Are You New to K-3 Math?

Provincial Presentation
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Alberta Regional Professional Development Consortia
Central Alberta Regional Consortium

2023-2024 School Year

In September 2023, students across Alberta will learn from finalized curriculum in:

- K–3 Français langue première et littérature
- K–3 French Immersion Language Arts and Literature
- K–3 Science
- K–6 English Language Arts and Literature
- K–6 Mathematics
- K–6 Physical Education and Wellness

School authorities may optionally implement Grades 4–6 curriculum in:

- Français langue première et littérature
- French Immersion Language Arts and Literature
- Science

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Old Front Matter

MATHEMATICS KINDERGARTEN TO GRADE 9

INTRODUCTION

The *Mathematics Kindergarten to Grade 9 Program of Studies* has been derived from *The Common Curriculum Framework for K–9 Mathematics: Western and Northern Canadian Protocol*, May 2006 (the Common Curriculum Framework). The program of studies incorporates the conceptual framework for Kindergarten to Grade 9 Mathematics and the general outcomes and specific outcomes that were established in the Common Curriculum Framework.

BACKGROUND

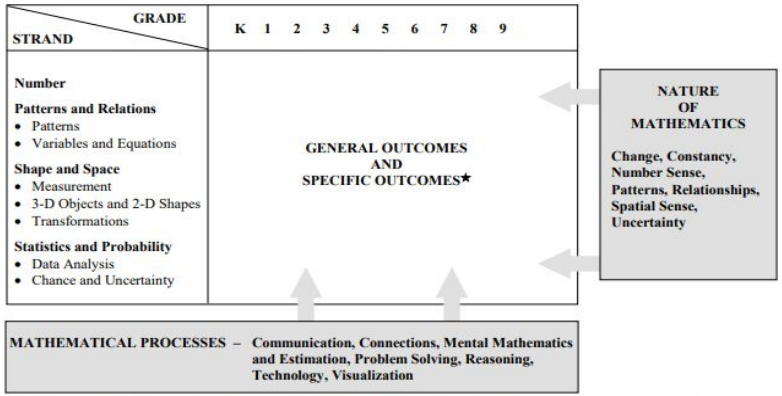
The Common Curriculum Framework was developed by the seven ministries of education (Alberta, British Columbia, Manitoba, Northwest Territories, Nunavut, Saskatchewan and Yukon Territory) in collaboration with teachers, administrators, parents, business representatives, post-secondary educators and others. The framework identifies beliefs about mathematics, general and specific student outcomes, and achievement indicators agreed upon by the seven jurisdictions.

BELIEFS ABOUT STUDENTS AND MATHEMATICS LEARNING

Students are curious, active learners with individual interests, abilities and needs. They come to classrooms with varying knowledge, life experiences and backgrounds. A key component in successfully developing numeracy is making connections to these backgrounds and experiences.

Students learn by attaching meaning to what they do, and they need to construct their own meaning of mathematics. This meaning is best developed when learners encounter mathematical experiences that proceed from the simple to the complex and from the concrete to the abstract. Through the use of manipulatives and a variety of pedagogical approaches, teachers can address the diverse learning styles, cultural backgrounds and developmental stages of students, and enhance within them the formation of sound, transferable mathematical understandings. At all levels, students benefit from working with a variety of materials, tools and contexts when constructing meaning about new mathematical ideas. Meaningful student discussions provide essential links among concrete, pictorial and symbolic representations of mathematical concepts.

The learning environment should value and respect the diversity of students' experiences and ways of thinking, so that students are comfortable taking intellectual risks, asking questions and posing conjectures. Students need to explore problem-solving situations in order to develop personal strategies and become mathematically literate. They must realize that it is acceptable to solve problems in a variety of ways and that a variety of solutions may be acceptable.



★ Achievement indicators for the prescribed program of studies outcomes are provided in the companion document *Alberta K–9 Mathematics Achievement Indicators*, 2016.

Mathematical Processes

There are critical components that students must encounter in a mathematics program in order to achieve the goals of mathematics education and embrace lifelong learning in mathematics.

Students are expected to:

Communication [C]	• communicate in order to learn and express their understanding
Connections [CN]	• connect mathematical ideas to other concepts in mathematics, to everyday experiences and to other disciplines
Mental Mathematics and Estimation [ME]	• demonstrate fluency with mental mathematics and estimation
Problem Solving [PS]	• develop and apply new mathematical knowledge through problem solving
Reasoning [R]	• develop mathematical reasoning
Technology [T]	• select and use technologies as tools for learning and for solving problems
Visualization [V]	• develop visualization skills to assist in processing information, making connections and solving problems.

The program of studies incorporates these seven interrelated mathematical processes that are intended to permeate teaching and learning.

New Front Matter

Mathematics Introduction

What Is Mathematics?

Mathematics is a universal language relying on a shared understanding of symbols and procedures to communicate ideas efficiently. It is a powerful tool used every day to solve real-life problems. The beauty of mathematics inspires curiosity about our world and the universe. As a subject, mathematics has historical roots in many cultures and continues to evolve in support of innovations. Mathematics involves learning across various disciplines, including arithmetic, algebra, geometry, statistics, and probability. In all disciplines, procedures may range from counting, calculating, and measuring to analyzing, modelling, and generalizing. Engaging with mathematics allows students to develop logical thinking skills, which contribute to effective decision making and problem solving. Students are able to extend their thinking beyond personal experiences through flexible and collaborative learning opportunities. Experiences with mathematics help students develop appreciation for the patterns and relationships that describe multiple aspects of the world and its future possibilities.

Numeracy, Quantitative Information, and Spatial Information

Numeracy is a foundational building block of learning and is developed in all subjects in different ways. Central to the development of numeracy, the mathematics curriculum helps students acquire and apply the knowledge and skills necessary to interact with quantitative and spatial information in a variety of situations.

Foundational numeracy focuses on

- counting, comparing, and calculating* with numbers;
- describing, representing, and measuring shapes and objects;
- collecting, organizing, and interpreting data; and
- creating and interpreting diagrams, graphs, and tables.

Numeracy skills support real-life pursuits,

- including telling time,
- using and managing money,
- following instructions,
- finding an address, and
- reading a schedule.

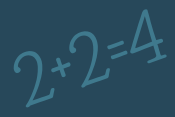
With a focus on numeracy, the mathematics curriculum provides all students with a solid foundation of mathematical knowledge, understanding, and skills to set them up for future success. Mathematics education is an ongoing process of connecting students' concrete experiences to their comprehension of abstract concepts. A recognition of numbers and their application to counting and comparing form foundational knowledge and skills for students as they encounter a variety of quantitative information in their lives. The development of these skills supports students as they participate in family, community, and cultural activities. As their experiences broaden, students also learn that operations with numbers

~ recognition of numbers and their application to counting and comparing form foundational knowledge and skills for students as they encounter a variety of quantitative information in their lives.
~ skills supports students as they participate in family, community, and cultural activities.
~ learn that operations with numbers provide reliable and efficient options to counting and comparing.
~ basic number facts that can be applied to addition, subtraction, multiplication, and division of larger numbers using commonly recognized algorithms.

~ communicate using conventional mathematical symbols and vocabulary.
~ learn about different number systems and their applications to various situations, such as decimals for money and integers for temperature.

In developing algebraic thinking skills, students transfer their understandings of properties of number to new or abstract problems.

~ interpret spatial information in the world.
~ Mathematics provides the foundations for precisely describing, defining, and measuring spatial information.
~ geometric properties that relate to and distinguish shapes.
~ measurement, progressing from direct comparison, to the use of non-standard units of measure, to accurately measuring with various standard units and tools.
~ shapes through measures and calculations of length, area, volume, and angle will allow students to build a broad understanding of spatial information.

