

Summer New Curriculum Institute

Math Grade 4-6

Day 1



Alberta **Regional** Professional
Development Consortia

Adult learning for students' sake



Land Acknowledgement

The ARPDC respectfully acknowledges that we are located on traditional lands across the Province of Alberta on Treaty 4, 6, 7, 8 and 10 territories—the travelling route, gathering place and meeting grounds for Indigenous Peoples, whose histories, languages, cultures and traditions continue to influence our vibrant community.

We are grateful for the traditional Knowledge Keepers and Elders who are still with us today and those who have gone before us. We recognize the land as an act of reconciliation and gratitude to those whose territory we reside on or are visiting.

Honouring the land in this way acknowledges the story of the creation of this country in a way that has historically been missing.

Let Us Introduce Ourselves



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When you think of teaching math in the fall, where would you place yourself?

1



2



3



4



5



Four Day Agenda

Day 1	<ol style="list-style-type: none">1. Background on New Curriculum2. Navigating the website3. Unpacking the math curriculum
Day 2	<ol style="list-style-type: none">1. What is Numeracy and Mathematics?2. Learning progressions3. ARPDC resources4. Deep dive into Order of operations 4-6
Day 3	<ol style="list-style-type: none">1. Unpacking student actions (verbs) in the new curriculum
Day 4	<ol style="list-style-type: none">1. Use of manipulatives2. Fraction support3. Integer support

Agenda for Day One

1. Background on New Curriculum
2. Navigating the website
3. Unpacking the math curriculum



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Navigating newLearn Alberta

Documents and Website

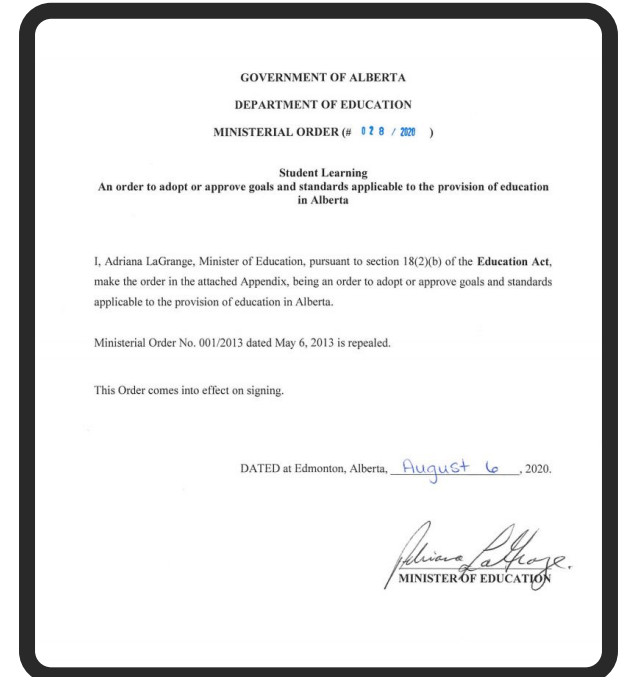


Direction for Curriculum

Ministerial Order on Student Learning

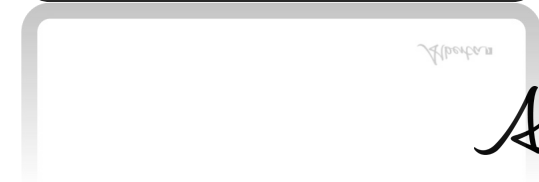
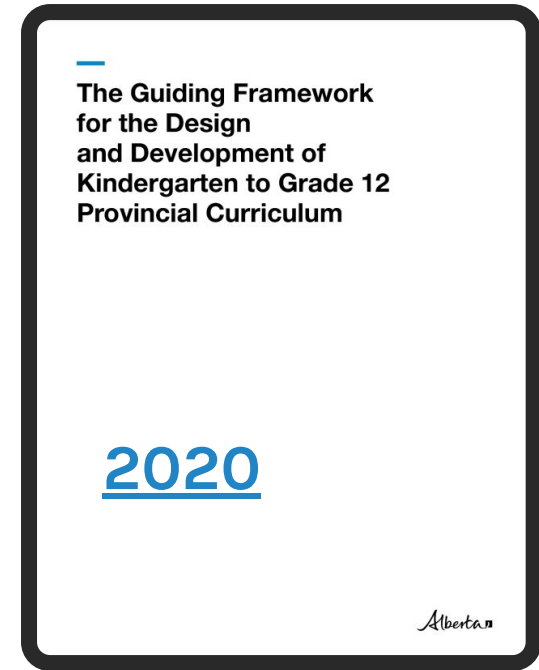
- Vision for Student Learning
- Foundations for Learning
- Outcomes for Learning

“Education in Alberta will promote the acquisition of skills and the pursuit of knowledge with wisdom, while valuing equality of opportunity, parental responsibility, personal responsibility and excellence, and respect for difference and the inherent dignity of each individual.”



