Grade 1 Curriculum

Number = N
Patterns = P
Geometry = G
Time = T
Measurement = M
Statistics = ST
Financial Literacy = F

Number (N)

Quantity is measured with numbers that enable counting, labelling, comparing, and operating.

Guiding Question: How can quantity be communicated?

LEARNING OUTCOME
1N1 Students interpret and explain quantity to 100.

1N1.1 UNDERSTANDING
Quantity is expressed in words and numerals based on patterns.

Quantity in the world is represented in multiple ways.

KNOWLEDGE	SKILLS & PROCEDURES
A numeral is a symbol or group of symbols used to represent a number. The absence of quantity is represented by 0.	Represent quantities using words, numerals, objects, or pictures. Identify a quantity of 0 in familiar situations.

1N1.2 UNDERSTANDING
Each number counted includes all previous numbers (counting principle: hierarchical inclusion).

A quantity can be determined by counting more than one object in a set at a time.

KNOWLEDGE	SKILLS & PROCEDURES
Counting can begin at any number. Counting more than one object at a time is called skip counting.	Count within 100, forward by 1s, starting at any number, according to the counting principles. Count backward from 20 to 0 by 1s. Skip count to 100, forward by 5s and 10s, starting at 0. Skip count to 20, forward by 2s, starting at 0.

1N1.3 UNDERSTANDING
Quantity can be partitioned by sharing or grouping.

KNOWLEDGE	SKILLS & PROCEDURES
Sharing involves partitioning a quantity into a certain number of groups. Grouping involves partitioning a quantity into groups of a certain size.	Partition a set of objects by sharing and grouping. Demonstrate conservation of number when sharing or grouping.

1N1.4 UNDERSTANDING
A quantity can be perceived as the composition of smaller quantities.

KNOWLEDGE	SKILLS & PROCEDURES
Familiar arrangements of small quantities facilitate subitizing.	Recognize quantities to 10.

1N1.5 UNDERSTANDING
Two quantities are equal when there is the same number of objects in both sets.

Equality is a balance between two quantities.

KNOWLEDGE
Comparisons of quantity can be described by using words such as

- equal
- not equal
- less
- more

Equality can be modelled using a balance.

The equal sign, =, is used to show equality between two quantities.

The unequal sign is ≠ is used to show that two quantities are not equal.

SKILLS & PROCEDURES
Investigate equal and unequal quantities, including using a balance model.

Identify numbers that are one more, two more, one less, and two less than a given number.

Represent a quantity relative to another, including symbolically.

Number (N)

Quantity is measured with numbers that enable counting, labelling, comparing, and operating.

Guiding Question: How can addition and subtraction provide perspectives of number?

LEARNING OUTCOME

1N2 Students examine addition and subtraction within 20.

1N2.1 UNDERSTANDING
Addition and subtraction are processes that describe the composition and decomposition of quantity.

KNOWLEDGE
Quantities can be composed or decomposed to model a change in quantity.

Addition can be applied in various contexts, including

- combining parts to find the whole
- increasing an existing quantity

Subtraction can be applied in various contexts, including

- comparing two quantities
- taking away one quantity from another
- finding a part of a whole

Addition and subtraction can be modelled using a balance.

SKILLS & PROCEDURES
Visualize quantities between 10 and 20 as compositions of 10 and another quantity.

Model addition and subtraction within 20 in various ways, including with a balance.

Relate addition and subtraction to various contexts involving composition or decomposition of quantity.

1N2.2 UNDERSTANDING
Addition and subtraction are opposite (inverse) mathematical operations.

KNOWLEDGE

Strategies are meaningful steps taken to solve problems.

Addition and subtraction strategies include

- counting on
- counting back
- decomposition
- compensation
- making tens

Sums and differences can be expressed symbolically using the addition sign, +, the subtraction sign, −, and the equal sign, =.

The order in which two quantities are added does not affect the sum (commutative property).

The order in which two quantities are subtracted affects the difference.