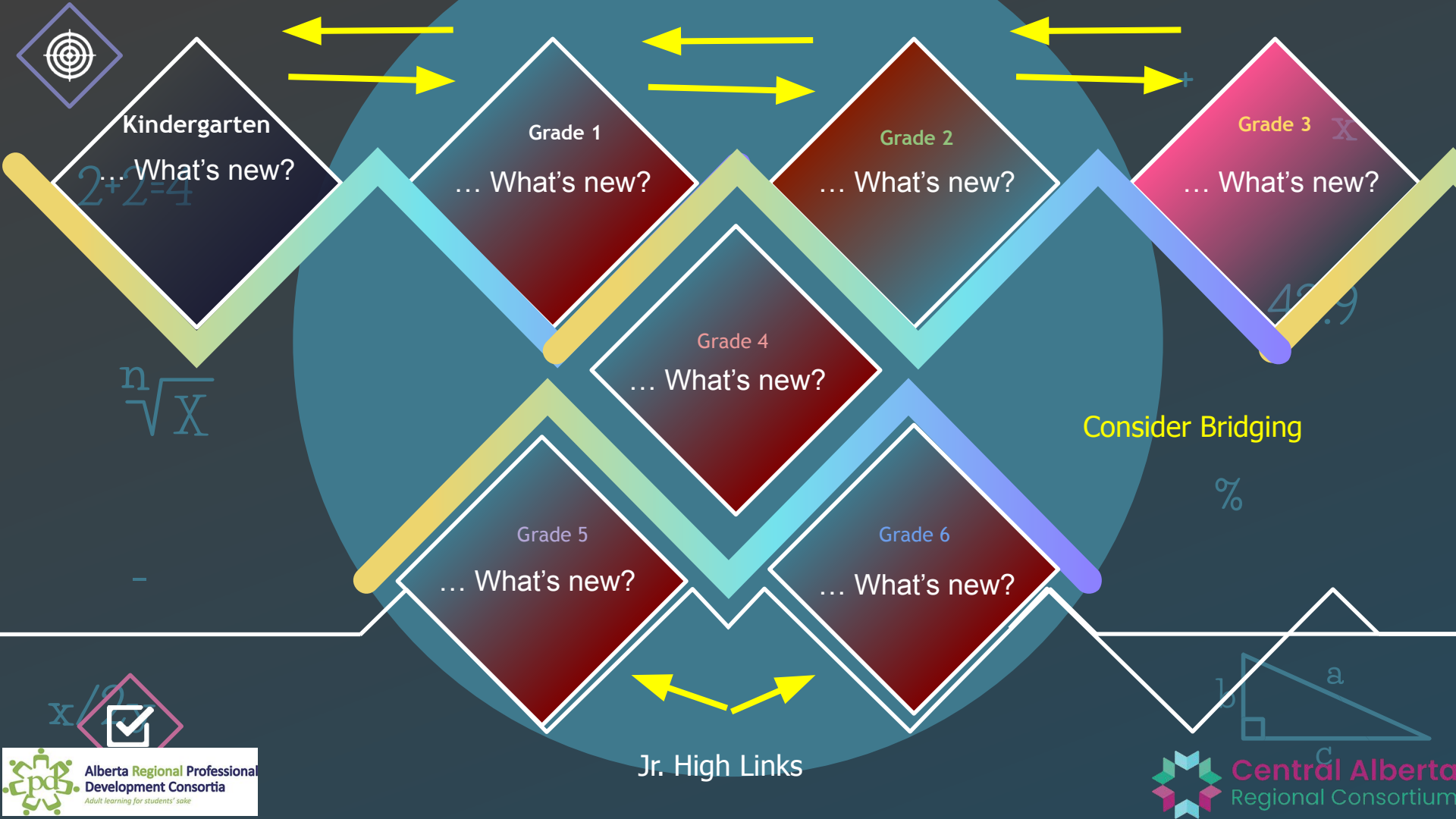


~ describing location and movement of shapes in a plane. They will develop knowledge of geometric properties, theorems, and formulas to appreciate complex patterns within traditional cultural designs, to solve immediate real-life problems, and to propose innovations.

~ procedures to solve problems.
~ thinking logically, choosing a strategy, reaching a conclusion, and justifying the solution
~ reinforced by both literacy and numeracy skills
~ financial literacy.

Students will apply abilities in computation, managing information, reasoning, and problem solving in daily life and in future educational pursuits and careers. Mathematics will help students interact in society with confidence and intellectual curiosity. Students will rely on their mathematical knowledge and skills as they continue into adulthood in our interconnected and ever changing world.

*Note: Learning outcomes in the Mathematics Kindergarten to Grade 6 Curriculum are intended to be achieved without the support of calculators.



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Old Curriculum

GRADE 1

[C] Communication	[PS] Problem Solving
[CN] Connections	[R] Reasoning
[ME] Mental Mathematics and Estimation	[T] Technology
	[V] Visualization

NUMBER

General Outcome
Develop number sense.

Specific Outcomes

1. Say the number sequence 0 to 100 by:
   - 1s forward between any two given numbers
   - 1s backward from 20 to 0
   - 2s forward from 0 to 20
   - 5s and 10s forward from 0 to 100.

   [C, CN, ME, V]

2. Subitize (recognize at a glance) and name familiar arrangements of 1 to 10 objects or dots.
   [C, CN, ME, V]

3. Demonstrate an understanding of counting by:
   - indicating that the last number said identifies "how many"
   - showing that any set has only one count
   - using counting-on
   - using parts or equal groups to count sets.

   [C, CN, ME, R, V]

4. Represent and describe numbers to 20, concretely, pictorially and symbolically.
   [C, CN, V]

5. Compare sets containing up to 20 elements, using:
   - referents
   - one-to-one correspondence

   to solve problems.
   [C, CN, ME, PS, R, V]

6. Estimate quantities to 20 by using referents.
   [C, CN, ME, PS, R, V]

7. Demonstrate an understanding of conservation of number.
   [C, R, V]

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Architecture and Design of Provincial K–12 Curriculum

Organizing Idea

Guiding Question

Learning Outcome

Knowledge, Understanding, Skills and Procedures

Literacy, Numeracy, and Competencies

Alberta

Organizing Idea

- statement of the learning
- spans all or most grades
- main concepts

Mathematics Kindergarten to Grade 6 Curriculum

	Kindergarten			Grade 1			Grade 2		
Organizing Idea	Number: Quantity is measured with numbers that enable counting, labelling, comparing, and operating.								
Guiding Question	How can quantity contribute meaning to daily life?			How can quantity be communicated?			How can quantity contribute to a sense of number?		
Learning Outcome	KN1.1 Children investigate quantity to 10.			1N1.1 Students interpret and explain quantity to 100.			2N 1.1 Students analyze quantity to 1000.		
	Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures
	Quantity can be represented using • Objects • Pictures • Words • numerals	Quantity can be the number of objects in a set.	Recognize a number of familiar objects as a quantity. Represent a quantity in different ways. Relate a numeral to a specific quantity.	A numeral is a symbol or group of symbols used to represent a number. The absence of quantity is represented by 0.	Quantity is expressed in words and numerals based on patterns. Quantity in the world is represented in multiple ways.	Represent quantities using words, numerals, objects, or pictures. Identify a quantity of 0 in familiar situations.	Any number of objects in a set can be represented by a natural number. The values of the places in a four-digit natural number are thousands, hundreds, tens, and ones. Places that have no value within a given number use zero as a placeholder. The number line is a spatial representation of quantity.	There are infinitely many natural numbers. Every digit in a natural number has a value based on its place. Each natural number is associated with exactly one point on the number line.	Represent quantities using words and natural numbers. Identify the digits representing thousands, hundreds, tens, and ones based on place in a natural number. Relate a number, including zero, to its position on the number line.

Organizing Ideas

Organizing Ideas	K	1	2	3	4	5	6
Number							
Algebra							
Geometry							
Coordinate Geometry							
Measurement							
Patterns							
Time							
Statistics							

Guiding Question

- informed by the organizing idea and frames the learning outcome
- intended to spark curiosity and wonder about the LO
- identifies more specific concepts

Mathematics Kindergarten to Grade 6 Curriculum

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Learner Outcome

- describes what students are required to know, understand, and be able to do by the end of a grade.
- must be assessed and reported.
- discipline (subject) specific
- key concepts to be learned and assessed are identified.

