Pearson mathology

GRADE 1

Getting Started Guide

Pearson

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Contents

Welcome to Pearson Mathology Grade 1

We believe in teachers and their abilities to help their students develop happy, empowering, and positive math stories.

Mathology is a comprehensive math solution for grades K–9 that helps educators engage and facilitate math teaching and learning for all students through:

- **differentiated learning options**, rooted in classroom reality, as well as **effective teacher support**
- **rich activities**, classroom-tested and optimized through continuous teacher involvement
- teacher assistance every step of the way, offering practical supports for planning, teaching, and assessing
- an ongoing focus on **student thinking** and math conversation
- **flexible** use in different classroom settings
- a variety of **fun and engaging** experiences

Based on the solid foundation of a research-based learning progression, Mathology combines insights from teacher interviews, focus groups, and classroom observations with the best of academic research and pedagogical approaches.

Classroom Resources

A set of little books developed along a mathematics learning progression that allows teachers to match books to students according to their level of mathematical understanding

***Mathology* Little Books (K–3)**

Classroom Activity Kit (Grade 1)

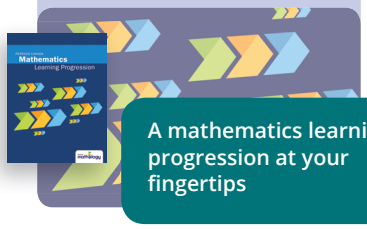
100+ engaging math activities, organized by strand, to support the complete curriculum

mathology.ca

A flexible tool for teachers that facilitates activity searches, lesson planning, differentiation, assessment, and next steps

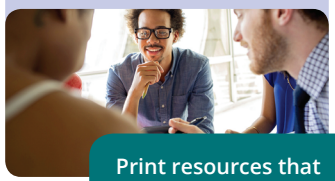
Just-in-time support and professional learning that scaffolds the classroom material

Pearson Canada Learning Progression



A mathematics learning progression at your fingertips

Professional Learning Resources and Services



Print resources that address current topics in mathematics education

Courses and workshops, in person and online, that help educators to deepen math content knowledge and enhance effective instructional skills and practice

At Grade 1, Mathology comprises these core components:

- The Pearson Canada K–3 Learning Progression
- Mathology Little Books and Teacher's Guides
- Mathology Grade 1 Activity Kit
- mathology.ca

Mathology Little Books

- Comprise a collection of 72 enriching math-first short stories that link math and literacy, and connect to relatable, real-life contexts
- Address math content across K–3, progressively exploring each Big Idea in math
- Allow educators **flexibility** to match a title to students' level of math understanding
- Can be used for whole class, guided instruction, and individual work
- Consolidate and enrich math teaching and learning

Created with a deep understanding of math learning and classroom practice; co-developed with Canadian educators

Mathology Grade 1 Activity Kit

- Comprises a collection of 101 **rich**, **engaging** math activities and games (teacher cards with accompanying student cards for the whole class and reproducible line masters)
- Fully addresses the Grade 1 curriculum for every province and territory in Canada
- Helps teachers quickly recognize student strategies and behaviours and identify next steps
- Provides easily **differentiated math lessons** that can be used in combined-grade classrooms
- Includes simple, point-of-use **teacher instructional and assessment support** (Probing Questions, What to Look For, Consolidation)

Although the Mathology components can effectively be used on their own, when integrated, the collection offers a successful, comprehensive teacher and student family of resources, with rich professional learning underpinnings.

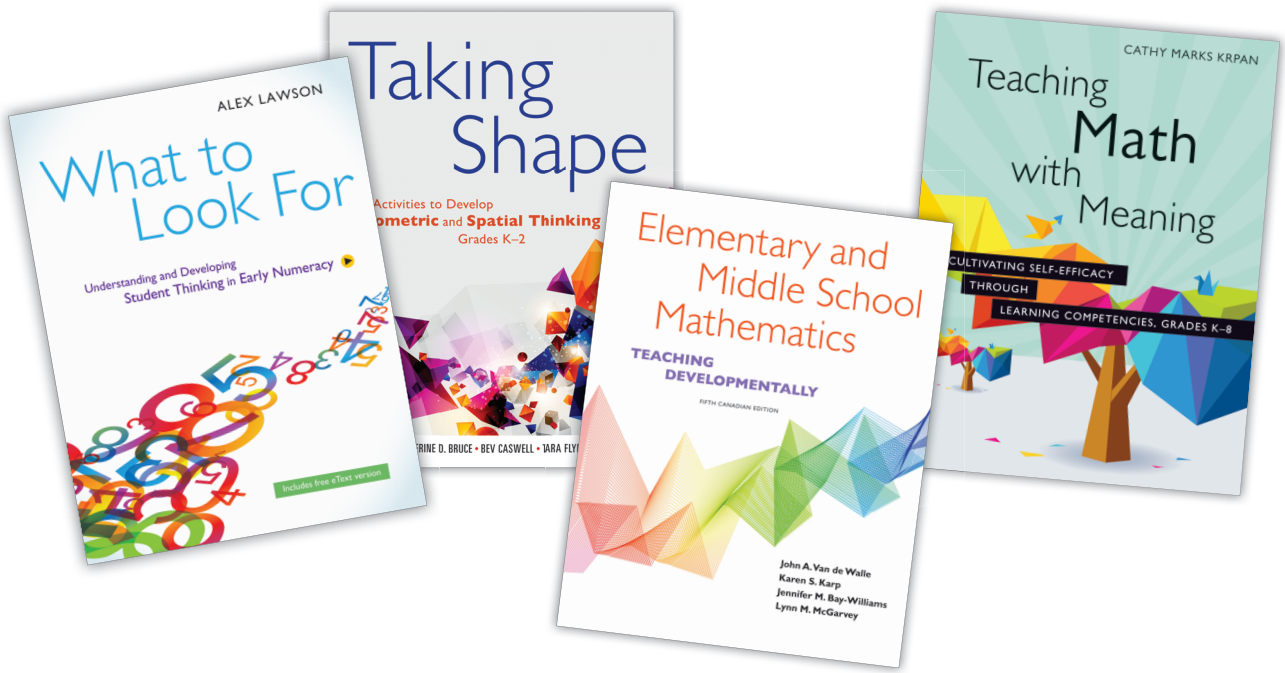
The Mathology resources are built with the belief that every child has the right to a strong math foundation, to feel confident in his or her mathematical abilities, and to have the necessary tools to take on everyday challenges.

Each Mathology component plays an important role in building a comprehensive teaching and learning portfolio:

Activity Kit	Little Books	Mathology.ca
• Source of learning content • Provides just-in-time teacher supports • Based on the Learning Progression • Addresses all curriculum expectations (100%)	• Source of learning content • Provide just-in-time teacher supports • Based on the Learning Progression • Variety in math instruction with an anchor in math stories	• Planning hub • Assessment enabler and tracker • Provides extended instructional content and teacher supports • Source of professional learning • Provides interactive instructional assets • Searchable repository of learning content (Activity Kit and Mathology Little Books) • Integrates planning and usage of Mathology classroom components

Related components include

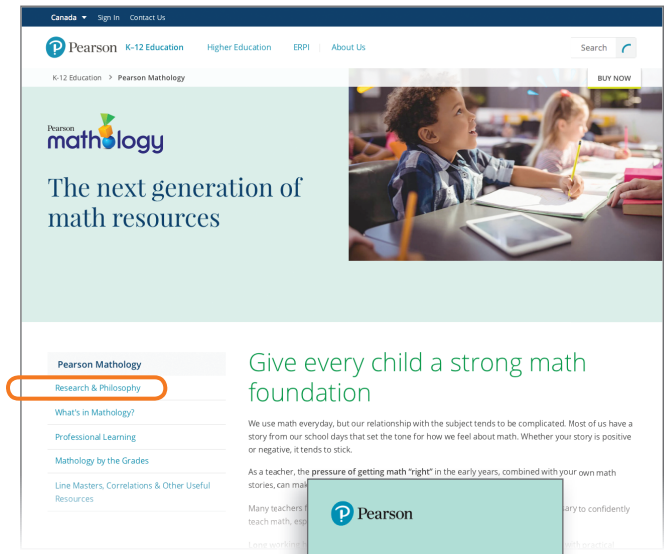
- Professional learning titles: *What to Look For* (Alex Lawson, Pearson, 2015), *Taking Shape* (Joan Moss, Catherine D. Bruce, Bev Caswell, Tara Flynn, Zachary Hawes, Pearson, 2016), *Elementary and Middle School Mathematics* (5th Edition) (John A. Van de Walle, Pearson, 2017), *Teaching Math with Meaning* (Cathy Marks Krpan, Pearson, 2017)
- Professional services: one- and two-day face-to-face professional learning sessions for *What to Look For* and *Taking Shape*

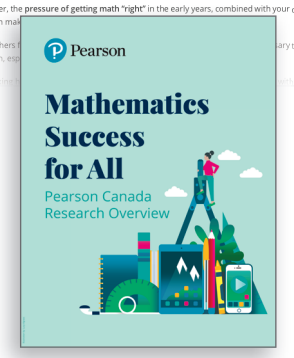


A Shared Focus

The components in the Mathology Grade 1 family work together to promote mathematics growth among educators and learners.

Very early in the development process for Mathology, Pearson Canada surveyed the educator community to identify key research areas in mathematics that are influencing mathematics instruction (K–9) today. Visit pearsonmathology.ca and view the Research & Philosophy section to see the topics that educators stated were crucial to high-quality mathematics instruction, the research articles and reference materials presented for each topic, and how it all connects and informs the development of Mathology.





The development of the Mathology components started with observations in about 40 Grade 1 Canadian classrooms, and included in-depth interviews with teachers, educators in district offices, and academics in faculties of education. All materials have been extensively reviewed and field-tested at all levels.

Core Mathology Actions

Plan

Plan your math lessons and activities for the year using rich math stories, activities, and games.

Teach

Use supports and tools connected to your curriculum and Big Ideas in math to effectively deliver lessons and help with next steps.

Assess & Track

Track students along a continuum of learning and understand the next steps to move them further.

Professional Learning

Stay connected to the most current research in teaching and learning mathematics through the Mathology Activity Kits, Mathology Little Books, and professional learning resources and tools.

Plan

Classroom Settings

The Grade 1 Mathology components support **flexible classroom groupings**, based on your students' needs:

- **Whole class:** Engage the whole class in an activity or story with a shared math focus.
- **Small group/individual:** Have the class engaged in a familiar activity or story while you pull a small group or individual aside to probe deeper.
- **Learning Centres:** Provide students with opportunities to practise and consolidate learning independently by setting up centres with choices of Mathology activities and stories.

Flexible Design

All the Mathology components can be easily and flexibly adapted to fit in a three-part lesson framework.

Pedagogical Framework	Classroom Activity Kit	Mathology Little Books
Activating ***(Before)*** Before	• Do the suggestions for activating the thinking in the **Before section** of each Teacher Card	• Do a **shared reading** and engage students in **math conversations** • Do **large-group activities** from the Teacher's Guide
Constructing Knowledge ***(During)*** During	• **Do the activities, using the differentiation options** on the Teacher Card • Use all the teacher supports on the teacher card, including the observational assessment	• Address a **Big Idea** through potentially more than 1 title per grade or through titles at other grade levels • Do **guided instruction** and have conversations • Use **small group/individual options/learning centres options** from the Teacher's Guide
Consolidating ***(After)*** After **Purposeful practice ›**	• Use **Consolidation** suggestions for each activity on the Teacher Card • **Revisit the activity** as is or with accommodations and extensions	• Do **shared reading** with math conversations • Use **large-group options** from the Teacher's Guide • Do **guided instruction** • Use **small group/individual options/learning centres options** from the Teacher's Guide • Use **Home Connection** options from the Teacher's Guide

Planning Support Tools

Whether you start with your provincial curriculum or a scope-and-sequence document, Mathology provides the tools to help you plan math instruction for the year:

Curriculum Correlations

Alignments of specific outcomes or expectations in your curriculum to corresponding Mathology Little Books and Activity Kit cards

Sample Long-Range Pathways

A generic overview of the five strands to help you plan your math instruction for the year

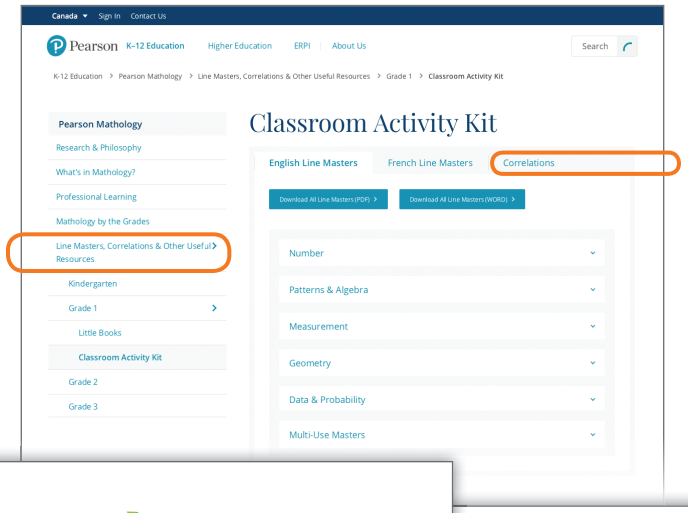
Sample Weekly Plans

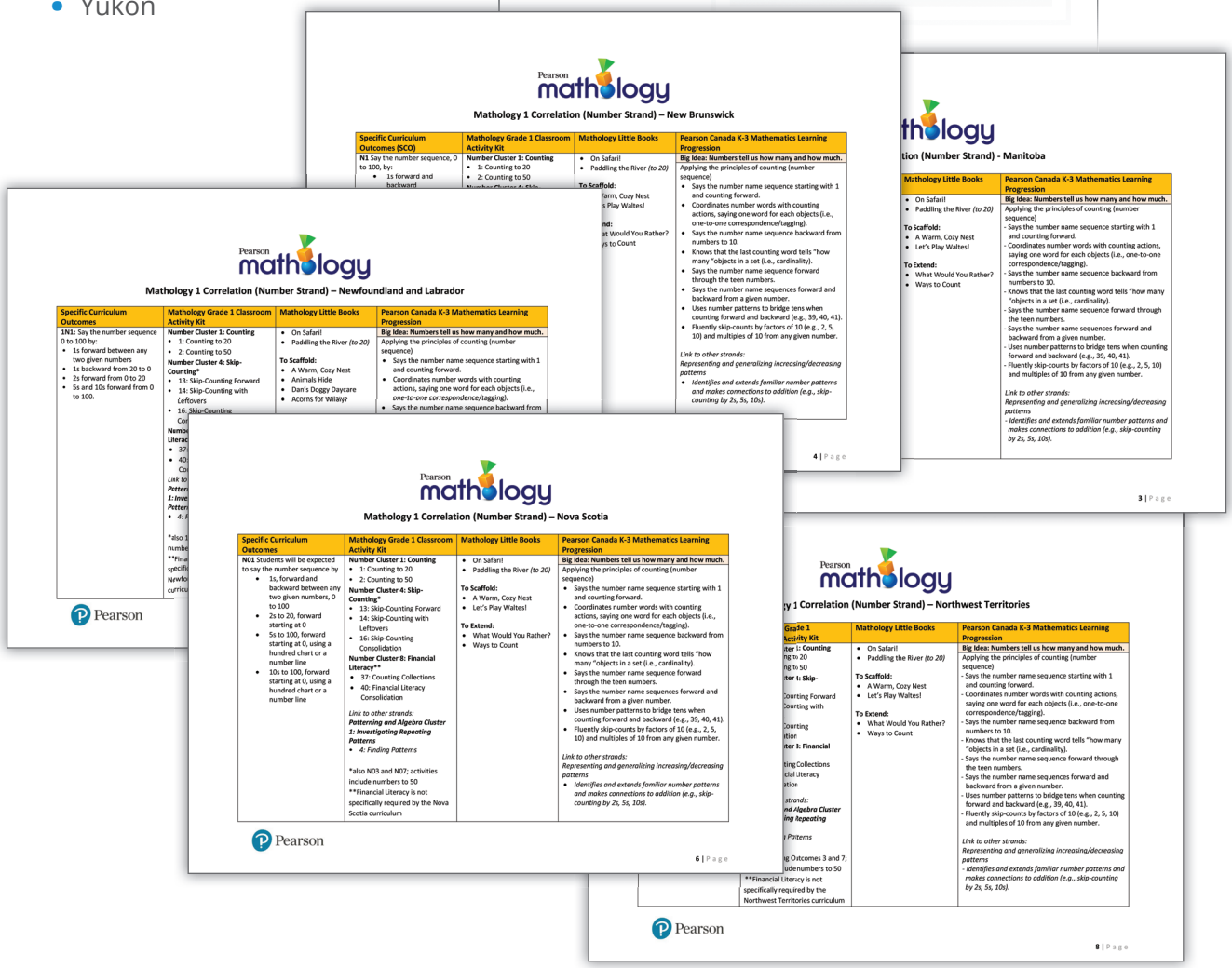
Several sample weekly plans that allow you to combine different Mathology components with flexibility for a successful learning experience

Curriculum Correlations

Go to pearsonmathology.ca, then view the Line Masters, Correlations & Other Useful Resources section to find the curriculum alignment for your province/territory. Choose the activity cards and Mathology Little Books that match your learning goals.

