

## GK-2 Grade Span Map 2021-22

Year-Long Focus Concept: Number Concept (K), Addition (1st), Subtraction (2nd)

Timing:	T1	T2	T3
<p>Mindset Mathematics Big Ideas:</p>	<ul style="list-style-type: none"> <li>● Using Fingers as Numbers</li> <li>● Understanding the Physical Quantity of a Number</li> <li>● Organizing to Count</li> <li>● Seeing and Making Patterns Everywhere</li> <li>● Describing and Sorting Objects</li> <li>● *Building and Talking About and Making Shapes</li> </ul>	<ul style="list-style-type: none"> <li>● Putting Numbers Together</li> <li>● Stretching Counting Toward 100 (120)</li> <li>● Seeing Numbers Inside of Numbers</li> <li>● *Numbers on a Line</li> <li>● *Tens and Ones are Useful Ways to Organize (Using Place Value to Add and Subtract)</li> <li>● Solving Problems in Different Ways</li> <li>● *Representing and Modeling Joining and Separating Situations</li> </ul>	<ul style="list-style-type: none"> <li>● *Equal means the same</li> <li>● Representing and modeling situations help us to see math</li> <li>● *We Use Data to Describe and Wonder About the World</li> <li>● *We use units to measure our world</li> <li>● Partitioning Shapes into equal parts</li> <li>● Building Numbers within 20.</li> </ul>
<p>Unit Concepts:</p>	<hr/> <ul style="list-style-type: none"> <li>● Playing with Shapes (K)</li> <li>● Numbers up to 10 (K)</li> <li>● Attributes of 2-D shapes (1)</li> <li>● Working with figures (2)</li> </ul> <hr/> <ul style="list-style-type: none"> <li>● Compose &amp; Decompose numbers up to 10 (K)</li> <li>● Ten as a Unit (1)</li> <li>● Grouping Objects (2)</li> </ul> <hr/> <ul style="list-style-type: none"> <li>● Length, Weight, &amp; Capacity (K)</li> <li>● Measuring Length and Time (1)</li> <li>● Measuring Length (2)</li> <li>● Measuring Time (2)</li> </ul>	<hr/> <ul style="list-style-type: none"> <li>● Addition/Subtraction and Addition/Subtraction Situations (K)</li> <li>● Addition/Subtraction within 20 (1)</li> <li>● Addition/Subtraction within 100 (2)</li> </ul> <hr/> <ul style="list-style-type: none"> <li>● Subtraction and Subtraction Situations (K)</li> <li>● Subtraction within 20 (1)</li> <li>● Subtraction within 100 (2)</li> </ul> <hr/> <ul style="list-style-type: none"> <li>● Problems with Unknowns (1)</li> <li>● Addition and Subtraction within 5 (K)</li> <li>● Problems with unknowns within 20 (for K and 1) and within 100 (for 2)</li> </ul>	<hr/> <ul style="list-style-type: none"> <li>● Describe and Compose 2D &amp; 3D Shapes(K)</li> <li>● Attributes of 3D Shapes (1)</li> <li>● Organizing Data (1)</li> <li>● Data and Graphs (2)</li> </ul> <hr/> <ul style="list-style-type: none"> <li>● Numbers to 20 (K)</li> <li>● Compose and Decompose numbers to 20 (K)</li> <li>● Numbers greater than 20 (1)</li> <li>● Numbers greater than 100 (2)</li> <li>● Calculations with 3-digit numbers (2)</li> </ul> <hr/> <ul style="list-style-type: none"> <li>● Numbers to 100 (K)</li> <li>● Challenging problems with</li> </ul>

			unknowns (1) <ul style="list-style-type: none"> <li>• Two- step problems with unknowns (2)</li> <li>• Calculations with 3-digit numbers (add four 2-digit numbers (2))</li> </ul>
Potential Common Assessments:	K - <a href="#">Year Long Observation Checklist</a>	<a href="#">OGAP Counting Collections</a>	<a href="#">K/1 Place Value Assessment</a>
Recurring Concepts:	<ul style="list-style-type: none"> <li>• Geometry</li> <li>• Measurement</li> <li>• Data</li> <li>• Patterns (beginning of the year focus on seeing/making patterns with objects, then transition to patterns in numbers)</li> </ul>		
Supporting or Secondary Concepts:			

