

Simcoe County District School Board

Grade 7: 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

Simcoe County District School Board

Grade 7: 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 7: 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, B1.3 - B1.6, B2.1, B2.4 - B2.6)

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, E1.2, E2.1, E2.2, E2.7)

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, C2.2)

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 and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations

Math Facts: B2.2 (*Grade 5*) recall and demonstrate multiplication facts from 0×0 to 12×12 , and related division facts; (*Grade 6*) understand the divisibility rules and use them to determine whether numbers are divisible by 2, 3, 4, 5, 6, 8, 9; (*Grade 7*) understand and recall commonly used percents, fractions, and decimal equivalents

Mental Math: B2.3 (*Grade 5*) use mental math strategies, including estimation, to add and subtract whole numbers, and explain the strategies used; (*Grade 6*) use mental math strategies to multiply whole numbers by 10, 100, and 1000, divide whole numbers by 10, and add and subtract decimal tenths, and explain the strategies used; (*Grade 7*) understand and recall commonly used square numbers and their square roots

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Grade 7: 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	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)	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	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	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	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	6. make connections between math and everyday contexts to help them make informed judgements and decisions
	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	

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 and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations

Math Facts: B2.2 (*Grade 5*) recall and demonstrate multiplication facts from 0×0 to 12×12 , and related division facts; (*Grade 6*) understand the divisibility rules and use them to determine whether numbers are divisible by 2, 3, 4, 5, 6, 8, 9; (*Grade 7*) understand and recall commonly used percents, fractions, and decimal equivalents

Mental Math: B2.3 (*Grade 5*) use mental math strategies, including estimation, to add and subtract whole numbers, and explain the strategies used; (*Grade 6*) use mental math strategies to multiply whole numbers by 10, 100, and 1000, divide whole numbers by 10, and add and subtract decimal tenths, and explain the strategies used; (*Grade 7*) understand and recall commonly used square numbers and their square roots

Simcoe County District School Board

Grade 7: Unit 2 - Number (20+ days)

Specific Expectations:

Rational Numbers B1.1 represent and compare whole numbers up to and including one billion, including in expanded form using powers of ten, and describe various ways they are used in everyday life

Rational Numbers B1.3 read, represent, compare, and order rational numbers, including positive and negative fractions and decimal numbers to thousandths, in various contexts

Fractions, Decimals, and Percents B1.4 use equivalent fractions to simplify fractions, when appropriate, in various contexts

Fractions, Decimals, and Percents B1.5 generate fractions and decimal numbers between any two quantities

Fractions, Decimals, and Percents B1.6 round decimal numbers to the nearest tenth, hundredth, or whole number, as applicable, in various contexts

Properties and Relationships B2.1 use the properties and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ~~ratios, rates, and percents~~, including those requiring multiple steps or multiple operations

Addition and Subtraction B2.4 use objects, diagrams, and equations to represent, describe, and solve situations involving addition and subtraction of integers

Addition and Subtraction B2.5 add and subtract fractions, including by creating equivalent fractions, in various contexts

Multiplication and Division B2.6 determine the greatest common factor for a variety of whole numbers up to 144 and the lowest common multiple for two and three whole numbers

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 and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations

Math Facts: B2.2 (*Grade 5*) recall and demonstrate multiplication facts from 0×0 to 12×12 , and related division facts; (*Grade 6*) understand the divisibility rules and use them to determine whether numbers are divisible by 2, 3, 4, 5, 6, 8, 9; (*Grade 7*) understand and recall commonly used percents, fractions, and decimal equivalents

Mental Math: B2.3 (*Grade 5*) use mental math strategies, including estimation, to add and subtract whole numbers, and explain the strategies used; (*Grade 6*) use mental math strategies to multiply whole numbers by 10, 100, and 1000, divide whole numbers by 10, and add and subtract decimal tenths, and explain the strategies used; (*Grade 7*) understand and recall commonly used square numbers and their square roots

Cross-Strand Connections:

Patterns: C1.4 create and describe patterns to illustrate relationships among integers

