Simcoe County District School Board

Grade 5: Scope and Sequence

Block 1

Start of school year
to Winter Break

71 instructional days

1 First 20 Days
A1
15+ days

2 Number
B1, B2
20+ days

3 Geometric Reasoning
E1, E2
15+ days

4 Patterns and Algebra
C1
10+ days

Progress Report

Term 1

Winter Break

Block 2

Winter Break
to March Break

48 instructional days

5 Number
B1, B2, F1
15+ days

6 Algebra and Coding
C2, C3
15+ days

7 Location and Movement
E1, C3
10+ days

Term 1

Term 2

March Break

Block 3

March Break
to end of school year

67 instructional days

8 Financial Lit/Number
F1, B2
10+ days

9 Data and Probability
D1, D2
15+ days

10 Measurement
E2, B2
20+ days

11 Last 20 Days
A1
15+ days

Term 2

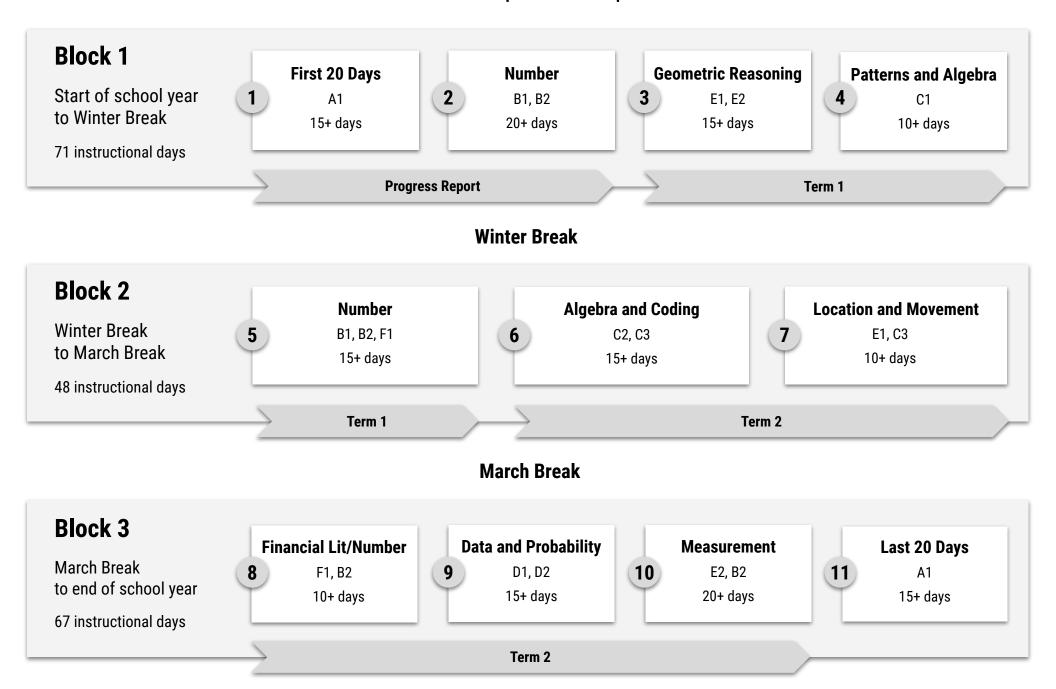**Last update:** August 2020

Grade 5: Course of Study

Welcome to the updated SCDSB Math Course of Study, revised to reflect the expectations found in _The Ontario Curriculum, Grades 1–8: Mathematics (2020)_.

The Scope and Sequence is split into three distinct "blocks", with natural breaks (Winter Break and March Break) separating them. Educators are encouraged to use their professional judgement and consider the total number of instructional days in a block, minimum unit lengths, reporting periods (indicated by the grey arrows), as well as the remaining "flex days" and how they can be used to support their students' achievement in mathematics. These "flex" days allow educators to tailor their programs to their students' needs, while ensuring they stay on course, so that sufficient time is dedicated to each unit.

This Scope and Sequence emphasizes a common focus across all grades at the same time, although unit lengths may vary from grade to grade due to shifts in emphasis in knowledge and skill development throughout the grades. Please note that because of this alignment, consideration will need to be given to the strategic organization, distribution, and sharing of resources (i.e., manipulatives) among classes.

Units are sequenced to allow for fundamental skills and concepts to be introduced early and then applied in later units, providing opportunities to deepen understanding and make connections between mathematical concepts.