Year-long Focus Concepts: year-long deep conceptual focus for all student in this grade level

\*Mindset Big Ideas marked with an asterisk indicates that the idea spans across grades, therefore they should be more heavily weighted (see Mindset Mathematics books for big idea lessons that support the units for that trimester).

Recurring Concepts can be revisited throughout the year as number talks or an application of a unit concept.

Secondary concepts have been identified as topics of less importance.

[Draft of K-2 Pilot Scope and Sequence](#)

## 2/3 Grade Span Map 2021-22

Year-Long Focus Concepts: Subtraction (2nd)/ Multiplication (3rd)

Timing:	T1	T2	T3
<b>Mindset Mathematics Big Ideas:</b>	<ul style="list-style-type: none"> <li>● Using Benchmark Numbers and the Number Line</li> <li>● The Ruler as a Number Line</li>   <li>● Being Flexible with Numbers</li> <li>● Doing and Undoing: Connecting Addition and Subtraction</li> <li>● Using Tens, Ones, and hundreds</li> <li>● Building with 10's and 100's</li>   <li>● *Solving Problems with Data</li> </ul>	<ul style="list-style-type: none"> <li>● *Thinking in Equal Groups</li> <li>● Seeing multiplication as Area</li> <li>● Tiling to Understand Area</li> <li>● Thinking Around Shapes (partitioning)</li> <li>● Using Units to Investigate</li> </ul>	<ul style="list-style-type: none"> <li>● Seeing Fractions: the parts and the wholes</li> <li>● Understanding <math>\frac{1}{2}</math></li> </ul>
<b>Units Concepts:</b>	<ul style="list-style-type: none"> <li>● Grouping Objects</li> <li>● Measurement</li> <li>● Subtraction Concepts (major focus on the 1st trimester)               <ul style="list-style-type: none"> <li>○ Development of place value understanding, models, and number lines (2nd)</li> <li>○ Problem-solving, patterns, and properties (3rd)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Multiplication (Major focus of second trimester)               <ul style="list-style-type: none"> <li>○ Equal groups and models with single digits (2nd)</li> <li>○ Models, properties, and patterns up to 2 digits (3rd)</li> </ul> </li> <li>● Subtraction Concepts (2nd) / Division (3rd)</li> <li>● Application of addition and subtraction concepts (2nd)/ Area (3rd)</li> </ul>	<ul style="list-style-type: none"> <li>● Time</li> <li>● Fractions</li> <li>● Geometry</li> </ul>
<b>Potential Common Assessments:</b>	<a href="#">OGAP 2nd Pre Assessment</a> <a href="#">OGAP 3rd Pre Assessment</a>	<a href="#">OGAP 3rd Pre Assessment - Multiplication</a> <a href="#">Multiplication Assessment</a>	<a href="#">OGAP 3rd Pre Assessment - Fractions</a> <a href="#">Fraction Progression</a> <a href="#">Fraction Task</a>
<b>Recurring</b>	Measurement, Time, Data, Geometry		

Concepts:	
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Year-long Focus Concepts= this should be a year-long deep conceptual focus for all student in this grade level

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Recurring Concepts can be revisited throughout the year as number talks or an application of a unit concept.

Secondary concepts have been identified as topics of less importance.