- Alberta
- British Columbia
- New Brunswick
- Manitoba
- Newfoundland and Labrador
- Nova Scotia
- Nunavut
- Northwest Territories
- Saskatchewan
- Prince Edward Island
- Ontario
- Yukon





Sample Long-Range Pathways

Go to pearsonmathology.ca, then view the Line Masters, Correlations & Other Useful Resources section to view two sample long-range pathways that include all strands.

In the example below, the suggested learning is cyclical, allowing concepts to be revisited throughout the year. The Number strand alternates with another strand every month. Students can then make connections with concepts in another, more prominent strand. This suggested pathway also allows students whose strengths are in the visual-spatial areas of math to have more opportunities to be engaged.

	Strand	Big Idea	Conceptual Thread	Activity Kit	Grade 1 Mathology Little Books	Practice and Learning Centres
Sept.	Geometry	2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change	Investigating geometric attributes and properties of 2-D shapes Exploring 2-D shapes by applying and visualizing transformations	Geometry Cluster 1 2-D Shapes Activities 1–6	The Tailor Shop What Was Here?	Sorting activities
Sept.	Number	Numbers tell us how many and how much	Applying the principles of counting Recognizing and writing numerals	Number Cluster 1 Counting Activities 1–5	On Safari! A Family Cookout Paddling the River	Counting and subitizing practice from K
Oct.	Patterning and Algebra	Regularity and repetition form patterns that can be generalized and predicted mathematically	Identifying, sorting, and classifying attributes and patterns mathematically Identifying, reproducing, extending, and creating patterns that repeat	Patterning and Algebra Cluster 1 Investigating Repeating Patterns Activities 1–5 Cluster 2 Creating Patterns Activities 6–9	Midnight and Snowfall	Making repeating patterns
Oct.	Number	Numbers tell us how many and how much Numbers are related in many ways	Recognizing quantities by subitizing Estimating quantities and numbers	Number Cluster 2 Spatial Reasoning Activities 6–8	Paddling the River	Counting and subitizing practice, including skip-counting
Nov.	Geometry	2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change	Investigating geometric attributes and properties of 3-D solids Exploring 3-D solids by applying and visualizing transformations	Geometry Cluster 2 3-D Solids Activities 7–10	What Was Here?	2-D and 3-D sorting and building activities Creating and translating repeating patterns
Nov.	Number	Numbers tell us how many and how much	Applying the principles of counting Recognizing and writing numerals	Number Cluster 4 Skip-Counting Activities 13–16	How Many Is Too Many?	Counting and subitizing practice, including skip-counting

Sample Long-Range Pathway, continued

	Strand	Big Idea	Conceptual Thread	Activity Kit	Grade 1 Mathology Little Books	Practice and Learning Centres
Dec.	Data Management and Probability* *Ontario and BC only	Formulating questions, collecting data, and consolidating data in visual and graphical displays helps us understand, predict, and interpret situations that involve uncertainty, variability and randomness	Formulating questions to learn about groups, collections, and events Collecting data and organizing it into categories Creating graphical displays of collected data Using the language of chance to describe and predict events	Data Management Cluster 1 Activities 1–4 Cluster 2 Probability and Chance Activities 5–6	Graph It!	2-D and 3-D sorting and building activities Creating and translating repeating patterns
Dec.	Number	Numbers are related in many ways	Comparing and ordering quantities	Number Cluster 3 Comparing and Ordering Activities 9–12	Cats and Kittens!	Counting and subitizing practice, including skip-counting Comparing and ordering numbers and quantities
Jan.	Measurement	Many things in our world have attributes that can be measured and compared	Understanding attributes that can be measured Directly and indirectly comparing and ordering objects with the same measurable attribute	Measurement Cluster 1 Comparing Objects Activities 1–6	The Amazing Seed	Sorting and building with 2-D shapes and 3-D solids Creating, extending, and repeating patterns
Jan.	Number	Numbers are related in many ways	Decomposing wholes into parts and composing wholes from parts	Number Cluster 5 Composing and Decomposing Activities 17–23	Paddling the River That's 10!	Counting and subitizing practice, including skip-counting Comparing and ordering numbers and quantities
Feb.	Patterning and Algebra	Patterns and relations can be represented with symbols, equations, and expressions	Understanding equality and inequality, building on generalized properties of numbers and operations Using symbols, unknowns, and variables to represent mathematical relations	Patterning and Algebra Cluster 3 Equality and Inequality Activities 10–13	Nutty and Wolfy	Sorting and building with 2-D shapes and 3-D solids Creating, extending, and repeating patterns Measurement through direct comparison and repeating iteration of uniform non-standard unit
Feb.	Number	Quantities and numbers can be added and subtracted to determine how many or how much	Developing conceptual meaning of addition and subtraction	Number Cluster 7 Operational Fluency Activities 28–30 (Change Problems)	Hockey Time! Buy 1—Get 1 Canada's Oldest Sport Cats and Kittens!	Counting and subitizing practice, including skip-counting Comparing and ordering numbers and quantities Composing and decomposing
Mar.	Geometry	2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change	Investigating 2-D shapes, 3-D solids, and their attributes through composition and decomposition Exploring symmetry to analyze 2-D shapes and 3-D solids* *Ontario only	Geometry Cluster 3 Geometric Relationships Activities 11–15 Geometry Cluster 4 Symmetry Activities 16–18	What Was Here? The Tailor Shop	Sorting and building with 2-D shapes and 3-D solids Creating, extending, and repeating patterns Measurement through direct comparison and repeating iteration of uniform non-standard unit Balance scale activities to explore equality and inequality

Sample Long-Range Pathway, continued

	Strand	Big Idea	Conceptual Thread	Activity Kit	Grade 1 Mathology Little Books	Practice and Learning Centres
Mar.	Number	Quantities and numbers can be added and subtracted to determine how many or how much	Developing fluency of addition and subtraction computation Developing conceptual meaning of addition and subtraction	Number Cluster 7 Operational Fluency Activities 31–35 (Join/separate and part-part-whole problem types)	Hockey Time! Buy 1—Get 1 Canada's Oldest Sport Cats and Kittens!	Counting and subitizing practice, including skip-counting Comparing and ordering numbers and quantities Composing and decomposing Creating and solving pictorial story problems using addition and subtraction
Apr.	Measurement	Assigning a unit to a continuous attribute allows us to measure and make comparisons	Selecting and using non-standard units to estimate, measure, and make comparisons	Measurement Cluster 2 Using Uniform Units Activities 7–15 Cluster 3 Time and Temperature Activities 16–21* *Ontario only	Animal Measures	Sorting and building with 2-D shapes and 3-D solids Creating, extending, and repeating patterns Measurement through direct comparison and iteration (repeating) of uniform non-standard unit Balance scale activities to explore equality and inequality Replicating and creating composite 2-D shapes and 3-D solids
Apr.	Number	Quantities and numbers can be grouped by or partitioned into equal-sized units	Unitizing quantities into ones, tens, and hundreds (place-value concepts) Unitizing quantities and comparing units to the whole	Number Cluster 6 Early Place Value Activities 24–27	At the Corn Farm	Counting and subitizing practice, including skip-counting Composing and decomposing Creating and solving pictorial story problems using addition and subtraction
May	Number	Financial Literacy* *Ontario and BC only		Number Cluster 8 Activities 36–40		
May	Number	Quantities and numbers can be added and subtracted to determine how many or how much	Developing fluency of addition and subtraction computation Developing conceptual meaning of addition and subtraction (Consider a focus on subtraction)	Number Revisit Cluster 7 Operational Fluency Activities 28–35 Number Talks for mental math fluency and basic fact recall Problem-Solving with all problem types for addition and subtraction	On Safari! Hockey Time! Buy 1—Get 1 Canada's Oldest Sport Cats and Kittens!	Creating and solving pictorial story problems using addition and subtraction
May	Geometry	Objects can be located in space and viewed from multiple perspectives* *Ontario only	Locating and mapping objects in space Viewing and representing objects from multiple perspectives	Geometry Cluster 5 Location and Movement Activities 19–21	Memory Book	
June	Revisit difficult concepts			Revisit activities from each strand		

Sample Weekly Plans

Go to pearsonmathology.ca, then view the Line Masters, Correlations & Other Useful Resources section to view sample weekly plans that use the Mathology Little Books and Activity Kit cards to support teaching and learning various mathematical concepts. Create weekly plans that suit your students' needs.

Teaching Geometric Relationships: Week 1

3-PART LESSON	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1. Activating 1	**What Was Here?** Intro TG pp. 4–5	**Faces of Solids Activity Card 11:** "Before"	**Making Designs Activity Card 12:** "Before"	**Covering Outlines Activity Card 13:** "Before"	**Workstations/ Guided Math** Teacher works with one group at a time using **Shapes and Solids Problems What Was Here?** TG p. 29; LM 10 Other groups work on one of the four practice activities from earlier in the week or the online Tangram shapes activity for **What Was Here?** (see QR code on back of little book)
2. Constructing Knowledge 2	Read aloud: **What Was Here?** (Find and describe; explore and classify shapes and solids)	**Activity Card 11:** "What to Do" Using solids to build and describe towers	**Activity Card 12:** "What to Do" Making and describing designs with Pattern Blocks	**Activity Card 13:** "What to Do" Filling in Pattern Block designs	
3. Consolidating 3	Represent the story using the Math Mat TG p. 21	**Activity Card 11:** Consolidation and Highlights	**Activity Card 12:** Consolidation and Highlights	**Activity Card 13:** Consolidation and Highlights	
4. Purposeful Practice 4	**Match-ups** Use modelling clay to make 3-D objects from the story **What Was Here?** TG p. 27	Independent Inquiry: **Hidden Shapes** Outline faces that are familiar 2-D shapes on pictures of real-world objects **What Was Here?** TG p. 29	**Circle and Square Faces** Stamp faces of small objects into slab of modelling clay; draw around faces and label **What Was Here?** TG p. 23	**Shape Hunt Booklet** Go on a shape hunt. Draw and label the objects and their shapes; e.g., window **What Was Here?** TG p. 29	

Teaching Geometric Relationships: Week 2

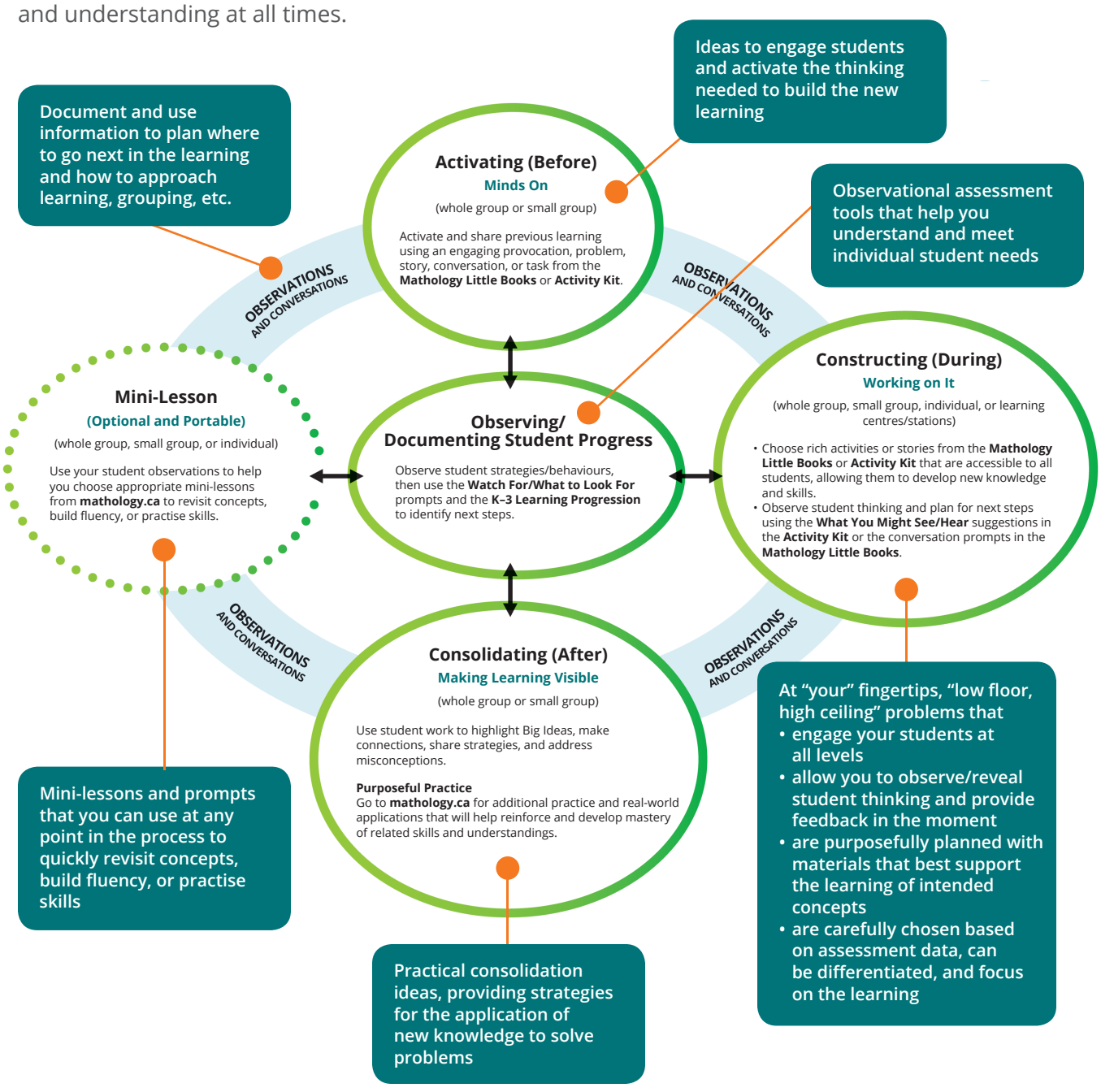
3-PART LESSON	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1. Activating 1	**What Was Here?** Shared reading, emphasizing geometric vocabulary in describing shapes	**Identifying Shapes Activity Card 14:** "Before"	Select Pattern Blocks or solids from a bag and describe them by using geometric attributes.	Choose a 2-D shape and volunteer statements to describe it using geometric attributes. Repeat with a 3-D solid.	**Conferences & Workstations** Teacher circulates and confers with students individually. Cluster 3 Assessment Rubric Master 30 can be used to collect evidence of learning. Students can draw and list geometric attributes of common shapes and/or solids. Students may choose to trace the shapes. Fast finishers can do practice activities from earlier in the week or the online Tangram shapes activity for **What Was Here?** (see QR code on back of little book).
2. Constructing Knowledge 2	Select another **Shape and Solids** problem from LM 10. Work in pairs to solve problems and record using pictures or words.	**Activity Card 14:** "What to Do" Use markers to outline different shapes that can be found in a composite design—Student card 14A and 14B.	**Consolidation Activity Card 15:** "Before" Trace around two or more Pattern Blocks pushed together on at least one side. Predict what pieces will fit there.	**Activity Card 15:** "What to Do" Play this card game to determine which Pattern Blocks would fill a shape or which 2-D shapes would make up a particular solid.	
3. Consolidating 3	Three pairs of students share solutions and explain their thinking.	**Activity Card 14:** Consolidation and Highlights	Review and chart geometric vocabulary by drawing and labelling.	**Activity Card 15:** Consolidation and Highlights	
4. Purposeful Practice 4	**Story Mat** Using story mat, draw new shapes and create individual stories of what was missing. **What Was Here?** TG p. 26	**What Am I?** Pick a 2-D shape and identify a 3-D object it reminds you of. **What Was Here?** TG p. 28	**Making Designs** Make a picture using Pattern Blocks on a sheet of paper. Draw around the outline, title your picture, and pile the blocks used beside it. Trade with a partner and try to rebuild their picture.	**Math Journals** Draw a familiar 2-D shape, and draw and label some 3-D objects it reminds you of.	

Teach

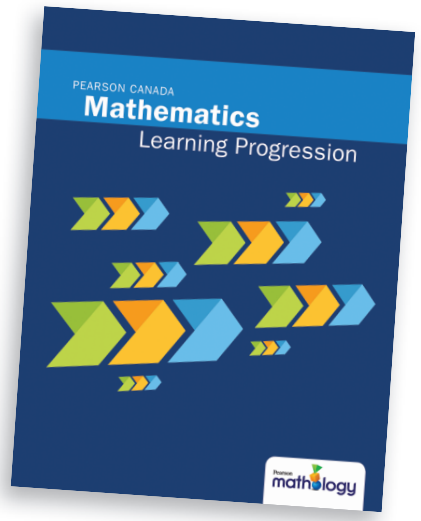
Mathology Lesson Model

All Mathology components are structured using a lesson model that was developed in collaboration with teachers, educators, and researchers across Canada, reflecting the most current research and best practices in teaching and learning mathematics.