The specific expectations that are to be the focus of instruction and assessment, as well as any relevant cross-strand connections are listed for each unit. Each grade has expectations that are an ongoing focus throughout the year. Previous grade expectations may be noted in this section for continued practice, however, only grade level expectations will be assessed.

Simcoe County District School Board

Grade 5: Block 1 Overview

1. First 20 Days
15+ days

Social-Emotional Learning Skills: A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

2. Number
20+ days

Number: B1. demonstrate an understanding of numbers and make connections to the way numbers are used in everyday life

Number: B2. use knowledge of numbers and operations to solve mathematical problems encountered in everyday life

B1.1 - B1.7, B2.2 - B2.5

3. Geometric Reasoning
15+ days

Spatial Sense: E1. describe and represent shape, location, and movement by applying geometric properties and spatial relationships in order to navigate the world around them

Spatial Sense: E2. compare, estimate, and determine measurements in various contexts

E1.1 - E1.3, E2.1 - E2.2

4. Patterns and Algebra
10+ days

Algebra: C1. identify, describe, extend, create, and make predictions about a variety of patterns, including those found in real-life contexts

C1.1 - C1.4

Progress Report

Term 1

Ongoing Focus:

Social-Emotional Learning: A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

Mathematical Modelling: C4. apply the process of mathematical modelling to represent, analyse, make predictions, and provide insight into real-life situations

Properties and Relationships: B2.1 use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations

Math Facts: B2.2 (*Grade 2*) recall and demonstrate addition facts for numbers up to 20, and related subtraction facts; (*Grade 5*) recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Mental Math: B2.3 (*Grade 4*) use mental math strategies to multiply whole numbers by 10, 100, 1000, divide by 10, and add and subtract decimal tenths and explain strategies used; (*Grade 5*) use mental math strategies to multiply whole numbers by 0.1, 0.01 and estimate sums and differences of decimal numbers to hundredths and explain strategies used.

Simcoe County District School Board
Grade 5: Unit 1 - First 20 Days (15+ days)

Social-Emotional Learning A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

To the best of their ability, students will learn to:	… as they apply the mathematical processes:	… so they can:
1. identify and manage emotions	**problem solving:** develop, select, and apply problem-solving strategies **reasoning and proving:** develop and apply reasoning skills (e.g., classification, recognition of relationships, use of counter-examples) to justify thinking, make and investigate conjectures, and construct and defend arguments	1. express and manage their feelings, and show understanding of the feelings of others, as they engage positively in mathematics activities
2. recognize sources of stress and cope with challenges		2. work through challenging math problems, understanding that their resourcefulness in using various strategies to respond to stress is helping them build personal resilience
3. maintain positive motivation and perseverance	**reflecting:** demonstrate that as they solve problems, they are pausing, looking back, and monitoring their thinking to help clarify their understanding (e.g., by comparing and adjusting strategies used, by explaining why they think their results are reasonable, by recording their thinking in a math journal) **connecting:** make connections among mathematical concepts, procedures, and representations, and relate mathematical ideas to other contexts (e.g., other curriculum areas, daily life, sports)	3. recognize that testing out different approaches to problems and learning from mistakes is an important part of the learning process, and is aided by a sense of optimism and hope
4. build relationships and communicate effectively	**communicating:** express and understand mathematical thinking, and engage in mathematical arguments using everyday language, language resources as necessary, appropriate mathematical terminology, a variety of representations, and mathematical conventions	4. work collaboratively on math problems – expressing their thinking, listening to the thinking of others, and practising inclusivity – and in that way fostering healthy relationships
5. develop self-awareness and sense of identity	**representing:** select from and create a variety of representations of mathematical ideas (e.g., representations involving physical models, pictures, numbers, variables, graphs), and apply them to solve problems	5. see themselves as capable math learners, and strengthen their sense of ownership of their learning, as part of their emerging sense of identity and belonging
6. think critically and creatively	**selecting tools and strategies:** select and use a variety of concrete, visual, and electronic learning tools and appropriate strategies to investigate mathematical ideas and to solve problems	6. make connections between math and everyday contexts to help them make informed judgements and decisions

Ongoing Focus:

Social-Emotional Learning: A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

Mathematical Modelling: C4. apply the process of mathematical modelling to represent, analyse, make predictions, and provide insight into real-life situations

Properties and Relationships: B2.1 use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations

Math Facts: B2.2 (*Grade 2*) recall and demonstrate addition facts for numbers up to 20, and related subtraction facts; (*Grade 5*) recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Mental Math: B2.3 (*Grade 4*) use mental math strategies to multiply whole numbers by 10, 100, 1000,divide by 10, and add and subtract decimal tenths and explain strategies used; (*Grade 5*) use mental math strategies to multiply whole numbers by 0.1, 0.01 and estimate sums and differences of decimal numbers to hundredths and explain strategies used.

