

Grade 4 - General Resources

Assessment		Getting There	
			Resources
<p>Number sense diagnostic assessments</p> <p>These will be done twice a year: at the start of the year and at the end of the year.</p> <p>Computation Assessments</p> <p>These will be done three times a year: start of year, mid-year, and end of year. These are done to inform teaching and to demonstrate students' understanding of operations.</p> <p>Readiness Tasks</p> <p>Most units in Mathology have an opening task that can be used for class-wide pre-assessment throughout the year. The Readiness Task pages also provide links to activities from earlier grades that can be used for intervention prior to moving on to any new learning in the unit.</p>	<p>Formative</p> <p>Mathology: "Exit Ticket" questions are available at the end of the Practice Questions for each lesson. These short check-ins can be used regularly throughout the year to inform teaching.</p> <p>Assessment tables are also available at the end of each lesson. These are designed for teachers to record observations as to student progress in relation to I can Statements.</p>	<p>Effective Practices</p> <ul style="list-style-type: none"> -Whole class number talks -Integrate hands on activities -Use centers around the room with different activities -Accept variations on how students communicate -Set goals for students -Use of creative exit tickets 	<p>Mathology</p> <p>-Sample Long-Range Plan: a standard plan is available for each grade. These are easily modified to arrange units to fit with the suggested order of units in the Overview Plan document.</p> <p>-Curriculum correlations: This overview table links curricular expectations to specific Mathology lessons and grades 4-6 Learning Progressions. It also helpfully outlines specific Workbook Practice questions and pages for each Mathology unit.</p> <p>-All classroom activity Line Masters are available for download as individual pdfs or Word docs here: Grade 4 Line Masters</p> <p style="text-align: center;">Resources for Basic Facts Practice</p> <p>-<i>"Learning Basic Facts by Strategy"</i> document outlines strategies by grade for $+/-$ and \times/\div subtraction facts and provides summary charts by grade for what students should know.</p> <p>-<i>"Effective Practice for Addition and Subtraction"</i> document provides activities and support for teaching (e.g., using anchor charts, number talks, centers, and games).</p> <p style="text-align: center;">Math Tools</p> <p>-Pearson interactive math tools: this online resource provides lots of opportunities for students to practice and play around with concepts; specific tools are linked in the relevant unit section.</p> <p style="text-align: center;">Alternative Resources</p> <ul style="list-style-type: none"> -Manitoba Activities -Saskatchewan curriculum & assessments -Indigenous Education Numeracy (SD71) -Indigenous Math Network (UBC)
	<p>Summative</p> <p>Mathology: "Show What You Know" exercises are available at the end of each unit.</p>		

Grade 4 - Number Sense (Unit 1)
Mid-August to Mid-September (About 3 weeks)

In Grade 4, students explore numbers to 10 000 and continue to skip count by multiples as a regular classroom routine to support learning multiplication and division, as well as to solve problems involving increasing and decreasing patterns. Students need a deep understanding of place value as they will apply this understanding to decimal numbers later in the year.

Pre-assessment	Assessment	Getting There		Comments
		Classroom Routines	Resources	
<p>Mathology: -Readiness Task: Number Relationship & Place Value (Number Task 1) *adapt the questions given to reflect the geography of your local area or the Yukon.</p> <p>Number Sense diagnostic assessment: this is done at the start of year.</p> <p>Computation Assessment: This should be done at the start of year to identify common problems. The focus of this assessment is: -Addition & subtraction (1- and 2-digit by 2-digit)</p>	<p>Formative</p> <p>-Exit ticket questions in each section of Practice Questions</p> <p>Assessment Tables: -Representing Number using Place Value -Comparing and Ordering Quantities</p>	<p>Daily Practice for Number Sense</p> <p>-Flexible counting strategies -Skip Counting multiples -Comparing and Ordering -Place Value/Number Lines (whole number benchmarks) -Representing Numbers -Relevant Word Problems</p> <p>Daily Practice for Facts</p> <p>-See “<i>Learning Basic Facts by Strategy</i>” document for ideas -Time: 5-minute intervals -Money: nickels/dimes coins -Basic Facts practice: simple addition & subtraction</p>	<p>Mathology</p> <p>Number Unit 1: Number Relationships and Place Value</p> <p>Math Tools Place value blocks Ten frames</p>	<p>Number Sense will be spiralled throughout the year.</p> <p>Counting, skip counting, and mental math strategies for addition and subtraction basic facts should be reviewed in September through regular classroom routines.</p> <p style="text-align: center;">Spiraling and Making Connections</p> <p><i>Financial Literacy:</i> Counting sets of nickel and dimes</p>
	<p>Summative</p> <p>Mathology: -Show What You Know (NU1 lesson 6)</p>			<p style="text-align: center;">Time</p> <p>Measuring and interpreting Time is a new concept in Grade 4 and should be taught throughout the year. Consider starting with: -Mathology: Measurement Unit 3 (Readiness Task: Time)</p>