Throughout the model, an active focus on observing and conferring with students enables teachers to gain insight into students' thinking and understanding at all times.



Pearson Canada K–3 Learning Progression



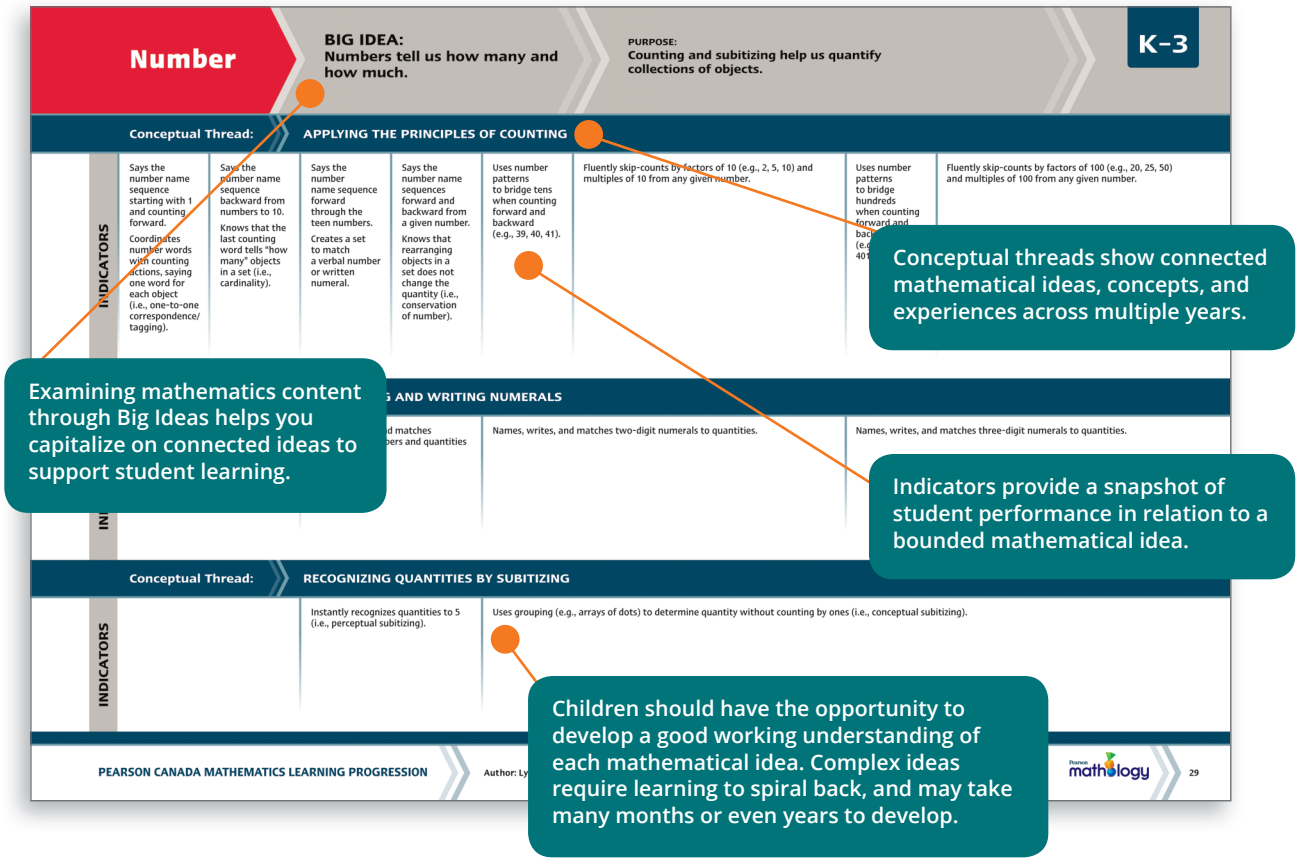
What is it?

- a research-based framework representing how mathematical ideas are connected and the typical progression of student learning of those ideas
- reflects current research in mathematical learning and relates to the Big Ideas in math curricula across Canada

How does it help your practice?

The Learning Progression provides you with a concise reference to mathematics content across multiple grades, allowing you to visualize the growth of mathematical ideas over several years. It helps you to plan for, anticipate, and assess student learning in today's diverse classrooms.

For each of the 5 mathematical strands, Big Ideas are unpacked gradually to reveal Conceptual Threads and Indicators of performance. As you move to the right across a thread, the indicators describe how learning and concepts unfold across the grades.



Mathology Grade 1 Activity Kit

About the Activity Kit

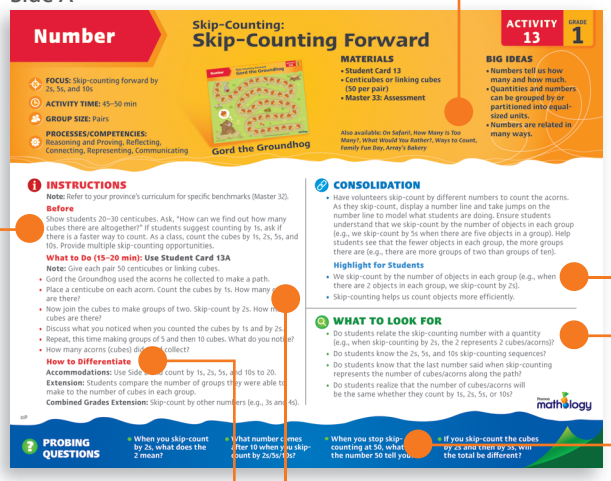
The Grade 1 Mathology Activity Kit includes 101 activities organized by strands into two boxes:

- The first box contains 40 activities illustrating the Number Strand as well as the Pearson Canada K–3 Learning Progression and 5 Multi-Use Cards.
- The second box contains 61 activities in the Patterning & Algebra, Measurement, Geometry, and Data Management & Probability strands.

Each box contains two types of cards: teacher cards and student cards.

- **Teacher cards** provide teaching instructions and observational guides.
  - Side A offers instructions for the activity, including How to Differentiate it, Probing Questions, and What to Look For prompts, as well as ideas for activating prior learning and consolidation.

Side A



A list of Mathology Little Books that further support math instruction and differentiation

Highlights of intended learning, connections to prior learning, and misconceptions to help students reflect on their own learning and the strategies they use

Practical, in-the-moment assessment prompts that help you gather evidence of understanding and uncover partial concepts/ misconceptions

Activities, stories, and math talks that engage students and activate thinking

Instructions written in student-friendly language

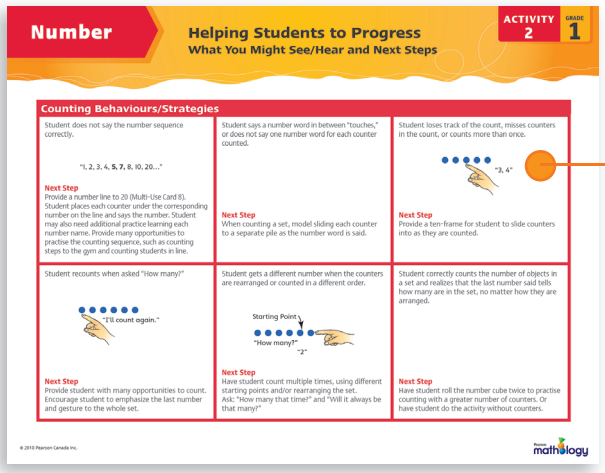
Sample questions to probe student understanding that can be added to your own repertoire of effective questioning

Suggestions for differentiation to help pace the learning within the same class activity, depending on your observation of student needs

Grade 2 extensions allow you to meet the curriculum requirements for Grade 2 if you have a combined class

– Side B includes information on what you might observe or hear as students work on the activity. It also provides suggestions for next steps.

Side B



A quick glimpse into potential student behaviours and strategies linked to the Big Ideas in the lesson; helps you move students forward to the next logical step along a mathematics learning progression

- **Student cards*** may be double-sided to allow for differentiation: one side is on grade; the other side supports accommodations or extensions. There are 10 copies of each card to allow for whole-class and small-group work.

Use Side B of the Student Card to accommodate or extend the learning

Side A

Side B

Designed for hands-on student work

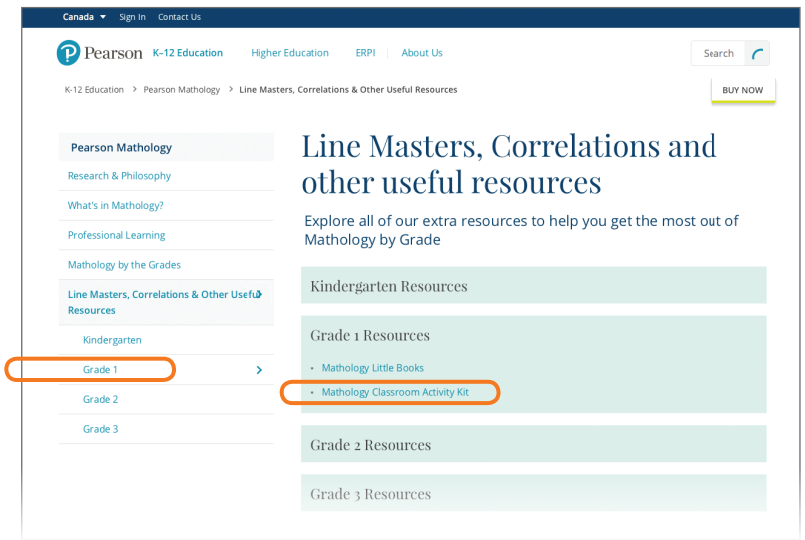
Fun, colourful illustrations

The math focus ties to specific curriculum outcomes

*For use with dry-erase markers and manipulatives.
For best results, use quality low-solvent dry-erase pens.

Line Masters

Line masters for each Activity Card are available, in Word and pdf format, at pearsonmathology.ca: Line Masters, Correlations & Other Useful Resources.



Select Grade 1, then Mathology Classroom Activity Kit.

Organizing Your Kit

Organizing Box 1

Box 1 contains:

- **Package 1**: 4 overview cards and 40 teacher cards
- **Package 2**: 10 divider cards with tabs (includes a Number strand divider, 8 cluster dividers, and a Today divider)
- **Package 3**: 27 student cards and 5 Multi-Use Cards
- The *Pearson Canada Mathematics Learning Progression* booklet

1. Unwrap your packages and place them in three piles. Put aside your Number strand divider: it lists each cluster and its accompanying teacher and student cards.
2. Place the Learning Progression booklet at the front of the box, followed by the 4 overview cards.
3. Then place cluster divider 1: Counting, followed by teacher cards 1–5 and student cards 1–5.

4. Use the order shown on the Number strand divider to help you place the remaining cluster dividers, teacher cards, and student cards.
5. Then place the Multi-Use Cards divider and the accompanying multi-use cards at the back of the box, followed by the Today card.
6. Finally, place the Number Strand divider in front of cluster divider 1: Counting.

Organizing Box 2

Box 2 contains:

- **Package 1**: 1 overview card and 61 teacher cards
- **Package 2**: 17 divider cards with tabs (includes 4 strand dividers and 13 cluster dividers)
- **Package 3**: 35 student cards

1. Unwrap your packages and place them in three piles. Put aside your Patterning and Algebra strand divider: it lists each cluster and its accompanying teacher and student cards.
2. Place cluster divider 1: Investigating Repeated Patterns at the front of the box, followed by teacher cards 1–5 and student cards 1, 3–5.
3. Use the order shown on the Patterning and Algebra strand divider to help you place the remaining cluster dividers, teacher cards, and student cards for this strand. Then place the Patterning and Algebra strand divider at the front of this section.
4. Put aside the Measurement strand divider. Follow the order listed to organize the cards for this strand.
5. Follow the same process for the two remaining strands.

Teacher Cards by Strand

Number

Cluster 1: Counting 1: Counting to 20 2: Counting to 50 3: Counting On and Back 4: Ordinal Numbers 5: Consolidation	**Cluster 2: Spatial Reasoning** 6: Subitizing to 10 7: Estimating Quantities 8: Consolidation	**Cluster 3: Comparing and Ordering** 9: Comparing Sets Concretely 10: Comparing Sets Pictorially 11: Comparing Numbers to 50 12: Consolidation
Cluster 4: Skip-Counting 13: Skip-Counting Forward 14: Skip-Counting with Leftovers 15: Skip-Counting Backward 16: Consolidation	**Cluster 5: Composing and Decomposing** 17: Decomposing 10 18: Numbers to 10 19: Numbers to 20 20: Money Amounts 21: Equal Groups 22: Equal Parts 23: Consolidation	**Cluster 6: Early Place Value** 24: Tens and Ones 25: Building and Naming Numbers 26: Different Representations 27: Consolidation
Cluster 7: Operational Fluency 28: More or Less 29: Adding to 20 30: Subtracting to 20 31: The Number Line 32: Doubles 33: Part-Part-Whole 34: Solving Story Problems 35: Consolidation	**Cluster 8: Financial Literacy** 36: Values of Coins 37: Counting Collections 38: Fair Trades 39: Wants and Needs 40: Consolidation	

Patterning and Algebra

Cluster 1: Investigating Repeating Patterns 1: Repeating the Core 2: Representing Patterns 3: Predicting Elements 4: Finding Patterns 5: Consolidation	**Cluster 2: Creating Patterns** 6: Extending Patterns 7: Translating Patterns 8: Errors and Missing Elements 9: Consolidation	**Cluster 3: Equality and Inequality** 10: Exploring Sets 11: Making Equal Sets 12: Using Symbols 13: Consolidation

Measurement

Cluster 1: Comparing Objects	Cluster 2: Using Uniform Units	Cluster 3: Time and Temperature
1: Comparing Length	7: Matching Lengths	16: Ordering Events
2: Comparing Mass	8: Exploring the Metre	17: Passage of Time
3: Comparing Capacity	9: Using Multiple Units	18: Telling Time
4: Making Comparisons	10: A Benchmark of One Metre	19: Relating to Seasons
5: Comparing Area	11: Measuring Length	20: The Calendar
6: Consolidation	12: Iterating the Unit	21: Consolidation
	13: Measuring Area	
	14: Measuring Capacity	
	15: Consolidation	

Geometry

Cluster 1: 2-D Shapes	Cluster 2: 3-D Solids	Cluster 3: Geometric Relationships
1: Sorting Shapes	7: Exploring 3-D Solids	11: Faces of Solids
2: Identifying Triangles	8: Sorting 3-D Solids	12: Making Designs
3: Identifying Rectangles	9: Identify the Sorting Rule	13: Covering Outlines
4: Visualizing Shapes	10: Consolidation	14: Identifying Shapes
5: Sorting Rules		15: Consolidation
6: Consolidation		

Cluster 4: Symmetry	Cluster 5: Location and Movement
16: Finding Lines of Symmetry	19: Perspective Taking
17: Creating Symmetrical Designs	20: Mapping
18: Consolidation	21: Consolidation

Data Management and Probability

Cluster 1: Data Management	Cluster 2: Probability and Chance
1: Interpreting Graphs	5: Likelihood of Events
2: Making Concrete Graphs	6: Consolidation
3: Making Pictographs	
4: Consolidation	

Activity Cards Index

Number

Big Idea 1: Numbers tell us how many and how much.

Big Idea 2: Numbers are related in many ways.

Big Idea 3: Quantities and numbers can be grouped by or partitioned into equal-sized units.

Big Idea 4: Quantities and numbers can be added and subtracted to determine how many or how much.