Grade 5: Unit 2 - Number (20+ days)

Specific Expectations:

Whole Numbers: B1.1 read, represent, compose, and decompose whole numbers up to and including 100 000, using appropriate tools and strategies, and describe various ways they are used in everyday life

Whole Numbers: B1.2 compare and order whole numbers up to and including 100 000, in various contexts

Fractions, Decimals, and Percents: B1.3 represent equivalent fractions from halves to twelfths, including improper fractions and mixed numbers, using appropriate tools, in various contexts

Fractions, Decimals, and Percents: B1.4 compare and order fractions from halves to twelfths, including improper fractions and mixed numbers, in various contexts

Fractions, Decimals, and Percents: B1.5 read, represent, compare, and order decimal numbers up to hundredths, in various contexts

Fractions, Decimals, and Percents: B1.6 round decimal numbers to the nearest tenth, in various contexts

Fractions, Decimals, and Percents: B1.7 describe relationships and show equivalences among fractions, decimal numbers up to hundredths, and whole number percents, using appropriate tools and drawings, in various contexts

Math Facts: B2.2 recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Mental Math: B2.3 use mental math strategies to multiply whole numbers by 0.1 and 0.01 and estimate sums and differences of decimal numbers up to hundredths, and explain the strategies used

Addition and Subtraction: B2.4 represent and solve problems involving the addition and subtraction of whole numbers that add up to no more than 100 000, and of decimal numbers up to hundredths, using appropriate tools, strategies, and algorithms

Addition and Subtraction: B2.5 add and subtract fractions with like denominators, in various contexts

Cross-Strand Connections:

Patterns: C1.3 determine pattern rules and use them to extend patterns, make and justify predictions, and identify missing elements in repeating, growing, and shrinking patterns

Patterns: C1.4 create and describe patterns to illustrate relationships among whole numbers and decimal tenths and hundredths

Area: E2.5 use the area relationships among rectangles, parallelograms, and triangles to develop the formulas for the area of a parallelogram and the area of a triangle, and solve related problems

Area: E2.6 show that two dimensional shapes with the same area can have different perimeters, and solve related problems

Ongoing Focus:

Social-Emotional Learning: A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

Mathematical Modelling: C4. apply the process of mathematical modelling to represent, analyse, make predictions, and provide insight into real-life situations

Properties and Relationships: B2.1 use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations

Math Facts: B2.2 (*Grade 2*) recall and demonstrate addition facts for numbers up to 20, and related subtraction facts; (*Grade 5*) recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Mental Math: B2.3 (*Grade 4*) use mental math strategies to multiply whole numbers by 10, 100, 1000, divide by 10, and add and subtract decimal tenths and explain strategies used; (*Grade 5*) use mental math strategies to multiply whole numbers by 0.1, 0.01 and estimate sums and differences of decimal numbers to hundredths and explain strategies used.

Grade 5: Unit 3 - Geometric Reasoning (15+ days)

Specific Expectations:

Geometric Reasoning: E1.1 identify geometric properties of triangles, and construct different types of triangles when given side or angle measurements

Geometric Reasoning: E1.2 identify and construct congruent triangles, rectangles, and parallelograms

Geometric Reasoning: E1.3 draw top, front, and side views of objects, and match drawings with objects

The Metric System: E2.1 use appropriate metric units to estimate and measure length, area, mass, and capacity

The Metric System: E2.2 solve problems that involve converting larger metric units into smaller ones, and describe the base ten relationships among metric units

Cross-Strand Connections:

Math Facts: B2.2 recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Mental Math: B2.3 use mental math strategies to multiply whole numbers by 0.1 and 0.01 and estimate sums and differences of decimal numbers up to hundredths, and explain the strategies used