Number Sense – I Can Statements	
Counting	I can identify and say the number that comes before and after any number from 1 to 10 000.
	I can count in multiples using flexible counting strategies.
Representing and Writing Whole Numbers	I can read numbers to 10 000 and say them without using the word “and”.
	I can write numbers to 10 000 using proper spacing without commas.
	I can represent numbers to 10 000 in many ways including words, symbols, expressions, equations, and daily situations.
Place Value	I can use base ten blocks and a place value chart to represent numbers to 10 000.
	I can compare and order numbers up to 10 000
	I can explain the meaning or value of each digit in numbers up to 5-digits.
Estimation	I can estimate large quantities to 10 000.
	I can estimate sums and differences from tenths to 10 000.

Grade 4 - Number Operations: Addition/Subtraction & Multiplication/Division (Unit 2)

Mid-September to Mid-November (About 8 weeks)

Understanding relationships between operations promotes computational fluency and enhances problem solving skills.

Pre-assessment	Assessment	Getting There		Comments
		Classroom Routines	Resources	
<p>Mathology: -Readiness Tasks: Fluency with Addition & Subtraction (Number Task 2)</p> <p>Fluency with Multiplication & Division Facts (Number Task 5)</p> <p>Multiplying and Dividing Larger Numbers (Number Task 6)</p>	<p align="center">Formative</p> <p>-Exit ticket questions in each section of Practice Questions</p> <p>Assessment Tables: -Fluency of Whole Number Addition and Subtraction -Conceptual Meaning of Whole Number Addition and Subtraction -Fluency of Multiplication and Division -Representing Multiplicative Relationships and Rates -Conceptual Meaning of Multiplication and Division with Larger Numbers</p>	<p align="center">Daily Practice</p> <p>-See <i>“Learning Basic Facts by Strategy”</i> document for ideas -In <i>“Effective Practice for Addition and Subtraction”</i> see: -Ideas in ‘Centers’ section for ways to practice -Number Strings in Math Talks -Practice using Arrays -Money: nickels/dimes coins and bills</p>	<p align="center">Mathology</p> <p>Number Unit 2: Fluency with Addition and Subtraction</p> <p>Number Unit 5: Fluency with Multiplication and Division</p> <p>Number Unit 6 Multiplying and Dividing Larger Numbers</p> <p>Math Tools</p> <p align="center">Arrays</p> <p align="center">Part-to-whole strip diagrams</p> <p align="center">Equal parts strip diagrams</p>	<p>Add and subtract to 10 000 are practiced as classroom routines throughout the year. These should be revisited when teaching decimal numbers. In this unit, students learn multiplication and division of 2- or 3-digit numbers by 1-digit numbers with whole remainders. In terms of progression, students are expected to recall basic facts: -Addition/subtraction at the end of Gr. 3 -In Grade 4: Squares, Times 2, Properties of 0 and 1</p> <p align="center">Spiraling and Making Connections</p> <p>-Bar Graphs and Pictographs: one-to-many correspondence -Increasing and Decreasing Patterns -One-step Equations</p> <p><i>Financial Literacy:</i> Monetary Calculations (without decimal notation)</p>
	<p align="center">Summative</p> <p>Mathology: -Show What You Know (NU2 lesson 12, NU5 lesson 29, and NU6 lesson 35)</p>			

