



British Columbia

Scope and Sequence

- **Grade One Scope and Sequence**
- **Grade Two Scope and Sequence**
- **Grade Three Scope and Sequence**
- **Grade One and Grade Two
Combined Scope and Sequence**
- **Grade Two and Grade Three
Combined Scope and Sequence**

Contents

2	<i>Math Place Scope and Sequence</i>
4	Scope and Sequence for Grade One
8	Elaboration of Scope and Sequence for Grade One
14	Scope and Sequence for Grade Two
19	Elaboration of Scope and Sequence for Grade Two
25	Scope and Sequence for Grade Three
31	Elaboration of Scope and Sequence for Grade Three
38	Scope and Sequence for Combined Grade One and Grade Two
42	Scope and Sequence for Combined Grade Two and Grade Three

Math Place Scope and Sequence

Introduction

There are many ways that the math concepts can be sequenced and taught throughout the year, as emphasized in the curriculum. “Within and across grades, there are multiple ways to combine learning standards to create lessons, units, and learning experiences, encouraging any and all approaches that support the growth and development of students’ mathematical understandings” (British Columbia Ministry of Education, 2016). The curriculum also highlights the need for instructional flexibility since it “enables teachers to confidently choose the strategies, resources, and applications best suited to the needs of students in their local setting” (British Columbia Ministry of Education, 2016). The key is making instruction meaningful to you and your students and being responsive to students’ evolving needs as the year progresses.

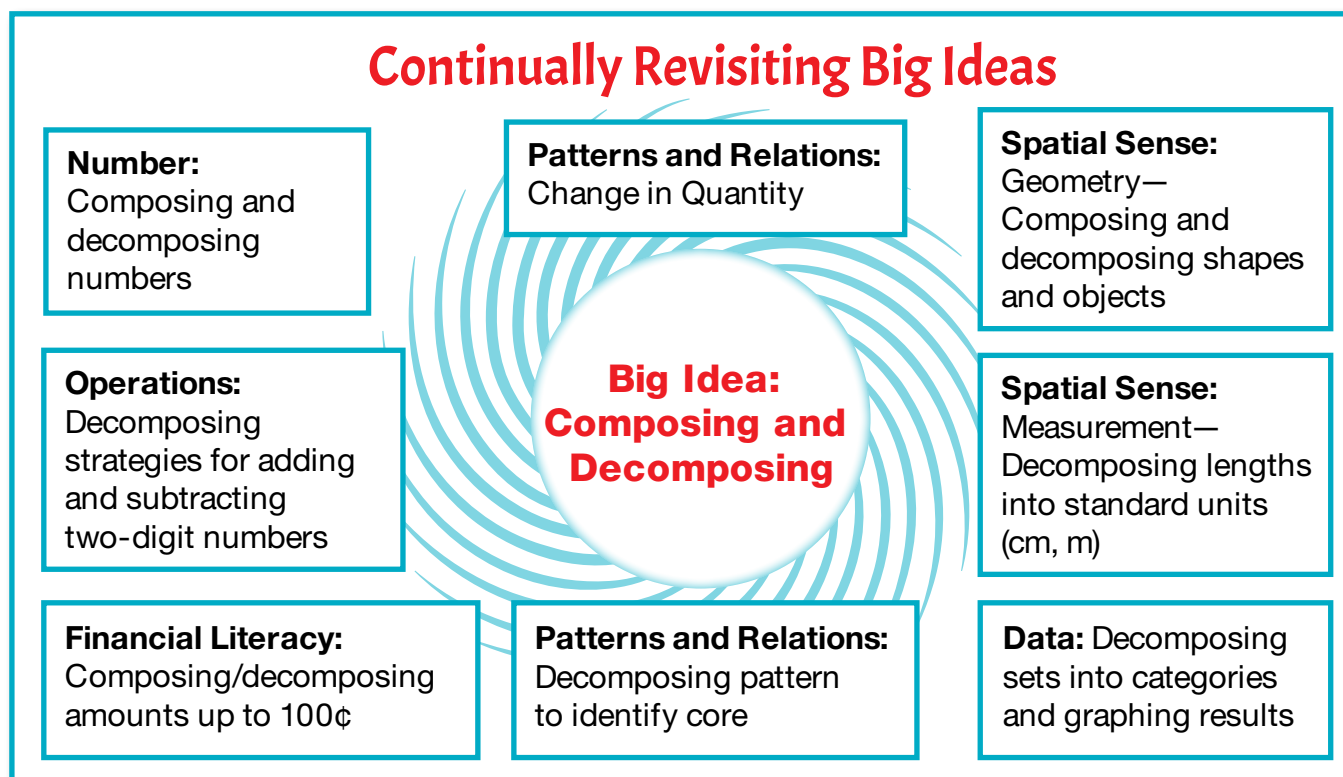
Curricular Competencies, Big Ideas, and Content

There are certain aspects of the curriculum to consider when planning your math programme. *Math Place* has addressed these elements on several levels. The Core Competencies (Communication, Thinking, and Personal and Social) permeate all aspects of the resource and are reflected in three curricular elements: the Curricular Competencies, the Big Ideas, and the Content. In *Math Place*, the Curricular Competencies are embedded and highlighted in all lessons and reflect what students do. They serve as the vehicle for the Big Ideas and Content, which are what students need to understand and know. The Big Ideas are continually addressed throughout the year as students investigate related Content. The Content can be sequentially organized to meet the needs of students and their stages of development.

One way to sequence the Content throughout the year is to cluster it around the Big Ideas. For example, a Big Idea in all primary grades is composing and decomposing. The graphic on page 3 shows an example of how this Big Idea is evident in many strands and Content areas in the Grade Two curriculum. Each time students study this Content at various times in the year, whether it is in Geometry, Patterns, Number and Operations, or Data, they are reinforcing and expanding their understanding of composing and decomposing. Composing and decomposing is not only a Big Idea in the primary grades but continues to develop throughout all grades as students encounter and investigate new and more complex math concepts. Focusing on Big Ideas in the early years helps students establish a strong foundation for later learning in math.

Focusing on the Big Ideas also allows students to make connections among math concepts, rather than seeing topics as isolated elements. By

seeing the connections, students can readily transfer their understanding of Big Ideas from previous topics to new and related Content.



The following pages describe one possible Scope and Sequence for Grades One to Three that can be used in conjunction with *Math Place*. The timing in the proposed Scope and Sequence is flexible and open, rather than giving specific timelines. The amount of time a unit may take will depend on your students and how they progress through the learning. For example, some years a unit may take three weeks for students to master, while in other years, it may take five weeks. Being responsive to your students' learning will determine the timing and whether your plan needs to be adapted. Some considerations are highlighted in the plan to serve as an example of how you may flexibly adapt the timing or sequence.

Building Growth Mindsets and Positive Attitudes

Nurturing positive attitudes toward math, building healthy habits of mind, and encouraging growth mindsets are also critical to your students' success in math. *Math Place* has embedded these essential elements into all aspects of the learning. There are lessons to introduce habits of mind and growth mindsets at the beginning of the year, and suggestions in many of the lessons on how to continually reinforce and build upon them as the year progresses. At the end of the year, students can reflect on their growth, not only in math, but in their perception of themselves as capable and confident mathematicians.

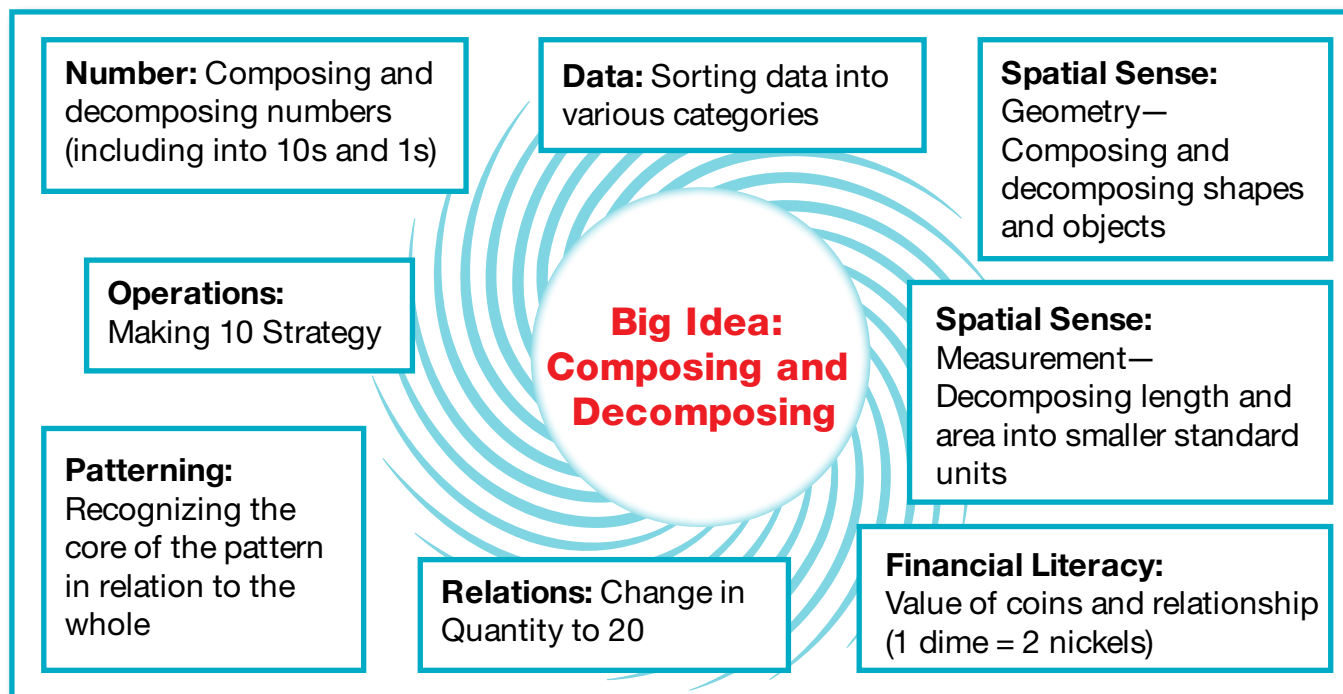
Scope and Sequence for Grade One

Rationale: By clustering Content around the Big Ideas identified in the Grade One curriculum, and other major math concepts, students are continually revisiting, reinforcing, and building upon the Big Ideas. This helps them acquire and consolidate a strong understanding of the math. (See the Introduction on pages 2–3 for more details.)