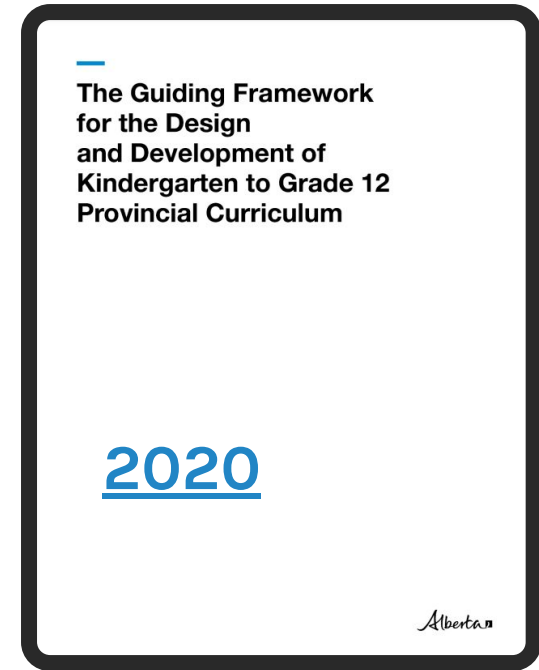
The Guiding Framework

- ❖ provides **transparent guidelines** to help parents and educators understand curriculum development in Alberta.
- ❖ **guides curriculum development.** Curriculum is the content—what students learn and why it is being taught in each subject from grade to grade.