Cluster 1: Counting		
Teacher Card	**Big Idea/Focus**	**Materials**
1: Counting to 20 1	**Big Idea 1** **Focus:** Counting to 20 to determine how many	• Student Card 1 (**Activity 1A: Berry Counting; Activity 1B: More Berries!**) • Pipe cleaners for branches (1 per pair) • Beads for berries (20 per pair) • Master 2: *My Huckleberry (Duje)* Story • Master 3: First Nations Languages and Dialects • Master 4: Audio Recordings • Master 5: Assessment
2: Counting to 50 2	**Big Idea 1** **Focus:** Counting to determine "how many"	• Student Card 2 (**Activity 2: Keeping Fit**) • Number cubes labelled 1–6 (1 per pair) • Counters (about 50 per pair) • Multi-Use Card 1: Ten-Frames • Master 6: Action Cards • Master 7: Assessment
3: Counting On and Back 3	**Big Idea 1** **Focus:** Counting on and back from a given number	• Student Card 3 (**Activity 3A: Hopping On; Activity 3B: Hopping Back**) • Game pieces (1 per student) • Number cubes labelled 1–6 (1 per pair) • Master 8: *Hopping On* Game Boards • Master 9: *Hopping Back* Game Boards • Master 10: Assessment
4: Ordinal Numbers 4	**Big Ideas 1 and 2** **Focus:** Using ordinal numbers to tenth	• Student Card 4 (**Activity 4: Line Them Up!**) • Master 11: Barn Animal Cards • Master 12: Ordinal Number Cards • Master 13: Assessment
5: Consolidation 5	**Big Ideas 1 and 2** **Focus:** Consolidating counting	• Student Card 5 (**Activity 5: Catching Fish**) • Bags of about 30 counters (1 per pair) • Two-sided counters (1 per pair) • Number cubes labelled 1–6 (1 per pair) • Master 14: Number Cards • Master 15: Assessment

Cluster 2: Spatial Reasoning		
Teacher Card	**Big Idea/Focus**	**Materials**
6: Subitizing to 10 6	**Big Idea 1** **Focus:** Recognizing quantities to 10 without counting	• Student Card 6 (**Activity 6A/6B: Dot Flash to 10!**) • Counters (15 per pair) • Master 17: Dot Cards • Master 18: How Many Dots? • Master 19: Assessment
7: Estimating Quantities 7	**Big Idea 2** **Focus:** Using referents to estimate quantities to 20	• Student Card 7 (**Activity 7: Grab 20!**) • Bags of about 40 counters (1 per pair) • Multi-Use Card 1: Ten-Frames • Master 20: *Grab 20!* Recording Sheet • Master 21: Assessment
8: Consolidation 8	**Big Idea 2** **Focus:** Consolidating spatial reasoning	• Student Card 8 (**Activity 8A/8B: How Many?**) • Master 22: *How Many?* Recording Sheet • Master 23: Assessment

Cluster 3: Comparing and Ordering		
Teacher Card	**Big Idea/Focus**	**Materials**
9: Comparing Sets Concretely 9	**Big Ideas 1 and 2** **Focus:** Comparing two sets to 20 concretely	• Bags of 20 counters (1 per student) • Multi-Use Card 1: Ten-Frames • Master 25: More/Fewer Cards • Master 26: Assessment *No student card is needed for this activity.
10: Comparing Sets Pictorially 10	**Big Ideas 1 and 2** **Focus:** Comparing two sets to 20 pictorially	• Student Card 10 (**Activity 10: Breakfast of Bananas**) • Master 14: Number Cards • Master 27: Banana Cards • Master 28: Assessment
11: Comparing Numbers to 50 11	**Big Ideas 1 and 2** **Focus:** Comparing and ordering numbers to 50	• Student Card 11 (**Activity 11A/11B: Making Popsicles!**) • 100 craft sticks (numbered 1–50 twice) • Counters, linking cubes, number lines, hundred charts • Master 29: Assessment
12: Consolidation 12	**Big Ideas 1 and 2** **Focus:** Consolidating comparing and ordering	• Student Card 12 (**Activity 12A/12B: Feeding the Fish**) • Craft sticks (numbered 2–49) • Counters, number lines, hundred charts (optional) • Master 30: Fish Outlines • Master 31: Assessment

Cluster 4: Skip-Counting		
Teacher Card	**Big Idea/Focus**	**Materials**
13: Skip-Counting Forward 13	**Big Ideas 1, 2, 3** **Focus:** Skip-counting forward by 2s, 5s, and 10s	• Student Card 13 (**Activity 13A/13B: Gord the Groundhog**) • Centicubes or linking cubes (50 per pair) • Master 33: Assessment
14: Skip-Counting with Leftovers 14	**Big Ideas 1, 2, and 3** **Focus:** Counting quantities that are not multiples of the skip-counting number	• Student Card 14 (**Activity 14A/14B: The Fun Fair**) • Bags of 48 counters (1 per pair) • Master 34: The School Fun Fair • Master 35: Activity Cards • Master 36: *The Fun Fair* Recording Sheet • Master 37: Assessment
15: Skip-Counting Backward 15	**Big Ideas 1, 2, and 3** **Focus:** Skip-counting backward by 2s and 5s	• Student Card 15 (**Activity 15A: Delivering Mail**; **Activity 15B: Mail on Planet Math**) • Number cubes labelled 1–6 and 1–10 (one of each per pair) • Game pieces (1 per student) • Master 38: *Delivering Mail* Game Board • Master 39: *Mail on Planet Math* Game Board • Master 40: Assessment
16: Consolidation 16	**Big Ideas 1, 2, and 3** **Focus:** Consolidating skip-counting	• Student Card 16 (**Activity 16A/16B: Under Construction!**) • Bags of 50 linking cubes or counters (1 per pair) • Master 41: *Under Construction!* Recording Sheet • Master 42: Assessment

Cluster 5: Composing and Decomposing		
Teacher Card	**Big Idea/Focus**	**Materials**
17: Decomposing 10 17	**Big Ideas 1 and 2** **Focus:** Composing and decomposing 10	• Student Card 17 (**Activity 17A: Ten in the Pools**; **Activity 17B: Ten in Three Pools**) • Counters (10 per pair) • Multi-Use Card 1: Ten-Frames • Master 44: *Ten in the Pools* Recording Sheet • Master 45: Assessment
18: Numbers to 10 18	**Big Ideas 1 and 2** **Focus:** Decomposing numbers to 10	• Two colours of linking cubes (10 of each per pair) • Master 14: Number Cards • Master 46: Tower Recording Sheet • Master 47: Assessment *No student card is needed for this activity.

Cluster 5: Composing and Decomposing (continued)		
Teacher Card	**Big Idea/Focus**	**Materials**
19: Numbers to 20 19	**Big Ideas 1, 2, and 3** **Focus:** Decomposing numbers to 20	• Counters (20 per pair) • Multi-Use Card 1: Ten-Frames • Multi-Use Card 3: Five-Frames • Master 14: Number Cards • Master 48: Ten-Frame Recording Sheet • Master 49: Assessment *No student card is needed for this activity.
20: Money Amounts 20	**Big Ideas 1, 2, and 4** **Focus:** Representing money amounts to 20 cents in different ways	• Student Card 20 (**Activity 20A: Pocket Full of Change**; **Activity 20B: My Coin**) • Canadian play coins • Master 50: Coin Cards • Master 51: Assessment
21: Equal Groups 21	**Big Ideas 1, 2, and 3** **Focus:** Decomposing numbers into equal groups, with and without singles	• Linking cubes (20 per pair) • Master 52: Equal Groups Recording Sheet • Master 53: Assessment *No student card is needed for this activity.
22: Equal Parts 22	**Big Ideas 2 and 3** **Focus:** Partitioning a whole into equal parts	• Large paper squares • A collection of paper strips, rectangles, pieces of ribbon, string, and balls of modelling clay • Modelling clay tools, scissors • Master 54: Assessment *No student card is needed for this activity.
23: Consolidation 23	**Big Ideas 1, 2, and 3** **Focus:** Consolidating composing and decomposing numbers	• Counters, 2 colours of linking cubes, Canadian play coins • Multi-Use Card 1: Ten-Frames • Master 14: Number Cards • Masters 46, 48, 52: Recording Sheets • Master 55: Assessment *No student card is needed for this activity.

Cluster 6: Early Place Value		
Teacher Card	**Big Idea/Focus**	**Materials**
24: Tens and Ones 24	**Big Ideas 1, 2, and 3** **Focus:** Building and comparing two-digit numbers using tens and ones	• Student Card 24 (**Activity 24: Place-Value Mat**) • Pairs of Styrofoam®/paper cups (one numbered 1–4 twice; the other 0–9) (1 set per pair) • Linking cubes (100 per pair) • Multi-Use Card 2: Place-Value Mat • Master 57: Tens and Ones Recording Sheet • Master 58: Assessment

Cluster 6: Early Place Value (continued)		
Teacher Card	**Big Idea/Focus**	**Materials**
25: Building and Naming Numbers 25	**Big Ideas 1, 2, and 3** **Focus:** Building, naming, and comparing numbers using tens and ones	• Student Card 24 (**Activity 24: Place-Value Mat**) • Bags of about 80 linking cubes (1 per pair) • Number cubes labelled 1–6 (1 per pair) • Multi-Use Card 2: Place-Value Mat • Master 59: Assessment
26: Different Representations 26	**Big Ideas 1, 2, and 3** **Focus:** Recognizing numbers shown in different ways using tens and ones	• Linking cubes • Master 60: Matching Cards • Master 61: Assessment *No student card is needed for this activity.
27: Consolidation 27	**Big Ideas 1, 2, and 3** **Focus:** Consolidating early place value	• Chart paper • Linking cubes • Master 62: Tens and Ones Cut-outs • Master 63: Sample Number Poster • Master 64: Assessment *No student card is needed for this activity.

Cluster 7: Operational Fluency		
Teacher Card	**Big Idea/Focus**	**Materials**
28: More or Less 28	**Big Ideas 1, 2, and 4** **Focus:** Determining one or two more or less than a given number	• Bingo chips/small counters • Multi-Use Card 8: Number Lines • Master 66: Bingo Cards (1 per pair) • Master 67: Caller's Sheet • Master 68: Assessment *No student card is needed for this activity.
29: Adding to 20 29	**Big Ideas 1, 2, and 4** **Focus:** Adding numbers to 20	• Student Card 29 (**Activity 29: Let's Go Fishing!**) • Counters/linking cubes • Master 69: *Traditional Fish Weirs* Story • Master 70: Salmon Cards (2 sets per pair) • Master 71: Answer Cards (1 set per pair) • Master 72: Assessment
30: Subtracting to 20 30	**Big Ideas 1, 2, and 4** **Focus:** Subtracting numbers to 20	• 9 bear counters • Linking cubes (20 per student) • Number cubes labelled 1–6 (1 per pair) • Master 73: Subtracting to 20 Recording Sheet • Master 74: Assessment *No student card is needed for this activity.

Cluster 7: Operational Fluency (continued)		
Teacher Card	**Big Idea/Focus**	**Materials**
31: The Number Line 31	**Big Ideas 1, 2, and 4** **Focus:** Adding and subtracting numbers to 20 on a number line	• Masking tape to make a number line running 0–20 on the floor • Multi-Use Card 8: Number Lines • Master 75: Math Problem Cards • Master 76: Assessment *No student card is needed for this activity.
32: Doubles 32	**Big Ideas 1, 2, and 4** **Focus:** Determining doubles of numbers from 1 to 10	• 2-sided counters • Multi-Use Card 1: Ten-Frames • Master 77: Even-Number Cards • Master 78: Doubles with Ten-Frames Cards • Master 79: Doubles Cards • Master 80: Odd-Number Cards • Master 81: Near-Doubles Cards • Master 82: Assessment *No student card is needed for this activity.
33: Part-Part-Whole 33	**Big Ideas 1, 2, and 4** **Focus:** Representing addition and subtraction situations with concrete materials, pictures, and symbols	• Student Card 33 (**Activity 33: My Mat**) • Bag of 10 counters • Counters (20 per pair) • Styrofoam® cups (1 per pair) • Master 83: Assessment
34: Solving Story Problems 34	**Big Ideas 1, 2, and 4** **Focus:** Creating and solving addition and subtraction story problems	• Student Card 34 (**Activity 34A/34B: Math in Pictures**) • Linking cubes, counters, ten-frames • Multi-Use Card 4: Part-Part-Whole Mat • Master 84: *Math in Pictures* Recording Sheet • Master 85: Math in Pictures • Master 86: Assessment
35: Consolidation 35	**Big Ideas 1, 2, and 4** **Focus:** Consolidating operational fluency	• Student Card 35 (**Activity 35A/35B: Picture Problems**) • Counters, ten-frames, linking cubes • Multi-Use Card 4: Part-Part-Whole Mat • Master 87: Number Talks • Master 88: Number Sentences • Master 89: Assessment

Cluster 8: Financial Literacy		
Teacher Card	**Big Idea/Focus**	**Materials**
36: Values of Coins 36	**Big Ideas 1 and 2** **Focus:** Identifying, naming, and sorting coins	• Student Card 36 (**Activity 36A/36B: Sort and Count**) • Canadian play coins (small collection per pair) • Master 91: Assessment
37: Counting Collections 37	**Big Ideas 1 and 2** **Focus:** Counting multiples of coins of the same denomination	• Student Card 37 (**Activity 37A/37B: How Much?**) • Canadian play coins (loonies, toonies, nickels, and dimes) • Multi-Use Card 1: Ten-Frames • Master 92: Assessment
38: Fair Trades 38	**Big Ideas 1 and 2** **Focus:** Trading objects assigned a value for other objects	• Student Card 38 (**Activity 38A/38B: Nature Trades**) • Objects from nature (e.g., leaf, acorn) • Master 93: Object Pictures • Master 94: Assessment
39: Wants and Needs 39	**Big Idea 2** **Focus:** Distinguishing between wants and needs	• Student Card 39 (**Activity 39A/39B: Our Stores**) • Master 95: Our Stores • Master 96: Assessment
40: Consolidation 40	**Big Ideas 1 and 2** **Focus:** Consolidating financial literacy	• Student Card 40 (**Activity 40: Things We Need**) • Canadian play coins (small collection per pair) • Master 97: Assessment

Patterning and Algebra

Big Idea 1: Regularity and repetition form patterns that can be generalized and predicted mathematically.

Big Idea 2: Patterns and relations can be represented with symbols, equations, and expressions.

Number Big Idea 2: Numbers are related in many ways.

Cluster 1: Investigating Repeating Patterns

Teacher Card	Big Idea/Focus	Materials
1: Repeating the Core 1	**Big Idea 1** **Focus:** Identifying, describing, and extending geometric repeating patterns with 2–4 elements in the core	• Student Card 1 (**Activity 1A/1B: Spinning for Cores**) • Attribute Blocks • Pencils and paper clips for pointers (1 of each per pair) • Master 2: Assessment
2: Representing Patterns 2	**Big Idea 1** **Focus:** Identifying, representing, and describing numeric repeating patterns	• Master 3: Pattern Cards (1 set per pair) • Master 4: Core Cards (1 set per pair) • Master 5: Assessment *No student card is needed for this activity.
3: Predicting Elements 3	**Big Idea 1** **Focus:** Predicting an element in repeating patterns	• Student Card 3 (**Activity 3A/3B: Make a Guess**) • Materials such as Attribute Blocks and Colour Tiles • Master 6: Assessment
4: Finding Patterns 4	**Big Idea 1** **Focus:** Finding repeating patterns on a hundred chart	• Student Card 4 (**Activity 4A: Hundred Chart**; **Activity 4B: Number Chart (1–30)**) • Master 7: Assessment
5: Consolidation 5	**Big Idea 1** **Focus:** Consolidating the investigation of repeating patterns	• Student Card 5 (**Activity 5A/5B: The Jewelled Crown**) • Scissors and tape • Master 8: Crown Cut-Out • Master 9: Assessment

Cluster 2: Creating Patterns		
Teacher Card	**Big Idea/Focus**	**Materials**
6: Extending Patterns 6	**Big Idea 1** **Focus:** Extending repeating patterns	• Student Card 6 (**Activity 6A/6B/6C/6D/6E/6F/6G/6H: Continue the Patterns**) • Linking cubes/Colour Tiles, Attribute Blocks, Pattern Blocks • Master 11: Assessment
7: Translating Patterns 7	**Big Idea 1** **Focus:** Translating a repeating pattern in a variety of ways	• Student Card 7 (**Activity 7A/7B: Pattern Circle Cores**) • Materials such as Attribute Blocks, Pattern Blocks, counters • Game pieces (1 per pair) • Master 12: *The Number Four (Newo)* Story • Master 13: Assessment
8: Errors and Missing Elements 8	**Big Idea 1** **Focus:** Finding errors and missing elements in repeating patterns	• Student Card 8 (**Activity 8A/8C: Find the Errors**; **Activity 8B/8D: What's Missing?**) • Colour Tiles • Master 14: *Fancy Dance* Story • Master 15: Assessment
9: Consolidation 9	**Big Idea 1** **Focus:** Consolidating the creation of repeating patterns	• Student Card 9 (**Activity 9A/9B: More Pattern Circles**) • Materials such as Attribute Blocks, Pattern Blocks, counters • Pencils and paper clips for pointer (1 set per pair) • Game pieces (1 per pair) • Master 16: Assessment

Cluster 3: Equality and Inequality		
Teacher Card	**Big Idea/Focus**	**Materials**
10: Exploring Sets 10	**Big Idea 2** **Focus:** Creating equal and unequal sets	• Containers of about 25 linking cubes (1 per pair) • Pan balances (1 per pair) • Master 18: Am I Balanced? Recording Sheet • Master 19: Assessment *No student card is needed for this activity.
11: Making Equal Sets 11	**Big Idea 2** **Number Big Idea 2** **Focus:** Adding or subtracting to make unequal sets equal	• Linking cubes (25 per pair) • Pan balances (1 per pair) • Number cubes labelled 1–6 (1 per pair) • Master 20: Assessment *No student card is needed for this activity.

Cluster 3: Equality and Inequality (continued)		
Teacher Card	**Big Idea/Focus**	**Materials**
12: Using Symbols 12	**Big Idea 2** **Focus:** Recording equalities and inequalities symbolically	• Student Card 12 (**Activity 12: Do I Balance?**) • Number cubes labelled 1–10 (1 per pair) • Linking cubes (about 40 per pair) • Pan balances (1 per pair) • Master 21: Assessment
13: Consolidation 13	**Big Idea 2** **Focus:** Consolidating equality and inequality	• Linking cubes (30 per pair) • Pan balances (1 per pair) • Master 22: Number Cards • Master 23: Pan Card Recording Sheet • Master 24: Assessment *No student card is needed for this activity.

Measurement

Big Idea 1: Many things in our world have attributes that can be measured and compared.