Big Ideas in Grade One

Numbers to 20 represent quantities that can be decomposed to 10s and 1s.	Addition and subtraction with numbers to 10 can be modelled concretely, pictorially, and symbolically to develop computational fluency.	Repeating elements in patterns can be identified.	Objects and shapes have attributes that can be described, measured, and compared.	Concrete graphs help us to compare and interpret data and show one-to-one correspondence.
--	---	---	---	---

Example of Continually Revisiting the Big Ideas Throughout the Year



Possible Scope and Sequence for Grade One

While there are many potential sequences for teaching the Content, below is one possibility, which demonstrates how the Big Ideas for Grade One are continually revisited throughout the year. This gives students the opportunity to revisit, reinforce, and extend upon previously learned concepts, thereby providing them with a solid foundation of the Big Ideas. It also allows students to see the connections among many of the math concepts. In the possible Scope and Sequence, there is an example of how you may alter the plan, depending on the progress your students are making.

While the Content is identified in the Scope and Sequence, it must be remembered that the Curricular Competencies are the vehicle through which the Content is delivered and permeate all lessons. Each lesson in *Math Place* identifies the Curricular Competencies that are being focused upon throughout the lesson. Read the Introduction for more information.

Scope and Sequence Overview

Grade One		
Flexible Timeline	Content /Concepts	Big Ideas/Major Concepts
Sept/Oct	Number and Operations <ul style="list-style-type: none">• Number Concepts to 10• Ways to Make 10 Data <ul style="list-style-type: none">• Introduce Concrete Graphs* Spatial Sense: Geometry <ul style="list-style-type: none">• Positional Language** Probability (Optional) <ul style="list-style-type: none">• Introduction of Language of Likelihood***	<ul style="list-style-type: none">• Composing and decomposing• One-to-one correspondence• Number relationships• Concrete graphs help us to compare and interpret data

Grade One		
Flexible Timeline	Content /Concepts	Big Ideas/Major Concepts
Oct/Nov	Patterns and Relations <ul style="list-style-type: none"> Change in Quantity to 10 The Meaning of Equality and Inequality Number and Operations <ul style="list-style-type: none"> Addition and Subtraction to 10 	<ul style="list-style-type: none"> Composing and decomposing Number relationships Addition and subtraction can be modelled concretely, pictorially, and symbolically Equality and inequality
Nov/Dec	Number and Operations <ul style="list-style-type: none"> Counting and Quantity to 20 Patterns and Relations <ul style="list-style-type: none"> Change in Quantity to 20 Data: Concrete Graphs	<ul style="list-style-type: none"> Composing and decomposing Number relationships Patterns in skip-counting Concrete graphs help us to compare and interpret data
Jan/Feb	Spatial Sense: Geometry <ul style="list-style-type: none"> Attributes of 2D Shapes and 3D Objects Sorting using one attribute Patterning <ul style="list-style-type: none"> Repeating Patterns 	<ul style="list-style-type: none"> Composing and decomposing Objects and shapes have attributes that can be described and compared Repeating elements in patterns can be identified
Feb/Mar	Number and Operations <ul style="list-style-type: none"> Addition and Subtraction to 20 Understanding the process of the operations and how they are related 	<ul style="list-style-type: none"> Number concepts to 20 Composing and decomposing Addition and subtraction can be modelled concretely, pictorially, and symbolically One-to-one correspondence Equality and inequality

Grade One		
Flexible Timeline	Content /Concepts	Big Ideas/Major Concepts
Mar/Apr	Spatial Sense: Direct Measurement <ul style="list-style-type: none"> Using non-standard (non-uniform and uniform) units to measure length 	<ul style="list-style-type: none"> Objects and shapes have attributes that can be described, measured, and compared (non-standard units) Composing and decomposing One-to-one correspondence
Apr/May	Probability <ul style="list-style-type: none"> Language of Likelihood Spatial Sense: Geometry <ul style="list-style-type: none"> Replication of 2D Shapes Spatial Sense: Direct Measurement <ul style="list-style-type: none"> Area Financial Literacy <ul style="list-style-type: none"> Identify values of coins and count like-coins Role play financial transactions/trade 	<ul style="list-style-type: none"> Objects and shapes have attributes that can be described, measured, and compared (non- standard units) One-to-one correspondence Composing and decomposing Number relationships: number sequence, skip-counting
June	Revisiting and Reinforcing	All Big Ideas and Major Concepts covered throughout the year

* Data Concepts—Concrete graphs can be taught throughout the year.

** Positional Language—This can be taught at the beginning of the year and then reinforced incidentally throughout the year.

*** Probability—The language of likelihood of familiar events can be introduced at the beginning of the year. It can be more formally taught late in the year with the *Math Place* unit as well as incidentally reinforced throughout the year.

Note: Some math concepts, such as the ones mentioned above, can be taught throughout the year by embedding the learning into realistic situations, in math class and in other subject areas. For example, Data concepts concerning graphs can be introduced in September and then reinforced throughout the year as the opportunities for surveys and building graphs naturally arise. You can also introduce positional language and probability language in September and incidentally use the vocabulary in your daily routines throughout the year.

Elaboration of Scope and Sequence for Grade One

September/October Plan	
Big Ideas/ Major Concepts	Content/Concepts
<p>Composing and decomposing numbers flexibly</p> <p>One-to-one correspondence</p> <p>Number relationships</p> <p>Concrete graphs help us to compare and interpret data</p>	<p>Attitudes, Habits of Mind, Growth Mindsets</p> <ul style="list-style-type: none"> • Introduce Attitudes Toward Math, Habits of Mind, and Growth Mindsets (see lessons outlined in the <i>Math Place</i> Overview Guide). • Make an anchor chart as outlined in the lessons and reinforce throughout the month(s). • These concepts will be regularly reinforced throughout the year in lessons that have Reinforcing Growth Mindsets sections embedded in them.
	<p>Introduce Materials and Routines</p> <ul style="list-style-type: none"> • It is well worth the time to establish routines at the beginning of the year, so students understand expectations and are comfortable working in their math environment. • Introduce concrete materials by giving students time to explore/play with them. • Introduce routines for group work, storing materials, etc.
	<p>Number</p> <ul style="list-style-type: none"> • Number Concepts to 10 • Ways to Make 10
	<p>Data: Concrete Graphs</p> <ul style="list-style-type: none"> • Each day, do a short class survey so students can learn more about each other. The first surveys may take longer (e.g., 15 minutes) but as students catch on, they will take 5–10 minutes. • Students can: <ul style="list-style-type: none"> — Generate the questions (e.g., What kind of pet do you like best?). — Vote on their response by having a concrete item represent their choice (e.g., each student gets a straw to put under their choice), which reinforces one-to-one correspondence. — Create a concrete graph as a class. — Interpret data and make comparisons (comparing number). — Discuss what the results mean.

	<p>Spatial Sense: Geometry—Positional Language to Describe Relative Positions</p> <ul style="list-style-type: none"> • Introduce positional language using the Read Aloud, <i>We’re Going on a Lion Hunt</i>, and the accompanying Lessons 19 and 20 in the Geometry unit in the <i>Spatial Sense</i> Teacher’s Guide. • Make an anchor chart of the positional words illustrated with accompanying pictures. • Incidentally reinforce the language as you give students directions, etc. • Select lessons from Lessons 21–25 in the Geometry unit in the <i>Spatial Sense</i> Teacher’s Guide or use these lessons periodically throughout the year to continually reinforce positional language. <p>Optional:</p> <p>Probability: Language of Likelihood to Describe Familiar Events</p> <ul style="list-style-type: none"> • Introduce vocabulary (e.g., <i>never, sometimes, always, more likely, less likely</i>) and make an anchor chart. • Incidentally reinforce the language as you go through your day (e.g., Look outside. What do you think the possibility is that it is going to rain soon?).
October/November Plan	
<p>Big Ideas/ Major Concepts</p>	<p>Content/Concepts</p>
<p>Composing and decomposing numbers</p> <p>Number relationships</p> <p>One-to-one correspondence</p> <p>Modelling numbers concretely, pictorially, and symbolically</p> <p>Equality and inequality</p>	<p>Patterns and Relations</p> <ul style="list-style-type: none"> • It is beneficial to cover the following lessons before introducing Addition and Subtraction to 10 to reinforce stability of number order, composing and decomposing numbers, and the meaning of equality and inequality: <ul style="list-style-type: none"> — Change in Quantity to 10 (You can use Lessons 18, 19, and 20 in the Counting and Quantity (Part 1) unit in the <i>Number & Operations</i> Teacher’s Guide.) — Equality and Inequality (Select from lessons in the Equality and Inequality unit in the <i>Patterns & Relations/Data & Probability</i> Teacher’s Guide.) — Equality is a huge Big Idea that many students in all grades do not adequately understand. It is therefore worth the time to have students engage in related investigations. <p>Number and Operations: Addition and Subtraction to 10</p> <ul style="list-style-type: none"> • Select lessons from Lessons 1–17 in the Addition and Subtraction to 10 unit in the <i>Number & Operations</i> Teacher’s Guide. • The first lessons in this section also deal with equality and inequality.

November/December Plan

Note: This is a good time to reflect on your students' progress. If you feel they have a solid grasp of numbers to 10 and are ready to extend understanding to 20, you can continue with the Counting and Quantity (Part 2) unit. If you feel that your students need a break from number concepts and need time to consolidate ideas before continuing, you may want to switch November/December and January/February plans, doing Geometry and Patterning first and then proceeding with Number concepts to 20 in the new year. This reflects the need for flexibility in planning and being responsive to your learners.

Big Ideas/ Major Concepts	Content/Concepts
Composing and decomposing Patterns in skip-counting Number relationships Concrete graphs help us to compare and interpret data One-to-one correspondence	Number and Operations: Number Concepts to 20 <ul style="list-style-type: none"> Select lessons from Lessons 1–20 in the Counting and Quantity (Part 2) unit (Numbers to 20).
	Patterns and Relations: Change in Quantity to 20 <ul style="list-style-type: none"> Lesson 6 in the Counting and Quantity (Part 2) unit focuses on this concept, which can then be reinforced in the rest of the following lessons.
	Data: Concrete Graphs <ul style="list-style-type: none"> Students were introduced to concrete graphs at the beginning of the year and can be regularly reinforced throughout the year in math and in other subjects as students do class surveys, etc. Now that students are studying numbers to 20, they can further extend their understanding of concrete graphs using more data. As students compare data in concrete graphs, they are naturally reinforcing change in quantity concepts. Select lessons from Lessons 1–11 in the Data unit in the <i>Patterns & Relations/Data & Probability</i> Teacher's Guide.

January/February Plan

Big Ideas/ Major Concepts	Content/Concepts
Composing and decomposing Objects and shapes have attributes that can be described and compared Repeating elements in patterns can be identified	Spatial Sense: Geometry—Comparison of 2D Shapes and 3D Objects <ul style="list-style-type: none"> Sorting objects and shapes using one attribute. Comparing objects and shapes according to attributes. Select lessons from lessons 1–18 in the Geometry unit in the <i>Spatial Sense</i> Teacher's Guide. (You may decide to leave some of the lessons for later in the year when students study “replicate 2D shapes and 3D objects.” For example, students can do lessons 11, 12, 17, and 18 at a later time.)