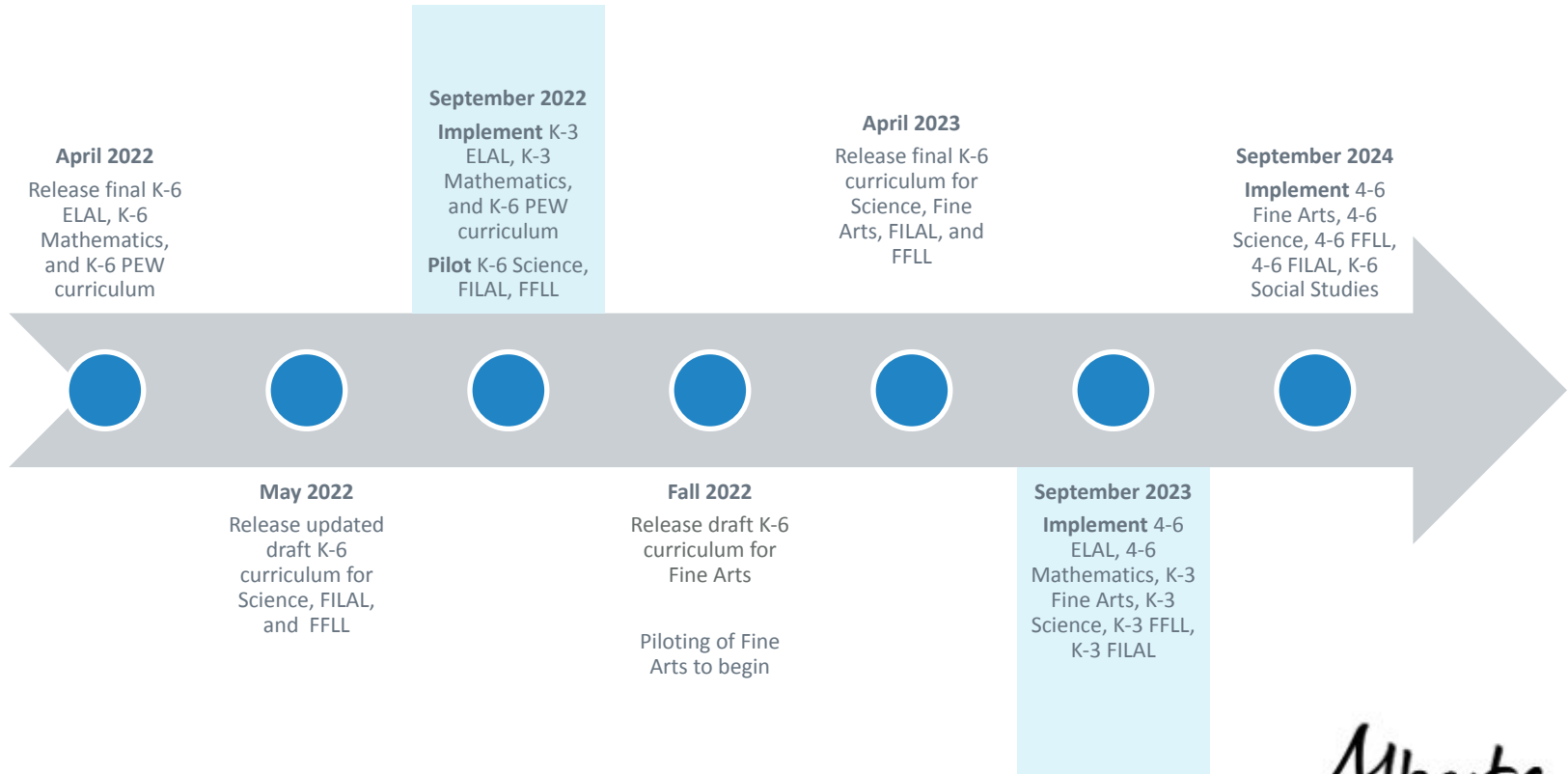


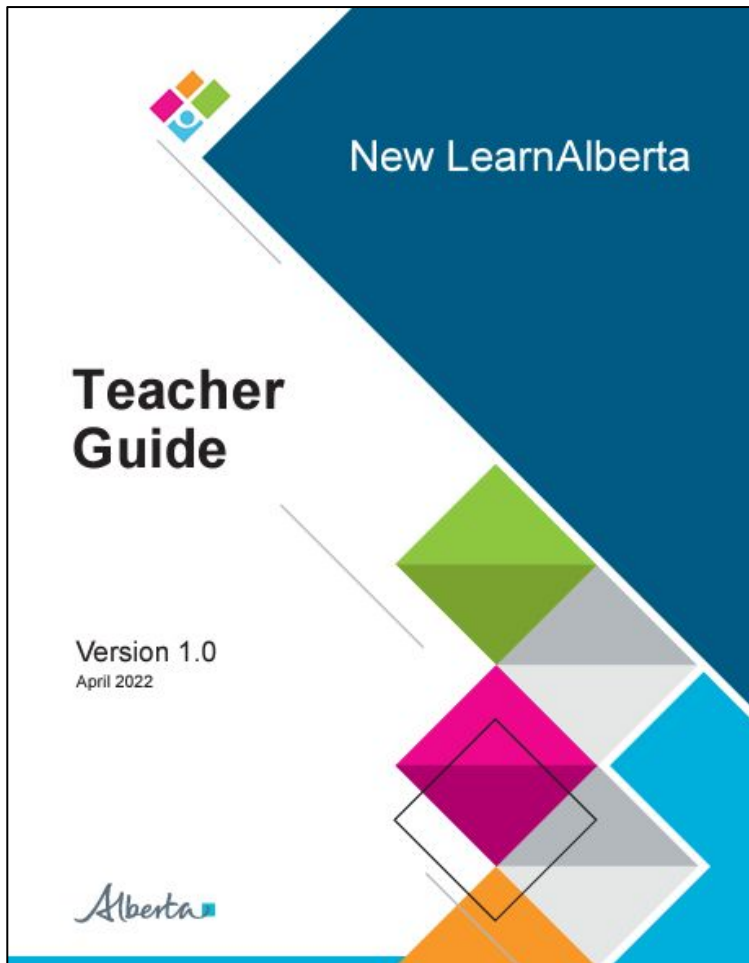
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Implementation Timeline: 2022 to 2024

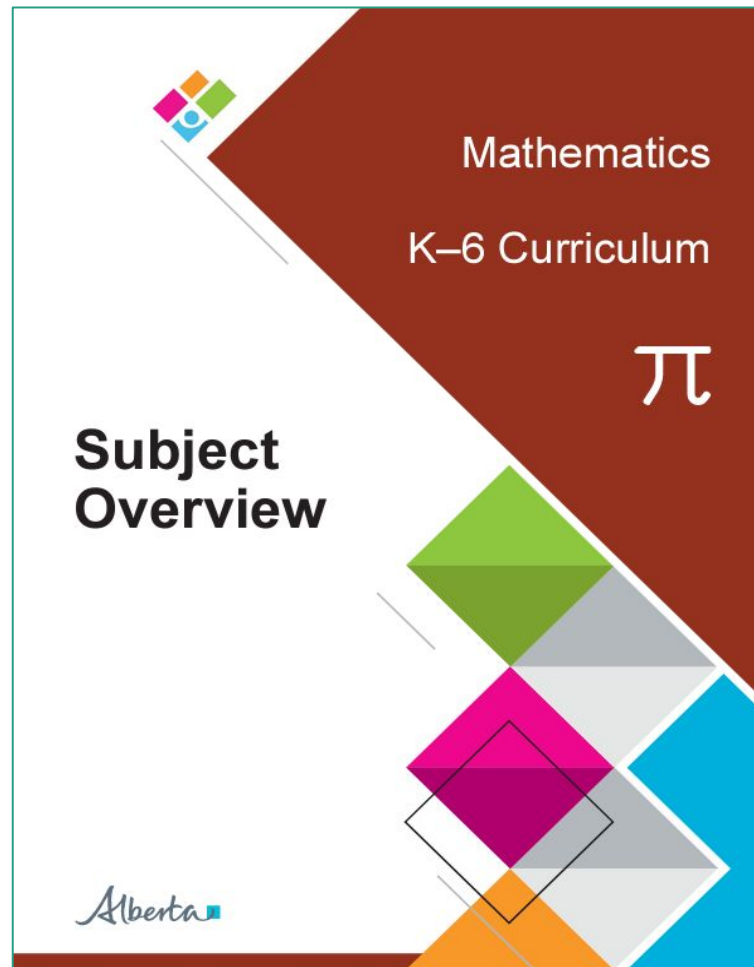




Teacher Guide

Subject Overview

<https://bit.ly/3YTU11a>



Bridging Student Learning to New Curriculum

π Subject: Mathematics



Suggestions to Support Bridging from Previous Grade 4 Curriculum to New Grade 5 Curriculum

Topic	Previous Mathematics Curriculum: Grade 4	New Mathematics Curriculum: Grade 5	Suggestions to Support Bridging
Operations	Use chosen strategies to add, subtract, multiply, and divide.	Use standard algorithms to add, subtract, multiply, and divide.	Students may need extra practice with standard algorithms in order to use them consistently for addition, subtraction, multiplication, and division.
Multiplication and Division Number Facts	Recall multiplication facts to 7×7 and related division facts.	There is no new expectation regarding number facts; students were expected to recall to 12×12 in Grade 4.	Students will need knowledge of multiplication number facts to 12×12 and related division facts.
Order of Operations	There is no content related to order of operations.	Evaluate numerical expressions that include multiple operations and parentheses.	Students will need an introduction to the order of operations.
Fractions	Demonstrate an understanding of fractions up to one whole.	Demonstrate an understanding of improper fractions and mixed numbers.	Students will need knowledge of equivalent fractions, including in simplest form.
Ratios	There is no content regarding percentages.	Understand that fractions, decimals, ratios, and percentages can all represent the same part-to-whole relationship.	Students may need an understanding of percentages within 100%.
Algebraic Equations	Use any strategy to solve equations with one unknown (symbol) and one operation.	Use preservation of equality to solve equations with one unknown and up to two operations.	Students will need to be able to apply preservation of equality to solve equations.

