: Explorers: Past and Present

- 4.2.1 identify and research selected explorers, past and present, of land, ocean, and space
- 4.2.2 demonstrate an understanding of the role of economics in exploration
- 4.2.3 describe and evaluate the impact of explorations over time

#### Unit Three: Exploring the World Today

- 4.3.1 identify, locate, and map examples of physical features of the world
- 4.3.2 investigate and identify the main attributes of rivers, islands, mountains, and oceans
- 4.3.3 demonstrate an understanding of human interactions associated with rivers, islands, mountains, and oceans

#### Unit Four: Exploring Canada Today

- 4.4.1 identify and describe the physical regions of Canada
- 4.4.2 identify and describe the human landscape of Canada
- 4.4.3 explore and describe how Canada's federal government functions
- 4.4.4 research and describe symbols of Canadian heritage

# Visual Arts

## General Curriculum Outcomes

## Specific Curriculum Outcomes

*Students will be expected to*

### Making

GCO 1: Students will explore and manipulate a range of materials, demonstrating an ability to express themselves.

1.1.1 acknowledge and express through art-making their personal relationship to the world

1.2.1 experiment with a range of materials and processes

1.3.1 use a combination of the visual elements and principles of art and design in art-making

GCO 2: Students will use a range of independent and collaborative art-making strategies.

2.1.1 work individually and with others to solve problems and express ideas

### Looking

GCO 3: Students will examine a broad range of artworks through time and cultures.

3.1.1 recognize and describe a variety of art forms

3.2.1 compare art across cultures

3.3.1 recognize that people use a variety of approaches when making art

3.4.1 use technology to locate works of art

GCO 4: Students will interact with sensitivity to and respect for their own artwork and that of others.

4.1.1 show respect for and value their own work and that of others

4.2.1 share thoughts and ideas about artworks

4.3.1 recognize that there are many ways of perceiving and knowing

### Reflecting

GCO 5: Students will bring personal meaning to artwork and communicate their discoveries.

5.1.1 explore art as a way of expressing ideas and points of view

5.2.1 demonstrate the ability to ask questions about and respond to art in various ways

5.3.1 investigate art and the lives of artists within cultural/historical/social contexts

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**General Curriculum Outcomes    Specific Curriculum Outcomes**

GCO 6: Students will demonstrate an awareness and appreciation of art as a lifelong process.

*Students will be expected to*

- 6.1.1 demonstrate a sensitivity towards the natural and built environment through their artwork
- 6.2.1 examine the effects of the media on their lives
- 6.3.1 demonstrate an awareness of the role of art and artists in their local and global communities