Addition and Subtraction: B2.4 represent and solve problems involving the addition and subtraction of whole numbers that add up to no more than 100 000, and of decimal numbers up to hundredths, using appropriate tools, strategies, and algorithms

Ongoing Focus:

Social-Emotional Learning: A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

Mathematical Modelling: C4. apply the process of mathematical modelling to represent, analyse, make predictions, and provide insight into real-life situations

Properties and Relationships: B2.1 use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations

Math Facts: B2.2 (*Grade 2*) recall and demonstrate addition facts for numbers up to 20, and related subtraction facts; (*Grade 5*) recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Mental Math: B2.3 (*Grade 4*) use mental math strategies to multiply whole numbers by 10, 100, 1000,divide by 10, and add and subtract decimal tenths and explain strategies used; (*Grade 5*) use mental math strategies to multiply whole numbers by 0.1, 0.01 and estimate sums and differences of decimal numbers to hundredths and explain strategies used.

Grade 5: Unit 4 - Patterns (10+ days)

Specific Expectations:

Patterns: C1.1 identify and describe repeating, growing, and shrinking patterns, including patterns found in real-life contexts

Patterns: C1.2 create and translate growing and shrinking patterns using various representations, including tables of values and graphs

Patterns: C1.3 determine pattern rules and use them to extend patterns, make and justify predictions, and identify missing elements in repeating, growing, and shrinking patterns

Patterns: C1.4 create and describe patterns to illustrate relationships among whole numbers and decimal tenths and hundredths

Cross-Strand Connections:

Whole Numbers: B1.1 read, represent, compose, and decompose whole numbers up to and including 100 000, using appropriate tools and strategies, and describe various ways they are used in everyday life

Math Facts: B2.2 recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Mental Math: B2.3 use mental math strategies to multiply whole numbers by 0.1 and 0.01 and estimate sums and differences of decimal numbers up to hundredths, and explain the strategies used

Ongoing Focus:

Social-Emotional Learning: A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

Mathematical Modelling: C4. apply the process of mathematical modelling to represent, analyse, make predictions, and provide insight into real-life situations

Properties and Relationships: B2.1 use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations

Math Facts: B2.2 (*Grade 2*) recall and demonstrate addition facts for numbers up to 20, and related subtraction facts; (*Grade 5*) recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Mental Math: B2.3 (*Grade 4*) use mental math strategies to multiply whole numbers by 10, 100, 1000, divide by 10, and add and subtract decimal tenths and explain strategies used; (*Grade 5*) use mental math strategies to multiply whole numbers by 0.1, 0.01 and estimate sums and differences of decimal numbers to hundredths and explain strategies used.

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Grade 5: Block 2 Overview

5

Financial Lit/Number

15+ days

Number: B2. use knowledge of numbers and operations to solve mathematical problems encountered in everyday life

Financial Literacy: F1. demonstrate the knowledge and skills needed to make informed financial decisions

B2.6 -B2.9

F1.1, F1.2

6

Algebra and Coding

15+ days

Algebra: C2. demonstrate an understanding of variables, expressions, equalities, and inequalities, and apply this understanding in various contexts

Algebra: C3. solve problems and create computational representations of mathematical situations using coding concepts and skills

C2.1 - C2.4, C3.1 - C3.2

7

Location and Movement

10+ days

Spatial Sense: E1. describe and represent shape, location, and movement by applying geometric properties and spatial relationships in order to navigate the world around them

Algebra: C3. solve problems and create computational representations of mathematical situations using coding concepts and skills

E1.4, E1.5

C3.1, C3.2

Term 1

Term 2

Ongoing Focus:

Social-Emotional Learning: A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

Mathematical Modelling: C4. apply the process of mathematical modelling to represent, analyse, make predictions, and provide insight into real-life situations

Properties and Relationships: B2.1 use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations

Math Facts: B2.2 (*Grade 2*) recall and demonstrate addition facts for numbers up to 20, and related subtraction facts; (*Grade 5*) recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Mental Math: B2.3 (*Grade 4*) use mental math strategies to multiply whole numbers by 10, 100, 1000,divide by 10, and add and subtract decimal tenths and explain strategies used; (*Grade 5*) use mental math strategies to multiply whole numbers by 0.1, 0.01 and estimate sums and differences of decimal numbers to hundredths and explain strategies used.