	<p>Patterns and Relations: Repeating Patterns</p> <ul style="list-style-type: none"> Students can apply and build upon their knowledge of attributes to investigate repeating geometric patterns. Students can apply and build upon their knowledge of number and counting to work with repeating number patterns. Select lessons from the Patterning unit in the <i>Patterns & Relations/ Data & Probability</i> Teacher's Guide. <p>Note: If you are doing this unit before Numbers to 20, you may decide to only do geometric patterns now and do the number patterns when students have more experience with numbers to 20.</p> <p>Number and Operations</p> <ul style="list-style-type: none"> To keep number concepts to 10 (or 20) and addition and subtraction fresh in students' minds, it is beneficial to do two to three brief Numbers Talks (5–10 minutes) each week. There are several to choose from throughout the <i>Number & Operations</i> units. You can also revisit the Read Alouds, <i>Math Fables</i> and <i>Apple Countdown</i>, and do the related Math Talks. You can easily use the visuals and change the line of questioning and numbers.
February/March Plan	
Big Ideas/ Major Concepts	Content/Concepts
<p>Number concepts to 20</p> <p>Composing and decomposing</p> <p>One-to-one correspondence</p> <p>Addition and subtraction can be modelled concretely, pictorially, and symbolically</p> <p>Equality and inequality</p>	<p>Number and Operations: Addition and Subtraction to 20</p> <ul style="list-style-type: none"> Students can extend their knowledge of addition and subtraction to 10 by applying their understanding of numbers to 20 and investigate addition and subtraction with larger numbers. Select lessons from Lessons 1–15 in the Addition and Subtraction to 20 unit in the <i>Number & Operations</i> Teacher's Guide.

March/April Plan	
Big Ideas/ Major Concepts	Content/Concepts
<p>Composing and decomposing</p> <p>One-to-one correspondence</p> <p>Objects and shapes have attributes that can be described, measured, and compared</p>	<p>Spatial Sense: Direct Measurement—Length</p> <ul style="list-style-type: none"> Students can apply and build upon their knowledge of attributes from the earlier unit to measure various lengths using non-standard units (non-uniform and uniform). Students can also apply their understanding of number concepts to 20 and counting in order to measure with accuracy. Select lessons from Lessons 1–14 in the Measurement unit in the <i>Spatial Sense Teacher's Guide</i>.
April/May Plan	
Big Ideas/ Major Concepts	Content/Concepts
<p>Composing and decomposing</p> <p>Objects and shapes have attributes that can be described, measured, and compared</p> <p>One-to-one correspondence</p> <p>Number relationships, number sequence, skip-counting</p>	<p>Spatial Sense: Geometry—Replication of 2D Shapes</p> <ul style="list-style-type: none"> Select lessons from the Geometry unit (<i>Spatial Sense Teacher's Guide</i>) that have students building and composing and recomposing shapes. Examples are Lessons 11, 12, 17, and 18.
	<p>Spatial Sense: Direct Measurement—Area</p> <ul style="list-style-type: none"> Students' previous experience with iterating smaller lengths to cover larger lengths will help them with tiling an area using non-standard units. Select lessons from Lessons 15–19 in the Measurement unit in the <i>Spatial Sense Teacher's Guide</i>.
	<p>Probability: The Language of Likelihood</p> <ul style="list-style-type: none"> You may have already introduced the language of likelihood earlier in the year and have been incidentally incorporating the vocabulary into your daily routines. Select from the lessons in the Probability unit, which is in the <i>Patterns & Relations/Data & Probability Teacher's Guide</i>.
	<p>Financial Literacy</p> <ul style="list-style-type: none"> Students apply their understanding of numbers to 20, skip-counting, and attributes to identify and count coins. They also learn about money as a medium of exchange and how needs and wants affect our decisions about spending. Select lessons from Lessons 1–11 in the Financial Literacy unit in the <i>Number & Operations Teacher's Guide</i>.

June Plan

June is the perfect month to tie up any loose ends, make connections among the concepts, and further reinforce the math. Above all, you can reinforce the idea that math is worth learning, connected to students' lives, and that they have proven to be successful and confident mathematicians.

Big Ideas/ Major Concepts	Content/Concepts
A culmination of all Big Ideas and Major Concepts investigated throughout the year	Teaching Suggestions for June <ul style="list-style-type: none">• Teach any units that you did not cover or were not able to finish throughout the year.• Revisit a unit that students found challenging. It is amazing how concepts that may have been confusing earlier in the year are easier for students to grasp once they are older and have had more math experiences with other concepts.• Revisit lessons that students enjoyed. Change the numbers and/or the contexts to vary them and challenge students' ability to apply knowledge to other problem situations.• Set up math activity centres using the ideas that are presented in the Reinforcement Activities at the end of most of the units. This is another opportunity for students to have fun while they apply and reinforce what they have learned.• While students are engaged at the math activity centres, use the Guided Math Lessons to work with students who may need more clarification or reinforcement with certain math concepts.• Reflect on how students have progressed throughout the year in math. Revisit the charts on "Growth Mindsets" and "Thinking Like a Mathematician" that were created at the beginning of the year and revisited in the following months. Highlight how having growth mindsets and feeling confident about the math have contributed to their success.

Scope and Sequence for Grade Two

Rationale: By clustering Content around the Big Ideas identified in the Grade One and Grade Two curricula, and other major math concepts, students are continually revisiting, reinforcing, and building upon the Big Ideas. This helps them acquire and consolidate a strong understanding of the math. (See the Introduction on pages 2–3 for more details.)

Big Ideas in Grade Two

Numbers to 100 represent quantities that can be decomposed into 10s and 1s.

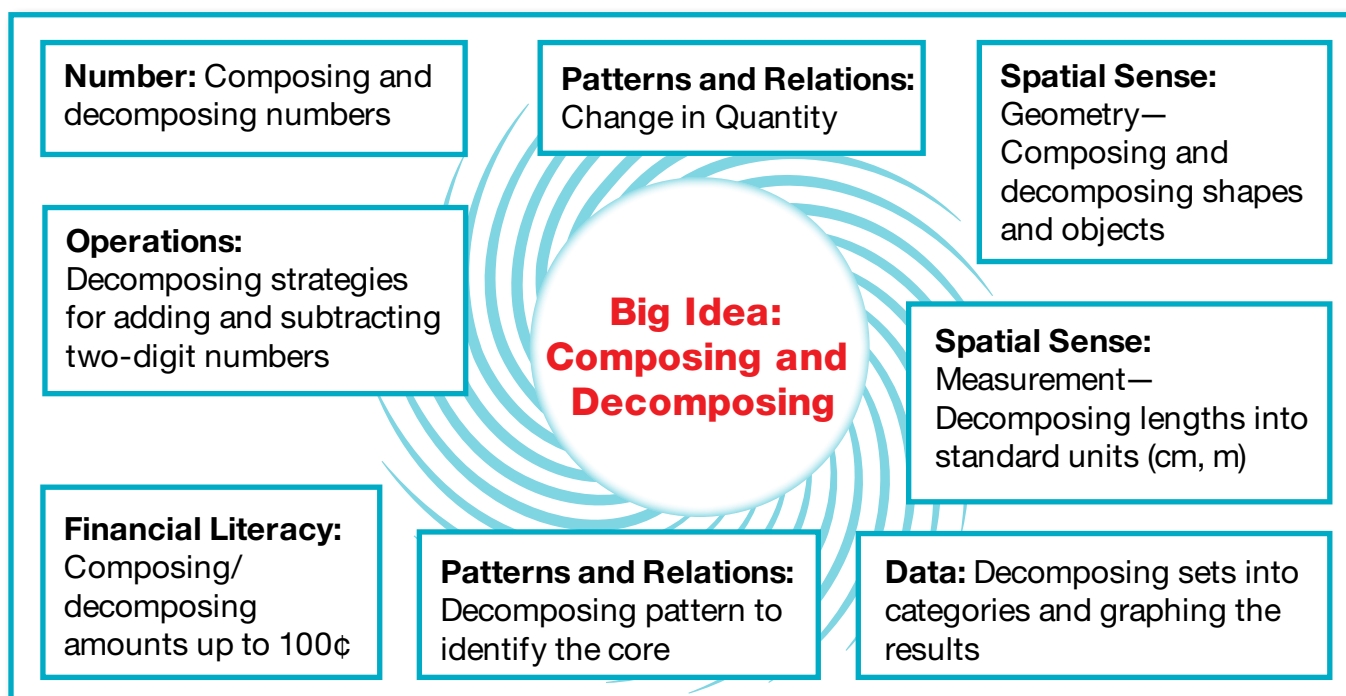
Development of computational fluency in addition and subtraction with numbers to 100 requires an understanding of place value.

The regular change in increasing patterns can be identified and used to make generalizations.

Objects and shapes have attributes that can be described, measured, and compared.

Concrete items can be represented, compared, and interpreted pictorially in graphs.

Example of Continually Revisiting the Big Ideas Throughout the Year



Possible Scope and Sequence for Grade Two

While there are many potential sequences for teaching the Content, below is one possibility, which demonstrates how the Big Ideas for Grade Two and Grade One, are continually revisited throughout the year. This gives students the opportunity to revisit, reinforce, and extend upon previously learned concepts, thereby providing them with a solid foundation of the Big Ideas. It also allows students to see the connections among many of the math concepts. In the possible Scope and Sequence, there is an example of how you may alter the plan, depending on the progress your students are making.

While the Content is identified in the Scope and Sequence, it must be remembered that the Curricular Competencies are the vehicle through which the Content is delivered and permeate all lessons. Each lesson in *Math Place* identifies the Curricular Competencies that are being focused upon throughout the lesson. Read the Introduction for more information.