Number Operations – I Can Statements	
Comparing and Ordering	I can compare and order numbers to 10 000 and explain my strategy.
	I can identify errors or missing numbers in a number sequence or on a number line.
	I can order numbers from 1 to 10 000 on a number line using benchmarks.
Addition and Subtraction	I can add and subtract numbers up to 4 digits.
	I can use estimation strategies to predict and verify sums and differences to 10 000.
Multiplication and Division	I can use groups and arrays to represent multiplication and division up to 10×10 .
	I can recall multiplication facts for 2s, 5s and 10s.
	I can use mental math strategies such as doubling and halving.
	I can model multiplication for numbers up to 3-digits by 1-digit.
	I can multiply multiples of 10 and 100 by any 1-digit number.
	I can relate multiplication to division, subtraction, addition, and division with subtraction
	I can divide numbers up to 3-digits by a 1-digit divisor.
	I can use multiplication and division in real life contexts.

Grade 4 – Measurement (Unit 3)
Mid November to start of December (About 3 weeks)

We can describe, measure, and compare spatial relationships.

Pre-assessment	Assessment	Getting There		Comments
		Classroom Routines	Resources	
<p>Mathology: -Readiness Task: Length, Perimeter, Area (Measurement Task 1)</p> <p>*Alternate pre-assessment would be to go outside and measure areas in school playground as a class then have students represent what they measured on paper.</p>	<p>Formative</p> <p>-Exit ticket questions in each section of Practice Questions</p> <p>Assessment Tables: -Estimating and Investigating Area -Investigating Perimeter -Using Measurement of Time</p>	<p>Daily Practice</p> <p>-Math Talks</p> <p>-Time: practice 5/10 min intervals</p> <p>-Relevant word problems involving operations</p>	<p>Mathology</p> <p>Measurement Unit 1: Length, Perimeter and Area</p> <p>Measurement Unit 3: Time</p> <p>Math Tools</p> <p>Analog & Digital clocks</p> <p>Geoboards</p>	<p>Students are first introduced to the idea of measuring area with square units in grade 3. While the grade 4 curriculum focuses on measuring perimeter, students should make the connection between the measured perimeter of an irregular shape and the idea of additive areas.</p> <p>Learning how to tell time is emphasized in the grade 4 curriculum for measurement. Ideally, the content elaborations for telling time are addressed throughout the year, however teachers may want to spend additional time on it here.</p> <p style="text-align: center;">Spiraling and Making Connections</p> <p>-Counting: units -Adding, subtracting, multiplying and dividing: to compare and solve problems -Estimating: Referents -Problem Solving</p> <p><i>Financial Literacy:</i> Introduce notation for money</p>
	<p>Summative</p> <p>Mathology: -Show What You Know: (Measurement U1 lesson 7)</p>			<p style="text-align: center;">Time</p> <p>Mathology: - Measurement Unit 3 - Activity 13: Telling time in 5- and 10- minute intervals</p>

Measurement – I Can Statements	
Measurement	I can explain why I chose to measure with a certain metric unit.
Perimeter, Area, and Volume	I can measure the perimeter of polygons using standard units.
	I can construct different polygons given a perimeter.
	I can use geoboards and grids to create, represent, measure and calculate perimeter.
Measurement - Time	I can tell how many minutes are in an hour.
	I can tell time in 5-minute intervals and to the nearest minute.
	I can tell time using both digital and analog clocks.
	I can explain what a.m. and p.m. are, and how the 12-h and 24-h systems work.
	I can use the ideas of a circle and fractions to tell time e.g., half past, quarter to.
	I can solve problems using elapsed time and the relationship between units of time.
	I can talk about how the position of the sun and moon were used to determine times, seasons, and length of activities.

Grade 4 - Geometry of Regular and Irregular Polygons (Unit 4)

Start of December to Break (About 2 weeks)

Polygons are closed shapes with similar attributes that can be described, measured, and compared.