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KUSPs: Knowledge

- Knowledge includes the facts, symbols, rules, principles, and concepts.

Mathematics Kindergarten to Grade 6 Curriculum

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KUSPs: Understanding

- how facts and knowledge fit together in a logical and meaningful order
- organized knowledge to understand concepts, skills, and procedures which can be applied to new situations

Mathematics Kindergarten to Grade 6 Curriculum

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KUSPs: Skills & Procedures

- what students do to demonstrate their knowledge and understanding

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02

What's Shifted?

Shifts in K–6 Mathematics

These are the main shifts in knowledge and skill requirements from the current K–6 mathematics program of studies to the new curriculum:

Spatial Reasoning

- Current – A limited focus on spatial reasoning is provided in earlier grades.
- New – More focus on spatial reasoning is provided at earlier grades to help students understand number and geometry concepts at a younger age.

Fractions

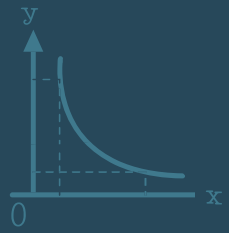
- Current – Students start learning fractions in Grade 3.
- New – Students learn fractions in Grade 1 to build a strong foundation for understanding proportions.

Number Facts

- Current – Students are expected to recall number facts.
- New – Students are expected to learn, recall, and apply number facts so they can add, subtract, multiply, and divide more efficiently in various situations.

Operations

- Current – Students do not have to use a particular method to add, subtract, multiply, or divide.
- New – There are clear expectations for students to use standard algorithms to add, subtract, multiply, or divide so there are consistent, reliable processes to find answers.

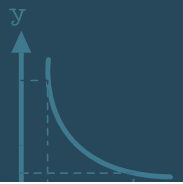


- Current – Students are expected to add, subtract, multiply, and divide with whole numbers and decimals.
- New – Students are expected to add, subtract, multiply, and divide with whole numbers and decimals, and to add and subtract fractions.

Financial Literacy

- Current – Students are not required to learn about money and financial concepts.
- New – Students work with money concepts in mathematics to support financial literacy skills learned in physical education and wellness.

Money as a Concept and as a Manipulative - use to build a strong foundation of Place Value.



03

Main Contents of the New Curriculum

Kindergarten

- Count and represent quantities within 10.
- Recognize 2-D and 3-D shapes in the environment.
- Compare objects by length, area, mass, and capacity.
- Order a sequence of events according to time.

Grade 1

- Recall addition number facts to a sum of 20 and related subtraction facts.
- Identify and sort 2-D and 3-D shapes.
- Order objects according to length, area, and capacity.
- Identify cycles of time from nature and calendars.

Grade 2

- Add and subtract numbers within 100.
- Sort shapes and describe the sorting rule.
- Measure length in centimetres.
- Describe durations of time in days, weeks, months, or years.
- Collect and graph data.

Grade 3

- Add and subtract numbers within 1000 using standard procedures (algorithms).
- Recall multiplication number facts to 10 x 10 and related division facts.
- Recognize parallel, perpendicular, and equal sides in 2-D shapes.
- Measure length using metric units.
- Tell time using analog and digital clocks.

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Grade 4

- Add and subtract numbers within 10,000 including decimal numbers, using standard procedures (algorithms)
- Multiply and divide 3-digit natural numbers by one-digit natural numbers, using standard procedures (algorithms)
- Classify quadrilaterals and triangles using angle and side measurements
- Measure and calculate the area of rectangles
- Represent and interpret data in various graphs

Grade 5

- Add and subtract numbers within 1,000,000 including decimal numbers, using standard procedures (algorithms)
- Multiply 3-digit natural numbers by two-digit natural numbers, using standard procedures (algorithms)
- Add and subtract fractions with common denominators
- Write and evaluate algebraic expressions
- Classify shapes using symmetry
- Calculate area and perimeter of rectangles

Grade 6

- Add, subtract, multiply and divide using standard procedures (algorithms) to solve problems
- Multiply fractions by natural numbers
- Calculate area and volume
- Solve algebraic equations
- Collect, graph and interpret data

04 Numbered Outcomes:

Consolidating your thinking.

Organizing Ideas

No More Strands

Organizing Ideas	K	1	2	3	4	5	6
Number							
Algebra							
Geometry							
Coordinate Geometry							
Measurement							
Patterns							
Time							
Statistics							

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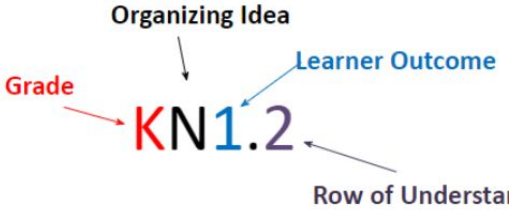
	Kindergarten			Grade 1			Grade 2		
	Quantity can be determined by counting.	A quantity is always counted using the same sequence of words (counting principle: stable order). A quantity remains the same no matter the order in which the objects are counted (counting principle: order irrelevance). A quantity can be determined by counting each object in a set once and only once (counting principle: one-to-one correspondence). The last number used to count represents the quantity (counting principle: cardinality). Any quantity of like or unlike objects can be counted as a set (counting principle: abstraction).	Count within 10, forward and backward, starting at any number, according to the counting principles.	Counting can begin at any number. Counting more than one object at a time is called skip counting.	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.	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.	A quantity can be skip counted in various ways according to context. Quantities of money can be skip counted in amounts that are represented by coins and bills (denominations).	A quantity can be interpreted as a composition of groups.	Decompose quantities into groups of 100s, 10s, and 1s. Count within 1000, forward and backward by 1s, starting at any number. Skip count by 20s, 25s, or 50s, starting at 0. Skip count by 2s and 10s, starting at any number. Determine the value of a collection of coins or bills of the same denomination by skip counting.

Mathematics Kindergarten to Grade 6 Curriculum & Financial Literacy for K-6



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Guiding Question	How can quantity contribute meaning to daily life?			How can quantity be communicated?			How can quantity contribute to a sense of number?		
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	Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures
	Quantity can be represented using • Objects • Pictures • Words • numerals	Quantity can be the number of objects in a set.	Recognize a number of familiar objects as a quantity. Represent a quantity in different ways. Relate a numeral to a specific quantity.	A numeral is a symbol or group of symbols used to represent a number. The absence of quantity is represented by 0.	Quantity is expressed in words and numerals based on patterns. Quantity in the world is represented in multiple ways.	Represent quantities using words, numerals, objects, or pictures. Identify a quantity of 0 in familiar situations.	Any number of objects in a set can be represented by a natural number. The values of the places in a four-digit natural number are thousands, hundreds, tens, and ones. Places that have no value within a given number use zero as a placeholder. The number line is a spatial representation of quantity.	There are infinitely many natural numbers. Every digit in a natural number has a value based on its place. Each natural number is associated with exactly one point on the number line.	Represent quantities using words and natural numbers. Identify the digits representing thousands, hundreds, tens, and ones based on place in a natural number. Relate a number, including zero, to its position on the number line.