Scope and Sequence Overview

Grade Two		
Flexible Timeline	Content/Concepts	Big Ideas/Major Concepts (Grades One and Two)
Sept/Oct	Number and Operations <ul style="list-style-type: none">Quantity and Counting to 100Number concepts to 100Benchmarks of 25, 50, 100 Data <ul style="list-style-type: none">Concrete Graphs* Probability (Optional) <ul style="list-style-type: none">Introduction of Language of Likelihood**	<ul style="list-style-type: none">Composing and decomposing numbers flexiblyOne-to-one correspondencePlace valueNumber relationshipsConcrete items can be represented in graphs

Grade Two		
Flexible Timeline	Content/Concepts	Big Ideas/Major Concepts (Grades One and Two)
Oct/Nov	Patterns and Relations <ul style="list-style-type: none"> Change in Quantity: numerically describe a change in quantity Equality and Inequality: symbolic representation of equality and inequality Number and Operations <ul style="list-style-type: none"> Addition and Subtraction to 20 Addition and Subtraction Facts to 20 Fluency with math strategies 	<ul style="list-style-type: none"> Composing and decomposing Place value Number relationships One-to-one correspondence Modelling addition and subtraction concretely, pictorially, and symbolically Equality and inequality
Nov/Dec	Number and Operations <ul style="list-style-type: none"> Place Value Data <ul style="list-style-type: none"> Pictorial representations of concrete graphs 	<ul style="list-style-type: none"> Composing and decomposing Place value Number relationships, skip-counting Concrete items can be represented, compared, and interpreted pictorially in graphs One-to-one correspondence
Jan/Feb	Spatial Sense: Geometry <ul style="list-style-type: none"> Attributes of 2D Shapes and 3D Objects/Sorting Patterning <ul style="list-style-type: none"> Sorting/Repeating and Increasing Patterns Number and Operations <ul style="list-style-type: none"> Number Talks 	<ul style="list-style-type: none"> Composing and decomposing Objects and shapes have attributes that can be described and compared Regular change in increasing patterns can be identified and used to make generalizations Repeating elements in patterns can be identified

Grade Two		
Flexible Timeline	Content/Concepts	Big Ideas/Major Concepts (Grades One and Two)
Feb/Mar	Number and Operations <ul style="list-style-type: none"> Addition and Subtraction to 100 	<ul style="list-style-type: none"> Number concepts to 100 Composing and decomposing Place value One-to-one correspondence Addition and subtraction can be modelled concretely, pictorially, and symbolically Equality and inequality
Mar/Apr	Spatial Sense: Measurement <ul style="list-style-type: none"> Length using standard units Composing and decomposing; One-to-one correspondence; Objects and shapes have attributes that can be described, measured, and compared 	<ul style="list-style-type: none"> Composing and decomposing One-to-one correspondence Objects and shapes have attributes that can be described, measured, and compared Standard units can be used to describe, measure, and compare linear attributes of shapes and objects
Apr/May	Spatial Sense: Geometry <ul style="list-style-type: none"> Composing 2D Shapes Probability <ul style="list-style-type: none"> Language of Likelihood Financial Literacy <ul style="list-style-type: none"> Coin combinations to 100¢ 	<ul style="list-style-type: none"> Composing and decomposing Objects and shapes have attributes that can be described, measured, and compared Number concepts to 100 Number relationships, skip-counting Place value

Grade Two		
Flexible Timeline	Content/Concepts	Big Ideas/Major Concepts (Grades One and Two)
June	Revisiting and Reinforcing	All Big Ideas and Major Concepts investigated throughout the year

* Data Concepts—Concrete and pictorial graphs can be taught throughout the year.

** Probability—The language of likelihood of familiar events can be introduced at the beginning of the year. It can be more formally taught late in the year with the *Math Place* unit as well as incidentally reinforced throughout the year.

Note: Some math concepts, such as those noted above, can be taught throughout the year by embedding the learning into realistic situations, in math class and in other subject areas. For example, Data concepts concerning graphs can be introduced in September and then reinforced throughout the year as the opportunities naturally arise. Concepts like gaining computational fluency with addition and subtraction facts to 20 can also be continually addressed throughout the year during short, whole-class Number Talks. Such an approach is beneficial since continually revisiting the facts will help students gain greater mastery than if the facts are taught as a separate unit.

Elaboration of Scope and Sequence for Grade Two

September/October Plan	
Big Ideas/ Major Concepts	Content/Concepts
Composing and decomposing numbers flexibly Place value Concrete items can be represented in graphs One-to-one correspondence	Attitudes, Habits of Mind, Growth Mindsets <ul style="list-style-type: none"> • Introduce Attitudes Toward Math, Habits of Mind, and Growth Mindsets (see lessons outlined in the <i>Math Place</i> Overview Guide). • Make an anchor chart as outlined in the lessons and reinforce throughout the month(s). • These concepts will be regularly reinforced throughout the year in lessons that have “Reinforcing Growth Mindsets” sections embedded in them.
	Introduce Materials and Routines <ul style="list-style-type: none"> • It is well worth the time to establish routines at the beginning of the year, so students understand expectations and are comfortable working in their math environment. • Introduce concrete materials by giving students time to explore/ play with them. • Introduce routines for group work, storing materials, etc.
	Number <ul style="list-style-type: none"> • Number Concepts to 100 • Benchmarks of 25, 50, and 100
	Data: Concrete Graphs <ul style="list-style-type: none"> • Students investigated and created concrete graphs in Grade One so this should be a good review and prepare them for learning about pictorial representations of concrete graphs later in the year. Each day, do a short class survey so students can learn more about each other. The first surveys may take longer (e.g., 15 minutes) but as students catch on, they will take 5–10 minutes. • Students can: <ul style="list-style-type: none"> — Generate the questions (e.g., What are your favourite pizza toppings?). — Vote on their response by having a concrete item represent their choice (e.g., each student gets a straw to put under their choice), which reinforces one-to-one correspondence. — Create a concrete graph as a class. — Interpret data and make comparisons (comparing number). — Discuss what the results mean.

	<p>Optional: Probability: Language of Likelihood to Describe Familiar Events</p> <ul style="list-style-type: none"> • Introduce vocabulary (e.g., <i>certain, uncertain, more, less, equally likely, never, sometimes, always</i>) and make an anchor chart. • Incidentally reinforce this vocabulary during the day as you go through your day (e.g., Look outside. What do you think the possibility is that it is going to rain soon?).
October/November Plan	
Big Ideas/Major Concepts	Content/Concepts
Composing and decomposing numbers Place value Number relationships One-to-one correspondence Modelling addition and subtraction concretely, pictorially, and symbolically Equality and inequality	<p>Patterns and Relations</p> <ul style="list-style-type: none"> • Equality and Inequality. • This is a huge Big Idea that many students in all grades do not adequately understand. It is therefore worth the time to have students engage in related investigations. • Select lessons from Lessons 1–11 in the Equality and Inequality unit in the <i>Patterns & Relations/Data & Probability</i> Teacher's Guide. • Change in Quantity, using pictorial and symbolic representation. • See Lessons 12 and 13 in the Equality and Inequality unit in the <i>Patterns & Relations/Data & Probability</i> Teacher's Guide.
	<p>Number and Operations: Addition and Subtraction to 20—Introduction of Computational Strategies</p> <ul style="list-style-type: none"> • Select lessons from Lessons 1–14 in the Addition and Subtraction to 20 unit in the <i>Number & Operations</i> Teacher's Guide. • By introducing the computational strategies early in the year, they can be revisited and reinforced throughout the year using Number Talks. There are several Number Talks within the lessons in this unit and can be easily used over and over again by changing the numbers.
<p>November/December Plan</p> <p>Note: This is a good time to reflect on your students' progress. If you feel they have a solid grasp of numbers and are ready to delve deeply into place value, you can continue with the Counting and Quantity (Part 2): Place Value unit. If you feel that your students need a break from number concepts and would benefit from time to consolidate ideas before continuing, you may want to switch November/December and January/February, doing Geometry and Patterning first and then proceeding with Place Value in the new year. This reflects the need for flexibility in planning and being responsive to your learners.</p>	

Big Ideas/Major Concepts	Content/Concepts
<p>Composing and decomposing</p> <p>Place value</p> <p>Number relationships, skip-counting</p> <p>Concrete items can be represented, compared, and interpreted pictorially in graphs</p> <p>One-to-one correspondence</p>	<p>Number: Place Value</p> <ul style="list-style-type: none"> Students apply their ability to flexibly compose and decompose numbers in many ways and recognize the value of grouping numbers into 10s and 1s as they deal with two-digit numbers. Select lessons from Lessons 1–15 in the Counting and Quantity (Part 2): Place Value unit in the <i>Number & Operations</i> Teacher’s Guide.
	<p>Data: Pictorial Representations of Concrete Graphs</p> <ul style="list-style-type: none"> Students were introduced to concrete graphs at the beginning of the year so this understanding can be extended to include pictorial representations of the data. Select lessons from Lessons 1–13 in the Data unit in the <i>Patterns & Relations/Data & Probability</i> Teacher’s Guide.
January/February Plan	
Big Ideas/Major Concepts	Content/Concepts
<p>Composing and decomposing</p> <p>Objects and shapes have attributes that can be described and compared</p> <p>Regular change in increasing patterns can be identified and used to make generalizations</p> <p>Repeating elements in patterns can be identified</p>	<p>Spatial Sense: Geometry—Multiple attributes of 2D shapes and 3D objects</p> <ul style="list-style-type: none"> Sorting, describing, and comparing using two attributes. Select lessons from Lessons 1–18 in the Geometry unit in the <i>Spatial Sense</i> Teacher’s Guide (3D Objects and Their 2D Shapes, Attributes of 2D Shapes). You may decide to leave some of the lessons, which deal with constructing with 2D shapes, for later in the year.
	<p>Patterns and Relations: Repeating and Increasing Patterns/Sorting</p> <ul style="list-style-type: none"> Students can apply and build upon their knowledge of attributes to investigate repeating and increasing geometric patterns. Students can apply and build upon their knowledge of number and counting to work with repeating and increasing number patterns. Select lessons from the Patterning unit in the <i>Patterns & Relations/Data & Probability</i> Teacher’s Guide. <p>Note: If you are doing this unit before place value, you may decide to only do geometric patterns now and do the number patterns once students have completed the Counting and Quantity (Part 2): Place Value unit.</p>
	<p>Number and Operations</p> <ul style="list-style-type: none"> To keep number concepts fresh in students’ minds, it is beneficial to do two or three brief Numbers Talks (5–10 minutes) each week. There are several to choose from throughout the <i>Number & Operations</i> units.

February/March Plan	
Big Ideas/ Major Concepts	Content/Concepts
Number concepts to 100 Composing and decomposing Place value One-to-one correspondence Addition and subtraction can be modelled concretely, pictorially, and symbolically Equality and inequality	Number and Operations: Addition and Subtraction to 100 <ul style="list-style-type: none"> Students can extend their knowledge of addition and subtraction to 20 and their understanding of numbers to 100 and place value to investigate addition and subtraction with two-digit numbers. Select lessons from Lessons 1–20 in the Addition and Subtraction to 100 unit in the <i>Number & Operations</i> Teacher's Guide.
March/April Plan	
Big Ideas/Major Concepts	Content/Concepts
Composing and decomposing One-to-one correspondence Objects and shapes have attributes that can be described, measured, and compared Standard units can be used to describe, measure, and compare linear attributes of shapes and objects	Spatial Sense: Measurement—Length Using Standard Units <ul style="list-style-type: none"> Students can apply and build upon their knowledge of attributes from the earlier unit as they measure linear attributes. Select lessons from Lessons 1–14 in the Measurement unit in the <i>Spatial Sense</i> Teacher's Guide.