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Grade 5: Unit 5 - Number (15+ days)

Specific Expectations:

Multiplication and Division: B2.6 represent and solve problems involving the multiplication of two-digit whole numbers by two digit whole numbers using the area model and using algorithms, and make connections between the two methods

Multiplication and Division: B2.7 represent and solve problems involving the division of three-digit whole numbers by two digit whole numbers using the area model and using algorithms, and make connections between the two methods, while expressing any remainder appropriately

Multiplication and Division: B2.8 multiply and divide one-digit whole numbers by unit fractions, using appropriate tools and drawings

Multiplication and Division: B2.9 represent and create equivalent ratios and rates, using a variety of tools and models, in various contexts

Money Concepts: F1.1 describe several ways money can be transferred among individuals, organizations, and businesses

Money Concepts: F1.2 estimate and calculate the cost of transactions involving multiple items priced in dollars and cents, including sales tax, using various strategies

Cross-Strand Connections:

Whole Numbers: B1.1 read, represent, compose, and decompose whole numbers up to and including 100 000, using appropriate tools and strategies, and describe various ways they are used in everyday life

Equalities and Inequalities: C2.3 solve equations that involve whole numbers up to 100 in various contexts, and verify solutions

Equalities and Inequalities: C2.4 solve inequalities that involve one operation and whole numbers up to 50, and verify and graph the solutions

Ongoing Focus:

Social-Emotional Learning: A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

Mathematical Modelling: C4. apply the process of mathematical modelling to represent, analyse, make predictions, and provide insight into real-life situations

Properties and Relationships: B2.1 use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations

Math Facts: B2.2 (*Grade 2*) recall and demonstrate addition facts for numbers up to 20, and related subtraction facts; (*Grade 5*) recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Mental Math: B2.3 (*Grade 4*) use mental math strategies to multiply whole numbers by 10, 100, 1000,divide by 10, and add and subtract decimal tenths and explain strategies used; (*Grade 5*) use mental math strategies to multiply whole numbers by 0.1, 0.01 and estimate sums and differences of decimal numbers to hundredths and explain strategies used.

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Grade 5: Unit 6 - Algebra and Coding (15+ days)

Specific Expectations:

Variables: C2.1 translate among words, algebraic expressions, and visual representations that describe equivalent relationships

Variables: C2.2 evaluate algebraic expressions that involve whole numbers

Equalities and Inequalities: C2.3 solve equations that involve whole numbers up to 100 in various contexts, and verify solutions

Equalities and Inequalities: C2.4 solve inequalities that involve one operation and whole numbers up to 50, and verify and graph the solutions

Coding Skills: C3.1 solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves conditional statements and other control structures

Coding Skills: C3.2 read and alter existing code, including code that involves conditional statements and other control structures, and describe how changes to the code affect the outcome

Cross-Strand Connections:

Math Facts: B2.2 recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Location and Movement: E1.4 plot and read coordinates in the first quadrant of a Cartesian plane using various scales, and describe the translations that move a point from one coordinate to another

Location and Movement: E1.5 describe and perform translations, reflections, and rotations up to 180° on a grid, and predict the results of these transformations

Ongoing Focus:

Social-Emotional Learning: A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

Mathematical Modelling: C4. apply the process of mathematical modelling to represent, analyse, make predictions, and provide insight into real-life situations

Properties and Relationships: B2.1 use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations

Math Facts: B2.2 (*Grade 2*) recall and demonstrate addition facts for numbers up to 20, and related subtraction facts; (*Grade 5*) recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Mental Math: B2.3 (*Grade 4*) use mental math strategies to multiply whole numbers by 10, 100, 1000,divide by 10, and add and subtract decimal tenths and explain strategies used; (*Grade 5*) use mental math strategies to multiply whole numbers by 0.1, 0.01 and estimate sums and differences of decimal numbers to hundredths and explain strategies used.