Pre-assessment	Assessment	Getting There		Comments
		Classroom Routines	Resources	
Mathology: -Readiness Tasks: 2D Shapes and Angles (Geometry Task 1B) Shapes and 3D Solids (Geometry Task 1A)	Formative -Exit ticket questions in each section of Practice Questions. Assessment Tables: -Identifying and Classifying Angles -Sorting Polygons -Understanding Line Symmetry -Describing and Constructing Rectangular Triangular Prisms	Daily Practice -Multiplication and division facts -Relevant word problems for polygons -Money: nickels/dime coins and bills	Mathology Geometry Unit 1B: 2D Shapes and Angles Geometry Unit 1A: 2D Shapes and 3D Objects Math Tools Pattern Blocks Exploring Objects	Students are expanding on their understanding of the attributes of polygons and learn to classify 2D shapes and 3D solids by their geometric properties. They are also enhancing their understanding of spatial relationships by connecting what they learned in the previous Measurement unit to irregular polygons. Seasonal activities to connect with geometry could include Christmas trees and ornaments. <p style="text-align: center;">Spiraling and Making Connections</p> <i>Financial Literacy:</i> Making monetary calculations in real life
	Summative Mathology: -Show What You Know (Geometry Unit 1B Lesson4; 1A Lesson 5;)			

Geometry – I Can Statements

Geometry	I can identify polygons as closed shapes with straight lines.
	I can describe and sort regular and irregular polygons based on attributes.
	I can describe differences and similarities between regular and irregular polygons.
	I can identify polygons in First Nations art, structures, and garments.

Grade 4 – Fractions (Unit 5)

January (About 3 weeks)

Fractions are numbers that represent an amount or quantity. Fractions can represent the number of parts of a region or set, or equal shares and equal sized portions.

Pre-assessment	Assessment	Getting There		Comments
		Classroom Routines	Resources	
Mathology: -Readiness Task: Fractions and Decimals (Number Task 3)	Formative -Exit ticket questions in each section of Practice Questions. Assessment Tables: -Exploring Fractions	Daily Practice -Relevant Word Problems -Math Talks -Number Lines -Fractions using Pattern Blocks - Money: nickels / dimes/quarters coins and bills - Multiplication and division facts	Mathology Number Unit 3: Fractions Math Tools Fraction Shapes Fraction Strips Relational Rods	Fractions help students understand division. They are numbers expressed as quotients in which the numerator is divided by the denominator. In grade 4, students are now representing fractions in many different ways, ordering fractions with common denominators on number lines, and estimating fractions using benchmarks.
	Summative Mathology: -Show What You Know (NU3, Lesson 19)			Spiraling and Making Connections -Measurement: half the distance, half a cup etc. -Line symmetry: congruent halves -Counting: half of 24 things -Division and sharing (e.g., a cake with friends) <i>Financial Literacy:</i> -Half a dollar, quarters, etc. -Sharing a tip amongst 4 people
				Time Mathology: -Measurement Unit 3 - Activity 14: Telling time on a 24-hour clock -Half past, or quarter to and past

I Can Statements

Fractions	I can distinguish a numerator from a denominator.
	I can identify that different meanings of fractions all represent equal partitions (e.g., sharing, division, or ratio).
	I can read and write a fraction.
	I can represent a fraction in a variety of ways, based on a whole or a collection of objects.
	I can match a fraction to part of a whole or part of a group of objects, and vice versa.

Grade 4 – Decimal Numbers to Hundredths (Unit 6a)

February (About 1 week)

Decimal numbers represent an amount or quantity. We start by introducing decimals through place value. As decimals values are like fractions and help us represent with “in-between” numbers, we also need to make the link between decimal numbers and fractions. For example, 1.3 is 1 and 3 tenths.

Pre-assessment	Assessment	Getting There		Comments
		Classroom Routines	Resources	
Mathology: -Readiness Task: Decimals (Number Task 4)	<p align="center">Formative</p> -Exit ticket questions in each section of Practice Questions. Assessment Tables: -Exploring Decimals	<p align="center">Daily Practice</p> -Math Talks -Relevant Word Problems -Qs. Relating place value to fractions -Time: Analogue clocks -Money: money notation -Multiplication and Division facts	<p align="center">Mathology</p> <p align="center">Number Unit 4: Decimals</p> <p align="center">Math Tools</p> <p align="center">Number Lines</p> <p align="center">Place-value Blocks</p>	Decimal numbers, like fractions, can represent parts of a region, set or linear model, and are used in situations where more precision is required than the whole numbers can provide. In this unit, students are learning to use correct place value up to hundredths. The use of visual aids and number lines to represent and compare decimal numbers is encouraged to enhance comprehension.
	<p align="center">Summative</p> Mathology: -Show What You Know (Number Unit 4, Lesson 23)			<p align="center">Spiraling and Making Connections</p> <p><i>Financial Literacy:</i> Introduce notation for money.</p> <p align="center">Time</p> Practice concepts related to Analogue Clocks: -5/10/25 minute intervals -Distinguishing a.m. and p.m.
		I can order fractions with the same denominator on a number line.		
		I can estimate fractions with benchmarks (0, $\frac{1}{2}$, 1).		