April/May Plan	
Big Ideas/ Major Concepts	Content/Concepts
<p>Composing and decomposing</p> <p>Objects and shapes have attributes that can be described, measured, and compared</p> <p>Number concepts to 100</p> <p>Number relationships, skip-counting</p> <p>Place value</p>	<p>Spatial Sense: Geometry—Constructing 2D Shapes</p> <ul style="list-style-type: none"> Select lessons from Lessons 19–28 in the Geometry unit in the <i>Spatial Sense</i> Teacher’s Guide.
	<p>Probability: The Language of Likelihood of Familiar Events</p> <ul style="list-style-type: none"> You may have already introduced the language of likelihood in September/October and have been incidentally reinforcing it throughout the year. This is an opportunity to dig deeper into the concept. Select lessons from Lessons 1–7 in the Probability unit, which is in the <i>Patterns & Relations/Data & Probability</i> Teacher’s Guide.
	<p>Financial Literacy</p> <ul style="list-style-type: none"> Students apply their understanding of numbers to 100, skip-counting, and composing and decomposing numbers to count combinations of coins. This is a meaningful and realistic context that reinforces previously learned number concepts. Students also learn about the financial concepts of spending and saving and how it ties into wants and needs, which they studied in Grade One. Select lessons from Lessons 1–13 in the Financial Literacy unit in the <i>Number & Operations</i> Teacher’s Guide.
<p>June Plan</p> <p>June is the perfect month to tie up any loose ends, make connections among the concepts, and further reinforce the math. Above all, you can reinforce that math is worth learning, connected to students’ lives, and that they have proven to be successful and confident mathematicians.</p>	

Big Ideas/ Major Concepts	Content/Concepts
<p>A culmination of all Big Ideas and Major Concepts investigated throughout the year</p>	<p>Teaching Suggestions for June</p> <ul style="list-style-type: none"> • Teach any units that you did not cover or were not able to finish throughout the year. • Revisit a unit that students found challenging. It is amazing how concepts that may have been confusing earlier in the year are easier for students to grasp once they are older and have had more math experiences with other concepts. • Revisit lessons that students enjoyed. Change the numbers and/or the contexts to vary them and challenge students' ability to apply knowledge to other problem situations. • Set up math activity centres using the ideas that are presented in the Reinforcement Activities at the end of most of the units. This is another opportunity for students to have fun while they apply and reinforce what they have learned. • While students are engaged at the math activity centres, use the Guided Math Lessons to work with students who may need more clarification or reinforcement with certain math concepts. • Reflect on how students have progressed throughout the year in math. Revisit the charts on "Growth Mindsets" and "Thinking Like a Mathematician" that were created at the beginning of the year and revisited in the following months. Highlight how having growth mindsets and feeling confident about the math have contributed to their success.

Scope and Sequence for Grade Three

Introduction

Grade Three math is both exciting and challenging, especially because some new and foundational concepts are introduced for the first time, including multiplication and division, fractions, and several new measurement concepts such as time, mass, and capacity. As a result, wise use of time is critical to adequately cover all concepts. Focusing on the Big Ideas and making connections among Content helps students apply what they already have learned and build upon it. It is also important to continually assess what your students know and understand so you can skilfully extend it and not spend time teaching what they have already mastered.

Flexibility throughout the year is essential so you are meeting the needs of your students as their learning evolves. For example, the *Math Place* Grade Three *Number & Operations* Kit has two units to cover number concepts to 1000—one that focuses on numbers to 500 and another that extends this knowledge and focuses on numbers to 1000. If your students have a good grasp of number patterns and sequence, you may be able to blend the two units. If your students need a stronger basis for understanding numbers, you may find it more worthwhile to focus on numbers to 500 first and then extend the knowledge a little later in the year.

Some math concepts can also be taught throughout the year by embedding the learning into realistic situations, in math class and in other subject areas. For example, time concepts can be introduced in September and then reinforced throughout the year as the opportunities naturally arise. Concepts like gaining computational fluency with addition and subtraction facts to 20 can also be continually addressed throughout the year during short, whole-class Number Talks. Such an approach is beneficial since continually revisiting the facts will help students gain greater mastery than if the facts are taught as a separate unit.

As you read the following Scope and Sequence for Grade Three for the year, keep in mind how you can flexibly meet the needs of students and best use time to help them understand the math concepts and make connections among them.

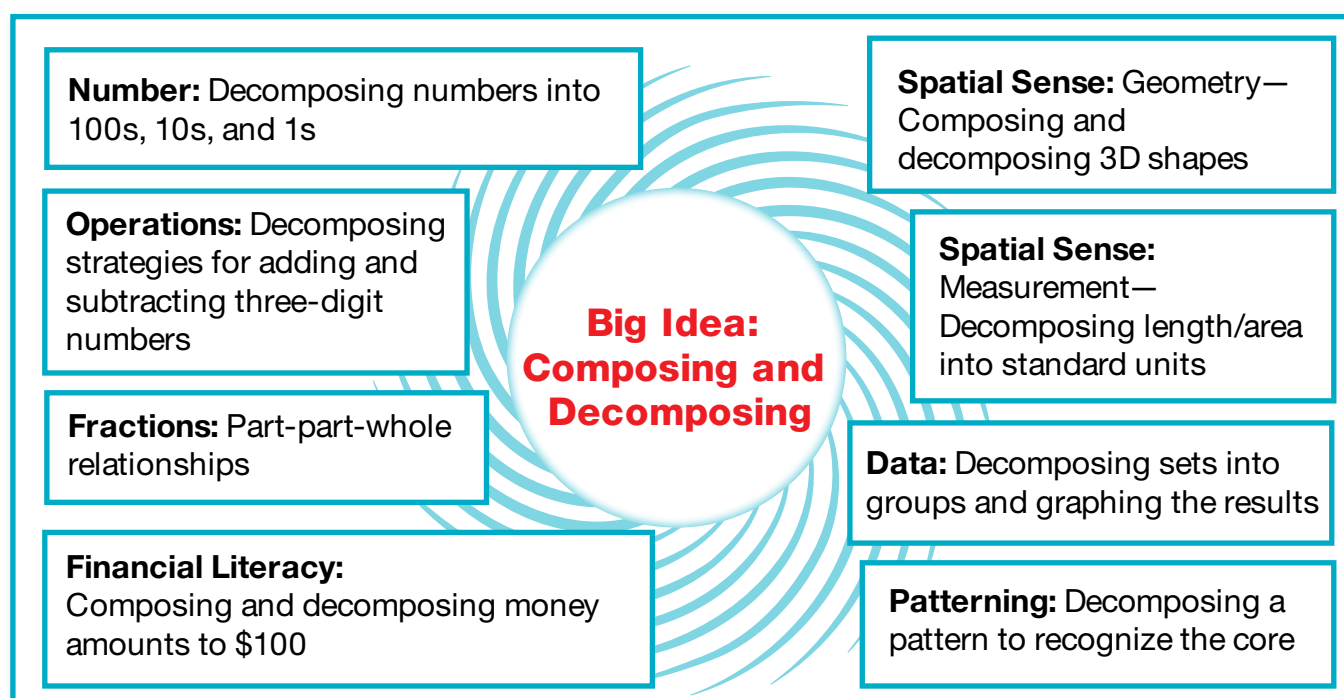
Scope and Sequence for Grade Three Overview

Rationale: By clustering Content around the Big Ideas identified in the Grades One, Two, and Three curricula, and other major math concepts, students are continually revisiting, reinforcing, and building upon the Big Ideas. This helps them reinforce and consolidate a strong understanding of the math. (See the Introduction on pages 2–3 for more details.)

Big Ideas in Grade Three

Fractions are a type of number that can represent quantities.	Development of computational fluency in addition, subtraction, multiplication, and division of whole numbers requires flexible decomposing and composing.	Regular increases and decreases in patterns can be identified and used to make generalizations.	Standard units are used to describe, measure, and compare attributes of objects' shapes.	The likelihood of possible outcomes can be examined, compared, and interpreted.
---	---	---	--	---

Example of Continually Revisiting the Big Ideas Throughout the Year



Possible Scope and Sequence for Grade Three

While there are many potential sequences for teaching the Content, below is one possibility, which highlights how the Big Ideas for Grade Three, as well as the Big Ideas and Major Concepts for Grades One and Two, are continually revisited throughout the year. This gives students the opportunity to revisit, reinforce, and extend upon previously learned concepts, thereby providing them with a solid foundation of the Big Ideas. It also allows students to see the connections among many of the math concepts. Please note that flexibility has been built into the plan, taking into account the progress and needs of your students in deciding which direction you will take.

As outlined in the Introduction, while the Content is identified in the Scope and Sequence, the Curricular Competencies are the vehicle through which the Content is delivered and permeate all lessons. Each lesson in *Math Place* identifies the Curricular Competencies that are being focused upon throughout the lesson. Read the Introduction on pages 2–3 for more information.

