

Correlation of Mathematics Readers Grade 6 to the Ontario Mathematics Curriculum

Number Sense and Numeration

OVERALL EXPECTATION

A.2.

Students will solve problems involving the multiplication and division of whole numbers, and the addition and subtraction of decimal numbers to thousandths, using a variety of strategies.

Correlated Lessons:

Watch It Grow, Where Germs Lurk, Land Animals, Sea Creatures, A Sense of Art, Landscape by Design, Package Design, Pack It Up Page Reader: Objective 35 Students add, subtract, multiply, and divide integers, and rational numbers

What Did I Eat?, How Do They Make That? Page 60, 65: Objective 4 Students will apply and extend previous understandings of addition, subtraction, multiplication, and division of rational numbers,

SPECIFIC EXPECTATION

A.3.

Students will demonstrate an understanding of relationships involving percent, ratio, and unit rate.

Correlated Lessons:

On the Road, Our New Car Page 36, 41: Objective 1 Students will use ratio language to describe relationships and solve real-world problems including rates and percent.

On the Road, Our New Car Page Reader: Objective 27 Students understand the concepts of ratio, proportion, and percent and the relationships among them

On the Road, Our New Car Page Reader: Objective 28 Students use proportional reasoning to solve mathematical and real-world problems (e.g., involving equivalent fractions, equal ratios, constant rate of change, proportions, percents)

SPECIFIC EXPECTATION

A.1.6.

Solve problems that arise from real-life situations and that relate to the magnitude of whole numbers up to 1 000 000;

Correlated Lessons:

Watch It Grow, Where Germs Lurk Page Reader: Objective 34 Students understand the characteristics and uses of exponents and scientific notation

SPECIFIC EXPECTATION

A.2.3.

Add and subtract decimal numbers to thousandths, using concrete materials, estimation, algorithms, and calculators;

Correlated Lessons:

Watch It Grow, Where Germs Lurk, Land Animals, Sea Creatures, A Sense of Art, Landscape by Design, Package Design, Pack It Up Page Reader: Objective 35 Students add, subtract, multiply, and divide integers, and rational numbers

What Did I Eat?, How Do They Make That? Page 60, 65: Objective 4 Students will apply and extend previous understandings of addition, subtraction, multiplication, and division of rational numbers,

SPECIFIC EXPECTATION

A.2.8.

Explain the need for a standard order for performing operations, by investigating the impact that changing the order has when performing a series of operations.

Correlated Lessons:

Watch It Grow, Where Germs Lurk Page Reader: Objective 37 Students understand the correct order of operations for performing arithmetic computations

SPECIFIC EXPECTATION

A.3.1.

Represent ratios found in real-life contexts, using concrete materials, drawings, and standard fractional notation;

Correlated Lessons:

On the Road, Our New Car Page 36, 41: Objective 1 Students will use ratio language to describe relationships and solve real-world problems including rates and percent.

On the Road, Our New Car Page Reader: Objective 27 Students understand the concepts of ratio, proportion, and percent and the relationships among them

On the Road, Our New Car Page Reader: Objective 28 Students use proportional reasoning to solve mathematical and real-world problems (e.g., involving equivalent fractions, equal ratios, constant rate of change, proportions, percents)

SPECIFIC EXPECTATION

A.3.2.

Determine and explain, through investigation using concrete materials, drawings, and calculators, the relationships among fractions (i.e., with denominators of 2, 4, 5, 10, 20, 25, 50, and 100), decimal numbers, and percents;

Correlated Lessons:

What Did I Eat?, How Do They Make That? Page Reader: Objective 32 Students understand the relationships among equivalent number representations and the advantages and disadvantages of each type of representation

SPECIFIC EXPECTATION

A.3.3.

Represent relationships using unit rates.

Correlated Lessons:

On the Road, Our New Car Page 36, 41: Objective 1 Students will use ratio language to describe relationships and solve real-world problems including rates and percent.

On the Road, Our New Car Page Reader: Objective 27 Students understand the concepts of ratio, proportion, and percent and the relationships among them

On the Road, Our New Car Page Reader: Objective 28 Students use proportional reasoning to solve mathematical and real-world problems (e.g., involving equivalent fractions, equal ratios, constant rate of change, proportions, percents)

On the Road, Our New Car Page Reader: Objective 29 Students understand the basic concept of rate as a measure (e.g., miles per gallon)

Measurement

OVERALL EXPECTATION

B.2.