Mathematics Kindergarten to Grade 6 Curriculum & Financial Literacy for K-2

	Kindergarten			Grade 1			Grade 2		
Learning Outcome	KN1.2 Children investigate quantities to 10.			1N1.2 Students interpret and explain quantities to 100.			2N 1.2 Students analyze quantity to 1000.		
	Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures
	Quantity can be determined by counting.	a. A quantity is always counted using the same sequence of words (counting principle: stable order). b. A quantity remains the same no matter the order in which the objects are counted (counting principle: order irrelevance). c. A quantity can be determined by counting each object in a set once and only once (counting principle: one-to-one correspondence). d. The last number used to count represents the quantity (counting principle: cardinality). e. Any quantity of like or unlike objects can be counted as a	Count within 10, forward and backward, starting at any number, according to the counting principles.	Counting can begin at any number. Counting more than one object at a time is called skip counting.	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.	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. LINK	A quantity can be skip counted in various ways according to context. Quantities of money can be skip counted in amounts that are represented by coins and bills (denominations).	A quantity can be interpreted as a composition of groups.	Decompose quantities into groups of 100s, 10s, and 1s. Count within 1000, forward and backward by 1s, starting at any number. Skip count by 20s, 25s, or 50s, starting at 0. Skip count by 2s and 10s, starting at any number. Determine the value of a collection of coins or bills of the same denomination by skip counting.

Getting Your Copy of the Numbered Outcomes Document

Once you have downloaded the document, save it to your drive and open it to your grade. Take some time to read through the numbering and the contents of NUMBER. Having a Printed Copy would be helpful - best done on 11 x 17 inch paper, copies on both sides.

Guiding Question				In what ways can parts and wholes be related?			In what ways can parts compose a whole?		
Learning Outcome				1N3 Students examine one-half as a part-whole relationship.			2N3 Students interpret part-whole relationships using unit fractions.		
				Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures
				One-half can be one of two equal groups or one of two equal pieces.	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.	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.	A whole can be a whole set of objects, or a whole object, that can be partitioned into a number of equal parts. The whole can be any size and is designated by context. A unit fraction describes any one of the equal parts that compose a whole.	Fractions can represent part-to-whole relationships. One whole can be interpreted as a number of unit fractions.	Model a unit fraction by partitioning a whole object or whole set into equal parts, limited to 10 or fewer equal parts. Compare different unit fractions of the same whole, limited to denominators of 10 or less. Compare the same unit fractions of different wholes, limited to denominators of 10 or less. Model one whole, using a given unit fraction, limited to denominators of 10 or less.
Organizing Idea	Financial Literacy: Informed financial decision making contributes to the well-being of individuals, groups, and communities.								
Guiding Question	What is Money?			In what ways can money be used?			How does decision making influence money management?		
Learning Outcome	KF1. Children explore money.			1F1 Students explore money and how it is used for everyday living.			2F1 Students relate money and decision making.		
	Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures
	Canadian money comes in many forms, such as • coins • bills Canadian coins and bills come in different denominations, such as	Money has unique features to represent its value	Explore the value of Canadian coins and bills. Identify features of Canadian coins and bills.	Canadian money comes in many forms, such as • coins • bills • debit cards • credit cards	Money can be used to exchange for goods and services. Money has value and purpose in everyday living. Money has unique	Explore the value of Canadian coins and bills. Sort Canadian coins and bills. Identify goods and services that can be	Decisions about money include how much to • spend • save • share Individuals can have a limited amount of	Managing money involves making decisions. Decisions related to money are based on needs and wants.	Distinguish between a paying job and volunteer work. Describe how money can be divided for different purposes.

Health and Wellness Curriculum - Organizing Idea: Financial Literacy

Kindergarten			Grade 1			Grade 2		
Financial Literacy: Informed financial decision making contributes to the well-being of individuals, groups, and communities.								
What is money?			In what ways can money be used?			How does decision making influence money management?		
Children explore money.			Students explore money and how it is used for everyday living.			Students relate money and decision making.		
Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures
Canadian money comes in many forms, such as • coins • bills Canadian coins and bills come in different denominations, such as • loonies • toonies • $5 • $10 Canadian coins and bills have different features, such as • colour • number • images • size	Money has unique features to represent its value.	Explore the value of Canadian coins and bills. Identify features of Canadian coins and bills.	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	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.	Explore the value of Canadian coins and bills. Sort Canadian coins and bills. Identify goods and services that can be exchanged for money.	Decisions about money include how much to • spend • save • share Individuals can have a limited amount of money to spend. Money spent on one item means less money for other items or activities. Individuals can save money for an item, an event, or the future. Individuals can donate money through charities, organizations, and agencies to help	Managing money involves making decisions. Decisions related to money are based on needs and wants.	Distinguish between a paying job and volunteer work. Describe how money can be divided for different purposes. Practise making money-related decisions in a variety of contexts.

	Grade 3			Grade 4		
Organizing Idea	Financial Literacy: Informed financial decision making contributes to the well-being of individuals, groups, and communities.					
Guiding Question	In what ways can money management be supported?			What is personal finance?		
Learning Outcome	Students describe strategies that support responsible money management.			Students examine factors that influence spending.		
	Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures
	Good money habits allow individuals to appreciate the value of money and the importance of managing it. Responsible spending can be supported through strategies, such as • buying needed items first • buying items that are affordable • taking time when making purchases • not purchasing more than is needed Saving means not spending in order to keep money aside for unexpected expenses and to pay for purchases, activities, and future plans or goals. Responsible saving can be supported through strategies, such as • considering needs and wants • setting financial goals • establishing a savings account • putting earned money aside on a regular basis Responsible money management can allow individuals to help others in need through donation.	Individuals can develop good habits early in life to make responsible money decisions now and in the future. Saving is essential for personal short-term and long-term goals. Donating money can have a significant impact on the well-being of others.	Discuss the importance of responsible spending and saving. Identify possible short-term and long-term saving goals.	Money is commonly exchanged in the form of • currency • credit cards • debit cards • electronic transfer • prepaid cards Currency includes coins and paper money. Credit cards enable individuals to borrow money from banks or financial institutions. Credit cards • have a spending limit • must be repaid on time • have penalties if payment is not paid on time • are issued by a bank or financial institution Debit cards enable individuals to access money from a personal bank account. Prepaid cards have a fixed amount of money that can be spent. Factors to consider when spending include • budget • price comparison • quality and quantity • needs and wants	Goods and services can be purchased in a variety of ways.	Identify a variety of situations that would use different forms of money. Consider a variety of factors when making decisions about spending money.

	Grade 5			Grade 6		
Organizing Idea	Financial Literacy: Informed financial decision making contributes to the well-being of individuals, groups, and communities.					
Guiding Question	In what ways can financial goals be supported?			How can personal finances be enhanced?		
Learning Outcome	Students demonstrate how planning can support financial goals.			Students investigate borrowing and investing in a variety of situations.		
	Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures
	A budget is a plan that supports an individual when making decisions on how to earn, spend, save, invest, and donate over a period. A budget consists of money currently on hand (assets), money expected to be earned (income), and money planned on spending (expenses). A budget can be divided into needs and wants. Budgets can be used for a variety of situations, such as • personal • household • business • an event or activity Budgets may need to be adjusted due to unforeseen circumstances. Short-term financial goals can be immediate and can support attainment of long-term goals. Long-term financial goals can take several years to achieve, involve more money, and require commitment.	Budgeting is important to responsible financial decision making and can support achieving short-term and long-term financial goals.	Develop a simple budget for an activity or event. Examine the components of a budget. Create a savings plan for short-term and long-term goals.	A loan is money that is borrowed with an agreement to pay it back. A loan can come from a variety of sources, such as • banks • financial institutions • family • friends The decision to borrow money may be based on • ability to repay • intended purpose • additional costs • short-term and long-term goals • impact on budget Decisions by banks or financial institutions to loan money may be based on • ability to repay • previous loan history • other existing debts • intended purpose Borrowing money through loans can cost money in the form of interest on the amount borrowed and over the term of the agreement. Interest is a fee paid to the bank or financial institution that loaned the money.	Borrowing money to buy goods and services can have financial risks and benefits. Borrowing money can support financial goals if done appropriately.	Analyze the risks and benefits of borrowing money in a variety of situations. Identify situations where an individual can responsibly take on debt.

Take some time to find your grade in the numbered outcomes Documents and read it through.