Scope and Sequence Overview Chart

Grade Three		
Flexible Timeline	Content/Concepts	Big Ideas/Major Concepts (Grades One, Two, and Three)
Sept/Oct	Number and Operations <ul style="list-style-type: none"> Number Concepts to 500 Spatial Sense: Measurement <ul style="list-style-type: none"> Time Concepts* Standard units and their relationships Data <ul style="list-style-type: none"> Concrete and Pictorial Graphs** 	<ul style="list-style-type: none"> Composing and decomposing Place value Number relationships, skip-counting One-to-one correspondence Standard units are used to describe, measure, and compare attributes of objects' shapes Concrete items can be represented, compared, and interpreted in graphs

Grade Three		
Flexible Timeline	Content/Concepts	Big Ideas/Major Concepts (Grades One, Two, and Three)
Oct/Nov	Number and Operations <ul style="list-style-type: none"> Number Concepts to 1000 Number and Operations <ul style="list-style-type: none"> Addition and Subtraction Facts to 20: <ul style="list-style-type: none"> Emerging computational fluency with facts to 20 Patterns and Relations <ul style="list-style-type: none"> Equality and Inequality One-step addition and subtraction problems with an unknown value 	<ul style="list-style-type: none"> Composing and decomposing Place value Number relationships, skip-counting Regular increases and decreases in patterns can be used to make generalizations One-to-one correspondence Modelling numbers/operations concretely, pictorially, and symbolically Equality and inequality
Nov/Dec	Number and Operations <ul style="list-style-type: none"> Addition and Subtraction to 1000 Data <ul style="list-style-type: none"> One-to-one correspondence with bar graphs, pictographs, charts, and tables 	<ul style="list-style-type: none"> Composing and decomposing Place value Number relationships, skip-counting Equality and inequality Concrete items can be represented, compared, and interpreted pictorially in graphs One-to-one correspondence

Grade Three		
Flexible Timeline	Content/Concepts	Big Ideas/Major Concepts (Grades One, Two, and Three)
Jan/Feb	Spatial Sense: Geometry <ul style="list-style-type: none"> Construction of 3D Objects Patterns and Relations <ul style="list-style-type: none"> Increasing and Decreasing Patterns and Pattern Rules Number and Operations <ul style="list-style-type: none"> Number Talks to reinforce number and operations 	<ul style="list-style-type: none"> Composing and decomposing Objects and shapes have attributes that can be described and compared Regular increases and decreases in patterns can be identified and used to make generalizations Number concepts to 500 (1000)
Feb/Mar	Number and Operations <ul style="list-style-type: none"> Multiplication and Division <ul style="list-style-type: none"> Understanding concepts of multiplication and division and how they are related 	<ul style="list-style-type: none"> Composing and decomposing Number relationships, skip-counting Regularities in patterns can be used to make generalizations Equality and inequality
Mar/Apr	Spatial Sense: Measurement <ul style="list-style-type: none"> Length and Area <ul style="list-style-type: none"> Linear measurements using standard units (cm, km, m) Introduce concepts of perimeter and circumference Measure area using non-standard and standard square units Estimation using standard referents 	<ul style="list-style-type: none"> Composing and decomposing One-to-one correspondence Objects and shapes have attributes that can be described, measured (standard units), and compared The likelihood of possible outcomes can be examined, compared, and interpreted

Grade Three		
Flexible Timeline	Content/Concepts	Big Ideas/Major Concepts (Grades One, Two, and Three)
Apr/May	Spatial Sense: Measurement <ul style="list-style-type: none"> • Time Financial Literacy <ul style="list-style-type: none"> • Fluency with coins and bills to \$100 • Earning and payment Probability <ul style="list-style-type: none"> • The likelihood of simulated events, using comparative language 	<ul style="list-style-type: none"> • Standard units can be used to describe, measure, and compare attributes • Number concepts to 1000 • Composing and decomposing • The likelihood of possible outcomes can be examined, compared, and interpreted
May/June	Spatial Sense: Measurement <ul style="list-style-type: none"> • Mass and Capacity <ul style="list-style-type: none"> — Measuring mass—standard units (g, kg) — Measuring capacity—standard units (mL, L) Number and Operations <ul style="list-style-type: none"> • Fraction Concepts <ul style="list-style-type: none"> — Fractions can represent parts of a region, set or linear model — Connect fraction models to symbolic notation 	<ul style="list-style-type: none"> • Objects and shapes have attributes that can be described, measured, and compared • Standard units can be used to describe, measure, and compare attributes • Fractions are a type of number that can represent quantities • Composing and decomposing

* Time—Time concepts can be taught throughout the year.

** Data—Graphs can also be revisited regularly throughout the year in all subject areas when collecting and gathering classroom data.

Elaboration of Scope and Sequence for Grade Three

September/October Plan	
Big Ideas/ Major Concepts	Content/Concepts
<p>Composing and decomposing numbers flexibly</p> <p>Place value</p> <p>Number relationships, skip-counting</p> <p>One-to-one correspondence</p> <p>Standard units are used to describe, measure, and compare attributes of objects' shapes</p> <p>Concrete items can be represented, compared, and interpreted in graphs</p>	<p>Attitudes, Habits of Mind, Growth Mindsets</p> <ul style="list-style-type: none"> • Introduce Attitudes Toward Math, Habits of Mind, and Growth Mindsets (see introductory lessons outlined in the <i>Math Place</i> Overview Guide). • Make anchor charts as outlined in the lessons and reinforce throughout the year. • Regularly reinforce these ideas throughout the year. Many lessons throughout <i>Math Place</i> have “Reinforcing Growth Mindsets” sections that offer ideas on how to address the topics within the context of the lesson that was just investigated.
	<p>Introduce Materials and Routines</p> <ul style="list-style-type: none"> • It is well worth the time to establish routines at the beginning of the year, so students understand expectations and are comfortable working in their math environment. • Introduce concrete materials by giving students time to explore/ play with them. • Introduce routines for group work, storing materials, etc.
	<p>Number and Operations</p> <ul style="list-style-type: none"> • Number Concepts to 500 (skip-counting, comparing and ordering, place value). • Select lessons from Lessons 1–16 in the Quantity and Counting to 500 (Part 1) unit in the <i>Number & Operations</i> Teacher’s Guide.

	<p>Data: Concrete and Pictorial Graphs</p> <ul style="list-style-type: none"> Students investigated and created concrete graphs in Grade One and represented them pictorially in Grade Two, so this is a good review that prepares them for learning about more complex graphs later in the year. Each day, do a short class survey so students can learn more about each other. The first surveys may take longer (e.g., 15 minutes) but as students catch on, they will take 5–10 minutes. Students can: <ul style="list-style-type: none"> Generate the questions (e.g., What are your favourite pizza toppings?). Vote on their response by having a concrete item represent their choice (e.g., each student gets a straw to put under their choice), which reinforces one-to-one correspondence. Create a concrete graph as a class. Interpret data and make comparisons (comparing number). Discuss what the results mean.
	<p>Spatial Sense: Measurement—Time Concepts</p> <ul style="list-style-type: none"> Introduce students to the units of time (e.g., seconds, minutes, hours) and the relationships among them. Please note that students do not need to learn how to tell time. Select lessons from Lessons 1–7 in the Time unit in the <i>Spatial Sense</i> Teacher’s Guide. Once students are familiar with the time units, you can incidentally reinforce them throughout the year as they arise in math, in other subjects, and in day-to-day scheduling. You may decide to introduce the actual time unit now using the Read Aloud and/or the Time lessons in the Math Place <i>Spatial Sense</i> Teacher’s Guide. Alternatively, you may decide to work on the unit later in the year once students gain experience with time concepts in their daily routines.
October/November Plan	
Big Ideas/ Major Concepts	Content/Concepts
Composing and decomposing numbers flexibly	<p>Number and Operations: Number Concepts to 1000</p> <ul style="list-style-type: none"> Select lessons from Lessons 1–12 in the Quantity and Counting to 1000 (Part 2) unit in the <i>Number & Operations</i> Teacher’s Guide.

<p>Place value</p> <p>Number relationships, skip-counting</p> <p>Regular increases and decreases in patterns can be used to make generalizations</p> <p>One-to-one correspondence</p> <p>Modelling numbers/operations concretely, pictorially, and symbolically</p> <p>Equality and inequality</p>	<p>Patterns and Relations</p> <ul style="list-style-type: none"> Equality and Inequality. (This is a major Big Idea that many students in all grades do not adequately understand.) One-step addition and subtraction problems with an unknown number. Select lessons from Lessons 1–9 in the Equality and Inequality unit in the <i>Patterns & Relations/Data & Probability</i> Teacher’s Guide. <p>Number and Operations: Addition and Subtraction to 20—Developing Computational Fluency with Facts to 20</p> <ul style="list-style-type: none"> In Grades One and Two, students were introduced to many of the strategies used to develop computational fluency for addition and subtraction facts to 20. In Grade Three, students consolidate and reinforce their learning. For more details, refer to pages 142–143 in the <i>Math Place</i> Grade Three <i>Number & Operations</i> Teacher’s Guide. A good strategy is to introduce the computational strategies early in the year and then continually reinforce them throughout the year using Number Talks. The Number Talks take about 5–10 minutes and can be done two to three times per week, before beginning the planned lesson for the day. This allows students to practise and consolidate their computational fluency over time. Lesson 1 in the Addition and Subtraction unit uses a Read Aloud, entitled <i>Math Appeal</i>, that demonstrates how to use the book to reinforce facts to 20. This book can be used several times in Number Talks to offer additional practice and reinforcement. You can also use the Read Aloud entitled <i>The Grapes of Math</i> for addition and subtraction facts, even though <i>Math Place</i> uses this book to introduce multiplication. There are several ideas throughout the book on how to carry out Number Talks for addition and subtraction. Lesson 20 in the Addition and Subtraction unit has several Number Talks that can be used to introduce and reinforce the math strategies.
<p>November/December Plan</p>	
<p>Note: This is a good time to reflect on students’ progress. If you feel they have a solid grasp of numbers, addition, and subtraction and are ready for addition and subtraction to 1000, you can continue with the Addition and Subtraction unit. If you feel that students need a break from number and operation concepts and would benefit from time to consolidate ideas before continuing, you may want to switch November/December and January/February plans, thereby covering Geometry and Patterning first and then proceeding with Addition and Subtraction to 1000 in the new year. This reflects the need for flexibility in planning and being responsive to your learners.</p>	

Big Ideas/ Major Concepts	Content/Concepts
<p>Composing and decomposing flexibly</p> <p>Place value</p> <p>Number relationships, skip-counting</p> <p>Concrete items can be represented, compared, and interpreted pictorially in graphs</p> <p>One-to-one correspondence</p> <p>Equality and inequality</p>	<p>Number and Operations: Addition and Subtraction—Addition and Subtraction to 1000</p> <ul style="list-style-type: none"> Students can extend their knowledge of addition and subtraction to 20 and their understanding of place value to investigate addition and subtraction with larger numbers. Select lessons from lessons 1–20 in the Addition and Subtraction unit in the <i>Number & Operations</i> Teacher’s Guide.
	<p>Data: One-to-one correspondence with bar graphs, pictographs, charts, and tables</p> <ul style="list-style-type: none"> Students worked with concrete and pictorial graphs at the beginning of the year so this understanding can be extended to other representations, such as bar graphs, charts, and tables. Select lessons from Lessons 1–17 in the Data unit in <i>Patterns & Relations/Data & Probability</i> Teacher’s Guide.
January/February Plan	
Big Ideas/ Major Concepts	Content/Concepts
<p>Composing and decomposing</p> <p>Objects and shapes have attributes that can be described and compared</p> <p>Regular increases and decreases in patterns can be identified and used to make generalizations</p> <p>Number concepts to 500 (1000)</p>	<p>Spatial Sense: Geometry—Construction of 3D Objects</p> <ul style="list-style-type: none"> Identifying 3D objects by their mathematical terms Describing and comparing 3D objects (faces, edges, vertices/ types of 2D shapes) Students need hands-on experiences with 3D objects in order to fully understand attributes and be able to describe and compare them. Select lessons from Lessons 1–15 in the Geometry unit in the <i>Spatial Sense</i> Teacher’s Guide.