Grade 5: Unit 7 - Location and Movement (10+ days)

Specific Expectations:

Location and Movement: E1.4 plot and read coordinates in the first quadrant of a Cartesian plane using various scales, and describe the translations that move a point from one coordinate to another

Location and Movement: E1.5 describe and perform translations, reflections, and rotations up to 180° on a grid, and predict the results of these transformations

Coding Skills: C3.1 solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves conditional statements and other control structures*

Coding Skills: C3.2 read and alter existing code, including code that involves conditional statements and other control structures, and describe how changes to the code affect the outcome*

Cross-Strand Connections:

Math Facts: B2.2 recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Ongoing Focus:

Social-Emotional Learning: A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

Mathematical Modelling: C4. apply the process of mathematical modelling to represent, analyse, make predictions, and provide insight into real-life situations

Properties and Relationships: B2.1 use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations

Math Facts: B2.2 (*Grade 2*) recall and demonstrate addition facts for numbers up to 20, and related subtraction facts; (*Grade 5*) recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Mental Math: B2.3 (*Grade 4*) use mental math strategies to multiply whole numbers by 10, 100, 1000,divide by 10, and add and subtract decimal tenths and explain strategies used; (*Grade 5*) use mental math strategies to multiply whole numbers by 0.1, 0.01 and estimate sums and differences of decimal numbers to hundredths and explain strategies used.

Grade 5: Block 3 Overview

8

Financial Lit/Number

15+ days

Financial Literacy: F1. demonstrate the knowledge and skills needed to make informed financial decisions

Number: B2. use knowledge of numbers and operations to solve mathematical problems encountered in everyday life

F1.1 - F1.6

B2.2 - B2.4

9

Data and Probability

20+ days

Data: D1. manage, analyse, and use data to make convincing arguments and informed decisions, in various contexts drawn from real life

Data: D2. describe the likelihood that events will happen, and use that information to make predictions

D1.1 - D1.6, D2.1, D2.2

10

Measurement

15+ days

Spatial Sense: E2. compare, estimate, and determine measurements in various contexts

Number: B2. use knowledge of numbers and operations to solve mathematical problems encountered in everyday life

E2.1 - E2.6

B2.4, B2.6, B2.7

11

Last 20 Days

10+ days

Social-Emotional Learning Skills: A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

Term 2

Ongoing Focus:

Social-Emotional Learning: A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

Mathematical Modelling: C4. apply the process of mathematical modelling to represent, analyse, make predictions, and provide insight into real-life situations

Properties and Relationships: B2.1 use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations

Math Facts: B2.2 (*Grade 2*) recall and demonstrate addition facts for numbers up to 20, and related subtraction facts; (*Grade 5*) recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Mental Math: B2.3 (*Grade 4*) use mental math strategies to multiply whole numbers by 10, 100, 1000,divide by 10, and add and subtract decimal tenths and explain strategies used; (*Grade 5*) use mental math strategies to multiply whole numbers by 0.1, 0.01 and estimate sums and differences of decimal numbers to hundredths and explain strategies used.

Grade 5: Unit 8 - Number (10+ days)

Specific Expectations:

Money Concepts: F1.1 describe several ways money can be transferred among individuals, organizations, and businesses

Money Concepts: F1.2 estimate and calculate the cost of transactions involving multiple items priced in dollars and cents, including sales tax, using various strategies

Financial Management: F1.3 design sample basic budgets to manage finances for various earning and spending scenarios

Financial Management: F1.4 explain the concepts of credit and debt, and describe how financial decisions may be impacted by each

Consumer and Civic Awareness: F1.5 calculate unit rates for various goods and services, and identify which rates offer the best value

Consumer and Civic Awareness: F1.6 describe the types of taxes that are collected by the different levels of government in Canada, and explain how tax revenue is used to provide services in the community

Math Facts: B2.2 recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts*

Mental Math: B2.3 use mental math strategies to multiply whole numbers by 0.1 and 0.01 and estimate sums and differences of decimal numbers up to hundredths, and explain the strategies used*

Addition and Subtraction: B2.4 represent and solve problems involving the addition and subtraction of whole numbers that add up to no more than 100 000, and of decimal numbers up to hundredths, using appropriate tools, strategies, and algorithms*

Cross-Strand Connections:

Whole Numbers: B1.1 read, represent, compose, and decompose whole numbers up to and including 100 000, using appropriate tools and strategies, and describe various ways they are used in everyday life

Whole Numbers: B1.2 compare and order whole numbers up to and including 100 000, in various contexts

Data Analysis: D1.6 analyse different sets of data presented in various ways, including in stacked-bar graphs and in misleading graphs, by asking and answering questions about the data, challenging preconceived notions, and drawing conclusions, then make convincing arguments and informed decisions

Ongoing Focus:

Social-Emotional Learning: A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

Mathematical Modelling: C4. apply the process of mathematical modelling to represent, analyse, make predictions, and provide insight into real-life situations

Properties and Relationships: B2.1 use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations

Math Facts: B2.2 (*Grade 2*) recall and demonstrate addition facts for numbers up to 20, and related subtraction facts; (*Grade 5*) recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Mental Math: B2.3 (*Grade 4*) use mental math strategies to multiply whole numbers by 10, 100, 1000, divide by 10, and add and subtract decimal tenths and explain strategies used; (*Grade 5*) use mental math strategies to multiply whole numbers by 0.1, 0.01 and estimate sums and differences of decimal numbers to hundredths and explain strategies used.