Big Idea 2: Assigning a unit to a continuous attribute allows us to measure and make comparisons.

Number Big Idea 2: Numbers are related in many ways.

Cluster 1: Comparing Objects		
Teacher Card	**Big Idea/Focus**	**Materials**
1: Comparing Length 1	**Big Idea 1** **Focus:** Comparing and ordering two or more objects by length	• Large tray of items (e.g., pencil, pen, marker, craft stick, crayon, straw) • Pencil crayons (4 per pair) • Master 2: Assessment *No student card is needed for this activity.
2: Comparing Mass 2	**Big Idea 1** **Focus:** Comparing and ordering two or more objects by mass	• Book, eraser, stapler • Pan balances (1 per pair) • Variety of objects (e.g., rocks, pencils, cubes, balls, ...) (3 per pair) • Master 3: Assessment *No student card is needed for this activity.
3: Comparing Capacity 3	**Big Idea 1** **Focus:** Comparing and ordering two or more objects by capacity	• Two different-sized glasses • Containers of different sizes and shapes (e.g., yogourt tubs, jam jars) (3 per pair) • Sand or water • Cups (1 per pair) • Master 4: Assessment *No student card is needed for this activity.

Cluster 1: Comparing Objects (continued)		
Teacher Card	**Big Idea/Focus**	**Materials**
4: Making Comparisons 4	**Big Idea 1** **Focus:** Comparing and ordering two or more objects by length, mass, and capacity	• Objects for comparing length, mass, and capacity (from previous activities) • Pan balances (1 per group) • Cups (1 per group) • Sand or water • Master 5: Comparison Cards • Master 6: Making Comparisons Recording Sheet • Master 7: Assessment *No student card is needed for this activity.
5: Comparing Area 5	**Big Idea 1** **Focus:** Comparing and ordering two or more objects by area	• Student Card 5 (**Activity 5: Cover Me!**) • Two different-sized green paper rectangles • Colour Tiles (about 25 per pair) • Books (1 per pair) • Master 8: Assessment
6: Consolidation 6	**Big Idea 1** **Focus:** Consolidating comparing objects	• Variety of objects to compare (from previous activities) • Pan balances, Colour Tiles, sand/water, cups • Master 9: Word Cards • Master 10: Assessment *No student card is needed for this activity.

Cluster 2: Using Uniform Units		
Teacher Card	**Big Idea/Focus**	**Materials**
7: Matching Lengths 7	**Big Ideas 1 and 2** **Focus:** Using an object to measure and compare lengths of other objects	• Straws (1 per student) • Master 12: Sorting Mat • Master 13: Assessment *No student card is needed for this activity.
8. Exploring the Metre 8	**Big Ideas 1 and 2** **Focus:** Connecting non-standard units to the metre stick	• Metre stick • Paper strips (1 m long and 10–15 cm wide) (1 per student or pair) • Master 14: Hand Span Recording Sheet • Master 15: Assessment *No student card is needed for this activity.
9: Using Multiple Units 9	**Big Ideas 1 and 2** **Focus:** Using multiple uniform units to estimate and measure length	• Bags of 4–5 objects of varied lengths, all shorter than 10 cubes (e.g., pipe cleaner, pencil, popsicle stick) (1 per student or pair) • Linking cubes (10 per student or pair) • Master 16: How Many Cubes? Recording Sheet • Master 17: Assessment *No student card is needed for this activity.

Cluster 2: Using Uniform Units (continued)		
Teacher Card	**Big Idea/Focus**	**Materials**
10: A Benchmark of One Metre 10	**Big Ideas 1 and 2** **Focus:** Using the metre stick as a benchmark for measuring length	• Metre sticks or paper strips one metre in length (1 per student or pair) • Master 18: About One Metre Recording Sheet • Master 19: Assessment *No student card is needed for this activity.
11: Measuring Length 11	**Big Ideas 1 and 2** **Focus:** Estimating and measuring objects with different uniform, non-standard units	• Student Card 11 (**Activity 11A/11B: Silly Snake!**) • Items of different lengths (e.g., paper clips, short lengths of straws, different lengths of pipe cleaners, string, linking cubes) (1 set per group) • Master 20: Paper Snake • Master 21: *Silly Snake!* Recording Sheet • Master 22: Assessment
12: Iterating the Unit 12	**Big Ideas 1 and 2** **Focus:** Iterating (repeating) a single length unit to measure	• Student Card 12 (**Activity 12: The Curious Cat**) • Paper clips (1 per student or pair) • Master 23: The Toy Castle • Master 24: Assessment
13: Measuring Area 13	**Big Ideas 1 and 2** **Focus:** Estimating and measuring area using uniform, non-standard units	• Envelopes with 2 different sizes of paper squares (Masters 25, 26) (1 per pair) • Rectangular sheets of construction paper (9" by 12") (1 per pair) • Master 25: Paper Squares (3" by 3") • Master 26: Paper Squares (1.5" by 1.5") • Master 27: Assessment *No student card is needed for this activity.
14: Measuring Capacity 14	**Big Ideas 1 and 2** **Focus:** Estimating and measuring capacity using uniform, non-standard units	• Bags of cubes (1 per pair) • Containers of different sizes (e.g., baby food jars, milk cartons) (1 per pair) • Master 28: Assessment *No student card is needed for this activity.
15: Consolidation 15	**Big Ideas 1 and 2** **Focus:** Consolidating using uniform units	• Containers (e.g., cereal boxes, milk cartons) (2 per group) • Measuring tools (e.g., linking cubes, centicubes, paper clips, string, Colour Tiles, paper squares, marbles) • Master 29: Recording Sheet • Master 30: Assessment *No student card is needed for this activity.

Cluster 3: Time and Temperature		
Teacher Card	**Big Idea/Focus**	**Materials**
16: Ordering Events	**Big Idea 1** **Focus:** Ordering the events of a day	• Master 32: Building a Snow Figure • Master 33: Activity Pictures • Master 34: Activity Pictures (Extension) • Master 35: Assessment *No student card is needed for this activity.
17: Passage of Time	**Big Idea 1** **Focus:** Measuring the passage of time using non-standard units	• Sand timers (1 per pair) • Linking cubes (25 per pair) • Master 36: Passage of Time Activity Cards • Master 37: Passage of Time Recording Sheet • Master 38: Assessment *No student card is needed for this activity.
18: Telling Time	**Big Idea 1** **Focus:** Telling and writing time to the hour and half-hour	• Student Card 18 (**Activity 18: What's the Time?**) • Demonstration analogue clock • Modelling clay • Master 33: Activity Pictures • Master 39: Clock Cards • Master 40: Clock Cards (Extension) • Master 41: Assessment
19: Relating to Seasons	**Big Idea 1** **Focus:** Relating temperature to experiences of the season	• Large paper plates (1 per student) • Master 42: Which Season? Cards • Master 43: Tree Cards • Master 44: Assessment *No student card is needed for this activity.
20: The Calendar	**Big Idea 1** **Number Big Idea 2** **Focus:** Naming the months of the year and reading the calendar	• Master 45: Month Cards • Master 46: Ordinal Number Cards • Master 47: Assessment *No student card is needed for this activity.
21: Consolidation	**Big Idea 1** **Number Big Idea 2** **Focus:** Consolidating time and temperature	• Student Card 21 (**Activity 21A/21B/21C/21D: Zoey at the Zoo**) • Demonstration analogue clock • Master 48: Assessment

Geometry

Big Idea 1: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.

Big Idea 2: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.

Big Idea 3: Objects can be located in space and viewed from multiple perspectives.

Patterning and Algebra Big Idea 1: Regularity and repetition form patterns that can be generalized and predicted mathematically.

Cluster 1: 2-D Shapes		
Teacher Card	**Big Idea/Focus**	**Materials**
1: Sorting Shapes 1	**Big Idea 1** **P & A Big Idea 1** **Focus:** Sorting 2-D shapes by their attributes	• Student Card 1 (**Activity 1: Spin and Sort**) • Attribute Blocks • Pencils and paper clips for pointer (1 of each per pair) • Multi-Use Card 6: Sorting Mat • Master 2: Attribute Shapes • Master 3: Assessment
2: Identifying Triangles 2	**Big Idea 1** **P & A Big Idea 1** **Focus:** Using attributes of triangles to sort shapes	• Multi-Use Card 6: Sorting Mat • Master 4: *Shape Song* • Master 5: Am I a Triangle? Cards • Master 6: Assessment *No student card is needed for this activity.
3: Identifying Rectangles 3	**Big Idea 1** **P & A Big Idea 1** **Focus:** Using attributes of rectangles to sort shapes	• Index card • Multi-Use Card 6: Sorting Mat • Master 4: *Shape Song* • Master 7: Am I a Rectangle? Cards • Master 8: Assessment *No student card is needed for this activity.
4: Visualizing Shapes 4	**Big Idea 1** **P & A Big Idea 1** **Focus:** Building mental images of shapes	• Non-transparent bags of Attribute Blocks (all of 1 colour with hexagons removed, 1 bag per group) • Master 9: Assessment *No student card is needed for this activity.
5: Sorting Rules 5	**Big Idea 1** **P & A Big Idea 1** **Focus:** Sorting 2-D shapes using a sorting rule	• Attribute Blocks • Multi-Use Card 6: Sorting Mat • Master 10: Shape Cards • Master 11: Assessment *No student card is needed for this activity.
6: Consolidation 6	**Big Idea 1** **P & A Big Idea 1** **Focus:** Consolidating 2-D shapes	• Attribute Blocks • Multi-Use Card 6: Sorting Mat • Master 10: Shape Cards • Master 12: Assessment *No student card is needed for this activity.

Cluster 2: 3-D Solids		
Teacher Card	**Big Idea/Focus**	**Materials**
7: Exploring 3-D Solids 7	**Big Idea 1** **Focus:** Exploring and describing the attributes of 3-D solids	• A set of 6 reference solids: sphere, cylinder, cube, rectangular prism, triangular prism, cone • Sets of 6 solids in a non-transparent bag (1 set per pair) • Master 14: Assessment *No student card is needed for this activity.
8: Sorting 3-D Solids 8	**Big Idea 1** **P & A Big Idea 1** **Focus:** Sorting 3-D solids using a single attribute	• Student Card 8 (**Activity 8A/8B: Rules to Sort By**) • Sets of 10–12 solids (1 set per pair) • Master 15: Assessment
9: Identifying the Sorting Rule 9	**Big Idea 1** **P & A Big Idea 1** **Focus:** Identifying a sorting rule	• Student Card 8 (**Activity 8A/8B: Rules to Sort By**) • Sets of 10–12 solids (1 set per pair) • Master 16: Assessment
10: Consolidation 10	**Big Idea 1** **P & A Big Idea 1** **Focus:** Consolidating 3-D solids	• Student Card 10 (**Activity 10A/10B: Spinning for Rules**) • Sets of 10–12 solids (1 set per pair) • Paper clips and pencils for pointer (1 of each per pair) • Master 17: The Unfinished Castle • Master 18: Assessment

Cluster 3: Geometric Relationships		
Teacher Card	**Big Idea/Focus**	**Materials**
11: Faces of Solids 11	**Big Idea 1** **Focus:** Describing the 2-D faces of 3-D solids	• Two identical cereal boxes • Containers/boxes with square and circular faces • Assortment of 3-D solids • File folders to act as barriers (1 per pair) • Master 20: Assessment *No student card is needed for this activity.
12: Making Designs 12	**Big Idea 1** **Focus:** Using 2-D shapes to make pictures and designs	• Pattern Blocks • Master 21: Pattern Block Design Templates • Master 22: Assessment *No student card is needed for this activity.

Cluster 3: Geometric Relationships (continued)		
Teacher Card	**Big Idea/Focus**	**Materials**
13: Covering Outlines 13	**Big Idea 1** **Focus:** Covering puzzle outlines with 2-D shapes	• Student Card 13 (**Activity 13A/13B: Pattern Block Design**) • Non-transparent bags of Pattern Blocks (an assortment of about 25 blocks; no orange squares or tan parallelograms) (1 bag per pair) • Master 23: Assessment
14: Identifying Shapes 14	**Big Idea 1** **Focus:** Identifying 2-D shapes within geometric designs	• Student Card 14 (**Activity 14A/14B: Find the Shapes**) • Markers (3 different colours per pair) • Master 24: Quilt Design • Master 25: *Find the Shapes* Designs • Master 26: *Find the Shapes* Recording Sheet • Master 27: Assessment
15: Consolidation 15	**Big Idea 1** **Focus:** Consolidating geometric relationships	• Pattern Blocks • Assortment of 3-D solids • Master 28: Shape Outline Cards • Master 29: Made with Solids Cards • Master 30: Assessment *No student card is needed for this activity.

Cluster 4: Symmetry		
Teacher Card	**Big Idea/Focus**	**Materials**
16: Finding Lines of Symmetry 16	**Big Idea 2** **Focus:** Identifying lines of symmetry in pictures	• Student Card 16 (**Activity 16A/16B/16C/16D/16E/16F/16G/16H: Finding Symmetry**) • Miras (1 per pair) • Master 32: Exploring Lines of Symmetry • Master 33: Symmetrical Images • Master 34: Assessment
17: Creating Symmetrical Designs 17	**Big Idea 2** **Focus:** Creating symmetrical designs using concrete materials	• Student Card 17 (**Activity 17A/17B/17C/17D: Finish Me!**) • Pattern Blocks • Miras (1 per pair) • Master 35: Assessment
18: Consolidation 18	**Big Idea 2** **Focus:** Consolidating symmetry	• String, pipe cleaners, or heavy thread • At least 3–5 colours and different sizes of beads or buttons • Master 36: Necklace/Bracelet Templates • Master 37: Assessment *No student card is needed for this activity.

Cluster 5: Location and Movement		
Teacher Card	**Big Idea/Focus**	**Materials**
19: Perspective Taking 19	**Big Idea 3** **Focus:** Visualizing objects from different perspectives	• Bear counters/toy characters (1 per pair) • Bags of 3–4 small objects (e.g., rocks, cubes, craft sticks, paper cups) (1 per pair) • Master 39: Objects on a Table • Master 40: Position Cards • Master 41: Assessment *No student card is needed for this activity.
20: Mapping 20	**Big Idea 3** **Focus:** Creating and mapping familiar spaces	• Building materials (e.g., cubes, wooden blocks, building blocks, popsicle sticks, rocks, objects from nature) • Construction paper mats (1 per group) • Master 42: Maps (1 map per group) • Master 43: Assessment *No student card is needed for this activity.
21: Consolidation 21	**Big Idea 3** **Focus:** Consolidating location and movement	• Student Card 21 (**Activity 21A/21B: Where Am I?**) • Linking cubes (1 per pair) • Files folders to act as barriers (1 per pair) • Master 44: Map of a Classroom • Master 45: Student Card Map A • Master 46: Student Card Map B • Master 47: Assessment

Data Management and Probability

Big Idea 1: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.

Patterning and Algebra Big Idea 1: Regularity and repetition form patterns that can be generalized and predicted mathematically.

Cluster 1: Data Management		
Teacher Card	**Big Idea/Focus**	**Materials**
1: Interpreting Graphs 1	**Big Idea 1** **P & A Big Idea 1** **Focus:** Reading and interpreting concrete graphs and pictographs	• Student Card 1 (**Activity 1A/1B: Our Schoolyard**) • Master 2: Assessment
2: Making Concrete Graphs 2	**Big Idea 1** **P & A Big Idea 1** **Focus:** Using concrete graphs to display and interpret data	• Student Card 2 (**Activity 2A/2B: Our Cubes**) • Bags of about 20 linking cubes (mix of red, green, blue, yellow) (1 bag per pair) • Master 3: Assessment

Cluster 1: Data Management (continued)		
Teacher Card	**Big Idea/Focus**	**Materials**
3: Making Pictographs 3	**Big Idea 1** **P & A Big Idea 1** **Focus:** Using pictographs to display and interpret data	• Student Card 3 (**Activity 3A/3B: Our Walk**) • Sticky notes • Multi-Use Card 7: Graphing Mat • Master 4: Tally Chart • Master 5: Pictograph Pictures • Master 6: Assessment
4: Consolidation 4	**Big Idea 1** **P & A Big Idea 1** **Focus:** Consolidating data management	• Student Card 4 (**Activity 4A/4B: I Spy!**) • Chart paper/Multi-Use Card 7: Graphing Mat • Pattern Blocks, number cubes, bear counters, 2-D shapes, 3-D solids, linking cubes, counters • Master 7: Assessment

Cluster 2: Probability and Chance		
Teacher Card	**Big Idea/Focus**	**Materials**
5: Likelihood of Events 5	**Big Idea 1** **Focus:** Describing the likelihood of an event	• Master 9: Could It Happen? Events • Master 10: More Likely or Less Likely • Master 11: Assessment *No student card is needed for this activity.
6: Consolidation 6	**Big Idea 1** **Focus:** Consolidating probability and chance	• Paper and coloured pencils/crayons • Master 12: Chance Words • Master 13: Assessment *No student card is needed for this activity.