[Draft of 2/3 Pilot Scope and Sequence](#)

## 4/5 Multi-Age Grade Span Map 2021-22

Year-Long Focus Concepts: Division (4th), Fractions (5th)

Timing:	T1	T2	T3
Mindset Mathematics Big Ideas:	<ul style="list-style-type: none"> <li>● What is a decimal?</li> <li>● Illustrating Multiplication and Division</li> <li>● *Using numbers (and symbols) flexibly</li> <li>● Thinking in powers of 10</li> <li>● Seeing and connecting patterns across representations</li> </ul>	<ul style="list-style-type: none"> <li>● *Exploring/Using fraction Equivalence</li> <li>● Estimating with fractions</li> <li>● Units are a relationship</li> <li>● Understanding fraction addition and subtraction</li> <li>● Modeling with unit fractions</li> <li>● Thinking in cubes</li> </ul>	<ul style="list-style-type: none"> <li>● Understanding fraction multiplication and division visually</li> <li>● Building and designing with shapes and angles</li> <li>● Exploring the coordinate plane</li> <li>● Making and naming number patterns</li> <li>● Seeing Patterns inside of numbers</li> </ul>
Units Concepts:	<ul style="list-style-type: none"> <li>● Place Value (whole number and decimal)</li> <li>● Addition and subtraction with whole numbers and decimals</li> <li>● Multiplication of whole numbers (4th grade) and decimals by whole number (5th grade)</li> <li>● Modeling Division</li> </ul>	<ul style="list-style-type: none"> <li>● Division Concepts</li> <li>● Area and Volume*</li> <li>● Addition and Subtraction of Fractions</li> </ul>	<ul style="list-style-type: none"> <li>● Multiplication and Division of Fractions and decimals (5th grade)</li> <li>● Multiplication of fractions by whole numbers (4th grade)</li> <li>● Angles (4th grade)</li> <li>● Factors and Multiples*</li> <li>● Classifying Polygons*</li> <li>● Patterns and the Coordinate Plane*</li> </ul>
Potential Common Assessments:	OGAP Multiplication and Division  Place Value Assessment	<a href="#">Speed Stacking</a>  <a href="#">Dog Walking</a>  <a href="#">Road Trip)</a>  <a href="#">Road Trip Project</a>	<a href="#">Trail Mix</a>  <a href="#">Community Garden - Michigan</a>  <a href="#">Candy Dispenser</a>

		<a href="#">Division Assessment (Student Version)</a> <a href="#">Division Assessment (Teacher Version)</a>	<a href="#">Stuffed with Pizza</a> Bake Sale (AH) Fraction Assessment <a href="#">4/5 Fraction Assessment</a>
Recurring Concepts:  Supporting or Secondary Concepts:	<ul style="list-style-type: none"> <li>● Measurement</li> <li>● Geometry: volume and area</li> <li>● Sorting Shapes</li> <li>● Coordinate Grid</li> <li>● Data (integrate plotting fractions on a number line with the fraction units)</li> </ul>	<i>The recurring and supporting/secondary concepts will be taught/introduced throughout the year and assessed in the third trimester if/when units are explicitly taught as the focus lesson.</i>	

Year-long Focus Concepts= this should be a year-long deep conceptual focus for all student in this grade level

\*Mindset Big Ideas marked with an asterisk indicates that the idea spans across grades, therefore they should be more heavily weighted (see Mindset Mathematics books for big idea lessons that support the units for that trimester)

\*Units marked with an asterisk indicate that the unit focuses on a recurring or secondary concept, providing opportunity to assess these concepts. They should not be as heavily weighted.

Recurring Concepts can be revisited throughout the year as number talks or an application of a unit concept.

Secondary concepts have been identified as topics of less importance.

[Draft of 4/5 Pilot Scope and Sequence](#)