Grade 4 – Addition and Subtraction of Decimal Numbers to Hundredths (Unit 6b)

February (About 3 weeks)

Estimation is key to adding decimal numbers. When students estimate the whole number part of a decimal number, they will know where to place the decimal number.

Pre-assessment	Assessment	Getting There		Comments
		Classroom Routines	Resources	
<p>Mathology: -Readiness Task: Operations with Decimals (Number Task 7)</p> <p>Computation Assessment: The focus of this mid-year assessment is on whole and decimal numbers to 100ths, and looks at: -Addition & subtraction (multi-digit) -Multiplication & Division (whole numbers; simple 2-digit by 1-digit)</p>	<p>Formative</p> <p>-Exit ticket questions in each section of Practice Questions.</p> <p>Assessment Tables: -Conceptual Meaning of Addition and Subtraction of Decimals</p>	<p>Daily Practice</p> <p>-Relevant Word Problems -Math Talks (Number Strings) -Daily computation practice -Representing & ordering decimal numbers -Time: analogue vs. digital clocks</p>	<p>Mathology</p> <p>Number Unit 7: Operations with Fractions and Decimal Numbers</p> <p>Math Tools</p> <p>Place-value Blocks</p> <p>Analog and Digital Clocks</p>	<p>This unit should start with a review of a flexible strategies for addition and subtraction of whole numbers, including estimating before computing. Then, teachers are encouraged to use the same strategies for decimal numbers and use estimation to place the decimal point. This will deepen understanding of place value.</p> <p>Spiraling and Making Connections</p> <p>-Measurement: measuring and calculating perimeter -Problem Solving</p> <p><i>Financial Literacy:</i> Adding and subtracting monetary calculations</p>
	<p>Summative</p> <p>Mathology: -Show What You Know (Number Unit7, Lesson 40)</p>			<p style="text-align: center;">Time</p> <p>-Comparing Digital and Analogue Clocks</p>

I Can Statements

Decimals

I can relate fractions to decimals (tenths and hundredths).

I can represent decimal numbers up to the hundredths in many ways.

I understand that a decimal point separates wholes from parts of a whole.

I can read and write decimals in decimal notation up to hundredths.

I can explain the meaning of each digit in a decimal number if all the digits the same; ex: 1.11, 2.22

I can model using manipulatives that a tenth can be expressed as a hundredth; ex: 0.9 is equivalent to 0.90

I can use estimation to predict and verify sums and differences, and to place a decimal point.

I can add and subtract decimal numbers up to the hundredths.

I can record money values using decimals.

Grade 4 - Patterns and Relations (Unit 7)

March up to Spring Break (About 2 weeks)

Regular changes in patterns can be identified and represented using tools and tables.

Pre-assessment	Assessment	Getting There		Comments
		Classroom Routines	Resources	
Mathology: -Readiness Task: Increasing and Decreasing Patterns (Patterning and Algebra Task 1)	Formative -Exit ticket questions in each section of Practice Questions. Assessment Tables: -Generalizing and Representing Patterns - Pattern Relationships	Daily Practice - Relevant Word Problems - Addition and subtraction with decimal numbers including money - Increasing and decreasing patterns, charts and tables	Mathology Patterning Unit 1: Patterns and Relations Math Tools Graph Data	It is important that students understand the notion of consistent change in patterns. Patterns help us organize thoughts and establish order to our lives. Patterns lead to and build math, vocabulary and cognitive concepts. In this unit, students are exploring how to represent change in charts, graphs, and tables, and develop pattern rules. Spiraling and Making Connections - Application of the 4 operations <i>Financial Literacy:</i> Relevant word problems
	Summative Mathology: -Show What You Know (Patterning & Algebra U1, Lesson6)			Time -Connecting constructs of time in nature

I Can Statements

Patterns and Relations	I can represent the change in patterns using charts, graphs, and tables.
	I can describe a pattern rule for increasing and decreasing patterns.