Suggestions to Support Bridging from Previous Grade 5 Curriculum to New Grade 6 Curriculum

Topic	Previous Mathematics Curriculum: Grade 5	New Mathematics Curriculum: Grade 6	Suggestions to Support Bridging
Operations	Demonstrate proficiency with one appropriate and efficient strategy for addition, subtraction, multiplication, and division.	Use standard algorithms for addition, subtraction, multiplication, and division of decimal and natural numbers.	Students may need extra practice with standard algorithms in order to use them consistently for addition, subtraction, multiplication, and division.
Order of Operations	There is no content related to order of operations.	Evaluate numerical expressions that include multiple operations, parentheses, and powers.	Students will need an understanding of the order of operations.
Prime Factorization	There is no content regarding factors.	Determine the prime factorization of a composite number.	Students will need an understanding of factors, including using divisibility tests.
Fractions	Create equivalent fractions, and compare fractions with common denominators.	Understand that fractions represent quotients.	Students will need an understanding of improper fractions and mixed numbers.
Fraction Operations	There is no content regarding adding and subtracting fractions.	Add and subtract fractions with denominators within 100.	Students will need an understanding of how to add and subtract fractions with common denominators.

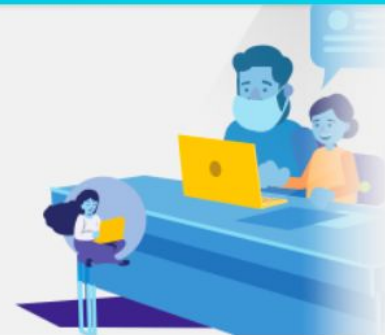
<https://curriculum.learnalberta.ca/ciihub/en/home>

(Click on For School Authorities, School Leaders and Teachers)



Welcome to new LearnAlberta

New LearnAlberta is Alberta's bilingual platform for teachers, parents, students, and other education partners. This innovative platform will allow you to engage with the curriculum in ways that were not previously possible. Education partners are encouraged to participate in the fine tuning of new LearnAlberta by clicking "Contact Us" and providing feedback.



To Access: curriculum.learnalberta.ca



Alberta's New Kindergarten to Grade 6 Curriculum

UPDATE: The final English Language Arts and Literature, Mathematics, and Physical Education and Wellness of Alberta's new K-6 curriculum has been updated to support classroom implementation in September 2022. The draft curriculum for all other subjects will be maintained in this area.



Explore Resources

Learning and teaching resources aligned to curriculum, with a focus on supporting September 2022 implementation.



Recent Announcements

e-Tutoring Hub

Posted: 2021-01-11

Pre-recorded tutoring sessions that support literacy and numeracy skills for students in grades 4 to 9 are now available for viewing in the [e-Tutoring Hub](#).

Later this year, Alberta Education will expand the free online tutoring services to cover more grades and subjects, including live tutoring. Feedback from school authorities, parents, and students will inform topics, identify needs for new tutoring sessions and be provided in both English and French.

ORGANIZING IDEA

Geometry: Shapes are defined and related by geometric attributes.

GUIDING QUESTION

How can shape bring meaning to the space in an environment?

LEARNING OUTCOME

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
- cylinders

First Nations, Métis, and Inuit relate specific shapes to those found in nature.

UNDERSTANDING

Shape is structured two-dimensional or three-dimensional space.

SKILLS & PROCEDURES

Relate shapes in nature 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.

GUIDING QUESTION

In what ways can shape be characterized?

LEARNING OUTCOME

Students interpret shape in two and three dimensions.

KNOWLEDGE

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.

UNDERSTANDING

A shape can be modelled in various sizes and orientations.

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

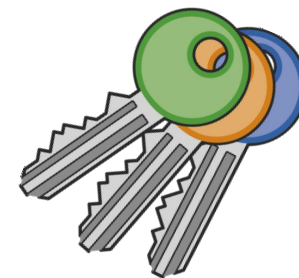
SKILLS & P

Identify familiar sizes and orientations.

Model two-dim

Sort shapes according to attribute and rule.

Compose and decompose three-dimensional



Organizing Idea

Guiding Question

Learning Outcome

Knowledge, Understanding, Skills and Procedures

Literacy, Numeracy, and Competencies

Curriculum 101: Architecture and Design



▶ 0:00 / 18:37

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[New LearnAlberta Video Overview](#)

[Home](#)[Home](#) > [Alberta's New K-6 Curriculum](#)[Alberta's New K-6 Curriculum](#)[Explore Resources](#)[Curriculum Implementation Information Hub](#)[Student Learning Hub](#)[Printable Curriculum](#)[Support](#)[e-Tutoring Hub](#)[Contact Us](#)

Alberta's New Kindergarten to Grade 6 Curriculum

Select the Subject or Feature below to begin browsing Alberta's new K-6 curriculum.