## Grade Span Map 2021-22 for 4th Grade

Year-Long Focus Concept: Division

Timing:	T1	T2	T3
Mindset Mathematics Big Ideas:	<ul style="list-style-type: none"> <li>● Seeing Patterns Inside Numbers</li> <li>● What is a Decimal?</li> <li>● Using Numbers Flexibly</li> <li>● Thinking in powers of 10</li> </ul>	<ul style="list-style-type: none"> <li>● Illustrating Multiplication and Division</li> <li>● Modeling with Fractions</li> <li>● Units are a relationship</li> </ul>	<ul style="list-style-type: none"> <li>● Building and designing with shapes and angles</li> <li>● Making and naming number patterns</li> <li>● Seeing Patterns inside of numbers</li> </ul>
Units Concepts:	<ul style="list-style-type: none"> <li>● Place Value (whole number and decimal)</li> <li>● Addition and subtraction with whole numbers and decimals</li> <li>● Multiplication of whole numbers</li> <li>● Modeling Division</li> </ul>	<ul style="list-style-type: none"> <li>● Division Concepts</li> <li>● Measurement*</li> <li>● Fractions</li> </ul>	<ul style="list-style-type: none"> <li>● Factors and Multiples*</li> <li>● Classifying Polygons*</li> <li>● Patterns in Shapes and Numbers</li> </ul>
Potential Common Assessments:	OGAP Pre-Assessment  Place Value Assessment	<a href="#">Division Assessment (Student Version)</a>  <a href="#">Division Assessment (Teacher Version)</a>  OGAP Fraction Pre-Assessment  <a href="#">4/5 Fraction Assessment</a>	
Recurring Concepts:  Supporting or	<ul style="list-style-type: none"> <li>● Measurement</li> <li>● Geometry: volume and area</li> <li>● Sorting Shapes</li> </ul>	<i>The recurring and supporting/secondary concepts will be taught/introduced throughout the year and assessed in the third trimester</i>	

Secondary Concepts:	<ul style="list-style-type: none"> <li>● Coordinate Grid</li> <li>● Data (integrate plotting fractions on a number line with the fraction units)</li> </ul>	<i>if/when units are explicitly taught as the focus lesson.</i>
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\*Units marked with an asterisk indicate that the unit focuses on a recurring or secondary concept, providing opportunity to assess these concepts. They should not be as heavily weighted.

Recurring Concepts can be revisited throughout the year as number talks or an application of a unit concept.

Secondary concepts have been identified as topics of less importance.

[Grade 4 Scope and Sequence](#)



## Grade Span Map 2021-22 for 5th Grade

Year-Long Focus Concept: Fractions

Timing:	T1	T2	T3
<p>Mindset Mathematics Big Ideas:</p>	<ul style="list-style-type: none"> <li>● Using numbers (and symbols) flexibly</li> <li>● Thinking in powers of 10</li> <li>● Seeing and connecting patterns across representations</li> </ul>	<ul style="list-style-type: none"> <li>● Exploring fraction Equivalence</li> <li>● Estimating with fractions</li> <li>● Thinking in cubes</li> </ul>	<ul style="list-style-type: none"> <li>● Understanding fraction multiplication visually</li> <li>● What does it mean to divide fractions</li> <li>● Exploring the coordinate plane</li> </ul>
<p>Units Concepts:</p>	<ul style="list-style-type: none"> <li>● Place Value (whole number and decimal)</li> <li>● Addition and subtraction with whole numbers and decimals</li> <li>● Multiplication of whole numbers and decimals by whole number</li> <li>● Modeling Division</li> </ul>	<ul style="list-style-type: none"> <li>● Division Concepts</li> <li>● Area and Volume*</li> <li>● Addition and Subtraction of Fractions</li> </ul>	<ul style="list-style-type: none"> <li>● Multiplication and Division of Fractions and decimals (5th grade)</li> <li>● Classifying Polygons*</li> <li>● Patterns and the Coordinate Plane*</li> </ul>
<p>Potential Common Assessments:</p>	<p>OGAP Multiplication and Division</p> <p>Place Value Assessment</p>	<p><a href="#">Speed Stacking</a></p> <p><a href="#">Dog Walking</a></p> <p><a href="#">Road Trip)</a></p> <p><a href="#">Road Trip Project</a></p> <p><a href="#">Division Assessment (Student Version)</a></p> <p><a href="#">Division Assessment (Teacher Version)</a></p>	<p><a href="#">Trail Mix</a></p> <p><a href="#">Community Garden - Michigan</a></p> <p><a href="#">Candy Dispenser</a></p> <p><a href="#">Stuffed with Pizza</a></p> <p>Bake Sale (AH)</p> <p>Fraction Assessment</p> <p><a href="#">4/5 Fraction Assessment</a></p>