Grade 4 – One Step Equations Algebraic Relationships (Unit 8)

April (About 4 weeks)

This unit is an introduction to algebra for students in Grade 4.

Pre-assessment	Assessment	Getting There		Comments
		Classroom Routines	Resources	
Mathology: -Readiness Task: Variables and Equations (Patterning & Algebra Task 2)	Formative -Exit ticket questions in each section of Practice Questions. Assessment Tables: -Using Symbols or Letters to Represent Unknowns. -Solving Unknowns in Equations	Daily Practice -Represent a Number -Word Problems -Math Talks -One-step equations	Mathology Patterning Unit 2: Variables and Equations Math Tools Elapsed Time Pan Balance	This is an introductory unit to Algebra, in which students are introduced to how we can represent patterns and relations with symbols, expressions, and equations. Students are learning how to solve one-step equations, by applying inverse (opposite) operations to whatever operation is being performed on the variable. After isolating variables, they are then demonstrating how to check their solutions. <p style="text-align: center;">Spiraling and Making Connections</p> -Problem Solving -Patterns -Measurement <i>Financial Literacy:</i>
	Summative Mathology: -Show What You Know (Patterning & Algebra U2 Lesson 13)			<p style="text-align: center;">Time</p> Solving problems involving: -Elapsed time -Relationship between units of time

I Can Statements

Algebra	I can represent and explain one-step equations with an unknown number.
	I can solve one-step equations with an unknown number using all operations.
	I can use concrete materials to check solutions to equations.

Grade 4 – Line Symmetry (Unit 9)

Start of May to Mid-May (About 1 week)

Lines of Symmetry help to analyze and interpret 2D shapes and 3D solids.

Pre-assessment	Assessment	Getting There		Comments
		Classroom Routines	Resources	
A quick review of the common shapes and objects covered in the geometry unit done before winter break would be beneficial.	Formative -Exit ticket questions in each section of Practice Questions. Assessment Tables: -Understanding Line Symmetry	Daily Practice -Word Problems involving all operations -Daily practice of addition and subtraction with decimal numbers (including money) Basic Facts Practice	Mathology Geometry Unit 1A: Activity 4A – Understanding Line Symmetry Math Tools Shapes: exploring symmetry	Note: Depending on class grade composition, line symmetry in grade 4 could be taught in conjunction with Geometry Unit 1 (I.e., with grade 3), or with Transformations (I.e., with grade 5). Symmetry is a fundamental part of geometry, nature, and shapes. It creates patterns that help us daily organize our world conceptually. Visit structures in your community that were designed to represent components of traditional Indigenous structures. Spiraling and Making Connections - Geometry of 2D shapes and 3D objects
	Summative Mathology: -Geometry Unit 1A Lesson 4 Practice Qs	-Increasing and decreasing patterns, charts, and tables		Time - Daily applications of measuring time

I Can Statements

Line Symmetry	I can use concrete materials to create designs that have a line of symmetry.
	I can recognize symmetry in the environment and make connections to congruence.
	I can sort shapes according to whether they have one, two or more lines of symmetry.
	I can identify symmetry in First Nations art, structures, and garments.

Grade 4 - Data Management (Unit 10a)

Mid-May to end of May (About 2 weeks)

Students are building on their knowledge of one-to-one correspondence by progressing to many-to-one correspondence, using bar graphs and pictographs.