Browse by Subject



English Language Arts and Literature



Fine Arts



Français langue première et littérature



French Immersion Language Arts and Literature



Mathematics



Physical Education and Wellness



Science



Social Studies

Features of the Provincial Curriculum



Competency Progressions



Literacy Progressions



Numeracy Progressions

Unpacking the Mathematics Curriculum

REMEMBER: Curriculum and Pedagogy

Curriculum is the
'what' to teach
and not the **'how'**
to teach.

“Some teachers
taught the curriculum
today.

Other teachers taught
students today. And
there's a big
difference”

* From @BluntEducator

3 Common Features Across All Subjects

Architecture and Design

Learning Outcomes

Clear and Concise Language



Organizing Idea

Guiding Question

Learning Outcome

Knowledge, Understanding, Skills and Procedures

Literacy, Numeracy, and Competencies

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	In what ways can quantity be composed?			How can addition and subtraction provide perspectives of number?			How can addition and subtraction be interpreted?		
Learning Outcome	Children interpret compositions of quantity within 10			Students examine addition and subtraction within 20			Students investigate addition and subtraction within 100		
	Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures
	Quantity can be arranged in various ways.	A quantity remains the same no matter how the objects are grouped or arranged	Identify a quantity in various groups or arrangements.	Quantities can be composed or decomposed to model a change in quantity.	Addition and subtraction are processes that describe the	Visualize quantities between 10 and 20 as compositions of 10 and another quantity.	The order in which more than two numbers are added does not affect the	A sum can be composed in multiple ways.	Visualize 100 as a composition of multiples of 10 in various ways.

English Language Arts and Literature Kindergarten to Grade 6 Curriculum

	Kindergarten			Grade 1			Grade 2		
Organizing Idea	Text Forms and Structures: Identifying and applying text forms and structures improves understanding of content, literary style, and our rich language traditions.								
Guiding Question	How can ideas and information be organized?			How can the organization of ideas and information support the sharing of messages?			How can the organization of ideas and information support the expression and understanding of messages?		
Learning Outcome	Children explore how messages can be organized.			Students examine ways that messages can be organized and presented for different purposes.			Students explain how the organization of ideas and information within texts can support the purpose or meaning of messages.		
	Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures
	Messages can be shared for different reasons (purposes), including to learn and have fun. Messages can be imaginary (fiction) or real (non-fiction). Messages can be shared digitally or non-digitially in a variety of forms, including: • stories • pictures • signs • text Messages, both real and imaginary, follow a sequen (structure), inclu: • beginning • middle • ending	Ideas and information can be organized in ways that support understanding messages. Engage with messages for enjoyment. Discuss the differences between messages that are imaginary (fiction) or real (non-fiction). Explore messages shared in a variety of forms, including: • writing • listening	Explore messages shared for different reasons. Engage with messages for enjoyment. Discuss the differences between messages that are imaginary (fiction) or real (non-fiction). Explore messages shared in a variety of forms, including: • writing • listening	Messages can be shared for different reasons (purposes), including to learn, have fun, and stay safe. Messages can depict ideas and information that are imaginary (fiction) or real (non-fiction). Messages can be shared digitially or non-digitially through: • reading • writing • listening	Ideas and information can be organized by purpose, form, or structure. Identify messages that provide enjoyment. Describe the differences between messages that are imaginary (fiction) or real (non-fiction). Discuss forms used to organize messages. Identify the beginning, middle, and ending in a message.	Discus reasons for messages to be shared. Identify messages that provide enjoyment. Messages can be shared digitially or non-digitially in a variety of forms, including	Creators share messages for different reasons (purposes), including entertainment, learning, and instruction. Messages can clarify ideas and information that are imaginary (fiction) or real (non-fiction). Messages can be shared digitially or non-digitially in a variety of forms, including	Ideas and information can be organized in a variety of ways to support the expression and understanding of messages. Explain why engaging with messages can be enjoyable. Distinguish between messages that are imaginary (fiction) or real (non-fiction). Compare and contrast forms used to organize messages. Examine the structure	Examine different reasons (purposes) for messages to be shared. Explain why engaging with messages can be enjoyable. Distinguish between messages that are imaginary (fiction) or real (non-fiction). Compare and contrast forms used to organize messages. Examine the structure