Data Analysis: D1.6 analyse different sets of data presented in various ways, including in circle 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

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Grade 7: Unit 3 - Geometric Reasoning (15+ days)

Specific Expectations:

Geometric Reasoning E1.1 describe and classify cylinders, pyramids, and prisms according to their geometric properties, including plane and rotational symmetry

Geometric Reasoning E1.2 draw top, front, and side views, as well as perspective views, of objects and physical spaces, using appropriate scales

The Metric System E2.1 describe the differences and similarities between volume and capacity, and apply the relationship between millilitres (mL) and cubic centimetres (cm³) to solve problems

The Metric System E2.2 solve problems involving perimeter, area, and volume that require converting from one metric unit of measurement to another

Volume and Surface Area E2.7 show that the volume of a prism or cylinder can be determined by multiplying the area of its base by its height, and apply this relationship to find the area of the base, volume, and height of prisms and cylinders when given two of the three measurements

Cross-Strand Connections:

Multiplication and Division: B2.9 multiply and divide decimal numbers by decimal numbers, in various contexts

Fractions, Decimals, and Percents B1.6 round decimal numbers to the nearest tenth, hundredth, or whole number, as applicable, in various contexts

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 and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations

Math Facts: B2.2 (*Grade 5*) recall and demonstrate multiplication facts from 0×0 to 12×12 , and related division facts; (*Grade 6*) understand the divisibility rules and use them to determine whether numbers are divisible by 2, 3, 4, 5, 6, 8, 9; (*Grade 7*) understand and recall commonly used percents, fractions, and decimal equivalents

Mental Math: B2.3 (*Grade 5*) use mental math strategies, including estimation, to add and subtract whole numbers, and explain the strategies used; (*Grade 6*) use mental math strategies to multiply whole numbers by 10, 100, and 1000, divide whole numbers by 10, and add and subtract decimal tenths, and explain the strategies used; (*Grade 7*) understand and recall commonly used square numbers and their square roots

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Grade 7: Unit 4 - Patterns (10+ days)

Specific Expectations:

Patterns C1.1 identify and compare a variety of repeating, growing, and shrinking patterns, including patterns found in real-life contexts, and compare linear growing patterns on the basis of their constant rates and initial values

Patterns C1.2 create and translate repeating, growing, and shrinking patterns involving whole numbers and decimal numbers using various representations, including algebraic expressions and equations for linear growing patterns

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 involving whole numbers and decimal numbers, and use algebraic representations of the pattern rules to solve for unknown values in linear growing patterns

Patterns C1.4 create and describe patterns to illustrate relationships among integers

Variables and Expressions C2.2 evaluate algebraic expressions that involve whole numbers and decimal numbers

Cross-Strand Connections:

Data Analysis D1.3 select from among a variety of graphs, including circle 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

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 and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations

Math Facts: B2.2 (*Grade 5*) recall and demonstrate multiplication facts from 0×0 to 12×12 , and related division facts; (*Grade 6*) understand the divisibility rules and use them to determine whether numbers are divisible by 2, 3, 4, 5, 6, 8, 9; (*Grade 7*) understand and recall commonly used percents, fractions, and decimal equivalents

Mental Math: B2.3 (*Grade 5*) use mental math strategies, including estimation, to add and subtract whole numbers, and explain the strategies used; (*Grade 6*) use mental math strategies to multiply whole numbers by 10, 100, and 1000, divide whole numbers by 10, and add and subtract decimal tenths, and explain the strategies used; (*Grade 7*) understand and recall commonly used square numbers and their square roots

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Grade 7: Block 2 Overview

5

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

(B1.2, B1.6, B1.7, B2.2, B2.3, B2.7 - B2.10)

Term 1

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, B2.1)

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

(E1.3, E1.4)

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 and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations

Math Facts: B2.2 (*Grade 5*) recall and demonstrate multiplication facts from 0×0 to 12×12 , and related division facts; (*Grade 6*) understand the divisibility rules and use them to determine whether numbers are divisible by 2, 3, 4, 5, 6, 8, 9; (*Grade 7*) understand and recall commonly used percents, fractions, and decimal equivalents