Activity Kit Materials List by Strand

Number

- Beads
- Bear counters
- Bingo chips/small counters
- Canadian play coins
- Centicubes
- Chart paper
- Counters, including two-sided
- Craft sticks
- Game pieces
- Hundred charts
- Large paper squares
- Linking cubes
- Masking tape
- Modelling clay
- Modelling clay tools
- Number lines
- Number cubes
- Objects from nature (e.g., leaf, acorn)
- Paper strips
- Pipe cleaners
- Rectangles
- Ribbon
- Scissors
- String
- Styrofoam®/paper cups
- Ten-frames

Patterning and Algebra

- Attribute Blocks
- Colour Tiles
- Counters
- Game pieces
- Linking cubes
- Number cubes
- Pan balances
- Paper clips
- Pattern Blocks
- Pencils
- Scissors
- Tape

Measurement

- Books
- Colour Tiles
- Containers of different sizes and shapes (e.g., yogourt tubs, jam jars, milk cartons, baby food jars, cereal boxes)
- Cubes
- Cups
- Demonstration analogue clock
- Envelopes with 2 different sizes of paper squares
- Eraser
- Items of different lengths (e.g., paper clips, straws, pipe cleaners, string, linking cubes)
- Large tray of items (e.g., pencil, pen, marker, craft stick, crayon, straw)
- Large paper plates
- Linking cubes
- Measuring tools (e.g., linking cubes, centicubes, paper clips, string, Colour Tiles, paper squares, marbles)
- Metre stick
- Modelling clay
- Objects for comparing length, mass, and capacity
- Pan balances
- Paper clips

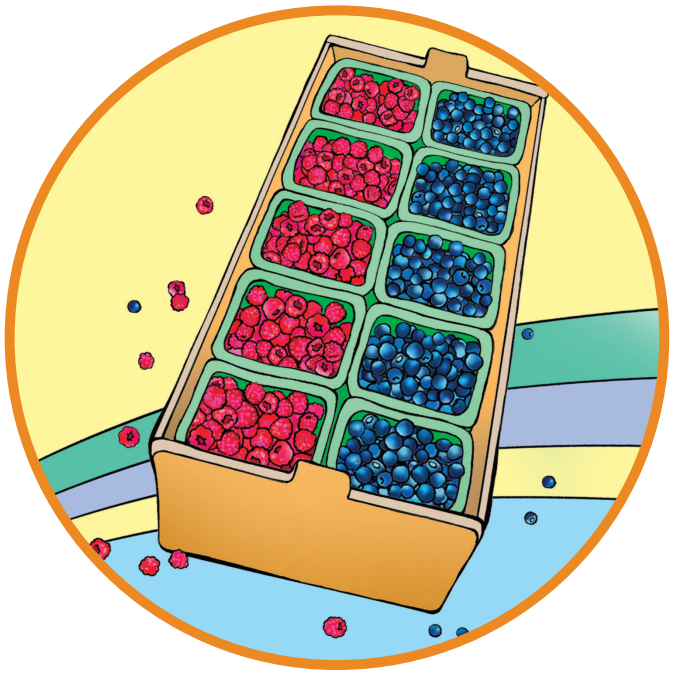
- Paper strips
- Pencil crayons
- Rectangular sheets of construction paper (9" by 12")
- Sand or water
- Sand timers
- Stapler
- Straws
- Two different-sized glasses
- Two different-sized green paper rectangles
- Variety of objects (e.g., rocks, pencils, cubes, balls)

Geometry

- Assortment of 3-D solids
- Attribute Blocks
- Beads or buttons, in different colours and sizes
- Bear counters/toy characters
- Building materials (e.g., cubes, wooden blocks, building blocks, popsicle sticks, rocks, objects from nature)
- Containers/boxes with square and circular faces
- Construction paper mats
- File folders
- Index cards
- Linking cubes
- Markers
- Miras
- Non-transparent bags
- Paper clips
- Pattern Blocks
- Pencils
- Sets of reference solids: sphere, cylinder, cube, rectangular prism, triangular prism, cone
- Small objects (e.g., rocks, cubes, craft sticks, paper cups)
- String, pipe cleaners, or heavy thread
- Two identical cereal boxes

Data Management and Probability

- 2-D shapes
- 3-D solids, linking cubes
- Bear counters
- Chart paper
- Coloured pencils/crayons
- Counters
- Linking cubes
- Number cubes
- Pattern Blocks
- Sticky notes



Activity Kit Line Masters

Number

Cluster 1: Counting

Master 1: Curriculum Correlation
Master 2: *My Huckleberry (Duje)* Story
Master 3: First Nations Languages and Dialects
Master 4: Audio Recordings
Master 5: Activity 1 Assessment
Master 6: Action Cards
Master 7: Activity 2 Assessment
Master 8: *Hopping On* Game Boards
Master 9: *Hopping Back* Game Boards
Master 10: Activity 3 Assessment
Master 11: Barn Animal Cards
Master 12: Ordinal Number Cards
Master 13: Activity 4 Assessment
Master 14: Number Cards
Master 15: Activity 5 Assessment

Cluster 2: Spatial Reasoning

Master 16: Curriculum Correlation
Master 17: Dot Cards
Master 18: How Many Dots?
Master 19: Activity 6 Assessment
Master 20: *Grab 20!* Recording Sheet
Master 21: Activity 7 Assessment
Master 22: *How Many?* Recording Sheet
Master 23: Activity 8 Assessment

Cluster 3: Comparing and Ordering

Master 24: Curriculum Correlation
Master 25: More/Fewer Cards
Master 26 Activity 9 Assessment
Master 27: Banana Cards
Master 28: Activity 10 Assessment
Master 29: Master 11 Assessment
Master 30: Fish Outlines
Master 31: Activity 12 Assessment

Cluster 4: Skip-Counting

Master 32: Curriculum Correlation
Master 33: Activity 13 Assessment
Master 34: The School Fun Fair
Master 35: Activity Cards
Master 36: *The Fun Fair* Recording Sheet
Master 37: Activity 14 Assessment
Master 38: *Delivering Mail* Game Board
Master 39: *Mail on Planet Math* Game Board
Master 40: Activity 15 Assessment
Master 41: *Under Construction!* Recording Sheet
Master 42: Activity 16 Assessment

Cluster 5: Composing and Decomposing

Master 43: Curriculum Correlation
Master 44: *Ten in the Pools* Recording Sheet
Master 45: Activity 17 Assessment
Master 46: Tower Recording Sheet
Master 47: Activity 18 Assessment
Master 48: Ten-Frame Recording Sheet
Master 49: Activity 19 Assessment
Master 50: Coin Cards
Master 51: Activity 20 Assessment
Master 52: Equal Groups Recording Sheet
Master 53: Activity 21 Assessment
Master 54: Activity 22 Assessment
Master 55: Activity 23 Assessment

Cluster 6: Early Place Value

Master 56: Curriculum Correlation
Master 57: Tens and Ones Recording Sheet
Master 58: Activity 24 Assessment
Master 59: Activity 25 Assessment
Master 60: Matching Cards
Master 61: Activity 26 Assessment
Master 62: Tens and Ones Cut-outs
Master 63: Sample Number Poster
Master 64: Activity 27 Assessment

Cluster 7: Operational Fluency
Master 65: Curriculum Correlation
Master 66: Bingo Cards
Master 67: Caller's Sheet
Master 68: Activity 28 Assessment
Master 69: *Traditional Fish Weirs* Story
Master 70: Salmon Cards
Master 71: Answer Cards
Master 72: Activity 29 Assessment
Master 73: Subtracting to 20 Recording Sheet
Master 74: Activity 30 Assessment
Master 75: Math Problem Cards
Master 76: Activity 31 Assessment
Master 77: Even-Number Cards
Master 78: Doubles with Ten-Frames Cards
Master 79: Doubles Cards
Master 80: Odd-Number Cards
Master 81: Near-Doubles Cards
Master 82: Activity 32 Assessment
Master 83: Activity 33 Assessment
Master 84: *Math in Pictures* Recording Sheet
Master 85: Math in Pictures
Master 86: Activity 34 Assessment
Master 87: Number Talks
Master 88: Number Sentences
Master 89: Activity 35 Assessment

Cluster 8: Financial Literacy
Master 90: Curriculum Correlation
Master 91: Activity 36 Assessment
Master 92: Activity 37 Assessment
Master 93: Object Pictures
Master 94: Activity 38 Assessment
Master 95: Our Stores
Master 96: Activity 39 Assessment
Master 97: Activity 40 Assessment

Patterning and Algebra

Cluster 1: Investigating Repeating Patterns
Master 1: Curriculum Correlation
Master 2: Activity 1 Assessment
Master 3: Pattern Cards
Master 4: Core Cards
Master 5: Activity 2 Assessment
Master 6: Activity 3 Assessment
Master 7: Activity 4 Assessment
Master 8: Crown Cut-Out
Master 9: Activity 5 Assessment

Cluster 2: Creating Patterns
Master 10: Curriculum Correlation
Master 11: Activity 6 Assessment
Master 12: *The Number Four (Newo)* Story
Master 13: Activity 7 Assessment
Master 14: *Fancy Dance* Story
Master 15: Activity 8 Assessment
Master 16: Activity 9 Assessment

Cluster 3: Equality and Inequality
Master 17: Curriculum Correlation
Master 18: Am I Balanced? Recording Sheet
Master 19: Activity 10 Assessment
Master 20: Activity 11 Assessment
Master 21: Activity 12 Assessment
Master 22: Number Cards
Master 23: Pan Card Recording Sheet
Master 24: Activity 13 Assessment

Measurement

Cluster 1: Comparing Objects
Master 1: Curriculum Correlation
Master 2: Activity 1 Assessment
Master 3: Activity 2 Assessment
Master 4: Activity 3 Assessment
Master 5: Comparison Cards
Master 6: Making Comparisons Recording Sheet
Master 7: Activity 4 Assessment
Master 8: Activity 5 Assessment
Master 9: Word Cards
Master 10: Activity 6 Assessment

Cluster 2: Using Uniform Units
Master 11: Curriculum Correlation
Master 12: Sorting Mat
Master 13: Activity 7 Assessment
Master 14: Hand Span Recording Sheet
Master 15: Activity 8 Assessment
Master 16: How Many Cubes? Recording Sheet

Master 17: Activity 9 Assessment
Master 18: About One Metre Recording Sheet
Master 19: Activity 10 Assessment
Master 20: Paper Snake
Master 21: *Silly Snake!* Recording Sheet
Master 22: Activity 11 Assessment
Master 23: The Toy Castle
Master 24: Activity 12 Assessment
Master 25: Paper Squares (3" by 3")
Master 26: Paper Squares (1.5" by 1.5")
Master 27: Activity 13 Assessment
Master 28: Activity 14 Assessment
Master 29: Recording Sheet
Master 30: Activity 15 Assessment

Cluster 3: Time and Temperature
Master 31: Curriculum Correlation
Master 32: Building a Snow Figure
Master 33: Activity Pictures
Master 34: Activity Pictures (Extension)
Master 35: Activity 16 Assessment
Master 36: Passage of Time Activity Cards
Master 37: Passage of Time Recording Sheet
Master 38: Activity 17 Assessment
Master 39: Clock Cards
Master 40: Clock Cards (Extension)
Master 41: Activity 18 Assessment
Master 42: Which Season? Cards
Master 43: Tree Cards
Master 44: Activity 19 Assessment
Master 45: Month Cards
Master 46: Ordinal Number Cards
Master 47: Activity 20 Assessment
Master 48: Activity 21 Assessment

Geometry

Cluster 1: 2-D Shapes
Master 1: Curriculum Correlation
Master 2: Attribute Shapes
Master 3: Activity 1 Assessment
Master 4: *Shape Song*
Master 5: Am I a Triangle? Cards
Master 6: Activity 2 Assessment
Master 7: Am I a Rectangle? Cards
Master 8: Activity 3 Assessment
Master 9: Activity 4 Assessment
Master 10: Shape Cards
Master 11: Activity 5 Assessment
Master 12: Activity 6 Assessment

Cluster 2: 3-D Solids
Master 13: Curriculum Correlation
Master 14: Activity 7 Assessment
Master 15: Activity 8 Assessment
Master 16: Activity 9 Assessment
Master 17: The Unfinished Castle
Master 18: Activity 10 Assessment

Cluster 3: Geometric Relationships
Master 19: Curriculum Correlation
Master 20: Activity 11 Assessment
Master 21: Pattern Block Design Templates
Master 22: Activity 12 Assessment
Master 23: Activity 13 Assessment
Master 24: Quilt Design
Master 25: *Find the Shapes* Designs
Master 26: *Find the Shapes* Recording Sheet
Master 27: Activity 14 Assessment
Master 28: Shape Outline Cards
Master 29: Made with Solids Cards
Master 30: Activity 15 Assessment

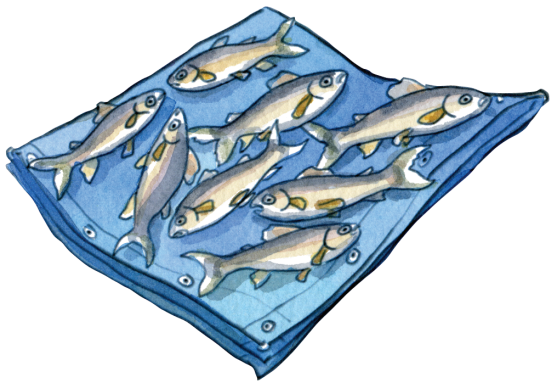
Cluster 4: Symmetry
Master 31: Curriculum Correlation
Master 32: Exploring Lines of Symmetry
Master 33: Symmetrical Images
Master 34: Activity 16 Assessment
Master 35: Activity 17 Assessment
Master 36: Necklace/Bracelet Templates
Master 37: Activity 18 Assessment

Cluster 5: Location and Movement
Master 38: Curriculum Correlation
Master 39: Objects on a Table
Master 40: Position Cards
Master 41: Activity 19 Assessment
Master 42: Maps
Master 43: Activity 20 Assessment

Data Management and Probability

Cluster 1: Data Management

Cluster 2: Probability and Chance



Mathology Little Books

About Mathology Little Books

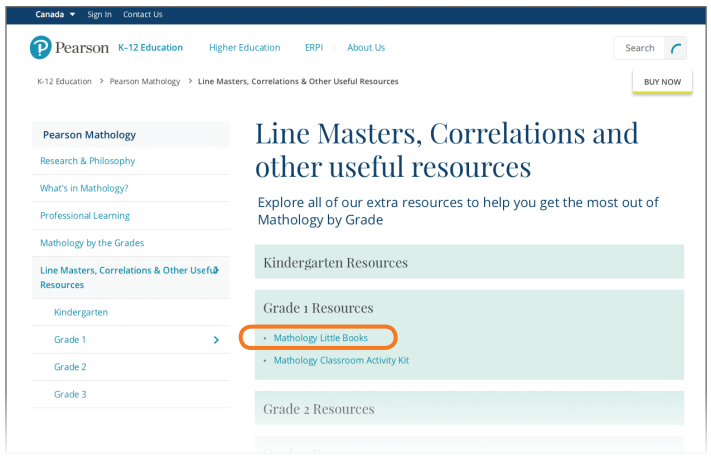
There are **72 fiction and non-fiction books**, with corresponding Teacher's Guides, organized around the Learning Progression's Big Ideas within each math strand.

The books span from **Kindergarten through Grade 3**. They are **math first**; each book focuses on two math foci in a Big Idea. **Indigenous** titles are included at each grade level, and all books have been reviewed by Indigenous educators as well as by bias and equity experts. All books are also available in **French**.

Digital Version and Tools for Little Books

A **digital version** of each book, an interactive activity, and an audio recording are available via a URL or QR code, which is located on the back cover of each book.

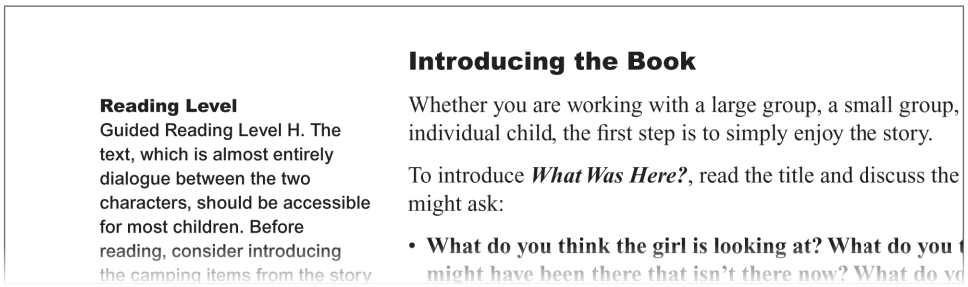
Line masters for each Mathology Little Book, in Word and PDF format, are located at pearsonmathology.ca (see Line Masters, Correlations & Other Useful Resources.) They include resources such as math mats, Home Connection ideas, and assessment checklists.



Select Line Masters, Correlations & Other Useful Resources, select the grade level, then select Mathology Little Books.

About Mathology Little Books Teacher's Guides

The reading level for each book is noted in the accompanying guide.