Physical Education and Wellness Kindergarten to Grade 6 Curriculum

	Kindergarten	Grade 1	Grade 2	
Organizing Idea	Active Living: Developing physical literacy through movement and active living supports well-being across a lifespan.			
Guiding Question	How can physical activity be included in daily life?	How can physical activity contribute to health?	What makes physical activity meaningful?	
Learning Outcome	Children explore physical activity in a variety of contexts.	Students investigate the benefits of physical activity.	Students investigate physical activity and relate it to personal experiences.	
	Knowledge Books and other print are orga • A book has a and a back c • Print is read: left to right or bottom. • One print wo represents a	Knowledge Individual or group physical activity includes: • play • active involve of transportation Physical activities are related to the seasons.	Knowledge Physical activity involves participation in movement experiences in enjoyable and enjoyable environments. Explores a variety of seasonal physical activities.	Knowledge Physical activity causes immediate changes in the body, as a result of include: • heart breathing • faster heart rate • feeling good • increased thirst
	Physical activity can be organized in ways that support understanding messages. Engage with messages for enjoyment. Discuss the differences between messages that are imaginary (fiction) or real (non-fiction). Explore messages shared in a variety of forms, including: • writing • listening	Ideas and information can be organized by purpose, form, or structure. Identify messages that provide enjoyment. Describe the differences between messages that are imaginary (fiction) or real (non-fiction). Discuss forms used to organize messages. Identify the beginning, middle, and ending in a message.	Discus reasons for messages to be shared. Identify messages that provide enjoyment. Messages can be shared digitially or non-digitially in a variety of forms, including	
	Messages can be shared for different reasons (purposes), including to learn and have fun. Messages can be imaginary (fiction) or real (non-fiction). Messages can be shared digitally or non-digitially in a variety of forms, including: • stories • pictures • signs • text Messages, both real and imaginary, follow a sequen (structure), inclu: • beginning • middle • ending	Ideas and information can be organized in ways that support understanding messages. Engage with messages for enjoyment. Discuss the differences between messages that are imaginary (fiction) or real (non-fiction). Explore messages shared in a variety of forms, including: • writing • listening	Ideas and information can be organized in a variety of ways to support the expression and understanding of messages. Explain why engaging with messages can be enjoyable. Distinguish between messages that are imaginary (fiction) or real (non-fiction). Compare and contrast forms used to organize messages. Examine the structure	
	Quantity can be arranged in various ways.	A quantity remains the same no matter how the objects are grouped or arranged	Identify a quantity in various groups or arrangements.	
	Quantities can be composed or decomposed to model a change in quantity.	Addition and subtraction are processes that describe the	Visualize quantities between 10 and 20 as compositions of 10 and another quantity.	
	The order in which more than two numbers are added does not affect the	A sum can be composed in multiple ways.	Visualize 100 as a composition of multiples of 10 in various ways.	

English Language Arts and Literature | April 2022



Organizing Idea

Guiding Question

Learning Outcome

Knowledge, Understanding, Skills and Procedures

Literacy, Numeracy, and Competencies

Math Strands to Organizing Ideas

Current Math Strands	*NEW* Organizing Ideas
<ul style="list-style-type: none">❖ Number (Counting, Place Value, Operations, Fractions, Basic Facts)❖ Patterns and Relations❖ Shape and Space (Geometry, Measurement)❖ Statistics and Probability	<ul style="list-style-type: none">❖ Number (Counting, Place Value, Operations, Fractions, Basic Facts)❖ Algebra- (Starts in Gr. 3)❖ Geometry❖ Coordinate Geometry(Starts in Gr.5)❖ Measurement❖ Patterns❖ Time❖ Statistics

Organizing Ideas



Organizing ideas

- ✓ are statements of the **overarching learning** within a given **section** of a subject
- ✓ are logical **categories** that communicate the **goals** of education within each **section** of a subject or discipline
- ✓ span some or all grades
- ✓ begin with **end** in mind

Organizing ideas consider:

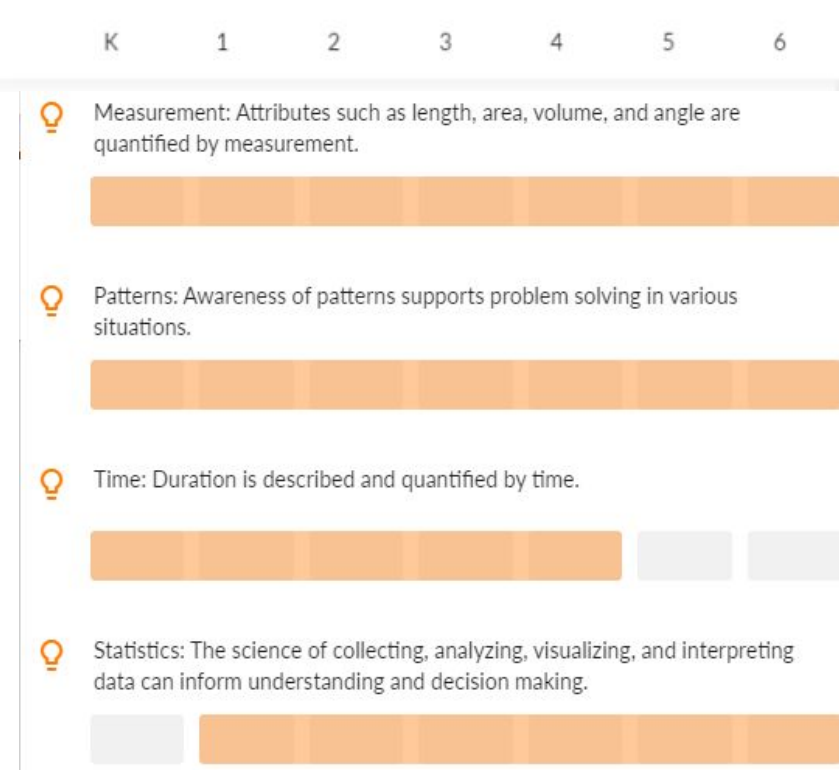
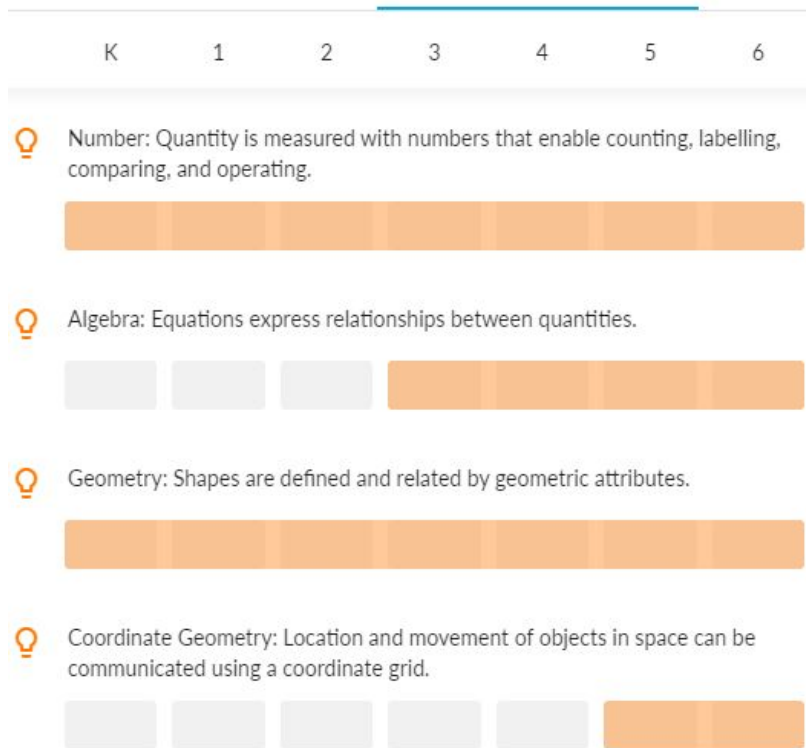
- the body of knowledge that includes the facts, symbols, rules, principles, and concepts that constitute the subject area
- the skills, strategies, processes, steps, and systematic approaches that students use to demonstrate their knowledge and understanding of the subject.