Pre-assessment	Assessment	Getting There		Comments
		Classroom Routines	Resources	
<p>Mathology:</p> <p>-Readiness Task: Data Management (Task 1A)</p> <p>Computation Assessment</p> <p>The focus of this end-of-year assessment is on whole and decimal numbers to 100ths, and looks at:</p> <p>-Addition & subtraction (multi-digit)</p> <p>-Multiplication. & Division (whole numbers; 2- and 3-digit by 1-digit)</p>	<p>Formative</p> <p>-Exit ticket questions in each section of Practice Questions.</p> <p>Assessment Tables:</p> <p>-Describing and Representing Data</p> <p>-Interpreting Data and Making Informed Decisions</p>	<p>Daily Practice</p> <p>-Word Problems involving all operations</p> <p>-Daily practice of addition and subtraction with decimal numbers (including money)</p> <p>- Review Questions involving Bar graphs and Pictographs</p>	<p>Mathology</p> <p>Data Unit 1: Data Management</p> <p>Math Tools</p> <p>Graphing & Data</p>	<p>A one-to-one correspondence is a pairing of each object in Set A with one and only one object in Set B. A many-to-one correspondence is a pairing of each object in Set A with more than one object in Set B. This unit is an introduction to how we can display these relationships using simple bar graphs and pictographs.</p> <p style="text-align: center;">Spiraling and Making Connections</p> <p>-Multiplication and division</p> <p>-Patterns and Relations</p>
	<p>Summative</p> <p>Mathology:</p> <p>-Show What You Know (Data Man. U1A Lesson 4)</p>			<p style="text-align: center;">Time</p> <p>-Daily applications of Time</p>

I Can Statements

Data Management	I can interpret many-to-one graphs.
	I can use bar graphs and pictographs.

Grade 4 – Probability (Unit 10b)

June (About 2 weeks)

This is a new topic in Grade 4. Students will develop an understanding of chance through analyzing and interpreting experiments.

Pre-assessment	Assessment	Getting There		Comments
		Classroom Routines	Resources	
Mathology: -Readiness Task: Data Management and Probability (Task 2)	Formative -Exit ticket questions in each section of Practice Questions. Assessment Tables: -Describing and Predicting Likelihood of Outcomes	Daily Practice - Word problems - Daily practice of multiplication and division	Mathology Data Unit 2: Probability Math Tools Probability	Probability is how likely something will happen, and allows for predictions such as in political strategies, the determination of blood types, sports and gaming strategies, purchasing or selling insurance, online shopping, and online games. In this unit, students investigate single-outcome probability experiments, such as coin tosses, and learn how to tally results. Spiraling and Making Connections -Problem Solving
	Summative Mathology: -Show What You Know (Data Man. 2 lesson 9)			Time Mathology: -Show What You Know: Measurement Unit 3: Lesson 18 -Connect the Times Game (in Time: Consolidation, activity 18)

I Can Statements

Probability	I can predict single outcomes from simulated events.
	I can record results using tallies.

Grade 4 - Financial Literacy (Unit 11)

Done throughout the year

In Grade 4, students explore monetary calculations including making change (to 100 dollars) and making simple financial decisions. Ideally, Financial Literacy is taught throughout the year.

Pre-assessment	Assessment	Getting There		Comments
		Classroom Routines	Resources	
Mathology: -Number Readiness Task: Financial Literacy (Task 8)	<p style="text-align: center;">Formative</p> <ul style="list-style-type: none"> -Exit ticket questions in each section of Practice Questions. <p>Assessment Tables:</p> <ul style="list-style-type: none"> -Adding and Subtracting Money Amounts -Making Financial Decisions -Making Good Purchases 	<p style="text-align: center;">Daily Practice</p> <ul style="list-style-type: none"> -Relevant Problems -Math Talks - Making change - Basic Facts - Time 	<p>Mathology</p> <p>Number Unit 8: Financial Literacy</p> <p>Math Tools</p> <p>Money</p>	<p>Working with money provides students with a great opportunity to review the four operations with whole numbers, as well as addition and subtraction with decimal numbers, in context and in simulated situations in the classroom. Financial literacy in this grade lends itself well to project-based learning that addresses making simple financial decisions involving earning, spending, saving, and trading.</p> <p style="text-align: center;">Spiraling and Making Connections</p> <ul style="list-style-type: none"> - Four Operations: Comparing and ordering etc. - Problem Solving in real life contexts
	<p style="text-align: center;">Summative</p> <ul style="list-style-type: none"> -Show What You Know (NU8, Lesson 45) 			

I Can Statements

Financial Literacy	I can make monetary calculations in real-life contexts.
	I can use a variety of strategies to calculate totals and make change.
	I can make simple financial decisions involving earning, spending, saving and giving.
	I can trade equitably.