Alberta Regional Professional Development Consortia
Adult learning for students' sake

Central Alberta Regional Consortium

Competencies

Competencies are combinations of knowledge, skills, and characteristics that students develop and apply for successful learning, living, and working. They emphasize aspects of learning that apply within and across all subjects. Competencies enhance the foundational building blocks of literacy and numeracy and work together with subject-area learning outcomes to ensure Alberta students are knowledge rich and well-prepared to live successful and fulfilling lives and make meaningful contributions to their communities and the world.

Alberta

Alberta's Student Competencies

- Critical Thinking
- Problem Solving
- Research and Managing Information
- Creativity and Innovation
- Communication
- Collaboration
- Citizenship
- Personal Growth and Well-being

Competency Progressions on New Learn Alberta

Competency Example: Grade 3

Learning Outcome: Students **illustrate** equality with equations.		
Knowledge	**Understanding**	**Skills & Procedures**
Equations can be **modelled** using a balance. A symbol may represent an **unknown value** in an equation.	Equations can include **unknown values**.	**Model equations** that include an unknown value, including with a balance. Determine an **unknown value** on the left or right side of an equation, limited to equations with one operation. **Solve problems** using equations, limited to equations with one operation.
Competency: Problem Solving, Research and Managing Information, Creativity and Innovation		

NUMERACY PROGRESSIONS

Alberta Education defines numeracy as follows: **Numeracy** involves acquiring and applying the mathematical knowledge and skills needed to engage with quantitative and spatial information in a variety of situations. Numeracy is embedded in learning experiences across all subject areas. It is foundational, allowing students to make informed decisions as knowledgeable, active participants in our democratic society. The Numeracy Progressions identify knowledge and behaviours that students may demonstrate by the end of each divisional age range.

	Kindergarten (ages 4–5)	Division 1 (ages 6–8)	Division 2 (ages 9–11)
Awareness Students develop awareness of the numeracy skills required to engage in tasks or to make decisions.			
Purpose	Children recognize that quantitative and spatial information is all around them.	Students recognize everyday situations where numeracy is used to make decisions.	Students recognize that numeracy helps people make informed decisions.
Personal Insight	Children participate in guided activities that model how to think about their numeracy strengths and the strategies they can use to regulate their learning.	Students, with guidance, recognize their numeracy strengths and the strategies they can use to regulate their learning.	Students recognize and describe their numeracy strengths and challenges. With some guidance, they choose appropriate strategies to regulate their learning.
Task Analysis	Children participate in guided activities that model how to complete a task involving numeracy.	Students identify tasks that involve numeracy and determine which information may be used to complete a task.	Students analyze situations that involve numeracy to identify relevant and irrelevant information.

New Learn Alberta

NUMERACY PROGRESSIONS

	Kindergarten (ages 4–5)	Division 1 (ages 6–8)	Division 2 (ages 9–11)
Quantitative Information Students apply knowledge of quantitative information to make an informed decision.			
Magnitude	Children describe the quantity of objects within a group(s) as being more, less, enough, too many, or too few for a variety of purposes (e.g., to share cookies, make teams).	Students interpret and compare quantities expressed as whole numbers in their environment.	Students interpret, compare, and use quantities expressed as whole numbers, percentages, fractions, and decimals that are commonly used in real-life situations.
Using Numbers	Children use numbers to count and label in their environment (e.g., board games, phone numbers, counting rhymes).	Students use numbers to indicate position or value in their environment (e.g., first, second, third, currency, music notes).	Students use negative numbers in real-life situations (e.g., temperature, golf scores, hockey statistics).
Calculations	Children solve basic counting problems informally in familiar situations.	Students use addition and subtraction in familiar situations.	Students calculate using whole numbers and decimals in real-life situations.
Patterns and Relationships	Children recognize and use non-numerical patterns in their environment and daily routines (e.g., days of the week, rhythms).	Students recognize and use patterns in their environment and daily routines (e.g., calendar, seasons).	Students analyze and use patterns, including increasing or decreasing patterns, to make simple predictions in real-life situations.
Organization of Data	Children organize familiar items by sorting according to shared characteristics.	Students organize objects, ideas, or information using a classification system.	Students organize objects, ideas, or information using a variety of classification systems.

Numeracy Example: Grade 2

Learning Outcome: Students relate duration to **time**.		
Knowledge	**Understanding**	**Skills & Procedures**
Time can be described using **standard units** such as days or minutes.	Duration is quantified by **measurement**.	Describe the **relationship** between days, weeks, months, and years. Describe the duration between or until significant events using **standard units** of **time**.
Numeracy: Time, Measurement, Patterns and Relationships, Units of Measurement, Interpretation and Representation of Quantitative Information		

LITERACY PROGRESSIONS

Alberta Education defines literacy as follows: **Literacy** involves acquiring and applying the understanding and skills necessary to decode, evaluate, and logically communicate ideas and build meaning, using oral, written, visual, and multimedia sources. Literacy is embedded in learning across all subject areas. It is foundational, allowing students to live, learn, and work as knowledgeable, active participants in a democratic society. The Literacy Progressions identify knowledge and behaviours that students may demonstrate by the end of each divisional age range.

	Kindergarten (ages 4–5)	Division 1 (ages 6–8)	Division 2 (ages 9–11)
Awareness Students develop awareness of the literacy skills required to engage in tasks or to make decisions.			
Purpose	Children recognize that language is all around them and provides enjoyment.	Students recognize that literacy is used for many purposes in their everyday lives and provides enjoyment.	Students recognize how literacy enhances learning opportunities and provides enjoyment.
Participation	Children participate in guided activities that model how being literate enables them to participate in local and global communities.	Students, with guidance, recognize how being literate enables them to participate in local and global communities.	Students recognize how being literate enables them to participate in local and global communities.
Personal Insight	Children participate in guided activities that model how to think about their literacy strengths and how they can regulate their learning.	Students, with guidance, identify their literacy strengths and how they can regulate their learning.	Students identify and describe their literacy strengths and challenges. With some guidance, they regulate their learning.
Task Analysis	Children participate in guided activities that model how to identify the literacy skills needed to complete a task.	Students identify the literacy skills needed to complete a task.	Students analyze a task and identify the literacy skills needed to complete it.

LITERACY PROGRESSIONS

Alberta Education defines literacy as follows: **Literacy** involves acquiring and applying the understanding and skills necessary to decode, evaluate, and logically communicate ideas and build meaning, using oral, written, visual, and multimedia sources. Literacy is embedded in learning across all subject areas. It is foundational, allowing students to live, learn, and work as knowledgeable, active participants in a democratic society. The Literacy Progressions identify knowledge and behaviours that students may demonstrate by the end of each divisional age range.

	Kindergarten (ages 4–5)	Division 1 (ages 6–8)	Division 2 (ages 9–11)
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Purpose	Children recognize that language is all around them and provides enjoyment.	Students recognize that literacy is used for many purposes in their everyday lives and provides enjoyment.	Students recognize how literacy enhances learning opportunities and provides enjoyment.
Participation	Children participate in guided activities that model how being literate enables them to participate in local and global communities.	Students, with guidance, recognize how being literate enables them to participate in local and global communities.	Students recognize how being literate enables them to participate in local and global communities.
Personal Insight	Children participate in guided activities that model how to think about their literacy strengths and how they can regulate their learning.	Students, with guidance, identify their literacy strengths and how they can regulate their learning.	Students identify and describe their literacy strengths and challenges. With some guidance, they regulate their learning.
Task Analysis	Children participate in guided activities that model how to identify the literacy skills needed to complete a task.	Students identify the literacy skills needed to complete a task.	Students analyze a task and identify the literacy skills needed to complete it.