	<p>Patterns and Relations</p> <ul style="list-style-type: none"> — Increasing and Decreasing Patterns — Pattern rules using words and numbers, based on concrete experiences • Students can apply and build upon their knowledge of attributes from the Geometry unit to investigate increasing and decreasing geometric patterns. • Students can apply and build upon their knowledge of number and counting to work with increasing and decreasing number patterns. • Select lessons from Lessons 1–13 in the Patterns and Relations unit in the <i>Patterns & Relations/Data & Probability</i> Teacher’s Guide.
	<p>Number and Operations</p> <ul style="list-style-type: none"> • To keep number and operations concepts fresh in students’ minds, it is beneficial to do two or three brief Numbers Talks (5–10 minutes) each week. As previously mentioned, you can use Number Talks related to the Read Alouds <i>Math Appeal</i> and <i>The Grapes of Wrath</i> to reinforce addition and subtraction to 20. Although <i>The Grapes of Math</i> is used later in the year to introduce multiplication and division, it can be used to reinforce addition and subtraction concepts to 20. There are also other Number Talks at the end of some of the related lessons that reinforce addition and subtraction to 1000. These Number Talks can be revisited several times by changing the numbers.
February/March Plan	
Big Ideas/ Major Concepts	Content/Concepts
<p>Composing and decomposing flexibly</p> <p>Number relationships, skip-counting</p> <p>Regular increases and decreases in patterns can be used to make generalizations</p> <p>Equality and inequality</p>	<p>Number and Operations: Multiplication and Division</p> <ul style="list-style-type: none"> • Connections made to students’ understanding of skip-counting, repeated addition and subtraction, and increasing and decreasing number patterns, all of which focus on the Big Idea of composing and decomposing flexibly, will help students understand the operations of multiplication and division. • Select lessons from Lessons 1–20 in the Multiplication and Division unit in the <i>Number & Operations</i> Teacher’s Guide.

March/April Plan	
Big Ideas/ Major Concepts	Content/Concepts
<p>Composing and decomposing</p> <p>One-to-one correspondence</p> <p>Objects and shapes have attributes that can be described, measured (standard units), and compared</p> <p>The likelihood of possible outcomes can be examined, compared, and interpreted</p>	<p>Spatial Sense: Measurement—Length and Area with Standard Units/Estimation</p> <ul style="list-style-type: none"> • Students can apply their knowledge of attributes from earlier as they learn to use standard units to measure length and area. • Students can use their understanding of linear measurement that they acquired from Grades One and Two to help them understand the concepts of perimeter and circumference, which are basically linear measurements that are not presented in a straight line. • Select lessons from Lessons 1–9 in the Linear Measurement unit and Lessons 1–16 in the Perimeter and Area unit in the <i>Spatial Sense</i> Teacher’s Guide.
April/May Plan	
Big Ideas/ Major Concepts	Content/Concepts
<p>Composing and decomposing</p> <p>One-to-one correspondence</p> <p>Number concepts to 1000</p> <p>Objects and shapes have attributes that can be described, measured, and compared</p> <p>The likelihood of possible outcomes can be examined, compared, and interpreted</p>	<p>Spatial Sense: Measurement—Time</p> <ul style="list-style-type: none"> • By introducing time concepts at the beginning of the year and incidentally reinforcing them throughout the year in math and in other subjects, students should have a reasonable basis of understanding. • Select lessons from Lessons 1–7 in the Time unit in the <i>Spatial Sense</i> Teacher’s Guide. You may have used some of these lessons or the Read Aloud previously.
	<p>Financial Literacy: Fluency with coins and bills to \$100</p> <ul style="list-style-type: none"> • Students have had lots of time to build their understanding of number concepts to 1000. They can apply this knowledge as they count, add, and subtract with mixed coins and bills up to \$100. • Students also build upon their understanding of financial concepts (wants and needs from Grade One and saving and spending from Grade Two) and learn about earning and payment. • Select lessons from Lessons 1–11 in the Financial Literacy unit in the <i>Number & Operations</i> Teacher’s Guide.

	<p>Probability: Likelihood of simulated events, using comparative language</p> <ul style="list-style-type: none"> Select lessons from Lessons 1–11 in the Probability unit in the <i>Patterns & Relations/Data & Probability Teacher’s Guide</i>.
May/June Plan	
Big Ideas/ Major Concepts	Content/Concepts
<p>Objects and shapes have attributes that can be described, measured, and compared</p> <p>Standard units can be used to describe, measure, and compare attributes</p> <p>Fractions are a type of number that can represent quantities</p> <p>Composing and decomposing</p>	<p>Spatial Sense: Measurement—Mass and Capacity with Standard Units</p> <ul style="list-style-type: none"> Students are familiar with the concept of standard units from their previous experiences with length and area. They can apply this understanding as they use different standard units to measure mass and capacity. It is important that students have hands-on experiences with mass and capacity. For example, they need to investigate using a variety of materials such as water and sand to fully understand capacity. By using familiar objects in the room for mass, students can establish realistic benchmarks and refer to them throughout the learning. Select lessons from Lessons 1–7 in the Mass unit in the <i>Spatial Sense Teacher’s Guide</i>. Select lessons from Lessons 1–5 in the Capacity unit in the <i>Spatial Sense Teacher’s Guide</i>.
	<p>Fractions: Fraction Concepts</p> <ul style="list-style-type: none"> Fractions can represent parts of a region, set or linear model. Connect fraction models to symbolic notation. This is a good time of the year to teach fractions since it is typically one of the most challenging concept for students to understand. Students are most prepared now since they have had the year to consolidate their understanding of Big Ideas and are comfortable with classroom routines in math class. Select lessons from Lessons 1–17 in the Fractions unit in the <i>Number & Operations Teacher’s Guide</i>.

Scope and Sequence for Combined Grade One and Grade Two

Introduction

Teaching math in combined grades can be a challenge since you are covering multiple levels of learning standards and meeting the needs of a diverse group of individuals in more than one grade level.

While there are many ways of teaching math in combined grades, one approach is to focus on the Big Ideas that are common to both grades and cluster Content from the two grades around them. This works well since the Big Ideas are fundamental in all grades and students build upon them from year to year. You can focus on the same Big Ideas even though the Content might be different for the two grade levels. For example, if you are teaching a combined Grade One and Grade Two class, you can simultaneously work with numbers to 20 with Grade One students, and numbers to 100 with Grade Two students. In both cases, you are getting at the Big Idea of flexibly composing and decomposing numbers in various ways, including composing into 10s and 1s, which is the basis for understanding the Big Idea of place value. Even though the students in the two grades are working on different ranges of numbers as they skip-count, they are all learning about number patterns and how they can be used to make generalizations and extend the number system.

There are several ways to co-ordinate your math programme for the two grades. As you plan, look for lessons from Grade One and Grade Two that share the same Big Ideas. There are several similar lessons in *Math Place* at the various grade levels and the Big Ideas are highlighted for you. Students work on slightly different Content but are focusing on the same Big Idea. Another approach is to identify a lesson in one of the grades and adapt the numbers or Content so they align with the other grade's learning standards. For example, when studying data, you can carry out a whole-class survey and make a concrete graph to represent the results. While Grade One students work on the concrete graphs, students in Grade Two can represent the data with pictorial representations.

The three-part lesson structure lends itself well to combined grades. When carrying out a three-part lesson, you can adapt the Minds On and involve the whole class. Alternatively, you can use the Minds On from Grade One with the entire class, get the students in Grade One started with their Working On It problem, and then extend the Minds On with the Grade Two students so it reflects their learning standards. Students

in Grade Two can then be given their problem. After the problem solving, you can meet with the entire class for the Consolidation and focus on the Big Idea common to both problems. You may also decide to do parts of the Consolidation with each grade and then meet together to focus on the common Big Idea.

In some cases, it is beneficial to have students from both grades take part in one Consolidation that focuses on the same Big Idea, yet slightly different Content. For example, the common Big Ideas may be composing and decomposing numbers, with the Grade One students working on numbers to 20 and Grade Two students working on numbers to 100. Hearing from both grades in the Consolidation provides practice and review for students in both grades who need more work with smaller numbers, and exposure to larger numbers for students who are ready. When taking this approach, it is important to remember that you are only assessing students on what they need to understand and know for their grade level.

Similarly, you can sometimes have whole-group Number Talks that focus on the same strategies but may deal with different numbers. You can start with the numbers that are in the range for Grade One students and then give some examples of how the strategies work with larger numbers, as outlined in the Grade Two curriculum. Students are offered both review and extension, depending on what they need, and you are only assessing them according to the learning standards at their grade level.

The following chart highlights one possible way of teaching math throughout the year in a combined Grade One/Grade Two class. The Big Ideas are identified, as well as the Content that applies to each grade. For more details on how to teach the Content areas, please refer to the Scope and Sequence for Grades One and Two.

Possible Scope and Sequence for Combined Grade One and Grade Two

Rationale: Focus on the Big Ideas that are common in both grades.

Flexible Timeline	Grade One Content	Grade Two Content	Big Ideas/ Major Concepts
Sept/Oct	Number and Operations <ul style="list-style-type: none"> Number Concepts to 10 Data <ul style="list-style-type: none"> Concrete Graphs Spatial Sense <ul style="list-style-type: none"> Positional Language Probability (Optional) <ul style="list-style-type: none"> Introduction of Probability Language 	Number and Operations <ul style="list-style-type: none"> Number Concepts to 100 Data <ul style="list-style-type: none"> Concrete and Pictorial Graphs Probability (Optional) <ul style="list-style-type: none"> Introduction of Probability Language 	<ul style="list-style-type: none"> Composing and decomposing numbers Using concrete graphs to compare and interpret data One-to-one correspondence
Oct/Nov	Number and Operations <ul style="list-style-type: none"> Addition and Subtraction to 10 Patterns and Relations <ul style="list-style-type: none"> Equality and Inequality Change in Quantity 	Number and Operations <ul style="list-style-type: none"> Addition and Subtraction to 20 Patterns and Relations <ul style="list-style-type: none"> Equality and Inequality Change in Quantity 	<ul style="list-style-type: none"> Composing and decomposing numbers Addition and subtraction can be represented concretely, pictorially, and symbolically The meaning of equality
Nov/Dec	Number and Operations <ul style="list-style-type: none"> Numbers to 20 Data <ul style="list-style-type: none"> Concrete Graphs 	Number and Operations <ul style="list-style-type: none"> Place Value Data <ul style="list-style-type: none"> Concrete and Pictorial Graphs 	<ul style="list-style-type: none"> Composing and decomposing numbers Using concrete graphs to compare and interpret data One-to-one correspondence