Addition of 0 to any number, or subtraction of 0 from any number, results in the same number (zero property).

A missing quantity in a sum or difference can be represented in different ways, including

$a + b = \square$ $\quad e - f = \square$
$a + \square = c$ $\quad e - \square = g$
$\square + b = c$ $\quad \square - f = g$

SKILLS & PROCEDURES

Investigate addition and subtraction strategies.

Add numbers up to a sum of 20 and subtract numbers with a maximum minuend of 20.

Check differences and sums using inverse operations.

Determine a missing quantity in a sum or difference, within 20, in a variety of ways.

Express addition and subtraction symbolically.

Solve problems using addition and subtraction.

1N2.3 UNDERSTANDING
Addition number facts have related subtraction number facts.

KNOWLEDGE

Addition and subtraction number facts represent part-part-whole relationships.

Fact families are groups of related addition and subtraction number facts.

SKILLS & PROCEDURES

Identify patterns in addition and subtraction, including patterns in addition tables.

Recognize families of related addition and subtraction number facts.

Recall addition number facts, with addends to 10, and related subtraction number facts.

Number (N)

Quantity is measured with numbers that enable counting, labelling, comparing, and operating.

Guiding Question: In what ways can parts and wholes be related?

LEARNING OUTCOME

1N3 Students examine one-half as a part-whole relationship.

1N3.1 UNDERSTANDING

In a quantity partitioned into two equal groups, each group represents one-half of the whole quantity.

In a shape or object partitioned into two identical pieces, each piece represents one-half of the whole.

KNOWLEDGE	SKILLS & PROCEDURES
One-half can be one of two equal groups or one of two equal pieces.	Identify one-half in familiar situations. Partition an even set of objects into two equal groups, limited to sets of 10 or less. Partition a shape or object into two equal pieces. Describe one of two equal groups or pieces as one-half. Verify that the two halves of one whole group, shape, or object are the same size.

Geometry (G)

Shapes are defined and related by geometric attributes.

Guiding Question: In what ways can shape be characterized?

LEARNING OUTCOME

1G1 Students interpret shape in two and three dimensions.

1G1.1 UNDERSTANDING

A shape can be modeled in various sizes and orientations.

A shape is symmetrical if it can be decomposed into matching halves.

KNOWLEDGE	SKILLS & PROCEDURES
Familiar two-dimensional shapes include • squares • circles • rectangles • triangles Familiar three-dimensional shapes include • cubes • prisms • cylinders • spheres • pyramids • cones A composite shape is composed of two or more shapes. A line of symmetry indicates the division between the matching halves of a symmetrical shape.	Identify familiar shapes in various sizes and orientations. Model two-dimensional shapes. Sort shapes according to one attribute and describe the sorting rule. Compose and decompose two- or three-dimensional shapes. Identify familiar shapes within two- or three-dimensional composite shapes. Investigate symmetry of two-dimensional shapes by folding and matching.

Measurement (M)

Attributes such as length, area, volume, and angle are quantified by measurement.

Guiding Question: In what ways can length provide perspectives of size?

LEARNING OUTCOME
1M1 Students relate length to the understanding of size.

1M1.1 UNDERSTANDING

Length is a measurable attribute that describes the amount of fixed space between the end points of an object.

Length remains the same if an object is repositioned but may be named differently.

KNOWLEDGE	SKILLS & PROCEDURES
Size may refer to the length of an object, including • height • width • depth A length does not need to be a straight line. The length between any two points in space is called distance. Familiar contexts of distance include • distance between objects or people • distance between objects on the land • distance between home and school • distance between towns or cities	Recognize the height, width, or depth of an object as lengths in various orientations. Compare and order objects according to length. Describe distance in familiar contexts.

1M1.2 UNDERSTANDING

The size of two objects can be compared indirectly with a third object.