Grade 5: Unit 9 - Data and Probability (15+ days)

Specific Expectations:

Data Collection and Organization: D1.1 explain the importance of various sampling techniques for collecting a sample of data that is representative of a population

Data Collection and Organization: D1.2 collect data, using appropriate sampling techniques as needed, to answer questions of interest about a population, and organize the data in relative frequency tables

Data visualisation: D1.3 select from among a variety of graphs, including stacked-bar graphs, the type of graph best suited to represent various sets of data; display the data in the graphs with proper sources, titles, and labels, and appropriate scales; and justify their choice of graphs

Data visualisation: D1.4 create an infographic about a data set, representing the data in appropriate ways, including in relative-frequency tables and stacked bar graphs, and incorporating any other relevant information that helps to tell a story about the data

Data Analysis: D1.5 determine the mean and the median and identify the mode(s), if any, for various data sets involving whole numbers and decimal numbers, and explain what each of these measures indicates about the data

Data Analysis: D1.6 analyse different sets of data presented in various ways, including in stacked-bar graphs and in misleading graphs, by asking and answering questions about the data, challenging preconceived notions, and drawing conclusions, then make convincing arguments and informed decisions

Probability: D2.1 use fractions to express the probability of events happening, represent this probability on a probability line, and use it to make predictions and informed decisions

Probability: D2.2 determine and compare the theoretical and experimental probabilities of of an event happening

Cross-Strand Connections:

Multiplication and Division: B2.6 represent and solve problems involving the multiplication of two-digit whole numbers by two digit whole numbers using the area model and using algorithms, and make connections between the two methods

Multiplication and Division: B2.7 represent and solve problems involving the division of three-digit whole numbers by two digit whole numbers using the area model and using algorithms, and make connections between the two methods, while expressing any remainder appropriately

Equalities and Inequalities: C2.4 solve inequalities that involve one operation and whole numbers up to 50, and verify and graph the solutions

Ongoing Focus:

Social-Emotional Learning: A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

Mathematical Modelling: C4. apply the process of mathematical modelling to represent, analyse, make predictions, and provide insight into real-life situations

Properties and Relationships: B2.1 use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations

Math Facts: B2.2 (*Grade 2*) recall and demonstrate addition facts for numbers up to 20, and related subtraction facts; (*Grade 5*) recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Mental Math: B2.3 (*Grade 4*) use mental math strategies to multiply whole numbers by 10, 100, 1000,divide by 10, and add and subtract decimal tenths and explain strategies used; (*Grade 5*) use mental math strategies to multiply whole numbers by 0.1, 0.01 and estimate sums and differences of decimal numbers to hundredths and explain strategies used.

Grade 5: Unit 10 - Measurement (20+ days)

Specific Expectations:

The Metric System: E2.1 use appropriate metric units to estimate and measure length, area, mass, and capacity*

The Metric System: E2.2 solve problems that involve converting larger metric units into smaller ones, and describe the base ten relationships among metric units*

Angles: E2.3 compare angles and determine their relative size by matching them and by measuring them using appropriate nonstandard units

Angles: E2.4 explain how protractors work, use them to measure and construct angles up to 180°, and use benchmark angles to estimate the size of other angles

Area: E2.5 use the area relationships among rectangles, parallelograms, and triangles to develop the formulas for the area of a parallelogram and the area of a triangle, and solve related problems

Area: E2.6 show that two dimensional shapes with the same area can have different perimeters, and solve related problems

Addition and Subtraction: B2.4 represent and solve problems involving the addition and subtraction of whole numbers that add up to no more than 100 000, and of decimal numbers up to hundredths, using appropriate tools, strategies, and algorithms*