New Learn Alberta

Literacy Example: Grade 1

Learning Outcome: Students **investigate** and represent data.		
Knowledge	**Understanding**	**Skills & Procedures**
Data can be **collected information**.	Data can be **answers to questions**.	**Share wonderings** about people, things, events, or experiences. **Gather** data by sharing answers.
Literacy: Develop Questions, Access, Background Knowledge		

New Learn Alberta Site

https://curriculum.learnalberta.ca/home/en

Alberta Regional Professional Development Consortia
Adult learning for students' sake

Central Alberta Regional Consortium

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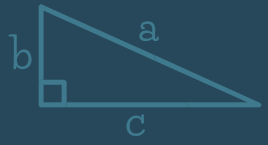

Curriculum Comparison Documents

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Curriculum Comparison - Kindergarten

Kindergarten Curriculum Comparison for the New Alberta Curriculum (Final)

Important Links

Comparison of Current 2007 Curriculum or Draft 2021 Changes to New (April 2022 version)

Comparison of Multi-grades of new Curriculum

N = Number **P= Patterns** **M = Measurement** **Time = T** **Geometry = G**

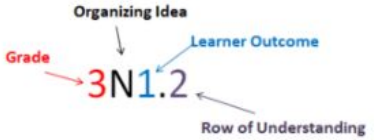
Outcomes from 2007 Curriculum	**Understandings** from April Draft (New **Understandings**)	**Draft Outcomes, Knowledge, Skills and Procedures**	
Number Strand	**Number (N)**		
Specific Outcome 1 Say the number sequence 1 to 10 by 1s, starting anywhere from 1 to 10 and from 10 to 1.	**UNDERSTANDING** A quantity is always counted using the same sequence of words (counting principle: stable order)	**LEARNING OUTCOME** KN1.2a. Children investigate quantity to 10. **KNOWLEDGE** Quantity can be determined by counting.	**Skills & Procedure:** Count within 10, forward and backward, starting at any number, according to the counting principles.
Specific Outcome 2 Subitize (recognize at a glance) and name familiar arrangements of 1 to 5 objects or dots.	**UNDERSTANDING** Quantity can be determined without counting.	**LEARNING OUTCOME** KN1.3 Children investigate quantity to 10. **KNOWLEDGE** A small quantity can be recognized at a glance (subitized).	**SKILLS & PROCEDURES** Subitize quantities to 5.
Specific Outcome 3 Relate a numeral, 1 to 10, to its respective quantity. **Specific Outcome 4** Represent and describe numbers 2 to 10, concretely and pictorially.	**UNDERSTANDING** Quantity can be the number of objects in a set.	**LEARNING OUTCOME** KN1.1 Children investigate quantity to 10. **KNOWLEDGE** Quantity can be represented using • objects • pictures • words • numerals	**SKILLS & PROCEDURES** Recognize a number of familiar objects as a quantity. Represent a quantity in different ways. Relate a numeral to a specific quantity
	UNDERSTANDING A quantity remains the same no matter the order in which the objects are counted (counting principle: order irrelevance). A quantity can be determined by counting each object in a set once and only once (counting principle: one-to-one correspondence). The last number used to count represents the quantity (counting principle: cardinality). Any quantity of like or unlike objects can be counted as a set (counting principle: abstraction).	**LEARNING OUTCOME** KN1.2 b-e. Children investigate quantity to 10. **KNOWLEDGE** Quantity can be determined by counting.	**SKILLS & PROCEDURES** Count within 10, forward and backward, starting at any number, according to the counting principles.

Curriculum Comparison - Kindergarten

	UNDERSTANDING A quantity remains the same no matter how the objects are grouped or arranged (counting principle: conservation).	**LEARNING OUTCOME** KN2.1 Children interpret compositions of quantities within 10. **KNOWLEDGE** Quantity can be arranged in various ways.	**SKILLS & PROCEDURES** Identify a quantity in various groups or arrangements. Compose quantities within 10. Recognize various ways to make 5 and 10.
Specific Outcome 5 Compare quantities 1 to 10, using one-to-one correspondence.	**UNDERSTANDING** A quantity can be described relative to another quantity. A quantity can be described in relation to a purpose or need.	**LEARNING OUTCOME** KN1.4 Children investigate quantity to 10. **KNOWLEDGE** Comparisons of quantity can be described by using words such as • more • less • same • enough • not enough	**SKILLS & PROCEDURES** Compare the size of two sets using one-to-one correspondence. Describe quantities relative to each other using comparative language. Describe a quantity in relation to a purpose or need using comparative language. Solve problems in familiar situations by counting.
Shape and Space - Measurement	**MEASUREMENT (M)**		
Specific Outcome 1 Use direct comparison to compare two objects based on a single attribute, such as length (height), mass (weight) and volume (capacity).	**UNDERSTANDING** Size describes the amount of one measurable attribute of an object or a space.	**LEARNING OUTCOME** KM1.1 Children explore size through direct comparison. **KNOWLEDGE** Size can be interpreted in many ways (according to measurable attributes), such as: • the length of an object • how much flat space an object covers (area) • how much a container holds (capacity) • the heaviness of an object (weight)	**SKILLS & PROCEDURES** Identify measurable attributes of familiar objects to which size may refer.
	UNDERSTANDING Size may refer to only one measurable attribute at a time. The size of two objects can be compared directly. The size of an object can be described in relation to a purpose or need.	**LEARNING OUTCOME** KM1.2 Children explore size through direct comparison. **KNOWLEDGE** Comparisons of size can be described by using words such as • longer • shorter • heavier • lighter • too big • too small	**SKILLS & PROCEDURES** Compare the length, area, weight, or capacity of two objects directly. Describe the size of an object in relation to another object, using comparative language. Describe the size of an object in relation to a purpose or need, using comparative language.

Shape & Space - Measurement	**GEOMETRY (G)**		
Specific Outcome 2 Sort 3-D objects, using a single attribute. **Specific Outcome 3** Build and describe 3-D objects. **Patterns and Relations:** **Specific Outcome 2** Sort a set of objects based on a single attribute, and explain the sorting rule.	**UNDERSTANDING** Shape is structured two-dimensional or three-dimensional space.	**LEARNING OUTCOME** KG 1.1 Children investigate shape. **KNOWLEDGE** A shape can be represented using objects, pictures, or words. Familiar two- and three-dimensional shapes can be found in nature, such as • circles • triangles • cubes • cylinder First Nations, Métis, and Inuit name specific shapes in relation to the natural world.	**SKILLS & PROCEDURES** Relate shapes in the natural world to various two-dimensional and three-dimensional shapes. Identify familiar two- and three-dimensional shapes. Investigate three-dimensional shapes by rolling, stacking, or sliding. Describe a shape using words such as flat, curved, straight, or round.
Patterns and Relations - Patterns	**PATTERNS (P)**		
Specific Outcome 1 Demonstrate an understanding of repeating patterns (two or three elements) by: • identifying • reproducing • extending • creating patterns using manipulatives, sounds and actions.	**UNDERSTANDING** A pattern is characterized by how the elements change or remain constant.	**LEARNING OUTCOME** KP1.1 Children identify and create repeating patterns. **KNOWLEDGE** Patterns exist everywhere. A pattern can involve elements such as • sounds • objects • pictures • symbols • actions Repeating patterns have one or more elements that repeat.	**SKILLS & PROCEDURES** Recognize repeating patterns encountered in daily routines and play, including songs or dances. Recognize change or constancy between elements in a repeating pattern. Predict the next elements in a repeating pattern. Create a repeating pattern with up to three repeating elements.
	TIME (T)		
	UNDERSTANDING Time can be perceived as a sequence.	**LEARNING OUTCOME** KT1.1 Children interpret time as a sequence of events. **KNOWLEDGE** Sequence in time can be described in words, such as • first • next • today Ordinal numbers can indicate order in time.	**SKILLS & PROCEDURES** Sequence events, limited to two events, according to time using words or ordinal numbers. Describe daily events as occurring yesterday, today, or tomorrow.