Mental Math: B2.3 (*Grade 5*) use mental math strategies, including estimation, to add and subtract whole numbers, and explain the strategies used; (*Grade 6*) use mental math strategies to multiply whole numbers by 10, 100, and 1000, divide whole numbers by 10, and add and subtract decimal tenths, and explain the strategies used; (*Grade 7*) understand and recall commonly used square numbers and their square roots

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Grade 7: Unit 5 - Number (15+ days)

Specific Expectations:

Rational Numbers B1.2 identify and represent perfect squares, and determine their square roots, in various contexts

Fractions, Decimals, and Percents B1.6 round decimal numbers to the nearest tenth, hundredth, or whole number, as applicable, in various contexts

Fractions, Decimals, and Percents B1.7 convert between fractions, decimal numbers, and percents, in various contexts

Math Facts B2.2 understand and recall commonly used percents, fractions, and decimal equivalents

Mental Math B2.3 use mental math strategies to increase and decrease a whole number by 1%, 5%, 10%, 25%, 50%, and 100%, and explain the strategies used

Multiplication and Division B2.7 evaluate and express repeated multiplication of whole numbers using exponential notation, in various contexts

Multiplication and Division B2.8 multiply and divide fractions by fractions, using tools in various contexts

Multiplication and Division B2.9 multiply and divide decimal numbers by decimal numbers, in various contexts

Multiplication and Division B2.10 identify proportional and non-proportional situations and apply proportional reasoning to solve 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 and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations

Math Facts: B2.2 (*Grade 5*) recall and demonstrate multiplication facts from 0×0 to 12×12 , and related division facts; (*Grade 6*) understand the divisibility rules and use them to determine whether numbers are divisible by 2, 3, 4, 5, 6, 8, 9; (*Grade 7*) understand and recall commonly used percents, fractions, and decimal equivalents

Mental Math: B2.3 (*Grade 5*) use mental math strategies, including estimation, to add and subtract whole numbers, and explain the strategies used; (*Grade 6*) use mental math strategies to multiply whole numbers by 10, 100, and 1000, divide whole numbers by 10, and add and subtract decimal tenths, and explain the strategies used; (*Grade 7*) understand and recall commonly used square numbers and their square roots

Cross-Strand Connections:

Data Analysis: D1.6 analyse different sets of data presented in various ways, including in circle 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

Money Concepts F1.1 identify and compare exchange rates, and convert foreign currencies to Canadian dollars and vice versa

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Grade 7: Unit 6 - Algebra and Coding (15+ days)

Specific Expectations:

Variables C2.1 add and subtract monomials with a degree of 1 that involve whole numbers, using tools

Variables C2.2 evaluate algebraic expressions that involve whole numbers and decimal numbers

Equalities and Inequalities C2.3 solve equations that involve multiple terms, whole numbers, and decimal numbers in various contexts, and verify solutions

Equalities and Inequalities C2.4 solve inequalities that involve multiple terms and whole numbers, and verify and graph the solutions

Coding Skills C3.1 solve problems and create computational representations of mathematical situations by writing and executing efficient code, including code that involves events influenced by a defined count and/or sub-program and other control structures

Coding Skills C3.2 read and alter existing code, including code that involves events influenced by a defined count and/or sub-program and other control structures, and describe how changes to the code affect the outcomes and the efficiency of the code

Properties and Relationships B2.1 use the properties and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations

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 and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations

Math Facts: B2.2 (*Grade 5*) recall

and demonstrate multiplication facts from 0×0 to 12×12 , and related division facts; (*Grade 6*) understand the divisibility rules and use them to determine whether numbers are divisible by 2, 3, 4, 5, 6, 8, 9; (*Grade 7*) understand and recall commonly used percents, fractions, and decimal equivalents

Mental Math: B2.3 (*Grade 5*) use

mental math strategies, including estimation, to add and subtract whole numbers, and explain the strategies used; (*Grade 6*) use mental math strategies to multiply whole numbers by 10, 100, and 1000, divide whole numbers by 10, and add and subtract decimal tenths, and explain the strategies used; (*Grade 7*) understand and recall commonly used square numbers and their square roots