KNOWLEDGE	SKILLS & PROCEDURES
Indirect comparison is useful when objects are fixed in place or difficult to move. Comparisons of size can be described by using words such as • higher • wider • deeper	Compare the length, area, or capacity of two objects directly, or indirectly using a third object. Order objects according to length, area, or capacity.

Patterns (P)

Awareness of patterns supports problem solving in various situations.

Guiding Question: What can patterns communicate?

LEARNING OUTCOME

1P1 Students examine patterns in cycles.

1P1.1 UNDERSTANDING

A pattern that appears to repeat may not be a cycle.

A cycle is a repeating pattern that repeats in the same way forever.

KNOWLEDGE

A cycle can express repetition of events or experiences.

Cycles include

- seasons
- day/night
- life cycles
- calendars

The same pattern can be represented with different elements.

A pattern core is a sequence of one or more elements that repeats as a unit.

SKILLS & PROCEDURES

Recognize cycles encountered in daily routines and nature.

Investigate cycles found in nature that inform First Nations, Métis, or Inuit practices.

Identify the pattern core, up to four elements, in a cycle.

Identify a missing element in a repeating pattern or cycle.

Describe change and constancy in repeating patterns and cycles.

Create different representations of the same repeating pattern or cycle, limited to a pattern core of up to four elements.

Extend a sequence of elements in various ways to create repeating patterns.

Time (T)

Duration is described and quantified by time.

Guiding Question: How can time characterize change?

LEARNING OUTCOME
1T1 Students explain time in relation to cycles.

1T1.1 UNDERSTANDING

Time is an experience of change.

Time can be perceived as a cycle.

KNOWLEDGE	SKILLS & PROCEDURES
Time can be perceived through observable change. First Nations, Métis, and Inuit experience time through sequences and cycles in nature, including cycles of seasons. Cycles from a calendar include days of the week and months of the year.	Describe cycles of time encountered in daily routines and nature. Describe observable changes that indicate a cycle of time. Relate cycles of seasons to First Nations, Métis, or Inuit practices. Identify cycles from a calendar.

Statistics (ST)

The science of collecting, analyzing, visualizing, and interpreting data can inform understanding and decision making.

Guiding Question: How can data be used to answer questions about the world?

LEARNING OUTCOME
1ST1 Students investigate and represent data.

1ST1.1 UNDERSTANDING

Data can be answers to questions.

KNOWLEDGE	SKILLS & PROCEDURES
Data can be collected information.	Share wonderings about people, things, events, or experiences. Gather data by sharing answers to questions.

1ST1.2 UNDERSTANDING

Data can be represented in a graph.

KNOWLEDGE	SKILLS & PROCEDURES
A graph is a visual representation of data. A graph can represent data by using objects, pictures, or numbers.	Collaborate to construct a concrete graph using data collected in the learning environment. Create a pictograph from a concrete graph.

Financial Literacy (F) *from Physical Education and Wellness*

Informed financial decision making contributes to the well-being of individuals, groups, and communities.

Guiding Question: In what ways can money be used?

LEARNING OUTCOME

1F1.1 Students explore money and how it is used for everyday living.

1F1.1 UNDERSTANDING

Money can be used to exchange for goods and services.

Money has value and purpose in everyday living.

Money has unique features to represent its value.

KNOWLEDGE

Canadian money comes in many forms, such as

- coins
- bills
- debit cards
- credit cards

Canadian coins and bills come in different denominations, such as

- nickels
- dimes
- quarters
- loonies
- toonies
- $5
- $10
- $20
- $50
- $100

Images on Canadian coins and bills include

- wildlife
- sports
- boats
- emblems
- historic figures

Money can be

- shared
- earned
- saved
- spent
- borrowed

Goods are things that are made and produced and can be touched, such as

- toys
- cars
- clothing
- electronics
- books

Services are things individuals do for others, such as

- health services
- personal services
- entertainment
- restaurants
- recreational activities

SKILLS & PROCEDURES

Explore the value of Canadian coins and bills.

Sort Canadian coins and bills.

Identify goods and services that can be exchanged for money.