Curriculum Comparison - Grade 3



Grade 3 Curriculum Comparison to the New Alberta Curriculum (Final)

Important Links

Comparison of Current 2007 Curriculum or Draft 2021 Changes to the new April 2022 Version

Comparison of Multi-grades of new Draft Curriculum

N = Number P= Patterns M = Measurement Time = T Geometry = G Statistics = ST Algebra = A Coordinate Geometry = CG

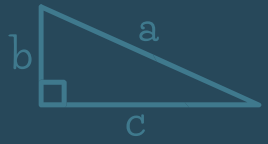
Outcomes from 2007 Curriculum	**Understandings** from New Curriculum (New **Understandings**)	**Outcomes, Knowledge, Skills and Procedures**	
Number Strand	**Number (N)**		
Specific Outcome 1 Say the number sequence 0 to 1000 forward and backward by: • 5s, 10s or 100s, using any starting point • 3s, using starting points that are multiples of 3 • 4s, using starting points that are multiples of 4 • 25s, using starting points that are multiples of 25. **<moved to grade 2>**			
Specific Outcome 2 Represent and describe numbers to 1000, concretely, pictorially and symbolically. <**moved to grade 2**> **Specific Outcome 3** Compare and order numbers to 1000. **Specific Outcome 4** Estimate quantities less than 1000, using referents.<**moved to grade 2**> **(but changed to benchmarks instead of referents)** **Specific Outcome 5** Illustrate, concretely and pictorially, the meaning of place value for numerals to 1000.	**UNDERSTANDING** Place value is the basis for the base-10 system. Place value determines the value of a digit based on its place in a number, relative to the one's place. Place value is used to read and write numbers.	**LEARNING OUTCOME** 3N1.1 Students interpret place value within 100 000. **KNOWLEDGE** For numbers in base-10, each place has 10 times the value of the place to its right. The digits 0 to 9 indicate the number of groups in each place in a number. The value of each place in a number is the product of the digit and its place value. Numbers can be composed in various ways using place value. Numbers can be rounded in context where an exact count is not needed.	**SKILLS & PROCEDURES** Identify the place value of each digit in a natural number. Relate the values of adjacent places. Determine the value of each digit in a natural number. Express natural numbers using words and numerals. Express various compositions of a natural number using place value. Round natural numbers to various places. Compare and order natural numbers. Express the relationship between two numbers using <, >, or =.

Curriculum Comparison Documents

Kindergarten
https://drive.google.com/file/d/1Q2m6lmIA1a95mQLs-WmbfLsori802JR8/view
Grade 1
https://drive.google.com/file/d/1urTwIbqMBPM8RjWMHOdtubIbuO4SkvP6/view
Grade 2
https://drive.google.com/file/d/1tVWtclFe7gxQv1PqP08Ib_jvtZCj8seB/view
Grade 3
https://drive.google.com/file/d/1B1pNgzSBAi7x_Y-czTzSoAzhkqDRbEQv/view

x

$2+2=4$



$\sqrt[n]{x}$

$42:9$

Sample Year Plans

$x/2y$

Alberta Regional Professional Development Consortia
Adult learning for students' sake

Central Alberta Regional Consortium

Alberta Mathematics Sample Year Plan

The purpose of this document is to provide a possible Year Plan for organizing your units of instruction but more importantly, it provides a possible approach to scaffolding the learning that students will need if they do not have the prerequisite knowledge. Sections highlighted in yellow suggest starting points for addressing the Learner Outcome at a more appropriate entry level. Students will require sufficient time to access prior knowledge so a spiralled approach to the Learner Outcomes will likely be necessary.

Grade 1

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Sample Year Plan: Mathematics - Grade 1

What is Mathematics?

Mathematics is a universal language relying on a shared understanding of symbols and procedures to communicate ideas efficiently. It is a powerful tool used every day to solve real-life problems. The beauty of mathematics inspires curiosity about our world and the universe. As a subject, mathematics has historical roots in many cultures and continues to evolve in support of innovations. Mathematics involves learning across various disciplines, including arithmetic, algebra, geometry, statistics, and probability. In all disciplines, procedures may range from counting, calculating, and measuring to analyzing, modelling, and generalizing. Engaging with mathematics allows students to develop logical thinking skills, which contribute to effective decision making and problem solving. Students are able to extend their thinking beyond personal experiences through flexible and collaborative learning opportunities. Experiences with mathematics help students develop appreciation for the patterns and relationships that describe multiple aspects of the world and its future possibilities.

Numeracy, Quantitative Information and Spatial Information

Numeracy is a foundational building block of learning and is developed in all subjects in different ways. Central to the development of numeracy, the mathematics curriculum helps students acquire and apply the knowledge and skills necessary to interact with quantitative and spatial information in a variety of situations. Foundational numeracy focuses on counting, comparing, and calculating* with numbers; describing, representing, and measuring shapes and objects; collecting, organizing, and interpreting data; and creating and interpreting diagrams, graphs, and tables. Numeracy skills support real-life pursuits, including telling time, using and managing money, following instructions, finding an address, and reading a schedule. With a focus on numeracy, the mathematics curriculum provides all students with a solid foundation of mathematical knowledge, understanding, and skills to set them up for future success.

Mathematics education is an ongoing process of connecting students' concrete experiences to their comprehension of abstract concepts. A recognition of numbers and their application to counting and comparing form foundational knowledge and skills for students as they encounter a variety of quantitative information in their lives. The development of these skills supports students as they participate in family, community, and cultural activities. As their experiences broaden, students also learn that operations with numbers provide reliable and efficient options to counting and comparing. Students acquire knowledge of basic number facts that can be applied to addition, subtraction, multiplication, and division of larger numbers using commonly recognized algorithms. Students also communicate using conventional mathematical symbols and vocabulary. As students are exposed to more and varied quantitative information, they learn about different number systems and their applications to various situations, such as decimals for money and integers for temperature. In developing algebraic thinking skills, students transfer their understandings of properties of number to new or abstract problems.

Sample Year Plan: Mathematics - Grade 1

Numeracy, Quantitative Information and Spatial Information

Although mathematics is often considered the study of numbers, it also provides the tools to interpret spatial information in the world. The earliest mathematical experiences of children involve exploration of the space and objects around them. Mathematics provides the foundations for precisely describing, defining, and measuring spatial information. Students will learn geometric properties that relate to and distinguish shapes. They will also develop an understanding of measurement, progressing from direct comparison, to the use of non-standard units of measure, to accurately measuring with various standard units and tools. Examining shapes through measures and calculations of length, area, volume, and angle will allow students to build a broad understanding of spatial information. Students will extend their application of spatial knowledge and skills from concrete to abstract situations, precisely describing location and movement of shapes in a plane. They will develop knowledge of geometric properties, theorems, and formulas to appreciate complex patterns within traditional cultural designs, to solve immediate real-life problems, and to propose innovations.

Throughout the study of mathematics, students apply their foundational knowledge, understandings, skills, and procedures to solve problems. They visualize and reason to move from what is known to what is sought. Thinking logically about a problem, choosing a strategy, reaching a conclusion, and justifying the solution helps students develop confidence in their mathematical thinking and decision making. These processes are reinforced by both literacy and numeracy skills and continue to develop throughout students' lives to support a wide variety of needs, such as financial literacy.

