BIG IDEAS

Numbers represent quantities that can be decomposed into smaller parts.	One-to-one correspondence and a sense of 5 and 10 are essential for **fluency** with numbers.	Repeating elements in **patterns** can be identified.	Objects have **attributes** that can be described, measured, and compared.	**Familiar events** can be described as likely or unlikely and compared.

Learning Standards

Curricular Competencies	Content
Students are expected to do the following: **Reasoning and analyzing** • Use reasoning to explore and make connections • **Estimate reasonably** • Develop **mental math strategies** and abilities to make sense of quantities • Use **technology** to explore mathematics • **Model** mathematics in contextualized experiences **Understanding and solving** • Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving • Visualize to explore mathematical concepts • Develop and use **multiple strategies** to engage in problem solving • Engage in problem-solving experiences that are **connected** to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures **Communicating and representing** • **Communicate** mathematical thinking in many ways • Use mathematical vocabulary and language to contribute to mathematical discussions • **Explain and justify** mathematical ideas and decisions • Represent mathematical ideas in **concrete, pictorial, and symbolic forms**	*Students are expected to know the following:* • **number concepts** to 10 • **ways to make 5** • **decomposition** of numbers to 10 • **repeating patterns** with two or three elements • **change in quantity to 10**, using concrete materials • **equality as a balance** and inequality as an imbalance • **direct comparative measurement** (e.g., linear, mass, capacity) • **single attributes** of 2D shapes and 3D objects • concrete or pictorial **graphs** as a visual tool • likelihood of **familiar life events** • **financial literacy** — attributes of coins, and financial role-play

Connecting and reflecting • **Reflect** on mathematical thinking • Connect mathematical concepts to each other and to **other areas and personal interests** • **Incorporate** First Peoples worldviews and perspectives to **make connections** to mathematical concepts	

BIG IDEAS

Numbers to 20 represent quantities that can be decomposed into 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.

Learning Standards

Curricular Competencies	Content
Students are expected to do the following: **Reasoning and analyzing** • Use reasoning to explore and make connections • **Estimate reasonably** • Develop **mental math strategies** and abilities to make sense of quantities • Use **technology** to explore mathematics • **Model** mathematics in contextualized experiences **Understanding and solving** • Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving • Visualize to explore mathematical concepts • Develop and use **multiple strategies** to engage in problem solving • Engage in problem-solving experiences that are **connected** to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures **Communicating and representing** • **Communicate** mathematical thinking in many ways • Use mathematical vocabulary and language to contribute to mathematical discussions • **Explain and justify** mathematical ideas and decisions • Represent mathematical ideas in **concrete, pictorial, and symbolic forms**	*Students are expected to know the following:* • **number concepts to 20** • **ways to make 10** • **addition and subtraction to 20** (understanding of operation and process) • **repeating patterns** with multiple elements and attributes • **change in quantity to 20**, concretely and verbally • meaning of **equality and inequality** • **direct measurement** with non-standard units (non-uniform and uniform) • comparison of **2D shapes and 3D objects** • **concrete graphs**, using one-to-one correspondence • likelihood of **familiar life events**, using comparative language • **financial literacy** — values of coins, and monetary exchanges

Connecting and reflecting • **Reflect** on mathematical thinking • Connect mathematical concepts to each other and to **other areas and personal interests** • **Incorporate** First Peoples worldviews and perspectives to **make connections** to mathematical concepts	

BIG IDEAS

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**.

Learning Standards

Curricular Competencies	Content
Students are expected to do the following: **Reasoning and analyzing** • Use reasoning to explore and make connections • **Estimate reasonably** • Develop **mental math strategies** and abilities to make sense of quantities • Use **technology** to explore mathematics • **Model** mathematics in contextualized experiences **Understanding and solving** • Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving • Visualize to explore mathematical concepts • Develop and use **multiple strategies** to engage in problem solving • Engage in problem-solving experiences that are **connected** to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures **Communicating and representing** • **Communicate** mathematical thinking in many ways • Use mathematical vocabulary and language to contribute to mathematical discussions • **Explain and justify** mathematical ideas and decisions • Represent mathematical ideas in **concrete, pictorial, and symbolic forms**	*Students are expected to know the following:* • **number concepts to 100** • **benchmarks** of 25, 50, and 100 and personal referents • addition and subtraction **facts to 20** (introduction of computational strategies) • **addition and subtraction to 100** • repeating and increasing **patterns** • **change in quantity**, using pictorial and symbolic representation • symbolic representation of equality and inequality • **direct linear measurement**, introducing standard metric units • multiple attributes of **2D shapes and 3D objects** • **pictorial representation** of concrete graphs, using one-to-one correspondence • likelihood of **familiar life events**, using comparative language • **financial literacy** — coin combinations to 100 cents, and spending and saving

Connecting and reflecting • **Reflect** on mathematical thinking • Connect mathematical concepts to each other and to **other areas and personal interests** • **Incorporate** First Peoples worldviews and perspectives to **make connections** to mathematical concepts	

BIG IDEAS

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.