Reading Level
Guided Reading Level H. The text, which is almost entirely dialogue between the two characters, should be accessible for most children. Before reading, consider introducing the camping items from the story

Introducing the Book

Whether you are working with a large group, a small group, individual child, the first step is to simply enjoy the story.

To introduce ***What Was Here?***, read the title and discuss the might ask:

- **What do you think the girl is looking at? What do you t might have been there that isn't there now? What do yo**

The guides feature a wrap-around format (student book pages are reproduced in the guide with notes surrounding them) so that you can read the annotated copy as students read their copy. Conversation and Watch For prompts are included throughout. Different colours for the conversation prompts denote the two math foci in each Mathology Little Book.

Detailed teaching plans for large groups, small groups, and centre options include Watch For prompts and differentiation tips. Home Connections options are also included in each guide.

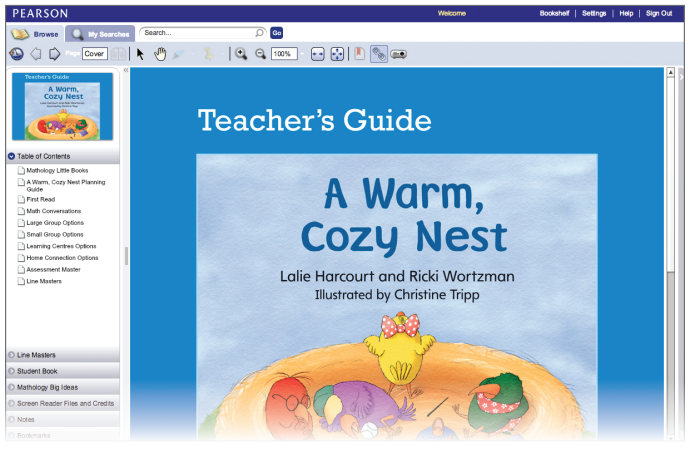
Digital Version and Tools for Teacher's Guide

With your order of a teacher's guide, you will receive an access code and registration instructions. If you have ordered multiple guides, use the same login name and password for all guides. Once you have logged in, you will see a bookshelf with each of the guides you have ordered.

Each guide includes these components:

- An etext version
- Line masters in Word and PDF format
- Wordless copy of the corresponding student book for projection/inquiry
- Mathology Big Ideas/Learning pathway

Should you encounter problems with registration, please email schoolaccesscodes@pearsoncanada.com.



Mathology Little Books Index

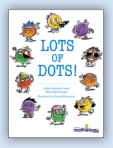
Number

BIG IDEA 1: Numbers tell us how many and how much.

KINDERGARTEN

A Warm, Cozy Nest
- count sets to 5
- recognize numerals to 5

Lots of Dots!
- subitize and count sets to 10
- compose and decompose to 10



Animals Hide
- count sets to 10
- compare quantities to 10

Dan's Doggy Daycare
- count and compare sets to 10
- compose and decompose 10

Acorns for Wilaiya
- count sets to 10
- compare sets to 10

GRADE 1

On Safari!
- count sets to 20
- add 1 or 2

BIG IDEA 2: Numbers are related in many ways.

KINDERGARTEN

Spot Check!
- compare quantities to 10
- count sets to 10

Time for Games
- compare quantities to 10 (further developed)
- count sets to 10 (further developed)

Let's Play Waltes!
- count and compare to 10
- compose and decompose to 10

GRADE 1

Paddling the River
- count, compare, and order to 20
- compose and decompose to 20

A Family Cookout
- compare and order quantities to 25
- estimate and count to 50

GRADE 2

What Would You Rather?
- compare quantities to 100
- estimate and count to 100

GRADE 3

Fantastic Journeys
- estimate quantities to 1000
- compare/order quantities to 1000

mathology
Little Books

BIG IDEA 3: Quantities and numbers can be grouped by units or split into units.

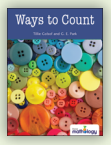
GRADE 1

At the Corn Farm
- group quantities based on units of 10
- compare and order sets/quantities to 20

How Many Is Too Many?
- estimate and group to skip-count to 50
- compare quantities to 50

GRADE 2

Ways to Count
- estimate and group to count to 100
- skip-count to 100



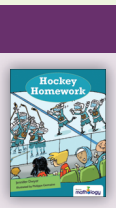
Family Fun Day
- split quantities into equal groups to count to 100
- compose/decompose to 100

Back to Batoche
- group quantities based on units of 10
- compare/order numbers to 100

The Best Birthday
- split wholes into equal parts (fractions)
- model equal grouping/ sharing

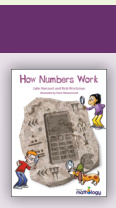
GRADE 3

Hockey Homework
- split wholes into equal parts (fractions)
- compare fractions



Finding Buster
- compose to 1000 based on place-value
- compare/order numbers to 1000

How Numbers Work
- compose/decompose 3-digit numbers
- find and use number patterns



BIG IDEA 4: Quantities and numbers can be added and subtracted to determine how many or how much.

GRADE 1

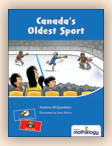
That's 10!
- add and subtract to 10
- compose and decompose 10

Hockey Time!
- add and subtract to 20
- compose and decompose to 20

Cats and Kittens!
- add and subtract to 20
- compare quantities to 20

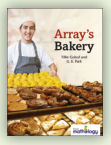
Buy 1—Get 1
- add and subtract to 20
- develop addition and subtraction strategies

Canada's Oldest Sport
- add and subtract to 20
- compare and order sets to 20



GRADE 2

Array's Bakery
- solve addition/subtraction problems
- solve equal grouping/ sharing problems



Marbles, Alleys, Mibs, and Guli!
- add/subtract 2-digit numbers
- solve equal grouping/ sharing problems

A Class-full of Projects
- add/subtract to 100
- compose/decompose based on units of 10

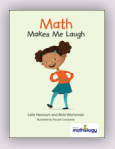
GRADE 2 (continued)

The Money Jar
- add/subtract to 100 (further developed)
- compose/decompose based on units of 10

The Great Dogsled Race
- add/subtract to 100
- compare/order numbers

GRADE 3

Math Makes Me Laugh
- add/subtract to 1000
- estimate, compare, and order numbers to 1000



The Street Party
- add/subtract to 1000
- compare/order numbers to 1000 (further developed)

Planting Seeds
- add/subtract to 1000
- develop concept of multiplication

BIG IDEA 5: Quantities and numbers can be multiplied (by grouping units) and divided (by splitting into units) to determine how many or how much.

GRADE 3

Sports Camp
- model and solve equal grouping/sharing problems
- relate adding to multiplying, subtracting to dividing

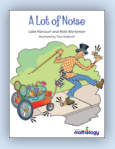
Calla's Jingle Dress
- multiply and divide to 50
- add and subtract to 100

Patterning and Algebra

BIG IDEA 1: Patterns can be described mathematically.

KINDERGARTEN

A Lot of Noise
- identify and extend repeating patterns
- reproduce and create repeating patterns



We Can Bead!
- describe, extend, and create repeating patterns
- sort objects by attributes

GRADE 1

Midnight and Snowfall
- identify and describe repeating patterns
- compare and create patterns

GRADE 2

The Best Surprise
- explore growing and shrinking patterns
- investigate number patterns

Pattern Quest
- investigate repeating patterns
- investigate growing and shrinking patterns

BIG IDEA 1: Patterns can be described mathematically. (continued)

GRADE 3

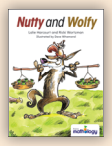
Namir's Marvellous Masterpieces

- investigate growing and shrinking patterns (further developed)
- use equations to represent simple growing and shrinking patterns

BIG IDEA 2: Symbols and expressions can be used to represent mathematical relations.

GRADE 1

Nutty and Wolfy



- explore equality and inequality
- compare quantities to 20

GRADE 2

Kokum's Bannock

- model and describe equality and inequality
- explore properties of addition and subtraction

GRADE 3

A Week of Challenges

- use properties of equality to solve problems
- use the language of algebra

Measurement

BIG IDEA 1: Many things in our world have attributes that can be measured and compared.

KINDERGARTEN

To Be Long

- compare objects by length
- order objects by length

GRADE 1

The Amazing Seed

- estimate and compare attributes
- estimate and measure using non-standard units

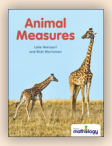
BIG IDEA 2: Units can be used to measure and compare attributes.

KINDERGARTEN

The Best in Show
- measure to compare and order objects
- choose and use measuring tools

GRADE 1

Animal Measures
- estimate and measure length
- compare measures according to length



GRADE 2

Getting Ready for School
- estimate and measure length, duration, and distance around
- compare, order, and describe measures

The Discovery
- estimate and measure length, perimeter, and area
- compare and describe length, perimeter, and area

GRADE 3

Goat Island
- measure time, temperature, and length
- explore units of measure and their relationships

The Bunny Challenge
- estimate, measure, and compare area
- estimate, measure, and compare perimeter

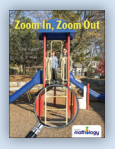
Measurements About YOU!
- estimate, measure, and compare attributes
- identify and relate measures

Geometry

BIG IDEA 1: Shapes and solids can be explored and compared based on attributes.

KINDERGARTEN

Zoom In, Zoom Out
- identify shapes
- locate objects



The Castle Wall
- explore, describe, and compare shapes and solids
- create and describe 3-D structures

GRADE 1

What Was Here?
- find and describe shapes and solids
- explore and classify shapes and solids

BIG IDEA 1: Shapes and solids can be explored and compared based on attributes. (continued)

GRADE 2

I Spy Awesome Buildings

- find and classify 2-D shapes in 3-D objects
- investigate and make 2-D shapes

GRADE 3

WONDERful Buildings

- identify, describe, and compare 2-D shapes and 3-D solids
- compose and decompose 2-D shapes and 3-D solids

BIG IDEA 2: Shapes and solids can be transformed in many ways.

GRADE 1

The Tailor Shop

- transform and describe shapes
- describe and compare shapes

GRADE 2

Sharing Our Stories

- explore lines of symmetry in 2-D shapes
- explore 2-D shapes

GRADE 3

Gallery Tour

- describe and compare transformations
- identify, describe, and compare 2-D shapes

BIG IDEA 3: Objects can be located in space and looked at from different perspectives.

KINDERGARTEN

The New Nest

- locate objects in space
- recognize shapes

GRADE 1

Memory Book

- locate and map objects in the environment
- investigate 2-D shapes and 3-D solids

BIG IDEA 3: Objects can be located in space and looked at from different perspectives. (continued)

GRADE 2

Robo
- describe the location of objects
- explore and describe the movement of objects

Data Management and Probability

BIG IDEA 1: Collecting and displaying data can help us predict and interpret situations.

KINDERGARTEN

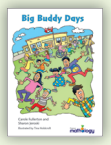
Hedge and Hog
- collect and interpret data
- sort a collection

GRADE 1

Graph It!
- interpret concrete graphs and picture graphs
- build concrete graphs and picture graphs

GRADE 2

Big Buddy Days
- build pictographs
- interpret pictographs



Marsh Watch
- collect, organize, and display data in graphs
- read and ask questions about graphs

GRADE 3

Welcome to The Nature Park
- interpret charts, tables, pictographs, and bar graphs
- draw conclusions from data displays

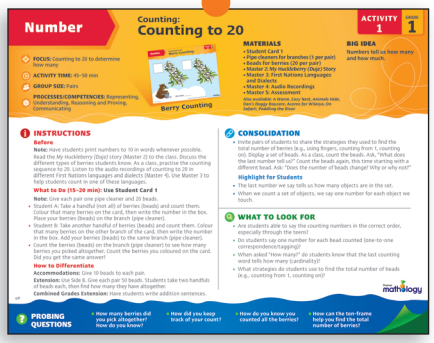
Chance
- explore the likelihood of different outcomes
- investigate the fairness of games

Assess & Track

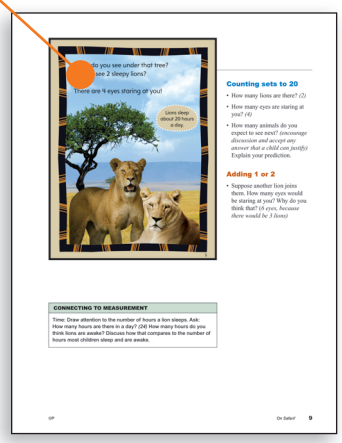
Assessment Tools and Supports

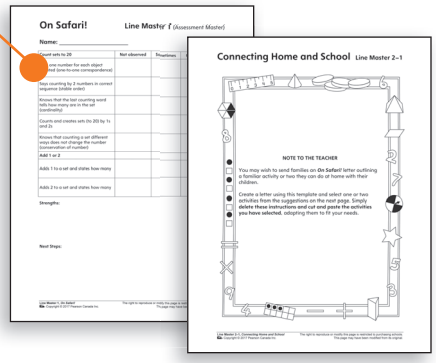
Many different formative and summative assessment tools and supports in the Mathology components allow you to probe and gain insight into students' knowledge and understanding throughout their learning experience. These supports enable you to uncover what students know at all times, and to choose the next steps to help move them forward in their learning. Observational assessment is at the heart of all the Mathology components.