Simcoe County District School Board

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

Specific Expectations:

Location and Movement E1.3 perform dilations and describe the similarity between the image and the original shape

Location and Movement E1.4 describe and perform translations, reflections, and rotations on a Cartesian plane, and predict the results of these transformations

Cross-Strand Connections:

Multiplication and Division: B2.10 identify proportional and non-proportional situations and apply proportional reasoning to solve 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 and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations

Math Facts: B2.2 (*Grade 5*) recall

and demonstrate multiplication facts from 0×0 to 12×12 , and related division facts; (*Grade 6*) understand the divisibility rules and use them to determine whether numbers are divisible by 2, 3, 4, 5, 6, 8, 9; (*Grade 7*) understand and recall commonly used percents, fractions, and decimal equivalents

Mental Math: B2.3 (*Grade 5*) use

mental math strategies, including estimation, to add and subtract whole numbers, and explain the strategies used; (*Grade 6*) use mental math strategies to multiply whole numbers by 10, 100, and 1000, divide whole numbers by 10, and add and subtract decimal tenths, and explain the strategies used; (*Grade 7*) understand and recall commonly used square numbers and their square roots

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Grade 7: 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)

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 - E2.7)

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 and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations

Math Facts: B2.2 (*Grade 5*) recall and demonstrate multiplication facts from 0×0 to 12×12 , and related division facts; (*Grade 6*) understand the divisibility rules and use them to determine whether numbers are divisible by 2, 3, 4, 5, 6, 8, 9; (*Grade 7*) understand and recall commonly used percents, fractions, and decimal equivalents

Mental Math: B2.3 (*Grade 5*) use mental math strategies, including estimation, to add and subtract whole numbers, and explain the strategies used; (*Grade 6*) use mental math strategies to multiply whole numbers by 10, 100, and 1000, divide whole numbers by 10, and add and subtract decimal tenths, and explain the strategies used; (*Grade 7*) understand and recall commonly used square numbers and their square roots

Simcoe County District School Board

Grade 7: Unit 8 - Financial Literacy (10+ days)

Specific Expectations:

Money Concepts F1.1 identify and compare exchange rates, and convert foreign currencies to Canadian dollars and vice versa

Financial Management F1.2 identify and describe various reliable sources of information that can help with planning for and reaching a financial goal

Financial Management F1.3 create, track, and adjust sample budgets designed to meet longer-term financial goals for various scenarios

Financial Management F1.4 identify various societal and personal factors that may influence financial decision making, and describe the effects that each might have

Consumer and Civic Awareness F1.5 explain how interest rates can impact savings, investments, and the cost of borrowing to pay for goods and services over time

Consumer and Civic Awareness F1.6 compare interest rates and fees for different accounts and loans offered by various financial institutions, and determine the best option for different scenarios

Cross-Strand Connections:

Data Visualization: D1.3 select from among a variety of graphs, including circle 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 Visualization: D1.4 create an infographic about a data set, representing the data in appropriate ways, including in tables and circle graphs, and incorporating any other relevant information that helps to tell a story about the data

Fractions, Decimals, and Percents: B1.6 round decimal numbers to the nearest tenth, hundredth, or whole number, as applicable, in various contexts

Fractions, Decimals, and Percents: B1.7 convert between fractions, decimal numbers, and percents, in various contexts

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 and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations

Math Facts: B2.2 (*Grade 5*) recall and demonstrate multiplication facts from 0×0 to 12×12 , and related division facts; (*Grade 6*) understand the divisibility rules and use them to determine whether numbers are divisible by 2, 3, 4, 5, 6, 8, 9; (*Grade 7*) understand and recall commonly used percents, fractions, and decimal equivalents

Mental Math: B2.3 (*Grade 5*) use mental math strategies, including estimation, to add and subtract whole numbers, and explain the strategies used; (*Grade 6*) use mental math strategies to multiply whole numbers by 10, 100, and 1000, divide whole numbers by 10, and add and subtract decimal tenths, and explain the strategies used; (*Grade 7*) understand and recall commonly used square numbers and their square roots