Learning Standards

Curricular Competencies

Students are expected to do the following:

Reasoning and analyzing

- Use reasoning to explore and make connections
- **Estimate reasonably**
- Develop **mental math strategies** and abilities to make sense of quantities
- Use **technology** to explore mathematics
- **Model** mathematics in contextualized experiences

Understanding and solving

- Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving
- Visualize to explore mathematical concepts
- Develop and use **multiple strategies** to engage in problem solving
- Engage in problem-solving experiences that are **connected** to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures

Communicating and representing

- **Communicate** mathematical thinking in many ways
- Use mathematical vocabulary and language to contribute to mathematical discussions
- **Explain and justify** mathematical ideas and decisions
- Represent mathematical ideas in **concrete, pictorial, and symbolic forms**

Content

Students are expected to know the following:

- **number concepts to 1000**
- **fraction concepts**
- **addition and subtraction** to 1000
- addition and subtraction facts to 20 (emerging **computational fluency**)
- **multiplication and division** concepts
- increasing and decreasing **patterns**
- **pattern rules** using words and numbers, based on concrete experiences
- one-step addition and subtraction **equations** with an unknown number
- measurement, using **standard units** (linear, mass, and capacity)
- **time** concepts
- construction of **3D shapes**
- **one-to-one correspondence** with bar graphs, pictographs, charts, and tables
- likelihood of **simulated events**, using comparative language
- **financial literacy** — fluency with coins and bills to 100 dollars, and earning and payment

Connecting and reflecting • **Reflect** on mathematical thinking • Connect mathematical concepts to each other and to **other areas and personal interests** • **Incorporate** First Peoples worldviews and perspectives to **make connections** to mathematical concepts	

BIG IDEAS

Fractions and decimals are types of **numbers** that can represent quantities.	Development of computational **fluency** and multiplicative thinking requires analysis of patterns and relations in multiplication and division.	Regular changes in **patterns** can be identified and represented using tools and tables.	Polygons are closed shapes with similar **attributes** that can be described, measured, and compared.	Analyzing and interpreting experiments in **data** probability develops an understanding of chance.

Learning Standards

Curricular Competencies	Content
Students are expected to do the following: **Reasoning and analyzing** • Use reasoning to explore and make connections • **Estimate reasonably** • Develop **mental math strategies** and abilities to make sense of quantities • Use **technology** to explore mathematics • **Model** mathematics in contextualized experiences **Understanding and solving** • Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving • Visualize to explore mathematical concepts • Develop and use **multiple strategies** to engage in problem solving • Engage in problem-solving experiences that are **connected** to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures **Communicating and representing** • **Communicate** mathematical thinking in many ways • Use mathematical vocabulary and language to contribute to mathematical discussions • **Explain and justify** mathematical ideas and decisions • Represent mathematical ideas in **concrete, pictorial, and symbolic forms**	*Students are expected to know the following:* • **number concepts** to 10 000 • **decimals to hundredths** • ordering and comparing **fractions** • **addition and subtraction** to 10 000 • **multiplication and division** of two- or three-digit numbers by one-digit numbers • addition and subtraction of **decimals** to hundredths • addition and subtraction facts to 20 (developing **computational fluency**) • multiplication and division **facts** to 100 (introductory computational strategies) • increasing and decreasing **patterns**, using tables and charts • **algebraic relationships** among quantities • **one-step equations** with an unknown number, using all operations • how to **tell time** with analog and digital clocks, using 12- and 24-hour clocks • regular and irregular **polygons** • **perimeter** of regular and irregular shapes

Connecting and reflecting • **Reflect** on mathematical thinking • Connect mathematical concepts to each other and to **other areas and personal interests** • **Incorporate** First Peoples worldviews and perspectives to **make connections** to mathematical concepts	• **line symmetry** • **one-to-one correspondence** and many-to-one correspondence, using bar graphs and pictographs • **probability experiments** • **financial literacy** — monetary calculations, including making change with amounts to 100 dollars and making simple financial decisions

BIG IDEAS

Numbers describe quantities that can be represented by equivalent fractions.	Computational **fluency** and flexibility with numbers extend to operations with larger (multi-digit) numbers.	Identified regularities in number **patterns** can be expressed in tables.	Closed shapes have **area and perimeter** that can be described, measured, and compared.	**Data** represented in graphs can be used to show many-to-one correspondence.

Learning Standards

Curricular Competencies	Content
Students are expected to do the following: **Reasoning and analyzing** • Use reasoning to explore and make connections • **Estimate reasonably** • Develop **mental math strategies** and abilities to make sense of quantities • Use **technology** to explore mathematics • **Model** mathematics in contextualized experiences **Understanding and solving** • Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving • Visualize to explore mathematical concepts • Develop and use **multiple strategies** to engage in problem solving • Engage in problem-solving experiences that are **connected** to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures **Communicating and representing** • **Communicate** mathematical thinking in many ways • Use mathematical vocabulary and language to contribute to mathematical discussions • **Explain and justify** mathematical ideas and decisions • Represent mathematical ideas in **concrete, pictorial, and symbolic forms**	*Students are expected to know the following:* • **number concepts** to 1 000 000 • decimals to thousandths • equivalent fractions • whole-number, fraction, and decimal **benchmarks** • addition and subtraction of **whole numbers** to 1 000 000 • **multiplication and division** to three digits, including division with remainders • addition and subtraction of **decimals** to thousandths • **addition and subtraction facts to 20** (extending computational fluency) • multiplication and division **facts to 100** (emerging computational fluency) • rules for increasing and decreasing patterns with words, numbers, symbols, and variables • **one-step equations** with variables • area measurement of squares and rectangles • relationships between **area and perimeter** • duration, using measurement of **time** • **classification** of prisms and pyramids • single **transformations** • one-to-one correspondence and **many-to-one**

Connecting and reflecting • **Reflect** on mathematical thinking • Connect mathematical concepts to each other and to **other areas and personal interests** • **Incorporate** First Peoples worldviews and perspectives to **make connections** to mathematical concepts	**correspondence**, using double bar graphs • **probability experiments**, single events or outcomes • **financial literacy** — monetary calculations, including making change with amounts to 1000 dollars and developing simple financial plans