The foundational knowledge and skills provided by the mathematics curriculum are important contributions to the future success of students. Students will apply abilities in computation, managing information, reasoning, and problem solving in daily life and in future educational pursuits and careers. Mathematics will help students interact in society with confidence and intellectual curiosity. Students will rely on their mathematical knowledge and skills as they continue into adulthood in our interconnected and ever changing world. *Note: Learning outcomes in the Mathematics Kindergarten to Grade 6 Curriculum are intended to be achieved without the support of calculators.

source: *Final Curriculum: Kindergarten to Grade 3 will be implemented starting September 2022. Grades 4 to 6 are available for optional implementation starting September 2022, Introduction, page 1.*

Sample Year Plan: Mathematics - Grade 1

September 2022 ---------- November 2022

September	October	November
Number: Quantity is measured with numbers that enable counting, labelling, comparing and operating.		
1N1.2 Students interpret and explain quantities to 100.(to 20) • 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. 1N1.3 Students interpret and explain quantities to 100.(to 20) • A quantity can be perceived as the composition of smaller quantities • Quantity can be partitioned by sharing or grouping. 1N1.1 Students interpret and explain quantities to 100.(to 20) • Quantity is expressed in words and numerals based on patterns. • Quantity in the world is represented in multiple ways. including with money. 1N1.5 Students interpret and explain quantities to 100.(to 20) • Two quantities are equal when there is the same number of objects in both sets. • Equality is a balance between two quantities. 1N2. 1 Students examine addition and subtraction within 20.(introduce)	1N1.2 Students interpret and explain quantities to 100.(to 20) • 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. 1N1.3 Students interpret and explain quantities to 100.(to 20) • A quantity can be perceived as the composition of smaller quantities • Quantity can be partitioned by sharing or grouping. 1N1.1 Students interpret and explain quantities to 100.(to 20) • Quantity is expressed in words and numerals based on patterns. • Quantity in the world is represented in multiple ways. including with money. 1N1.5 Students interpret and explain quantities to 100.(to 20) • Two quantities are equal when there is the same number of objects in both sets. • Equality is a balance between two quantities. 1N2. 1 Students examine addition and subtraction within	1N1.2 Students interpret and explain quantities to 100.(to 50) • 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. 1N1.3 Students interpret and explain quantities to 100.(to 50) • A quantity can be perceived as the composition of smaller quantities • Quantity can be partitioned by sharing or grouping. 1N1.1 Students interpret and explain quantities to 100.(to 50) • Quantity is expressed in words and numerals based on patterns. • Quantity in the world is represented in multiple ways. including with money. 1N1.4 Students interpret and explain quantities to 100.(to 50) • A quantity can be perceived as the composition of smaller quantities. 1N1.5 Students interpret and explain quantities to 100.(to 50) • Two quantities are equal when there is the same number of objects in both sets. • Equality is a balance between two quantities.

N = Number | P= Patterns | M = Measurement | Time = T | Geometry = G | Statistics = ST | Algebra = A | Coordinate Geometry = CG

Sample Year Plan: Mathematics - Grade 1

September 2022 ---------- November 2022

September	October	November
• Addition and subtraction are processes that describe the composition and decomposition of quantity.	20.(introduce) • Addition and subtraction are processes that describe the composition and decomposition of quantity.	• Quantity can be partitioned by sharing or grouping. 1N2. 1 Students examine addition and subtraction within 20.(introduce) • Addition and subtraction are processes that describe the composition and decomposition of quantity.
Patterns: Awareness of patterns supports problem solving in various situations.		
1P1. Students examine patterns in cycles. • A pattern that appears to repeat may not repeat in the same way forever. • A cycle is a repeating pattern that repeats in the same way forever.	1P1. Students examine patterns in cycles. • A pattern that appears to repeat may not repeat in the same way forever. • A cycle is a repeating pattern that repeats in the same way forever.	1P1. Students examine patterns in cycles. • A pattern that appears to repeat may not repeat in the same way forever. • A cycle is a repeating pattern that repeats in the same way forever.
Time: Duration is described and quantified with time.		
• Cycles - summer to fall - introduce here • Calendar Time all year • Weekly cycles • could consider the Indigenous Calendar for teaching specific topics at an appropriate time. All of the above is ongoing through the year	1T1. Students explain time in relation to cycles. • Time is an experience of change • Time can be perceived as a cycle	1T1. Students explain time in relation to cycles. • Time is an experience of change • Time can be perceived as a cycle
Measurement: Attributes such as length, area, volume, and angle are quantified by measurement.		

N = Number | P= Patterns | M = Measurement | Time = T | Geometry = G | Statistics = ST | Algebra = A | Coordinate Geometry = CG

Sample Year Plan: Mathematics - Grade 1

December 2022 ----------January 2023

December	January	February
Number: Quantity is measured with numbers that enable counting, labelling, comparing and operating.		
1N1.2 Students interpret and explain quantities to 100.(to 50) • 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. 1N1.3 Students represent equal sharing and grouping of quantities within 20. • Quantity can be partitioned by sharing or grouping. 1N1.1 Students interpret and explain quantities to 100. .(to 50) • Quantity is expressed in words and numerals based on patterns. • Quantity in the world is represented in multiple ways. including with money. 1N1.4 Students interpret and explain quantities to 100. .(to 50) • A quantity can be perceived as the composition of smaller quantities. 1N1.5 Students interpret and explain quantities to 100 ..(to 50) • Two quantities are equal when there is the same number of objects in both sets. • Equality is a balance between two quantities. 1N2. 1 Students examine addition and subtraction within 20.	1N1.2 Students interpret and explain quantities to 100. • 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. 1N1.3 Students represent equal sharing and grouping of quantities within 20. • Quantity can be partitioned by sharing or grouping. 1N1.1 Students interpret and explain quantities to 100. • Quantity is expressed in words and numerals based on patterns. • Quantity in the world is represented in multiple ways. including with money. 1N1.4 Students interpret and explain quantities to 100. • A quantity can be perceived as the composition of smaller quantities. 1N1.5 Students interpret and explain quantities to 100. • Two quantities are equal when there is the same number of objects in both sets. • Equality is a balance between two quantities. 1N2. 1 Students examine addition and subtraction within 20. • Addition and subtraction are processes that describe the composition and decomposition of quantity	1N1.2 Students interpret and explain quantities to 100. • 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. 1N1.3 Students represent equal sharing and grouping of quantities within 20. • Quantity can be partitioned by sharing or grouping.. 1N1.1 Students interpret and explain quantities to 100. • Quantity is expressed in words and numerals based on patterns. • Quantity in the world is represented in multiple ways. including with money. 1N1.4 Students interpret and explain quantities to 100. • A quantity can be perceived as the composition of smaller quantities. 1N1.5 Students interpret and explain quantities to 100. • Two quantities are equal when there is the same number of objects in both sets. • Equality is a balance between two quantities.. 1N2. 1 Students examine addition and subtraction within 20. • Addition and subtraction are processes that describe the composition and decomposition of quantity

N = Number | P= Patterns | M = Measurement | Time = T | Geometry = G | Statistics = ST | Algebra = A | Coordinate Geometry = CG

Copy the link for your Year Plan, open and save it to your computer.

Kindergarten -

https://drive.google.com/file/d/1CcnyRSqMVNHFH4fY7eXXkFj0UgZjs1Zu/view

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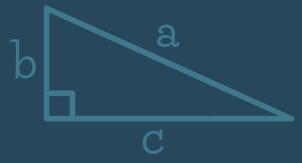


Copy the link for your grades Year Plan, open and save it to your computer.

Grade 1

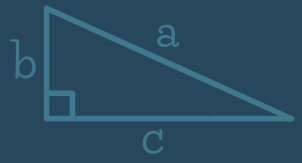
https://arpdc.ab.ca/wp-content/uploads/2023/08/Sample-Year-Plan-Year-at-a-Glance-Grade-1-2022-2023.pdf

Grade 2

https://arpdc.ab.ca/wp-content/uploads/2023/08/Sample-Year-Plan-Year-at-a-Glance-Grade-2-2022-2023.pdf

Grade 3

https://arpdc.ab.ca/wp-content/uploads/2023/08/Sample-Year-Plan-Year-at-a-Glance-Grade-3-2022-2023.pdf



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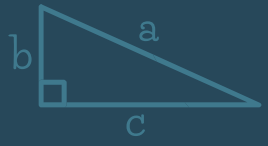
Where can I find resources and recordings?

https://arpdc.ab.ca/

Sessions 1 -5 Plan your year with you following the Sample Year Plan
Math Kits give you ideas of what might be helpful in the course for the year.

x

$2+2=4$



Coming as early as next week!

$\sqrt[n]{x}$

$42:9$

Curriculum Support Documents

$x/2y$

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2+2=4

Questions???

Don't hesitate to reach out to any of your local consortia members or myself

Chris Zarski
chris.zarski@arpdc.ab.ca

x

y

Have a WONDERFUL YEAR!

y