Organizing Ideas (OIs)

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

Organizing Ideas Overview

<https://curriculum.learnalberta.ca/curriculum/en/c/matk>



Guiding Questions



- are **informed** by the **organizing ideas**
- set the **direction** to **guide** student learning
- raise **important** questions
- include **debatable** questions to increase student interest and motivate thinking
- ask about the nature of the **relationship** between concepts or information
- are **open-ended** and **engaging**

Learning Outcomes



Learning Outcomes

- ✓ describe what students are required to **know, understand, and be able to do** by the end of a grade
- ✓ must be **assessed** and **reported**
- ✓ include **one or more concepts** that are the focus for learning and assessment

Relationship of the **Organizing Idea** to the **Guiding Question** and the **Learning Outcome**

Grade 4

Organizing Idea	Number: Quantity is measured with numbers that enable counting, labelling, comparing, and operating.
Guiding Question	How can fractions be characterized in different ways?
Learning Outcome	Students apply equivalence to the interpretation of fractions .



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Knowledge, Understanding, Skills and Procedures (KUSP)

Learning outcomes are supported by

- Knowledge
- Understanding
- Skills and Procedures



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Knowledge, Understanding, Skills and Procedures (KUSP)

Knowledge	Understanding	Skills and Procedures
<ul style="list-style-type: none">• is contextual• can be reused in various situations• needs to be applied in order to be maintained• foundational for all learning• includes facts, and builds towards understanding and skills and procedures.	<ul style="list-style-type: none">• is about putting pieces of knowledge into a logical and meaningful order to support students in understanding the concepts in the learning outcomes.• more complex than knowledge• supports students to transfer their learning in new contexts and situations.	<ul style="list-style-type: none">• what students do to demonstrate their knowledge and understanding• specific tools, strategies and methods that students develop to achieve the outcome.



OI: Number: Quantity is measured with **numbers that enable counting, labeling, comparing, and operating.**

GQ: How can **fractions be characterized in different ways?**

LO: Students apply **equivalence to the interpretation of fractions.**

Example:
Grade 4
Math

Knowledge

Equivalent fractions are associated with the **same point on the number line**.

Equivalent fractions can be created by **partitioning each equal part** of a fraction in the same way.

Partitioning a fraction can be interpreted as multiplying the numerator and denominator of a fraction by the same number.

Understanding

There are infinitely many **equivalent fractions** that **represent the same number**.

Exactly **one** of infinitely many **equivalent fractions is in simplest form**.

Skills and Procedures

Model equivalent fractions by partitioning a whole in multiple ways.
Determine fractions equivalent to a given fraction.

Relate the position of **equivalent fractions** on the number line.

Identify fractions in which the numerator and denominator have a common factor.

Simplify a given fraction by dividing the numerator and denominator by a common factor.

Express a fraction in simplest form.

Compare and order fractions.

Language Convention	Interpretation for Implementation	Example from Curriculum
including/include(s)	A list following “including” or “include(s)” contains required knowledge. Students must know all elements of the list in order to achieve the learning outcome.	Subtraction can be applied in various contexts, including <ul style="list-style-type: none"> • comparing two quantities • taking away one quantity from another • finding a part of a whole
such as	A list following “such as” provides a list of illustrative examples that support the learning outcome. Teachers may use any of these examples, or they may choose others.	Right angles can be identified using various referents, such as <ul style="list-style-type: none"> • the corner of a piece of paper • the angle between the hands on an analog clock at 3:00 • a capital letter L
content in parentheses	Words in parentheses are subject-specific terms for teachers and parents. These words follow the associated age-appropriate terms for students.	A shape can change orientation or position through slides (translations), turns (rotations), or flips (reflections).