Recurring Concepts:	<ul style="list-style-type: none"> <li>● Measurement</li> <li>● Geometry: volume and area</li> </ul>	<i>The recurring and supporting/secondary concepts will be taught/introduced throughout the year and assessed in the third trimester if/when units are explicitly taught as the focus lesson.</i>
Supporting or Secondary Concepts:	<ul style="list-style-type: none"> <li>● Sorting Shapes</li> <li>● Coordinate Grid</li> <li>● Data (integrate plotting fractions on a number line with the fraction units)</li> </ul>	

Year-long Focus Concepts= this should be a year-long deep conceptual focus for all student in this grade level

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\*Units marked with an asterisk indicate that the unit focuses on a recurring or secondary concept, providing opportunity to assess these concepts. They should not be as heavily weighted.

Recurring Concepts can be revisited throughout the year as number talks or an application of a unit concept.

Secondary concepts have been identified as topics of less importance.

[Grade 5 Scope and Sequence](#)

## Grade Span Map 2021-22 for 6th Grade

Year-long Focus Concept: Ratios

<p>Mindset Mathematics Big Ideas:</p>	<ul style="list-style-type: none"> <li>● Generalizing</li> <li>● Taking apart prisms and polygons (application)</li> </ul>	<ul style="list-style-type: none"> <li>● Reasoning with proportions</li> <li>● Finding and Using Unit Rates</li> <li>● Using symbols to describe the world</li> </ul>	<ul style="list-style-type: none"> <li>● Visualizing the center and spread of data</li> <li>● Expanding the number line</li> <li>● Folding and unfolding objects</li> </ul>
<p>Timing:</p>	<p>T1</p>	<p>T2</p>	<p>T3</p>
<p>Units:</p>	<ul style="list-style-type: none"> <li>● Operations with whole numbers, fractions, and decimals.</li> <li>● Patterns in numbers: prime/composite and prime factorization</li> </ul>	<ul style="list-style-type: none"> <li>● Connecting ratio and rate to division</li> <li>● Reasoning with proportions</li> <li>● Algebra Concepts, expressions, and equations</li> </ul>	<ul style="list-style-type: none"> <li>● Statistics</li> <li>● Integers</li> <li>● Geometry</li> <li>● Algebra Concepts, expressions, and equations</li> </ul>
<p>Potential Common Assessments</p> <p><a href="#">Grade 6 Planning Resource</a></p>		<p><a href="#">If I Had \$500</a></p> <p>OGAP Ratios Pre-assessment: <a href="#">Bob's Shower</a></p> <p>OGAP Ratios Post-Assessments: <a href="#">Marbles</a> and <a href="#">Cars</a></p>	
<p>Recurring Concepts:</p> <p>Supporting or Secondary Concepts:</p>	<ul style="list-style-type: none"> <li>● Integrate stats wherever possible (data talks and science/social studies)</li> <li>● Geometry (application of operations of whole number operations in tri 1/application of equations in tri 3)</li> <li>● Coordinate Grid (application of integers)</li> <li>● Nets and surface area calculations</li> <li>● Reduce the amount of required student practice in calculating measures of center and measures of variation by hand, to make room to emphasize the concept of a distribution and the usefulness of summary measures.</li> <li>● Reduce the amount of time spent creating data displays by hand.</li> </ul>		

Year-long Focus Concepts= this should be a year-long deep conceptual focus for all student in this grade level

\*Mindset Big Ideas marked with an asterisk indicates that the idea spans across grades, therefore they should be more heavily weighted (see Mindset Mathematics books for big idea lessons that support the units for that trimester)

Recurring Concepts can be revisited throughout the year as number talks or an application of a unit concept.

Secondary concepts have been identified as topics of less importance.

[Draft of 6th Grade Pilot Scope and Sequence](#)