Flexible Timeline	Grade One Content	Grade Two Content	Big Ideas/ Major Concepts
Jan/Feb	Spatial Sense: Geometry <ul style="list-style-type: none"> Attributes of 2D Shapes and 3D Objects Patterns and Relations <ul style="list-style-type: none"> Repeating Patterns Number and Operations <ul style="list-style-type: none"> Number Talks 	Spatial Sense: Geometry <ul style="list-style-type: none"> Attributes of 2D Shapes and 3D Objects Patterns and Relations <ul style="list-style-type: none"> Repeating and Increasing Patterns Number and Operations <ul style="list-style-type: none"> Number Talks 	<ul style="list-style-type: none"> Composing and decomposing shapes Objects and shapes have attributes that can be described and compared Repeating/increasing elements can be identified to make generalizations
Feb/Mar	Number and Operations <ul style="list-style-type: none"> Addition and Subtraction to 20 	Number and Operations <ul style="list-style-type: none"> Addition and Subtraction to 100 	<ul style="list-style-type: none"> Composing and decomposing numbers Place value Addition and subtraction can be modelled concretely, pictorially, and symbolically Equality and inequality
Mar/Apr	Spatial Sense: Measurement <ul style="list-style-type: none"> Linear/Area—non-standard units 	Spatial Sense: Measurement <ul style="list-style-type: none"> Linear—standard units 	<ul style="list-style-type: none"> Objects and shapes have attributes that can be described, measured, and compared
Apr/May	Spatial Sense: Geometry <ul style="list-style-type: none"> Composing 2D Shapes Probability <ul style="list-style-type: none"> The Language of Likelihood Financial Literacy <ul style="list-style-type: none"> Values of coins 	Spatial Sense: Geometry <ul style="list-style-type: none"> Composing 2D Shapes Probability <ul style="list-style-type: none"> The Language of Likelihood Financial Literacy <ul style="list-style-type: none"> Coin combinations to 100¢ 	<ul style="list-style-type: none"> Composing and decomposing shapes Language can be used to describe probability of events Composing and decomposing numbers
June	Revisiting and Reinforcing	Revisiting and Reinforcing	<ul style="list-style-type: none"> All Big Ideas and Major Concepts studied this year

Scope and Sequence for Combined Grade Two and Grade Three

Introduction

Teaching math in combined grades can be a challenge since you are covering multiple levels of learning standards and meeting the needs of a diverse group of individuals in more than one grade level.

While there are many ways of teaching math to combined grades, one approach is to focus on the Big Ideas that are common to both grades and cluster Content from the two grades around them. This works well since the Big Ideas are fundamental in all grades and students build upon them from year to year. You can focus on the same Big Ideas even though the Content might be different for the two grade levels. For example, if you are teaching a combined Grade Two and Grade Three class, you can simultaneously work with numbers to 100 with Grade Two students and numbers to 1000 with Grade Three students. In both cases, you can focus on Big Ideas such as flexibly composing and decomposing numbers in various ways, including by 100s, 10s, and 1s (place value). Even though the students in both grades are working on different ranges of numbers as they skip-count, they are all learning about number patterns and how they can be used to make generalizations and extend the number system.

There are several ways to co-ordinate your math programme for the two grades. As you plan, look for lessons from Grade Two and Grade Three that share the same Big Ideas. There are several similar lessons in *Math Place* at the various grade levels and the Big Ideas are highlighted for you. Students work on slightly different Content but are focusing on the same Big Idea. Another approach is to identify a lesson in one of the grades and adapt the numbers or Content so they align with the other grade's learning standards. For example, when studying data, you can carry out a whole-class survey and make a concrete graph to represent the results. While Grade Two students work on pictorial representations of the concrete graphs, students in Grade Three can represent the data with bar graphs.

The three-part lesson structure in *Math Place* lends itself well to combined grades. For example, when carrying out a three-part lesson, you can adapt the Minds On so it pertains to both grades and carry it out with the whole class. Alternatively, you can use the Minds On from Grade Two with the entire class, get the Grade Two students started with their Working On It problem, and then extend the Minds On with the

Grade Three students so it reflects their learning standards. Students in Grade Three can then be given their problem. After the problem solving, you can meet with the entire class for the Consolidation and focus on the Big Idea common to both problems. You may also decide to do parts of the Consolidation with each grade and then meet together to focus on the common Big Idea.

In some cases, it is beneficial to have students from both grades take part in one Consolidation that focuses on the same Big Idea, yet slightly different Content. For example, the common Big Ideas may be place value and decomposing numbers, with the Grade Two students working on numbers to 100 and Grade Three students working on numbers to 1000. Hearing from both grades in the Consolidation provides practice and review for students in both grades who need more work with smaller numbers, and exposure to larger numbers for students who are ready. When taking this approach, it is important to remember that you are only assessing students on what they need to understand and know for their grade level.

Similarly, you can sometimes have whole-group Number Talks that focus on the same strategies but may deal with different numbers. You can start with numbers that are in the range for Grade Two students, and then give some examples of how the strategies work with larger numbers, as outlined in the Grade Three curriculum. Students are offered both review and extension, depending on what they need, and you are only assessing them according to the learning standards at their grade level.

When comparing the Grade Two and Grade Three learning standards, there are some topics that are unique to Grade Three and not covered in Grade Two. Examples include multiplication and division and fractions. In the case of multiplication and division, it can be beneficial to teach these new operations to Grade Three students while the Grade Two students are working on addition and subtraction. This pairing makes sense since multiplication and division are related to addition and subtraction. All of these operations centre around the Big Idea, “development of computational fluency in addition, subtraction, multiplication, and division of whole numbers requires flexible composing and decomposing.” If some Grade Three students need review of repeated addition or subtraction to help them understand multiplication and division, this can be done with Grade Two students or in whole-class Number Talks.

In the case of fractions, it is hard to pair up a similar concept, especially since fractional concepts are often contrary to whole-number thinking (e.g., some students may think one third is larger than one half because the denominator is a larger number). In the following Scope and Sequence, it is suggested that you investigate fractions with the Grade

Three students in June, when Grade Two students have covered most or all of their concepts and are working on review and reinforcement. At this time of year, Grade Two students have had experience working independently at math activity centres, which frees you up to focus on your Grade Three students. There are many reinforcement activities in *Math Place* that you can use with your Grade Two students.

The following chart highlights one possible way of teaching math throughout the year in a combined Grade Two/Three class. The Big Ideas are identified, as well as the Content that applies to each grade. For more details on how to teach the Content areas, please refer to the Scope and Sequence documents for Grade Two and Grade Three.

Possible Scope and Sequence for Combined Grade Two and Grade Three

Rationale: Focus on the Big Ideas that are common in both grades.

Flexible Timeline	Grade Two Content	Grade Three Content	Big Ideas/ Major Concepts
Sept/Oct	Number and Operations <ul style="list-style-type: none"> Number Concepts to 100 Data <ul style="list-style-type: none"> Concrete and Pictorial Graphs Probability (Optional) <ul style="list-style-type: none"> Introduce Probability Language 	Number and Operations <ul style="list-style-type: none"> Number Concepts to 500 Data <ul style="list-style-type: none"> Graphs Spatial Sense: Measurement <ul style="list-style-type: none"> Introduce Time Concepts Probability (Optional) <ul style="list-style-type: none"> Introduce Probability Language 	<ul style="list-style-type: none"> Composing and decomposing numbers Concrete items can be represented, compared, and interpreted in graphs One-to-one correspondence The likelihood of events can be examined, compared, and interpreted
Oct/Nov	Number and Operations <ul style="list-style-type: none"> Addition and Subtraction to 20 Patterns and Relations <ul style="list-style-type: none"> Equality and Inequality Change in Quantity 	Number and Operations <ul style="list-style-type: none"> Number Concept to 1000 Introduce Addition and Subtraction to 20 Patterns and Relations: <ul style="list-style-type: none"> —Equality and Inequality 	<ul style="list-style-type: none"> Composing and decomposing numbers Place value The meaning of equality and inequality

Flexible Timeline	Grade Two Content	Grade Three Content	Big Ideas/ Major Concepts
Nov/Dec	Number and Operations <ul style="list-style-type: none"> Place Value Data <ul style="list-style-type: none"> Concrete and Pictorial Graphs 	Number and Operations <ul style="list-style-type: none"> Addition and Subtraction to 1000 Data <ul style="list-style-type: none"> Graphs 	<ul style="list-style-type: none"> Composing and decomposing numbers Concrete items can be represented, compared, and interpreted in graphs One-to-one correspondence
Jan/Feb	Spatial Sense: Geometry <ul style="list-style-type: none"> Attributes of 2D Shapes and 3D Objects Patterns and Relations <ul style="list-style-type: none"> Repeating and Increasing Patterns Number and Operations <ul style="list-style-type: none"> Number Talks 	Spatial Sense: Geometry <ul style="list-style-type: none"> Construction of 3D Objects Patterns and Relations <ul style="list-style-type: none"> Increasing and Decreasing Patterns Number and Operations <ul style="list-style-type: none"> Number Talks 	<ul style="list-style-type: none"> Composing and decomposing shapes Regular changes in patterns can be identified and used to make generalizations Composing and decomposing numbers
Feb/Mar	Number and Operations <ul style="list-style-type: none"> Addition and Subtraction to 100 	Number and Operations <ul style="list-style-type: none"> Multiplication and Division 	<ul style="list-style-type: none"> Composing and decomposing numbers Place value
Mar/Apr	Spatial Sense: Measurement <ul style="list-style-type: none"> Linear—standard units 	Spatial Sense: Measurement <ul style="list-style-type: none"> Linear/Area—standard units 	<ul style="list-style-type: none"> Objects and shapes have attributes that can be described, measured, and compared

Flexible Timeline	Grade Two Content	Grade Three Content	Big Ideas/ Major Concepts
Apr/May	Spatial Sense: Geometry <ul style="list-style-type: none"> Composing 2D Shapes Probability <ul style="list-style-type: none"> The Language of Likelihood of Familiar Events Financial Literacy <ul style="list-style-type: none"> Coin combinations to 100¢ 	Spatial Sense: Measurement <ul style="list-style-type: none"> Time Concepts Probability <ul style="list-style-type: none"> The Likelihood of Simulated Events Financial Literacy <ul style="list-style-type: none"> Coins and bills to \$100 	<ul style="list-style-type: none"> Composing and decomposing shapes Attributes can be described, measured, and compared The likelihood of events can be examined, compared, and interpreted
May/June	Complete Apr/May units	Spatial Sense: Measurement <ul style="list-style-type: none"> Mass and Capacity 	<ul style="list-style-type: none"> Objects and shapes have attributes that can be described, measured, and compared
June	Revisiting and Reinforcing	Number and Operations <ul style="list-style-type: none"> Fractions 	<ul style="list-style-type: none"> Fractions are a type of number that can represent quantities (Grade Three only) Composing and decomposing numbers