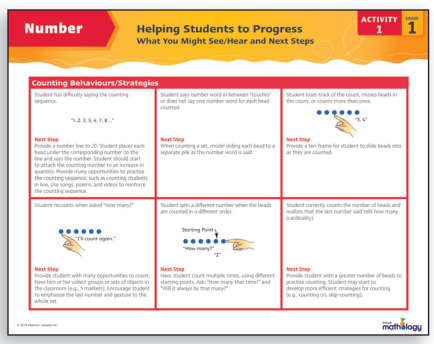
Diagnostic/Formative

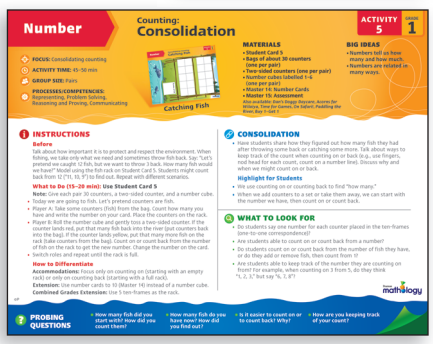


Summative





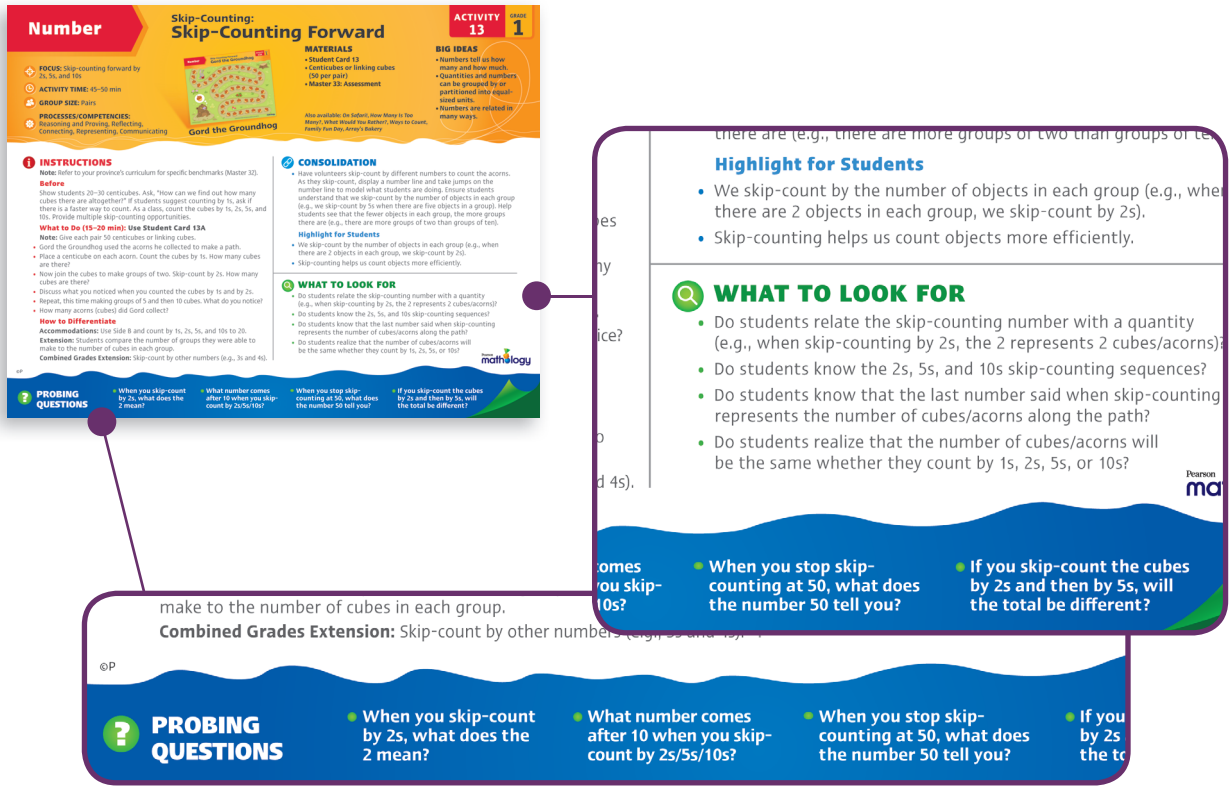




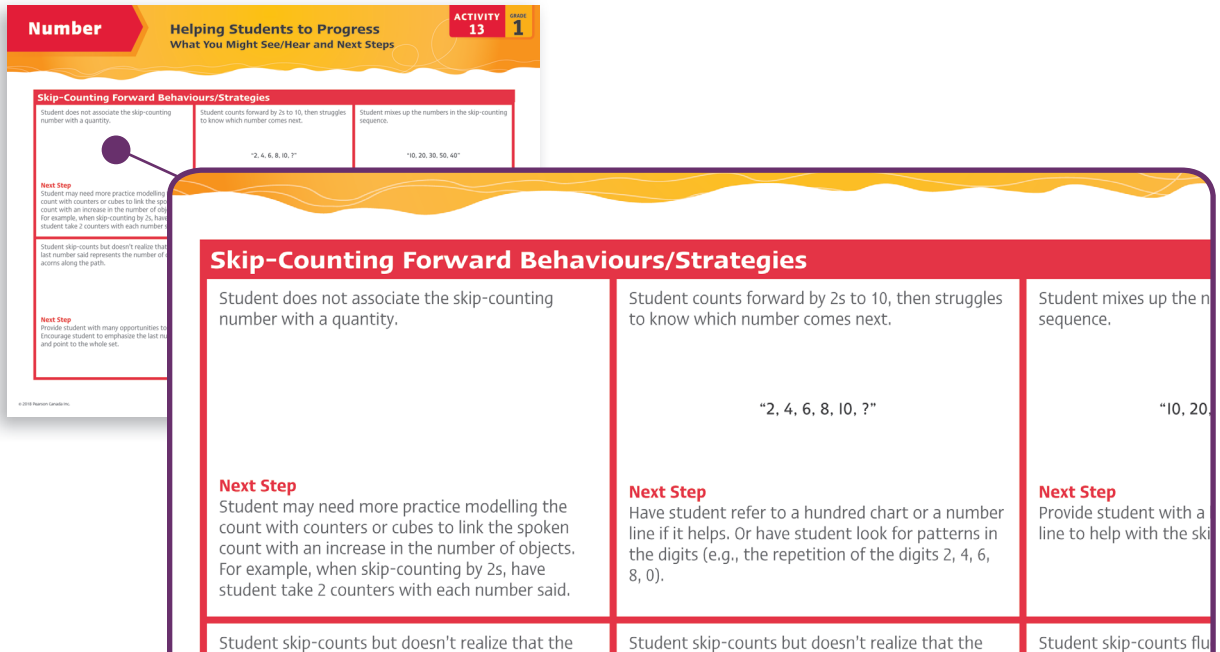
Mathology Grade 1 Activity Kit

On each activity card, the following multiple formative assessment supports are available:

- **Probing Questions:** Questions that you might ask in the moment to reveal students' understanding and any misconceptions they may have
- **What to Look For:** Suggestions about what to observe as students are performing the activity

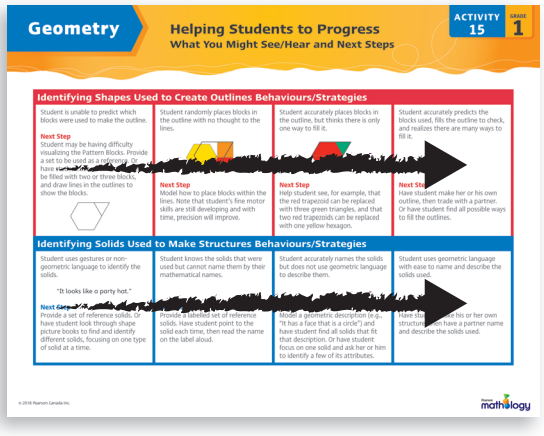


- **What You Might See/Hear and Next Steps:** Student behaviours and strategies that you may observe during the activity and ideas for next steps based on what you notice. These behaviours and strategies illustrate a progression of the most common responses, misconceptions, partial concepts, and strategies students may display while learning, culminating with a deep understanding of the concept.

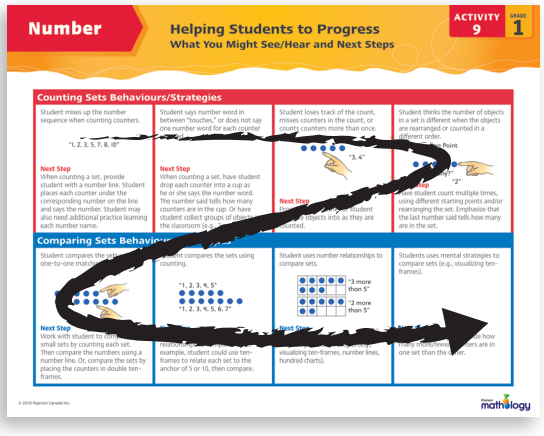


Some activities have concepts that cover a combined mathematical focus. Depending on the activity math focus and main concept, the card's Side B prompts allow you to observe on-grade mastery developing for two related concepts **simultaneously** or **sequentially**.

Simultaneously:



Sequentially:



The following activities have a combined mathematical focus. Use the progression guidelines provided below to guide your observational assessment of student behaviours and strategies:

Number

Cluster 2: Spatial Reasoning Activity 8: Consolidation (simultaneous)

Cluster 3: Comparing and Ordering Activity 9: Comparing Sets Concretely (sequential)

Cluster 5: Composing and Decomposing Activity 19: Numbers to 20 (simultaneous)

Cluster 5: Composing and Decomposing Activity 21: Equal Groups (simultaneous)

Cluster 5: Composing and Decomposing Activity 23: Consolidation (simultaneous)

Cluster 7: Operational Fluency Activity 28: More or Less (sequential)

Cluster 7: Operational Fluency Activity 29: Adding to 20 (simultaneous)

Cluster 7: Operational Fluency Activity 30: Subtracting to 20 (simultaneous)

Cluster 7: Operational Fluency Activity 31: The Number Line (sequential)

Cluster 7: Operational Fluency Activity 32: Doubles (sequential)

Cluster 7: Operational Fluency Activity 34: Solving Story Problems (simultaneous)

Cluster 7: Operational Fluency Activity 35: Consolidation (simultaneous)

Cluster 8: Financial Literacy Activity 40: Consolidation (simultaneous)

Patterning and Algebra

Cluster 3: Equality and Inequality Activity 10: Exploring Sets (simultaneous)

Cluster 3: Equality and Inequality Activity 11: Making Equal Sets (simultaneous)

Measurement

Cluster 1: Comparing Objects Activity 6: Consolidation (simultaneous)

Cluster 2: Using Uniform Units Activity 9: Using Multiple Units (simultaneous)

Cluster 2: Using Uniform Units Activity 10: A Benchmark of One Metre (simultaneous)

Cluster 2: Using Uniform Units Activity 12: Iterating the Unit (simultaneous)

Cluster 3: Time and Temperature Activity 18: Telling Time (simultaneous)

Geometry

Cluster 1: 2-D Shapes Activity 4: Visualizing Shapes (simultaneous)

Cluster 1: 2-D Shapes Activity 6: Consolidation (simultaneous)

Cluster 2: 3-D Solids Activity 7: Exploring 3-D Solids (simultaneous)

Cluster 2: 3-D Solids Activity 9: Identify the Sorting Rule (simultaneous)

Cluster 3: Geometric Relationships Activity 11: Faces of Solids (simultaneous)

Cluster 3: Geometric Relationships Activity 15: Consolidation (simultaneous)

Cluster 5: Location and Movement Activity 20: Mapping (simultaneous)

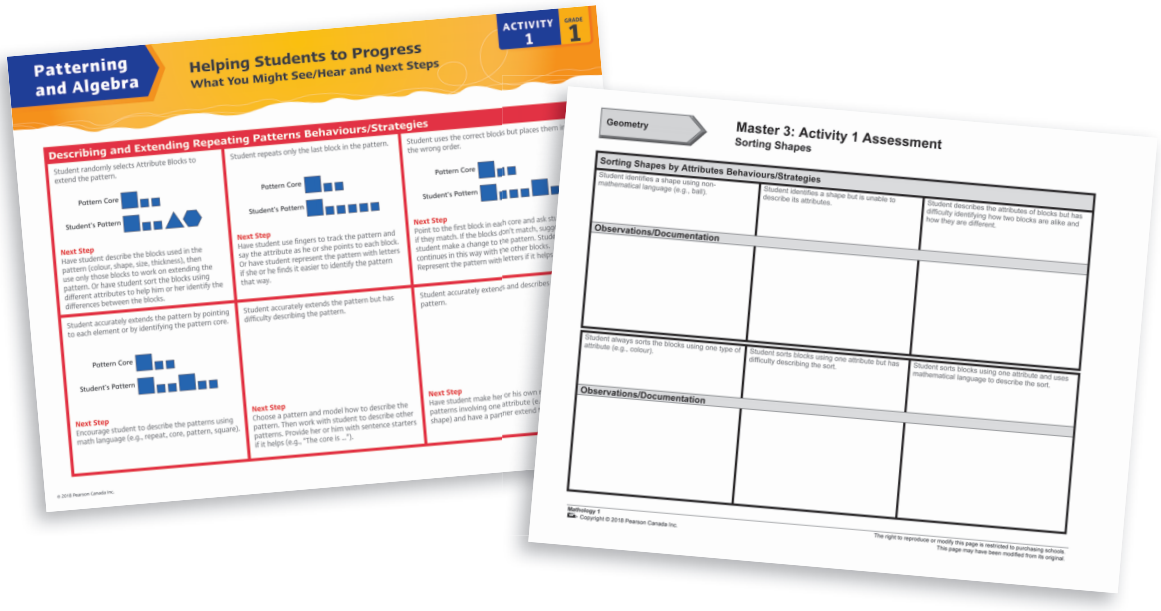
Data Management and Probability

Cluster 1: Data Management Activity 2: Making Concrete Graphs (simultaneous)

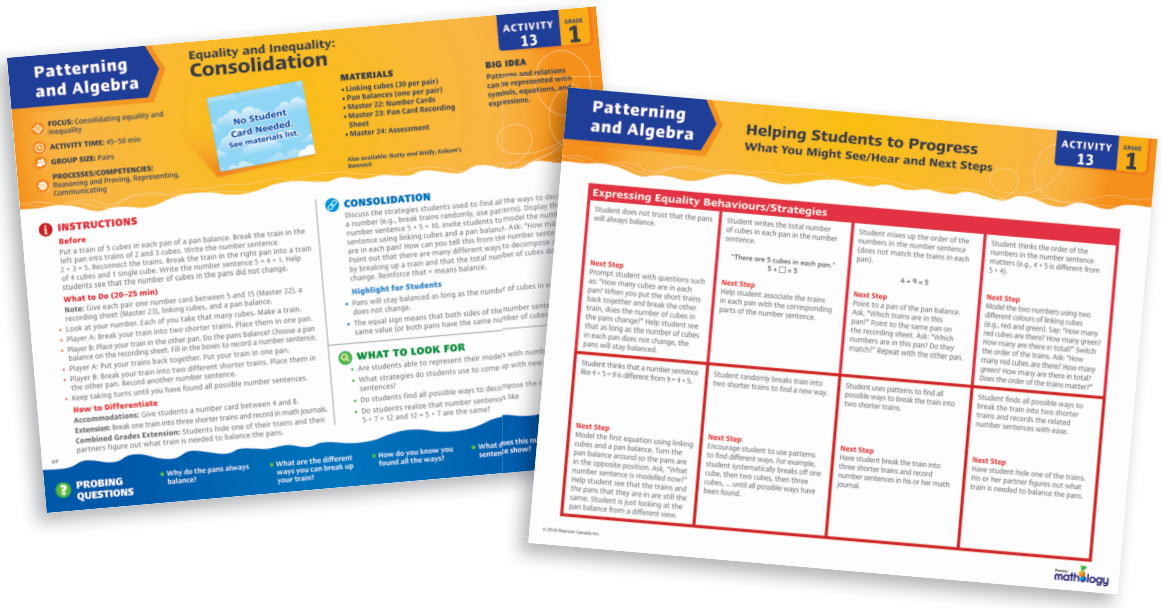
Cluster 1: Data Management Activity 3: Making Pictographs (simultaneous)

Cluster 1: Data Management Activity 4: Consolidation (simultaneous)

- **modifiable assessment line masters** for every activity based on Side B of the teacher card



Consolidation activity cards at the end of each cluster focus on **summative assessment** for individuals and the whole class. The cluster consolidation lessons are rich activities and games with an overarching math focus, allowing teachers to observe students apply the learning in the cluster flexibly and creatively.



Corresponding line masters are available at pearsonmathology.ca in the Line Masters, Correlations & Other Useful Resources section.

Mathology Little Books

For each Mathology Little Book, the Teacher's Guide includes **Watch For** prompts that allow you to assess students' understanding as you read the books with your students.

Assessment line masters are available for each book. They include checklists of indicators with space provided for your observations and notes.

WATCH FOR...

- Does the child recognize the relationship between t and the 3-D objects Layla and Theo found? Some 3 harder to identify by their faces (e.g., the bucket wit bottom face).

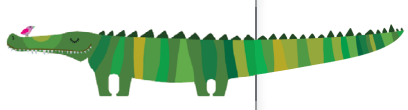
On Safari! Line Master 1 (Assessment Master)

Name: _____

Count sets to 20	Not observed	Sometimes	Consistently
Says one number for each object counted (one-to-one correspondence)			
Says counting by 2 numbers in correct sequence (stable order)			
Knows that the last counting word tells how many are in the set (cardinality)			
Counts and creates sets (to 20) by 1s and 2s			
Knows that counting a set different ways does not change the number (conservation of number)			
Add 1 or 2			
Adds 1 to a set and states how many			
Adds 2 to a set and states how many			

Strengths:

Next Steps:



Mathology.ca

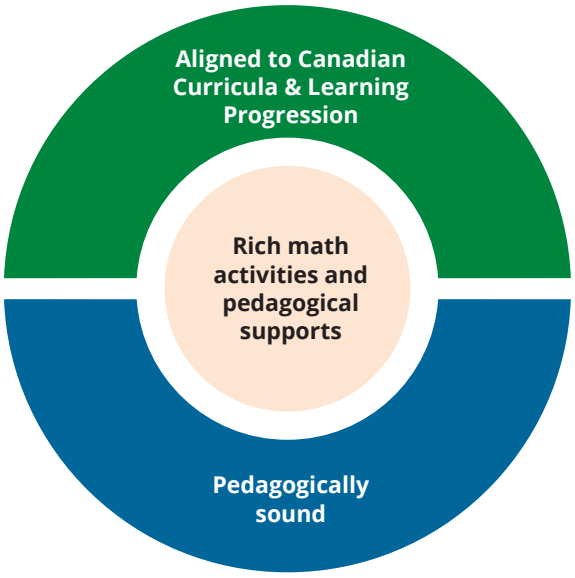
Why Mathology.ca?

Co-created with educators like you, mathology.ca integrates the Mathology components to **simplify** and **enhance** your math teaching journey through meaningful use of technology:

- **plan** your math journey with flexibility
- **find** fun and pedagogically sound math activities and lessons that match your curriculum
- **access** practical math content and pedagogical strategies aligned with your needs
- **engage** your students in thinking and problem-solving that stimulate their curiosity and encourage a positive disposition toward math
- **observe**, **conference**, and **assess** with ease through recording and tracking
- identify next steps with practical classroom ideas

Go to pearsonmathology.ca, What's In Mathology? to read more about the features and support provided through this website.

A simple tool for teachers containing rich math activities and pedagogical supports, powered by 5 core functionalities



PL Professional Learning

Throughout Mathology, an organic approach, embedding professional learning instruments, supports your professional judgment in the selection and implementation of deep mathematical learning in your classroom. This approach also provides you with built-in tools to facilitate teacher choice.

Each component helps you build **ongoing learning** in math pedagogy. These components also assist you in developing **individual learning paths** using a variety of approaches: the most current research; Big Ideas in math education (the Learning Progression); linking of curriculum to classroom practice; and inclusive three-part lesson plans that reach all of your students.

Mathology Activity Kit

- practical suggestions for **differentiation**, **probing questions**, and textual and visual representations of **student responses** to help you assess where students are and what you need to move forward
- **responsive teaching** guides through built-in observational assessment prompts (lesson-specific What to Look For prompts)

Mathology Little Books

- pathways for learning for Big Ideas in math
- story-specific Watch For prompts to guide your observations and conversations
- grouping and differentiation supports

Mathology.ca

- **classroom** and **author videos** that tie to math strands generally and to activity cards and books specifically
- topics such as **differentiation**, **assessment**, **teaching in multi-grade classrooms**, and **classroom management**
- **student exemplars**
- **Guide on the Side videos** to help you select and use materials that fit your classroom needs

Go to pearsonmathology.ca, then view the Professional Learning section to find resources that help you elevate your math instruction. Also included in this section are targeted professional learning courses for educators, coaches, and administrators.