Multiplication and Division: B2.6 represent and solve problems involving the multiplication of two-digit whole numbers by two digit whole numbers using the area model and using algorithms, and make connections between the two methods*

Multiplication and Division: B2.7 represent and solve problems involving the division of three-digit whole numbers by two digit whole numbers using the area model and using algorithms, and make connections between the two methods, while expressing any remainder appropriately*

Cross-Strand Connections:

Whole Numbers: B1.1 read, represent, compose, and decompose whole numbers up to and including 100 000, using appropriate tools and strategies, and describe various ways they are used in everyday life

Fractions, Decimals, Percents: B1.5 read, represent, compare, and order decimal numbers up to hundredths, in various contexts

Fractions, Decimals, Percents: B1.6 round decimal numbers to the nearest tenth, in various contexts

Equalities and Inequalities: C2.3 solve equations that involve whole numbers up to 100 in various contexts, and verify solutions

Equalities and Inequalities: C2.4 solve inequalities that involve one operation and whole numbers up to 50, and verify and graph the solutions

Ongoing Focus:

Social-Emotional Learning: A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

Mathematical Modelling: C4. apply the process of mathematical modelling to represent, analyse, make predictions, and provide insight into real-life situations

Properties and Relationships: B2.1 use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations

Math Facts: B2.2 (*Grade 2*) recall and demonstrate addition facts for numbers up to 20, and related subtraction facts; (*Grade 5*) recall and demonstrate multiplication facts from 0 × 0 to 12 × 12, and related division facts

Mental Math: B2.3 (*Grade 4)* use mental math strategies to multiply whole numbers by 10, 100, 1000, divide by 10, and add and subtract decimal tenths and explain strategies used; (*Grade 5*) use mental math strategies to multiply whole numbers by 0.1, 0.01 and estimate sums and differences of decimal numbers to hundredths and explain strategies used.

Grade 5: Unit 11 - Last 20 Days (15+ days)

Social-Emotional Learning A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

To the best of their ability, students will learn to:	… as they apply the mathematical processes:	… so they can:
1. identify and manage emotions	**problem solving:** develop, select, and apply problem-solving strategies	1. express and manage their feelings, and show understanding of the feelings of others, as they engage positively in mathematics activities
2. recognize sources of stress and cope with challenges	**reasoning and proving:** develop and apply reasoning skills (e.g., classification, recognition of relationships, use of counter-examples) to justify thinking, make and investigate conjectures, and construct and defend arguments	2. work through challenging math problems, understanding that their resourcefulness in using various strategies to respond to stress is helping them build personal resilience
3. maintain positive motivation and perseverance	**reflecting:** demonstrate that as they solve problems, they are pausing, looking back, and monitoring their thinking to help clarify their understanding (e.g., by comparing and adjusting strategies used, by explaining why they think their results are reasonable, by recording their thinking in a math journal)	3. recognize that testing out different approaches to problems and learning from mistakes is an important part of the learning process, and is aided by a sense of optimism and hope
4. build relationships and communicate effectively	**connecting:** make connections among mathematical concepts, procedures, and representations, and relate mathematical ideas to other contexts (e.g., other curriculum areas, daily life, sports) **communicating:** express and understand mathematical thinking, and engage in mathematical arguments using everyday language, language resources as necessary, appropriate mathematical terminology, a variety of representations, and mathematical conventions	4. work collaboratively on math problems – expressing their thinking, listening to the thinking of others, and practising inclusivity – and in that way fostering healthy relationships
5. develop self-awareness and sense of identity	**representing:** select from and create a variety of representations of mathematical ideas (e.g., representations involving physical models, pictures, numbers, variables, graphs), and apply them to solve problems	5. see themselves as capable math learners, and strengthen their sense of ownership of their learning, as part of their emerging sense of identity and belonging
6. think critically and creatively	**selecting tools and strategies:** select and use a variety of concrete, visual, and electronic learning tools and appropriate strategies to investigate mathematical ideas and to solve problems	6. make connections between math and everyday contexts to help them make informed judgements and decisions

Ongoing Focus:

Social-Emotional Learning: A1. apply, to the best of their ability, a variety of social-emotional learning skills to support their use of the mathematical processes and their learning in connection with the expectations in the other five strands of the mathematics curriculum

Mathematical Modelling: C4. apply the process of mathematical modelling to represent, analyse, make predictions, and provide insight into real-life situations

Properties and Relationships: B2.1 use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations

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