Simcoe County District School Board

Grade 7: Unit 9 - Data and Probability (15+ days)

Specific Expectations:

Data Collection and Organization D1.1 explain why percentages are used to represent the distribution of a variable for a population or sample in large sets of data, and provide examples

Data Collection and Organization D1.2 collect qualitative data and discrete and continuous quantitative data to answer questions of interest, and organize the sets of data as appropriate, including using percentages

Data Visualization D1.3 select from among a variety of graphs, including circle 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 Visualization D1.4 create an infographic about a data set, representing the data in appropriate ways, including in tables and circle graphs, and incorporating any other relevant information that helps to tell a story about the data

Data Analysis D1.5 determine the impact of adding or removing data from a data set on a measure of central tendency, and describe how these changes alter the shape and distribution of the data

Data Analysis D1.6 analyse different sets of data presented in various ways, including in circle 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 describe the difference between independent and dependent events, and explain how their probabilities differ, providing examples

Probability D2.2 determine and compare the theoretical and experimental probabilities of two independent events happening and of two dependent events happening

Cross-Strand Connections:

Fractions, Decimals, and Percents B1.7 convert between fractions, decimal numbers, and percents, in various contexts

Fractions, Decimals, and Percents B2.2 understand and recall commonly used percents, fractions, and decimal equivalents

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 and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations

Math Facts: B2.2 (*Grade 5*) recall and demonstrate multiplication facts from 0×0 to 12×12 , and related division facts; (*Grade 6*) understand the divisibility rules and use them to determine whether numbers are divisible by 2, 3, 4, 5, 6, 8, 9; (*Grade 7*) understand and recall commonly used percents, fractions, and decimal equivalents

Mental Math: B2.3 (*Grade 5*) use mental math strategies, including estimation, to add and subtract whole numbers, and explain the strategies used; (*Grade 6*) use mental math strategies to multiply whole numbers by 10, 100, and 1000, divide whole numbers by 10, and add and subtract decimal tenths, and explain the strategies used; (*Grade 7*) understand and recall commonly used square numbers and their square roots

Simcoe County District School Board

Grade 7: Unit 10 - Measurement (20+ days)

Specific Expectations:

The Metric System E2.1 describe the differences and similarities between volume and capacity, and apply the relationship between millilitres (mL) and cubic centimetres (cm³) to solve problems

The Metric System E2.2 solve problems involving perimeter, area, and volume that require converting from one metric unit of measurement to another*

Circles E2.3 use the relationships between the radius, diameter, and circumference of a circle to explain the formula for finding the circumference and to solve related problems

Circles E2.4 construct circles when given the radius, diameter, or circumference

Circles E2.5 show the relationships between the radius, diameter, and area of a circle, and use these relationships to develop the formula for measuring the area of a circle and to solve related problems

Volume and Surface Area E2.6 represent cylinders as nets and determine their surface area by adding the areas of their parts

Volume and Surface Area E2.7 show that the volume of a prism or cylinder can be determined by multiplying the area of its base by its height, and apply this relationship to find the area of the base, volume, and height of prisms and cylinders when given two of the three measurements

Cross-Strand Connections:

Multiplication and Division: B2.9 multiply and divide decimal numbers by decimal numbers, in various contexts

Fractions, Decimals, and Percents B1.6 round decimal numbers to the nearest tenth, hundredth, or whole number, as applicable, in various contexts

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 and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations

Math Facts: B2.2 (*Grade 5*) recall and demonstrate multiplication facts from 0×0 to 12×12 , and related division facts; (*Grade 6*) understand the divisibility rules and use them to determine whether numbers are divisible by 2, 3, 4, 5, 6, 8, 9; (*Grade 7*) understand and recall commonly used percents, fractions, and decimal equivalents

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Simcoe County District School Board

Grade 7: 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)	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	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	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	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	6. make connections between math and everyday contexts to help them make informed judgements and decisions
	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	

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 and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations

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