Organizing Idea

Guiding Question

Learning Outcome

Knowledge, Understanding, Skills and Procedures

Literacy, Numeracy, and Competencies

Competencies



COMPETENCY PROGRESSIONS

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 and enhance foundational literacy and numeracy. Competencies work together with learning outcomes to prepare Alberta students for successful and fulfilling lives and to make meaningful contributions to their communities and the world. The Competency Progressions identify behaviours that students may demonstrate by the end of the divisional age range.

	Kindergarten (ages 4–5)	Division 1 (ages 6–8)	Division 2 (ages 9–11)
<p>Critical Thinking involves reasoning logically to analyze and synthesize new knowledge with existing knowledge in a coherent way.</p>	<ul style="list-style-type: none"> I wonder about the world around me. I think about and share experiences or feelings. I make predictions based on prior knowledge. I make choices based on what I like or know. I recognize how my thoughts, words, or actions affect others and myself. 	<ul style="list-style-type: none"> I ask relevant questions to help me learn. I use simple criteria to form opinions or make decisions. I synthesize new understandings by comparing and contrasting information. I reflect on contexts or experiences that influence my thinking. I consider how my thoughts may be similar to or different from those of others. 	<ul style="list-style-type: none"> I pose questions to analyze information or evidence. I begin to analyze complex issues and ideas based on criteria I help to develop. I evaluate the effectiveness of my own thinking or that of others. I make inferences, predictions, or decisions based on information. I consider perspectives that do not fit with my understandings.
<p>Problem Solving involves selecting strategies and resources to move from what is known to what is sought.</p>	<ul style="list-style-type: none"> I communicate when I have a problem. I ask questions to help me solve problems. I explore ways to overcome challenges independently or with others. I try new ways to solve problems. 	<ul style="list-style-type: none"> I rephrase problems to clarify understandings. I determine information that is relevant to help me solve problems. I consider the possible outcomes of solutions. I work toward solving problems even when there are challenges. 	<ul style="list-style-type: none"> I acquire and select information to identify problems. I generate solutions to complex problems based on criteria I help to develop. I predict the possible outcomes of multiple courses of action. I identify impacts of possible solutions.
<p>Research and Managing Information involves research skills as well as organizing and using information for specific purposes.</p>	<ul style="list-style-type: none"> I use my senses to learn about the world around me. I connect new information with things I already know. I use information to understand my world and myself. I share my ideas and information. 	<ul style="list-style-type: none"> I collect information for a specific audience. I organize and combine information from a variety of sources. I consider the content of information to determine its relevance. I reference the source of information when I use it. 	
<p>Creativity and Innovation involves generating and applying knowledge and skill to create something new of value.</p>	<ul style="list-style-type: none"> I create to learn and have fun. I use my imagination to combine materials or ideas to create something new. I change my creations based on new ideas, information, or materials. I try new ways of doing things. 	<ul style="list-style-type: none"> I create in a variety of environments for specific purposes. I seek out the knowledge or resources needed to create new ideas into creative works. I use individual or group brainstorming to generate ideas. I work toward achieving creative goals even when I face challenges. 	

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

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
Task Analysis	Children participate in guided activities that model how to complete a task involving numeracy.	Students identify task numeracy and determine information may be used in a task.	

- Awareness
- Quantitative Information
- Spatial Information
- Interpret, Represent, Communicate
- Strategies, Methods, or Tools

MATCH UP!

Vocabulary	Meaning
Organizing Idea	A. describes what students are required to know, understand, and be able to do by the end of a grade
Guiding Question	B. putting pieces of knowledge into logical and meaningful order with other knowledge.
Learning Outcome	C. what students do to demonstrate their knowledge and understanding.
Knowledge	D. acquiring and applying the mathematical knowledge and skills needed to engage with quantitative and spatial information in a variety of situations.
Understandings	E. are informed by the organizing idea and frame the learning outcome.
Skills and Procedures	F. combinations of knowledge, skills, and characteristics that students develop and apply for successful learning, living, and working
Competencies	G. includes facts, and builds toward understanding and skills and procedures.
Numeracy Progressions	H. a statement of the learning within a given section of a subject area or discipline

MATCH UP!

Vocabulary	Meaning
Organizing Idea	H. a statement of the learning within a given section of a subject area or discipline
Guiding Questions	E. are informed by the organizing idea and frame the learning outcome.
Learning Outcome	A. describes what students are required to know, understand, and be able to do by the end of a grade
Knowledge	G. includes facts, and builds toward understanding and skills and procedures.
Understandings	B. putting pieces of knowledge into logical and meaningful order with other knowledge.
Skills and Procedures	C. what students do to demonstrate their knowledge and understanding.
Competencies	F. combinations of knowledge, skills, and characteristics that students develop and apply for successful learning, living, and working
Numeracy Progression	D. acquiring and applying the mathematical knowledge and skills needed to engage with quantitative and spatial information in a variety of situations.

Reminder for Day Two

1. What is Numeracy and Mathematics?
2. Learning progressions
3. ARPDC resources
4. Deep dive into Order of operations 4-6



Alberta **Regional** Professional
Development Consortia

Adult learning for students' sake

Thank you for
your time
today!



We will see you tomorrow!



**Link to Slides that were
shared at the end of Day 1**