Students will determine the relationships among units and measurable attributes, including the area of a parallelogram, the area of a triangle, and the volume of a triangular prism.

Correlated Lessons:

A Sense of Art, Landscape by Design Page Reader: Objective 43 Students solve problems involving perimeter (circumference) and area of various shapes

Package Design, Pack It Up Page 156, 161: Objective 16 Students will find the surface area and volume of rectangular prisms and cylinders.

SPECIFIC EXPECTATION

B.1.2.

Estimate, measure, and record length, area, mass, capacity, and volume, using the metric measurement system.

Correlated Lessons:

A Sense of Art, Landscape by Design Page Reader: Objective 43 Students solve problems involving perimeter (circumference) and area of various shapes

SPECIFIC EXPECTATION

B.2.1.

Select and justify the appropriate metric unit (i.e., millimetre, centimetre, decimetre, metre, decametre, kilometre) to measure length or distance in a given real-life situation;

Correlated Lessons:

A Sense of Art, Landscape by Design, Package Design, Pack It Up Page Reader: Objective 45 Students understand the relationships among linear dimensions, area, and volume and the corresponding uses of units, square units, and cubic units of measure

SPECIFIC EXPECTATION

B.2.2.

Solve problems requiring conversion from larger to smaller metric units;

Correlated Lessons:

On the Road, Our New Car Page Reader: Objective 30 Students solve problems involving units of measurement and converts answers to a larger or smaller unit within the same system (i.e., standard or metric)

SPECIFIC EXPECTATION

B.2.6.

Solve problems involving the estimation and calculation of the areas of triangles and the areas of parallelograms;

Correlated Lessons:

A Sense of Art, Landscape by Design Page Reader: Objective 43 Students solve problems involving perimeter (circumference) and area of various shapes

A Sense of Art, Landscape by Design, Package Design, Pack It Up Page Reader: Objective 44 Students understand formulas for finding measures (e.g., area, volume, surface area)

SPECIFIC EXPECTATION

B.2.7.

Determine, using concrete materials, the relationship between units used to measure area (i.e., square centimetre, square metre), and apply the relationship to solve problems that involve conversions from square metres to square centimetres;

Correlated Lessons:

A Sense of Art, Landscape by Design, Package Design, Pack It Up Page Reader: Objective 45 Students understand the relationships among linear dimensions, area, and volume and the corresponding uses of units, square units, and cubic units of measure

SPECIFIC EXPECTATION

B.2.9.

Determine, through investigation using a variety of tools and strategies, the surface area of rectangular and triangular prisms;

Correlated Lessons:

A Sense of Art, Landscape by Design, Package Design, Pack It Up Page Reader: Objective 44 Students understand formulas for finding measures (e.g., area, volume, surface area)

Package Design, Pack It Up Page 156, 161: Objective 16 Students will find the surface area and volume of rectangular prisms and cylinders.

SPECIFIC EXPECTATION

B.2.10.

Solve problems involving the estimation and calculation of the surface area and volume of triangular and rectangular prisms.

Correlated Lessons:

A Sense of Art, Landscape by Design, Package Design, Pack It Up Page Reader: Objective 44 Students understand formulas for finding measures (e.g., area, volume, surface area)

Package Design, Pack It Up Page 156, 161: Objective 16 Students will find the surface area and volume of rectangular prisms and cylinders.

Patterning and Algebra

OVERALL EXPECTATION

D.2.

Students will use variables in simple algebraic expressions and equations to describe relationships.

Correlated Lessons:

Land Animals, Sea Creatures Page 108, 113: Objective 10 Students will write and solve equations and inequalities.

SPECIFIC EXPECTATION

D.2.1.

Demonstrate an understanding of different ways in which variables are used;

Correlated Lessons:

Watch It Grow, Where Germs Lurk, Land Animals, Sea Creatures Page Reader: Objective 39 Students understand that a variable can be used in many ways

SPECIFIC EXPECTATION

D.2.2.

Identify, through investigation, the quantities in an equation that vary and those that remain constant;

Correlated Lessons:

Watch It Grow, Where Germs Lurk, Land Animals, Sea Creatures Page Reader: Objective 39 Students understand that a variable can be used in many ways

SPECIFIC EXPECTATION

D.2.3.

Solve problems that use two or three symbols or letters as variables to represent different unknown quantities;

Correlated Lessons:

Land Animals, Sea Creatures Page 108, 113: Objective 10 Students will write and solve equations and inequalities.

Land Animals, Sea Creatures Page Reader: Objective 42 Students solve simple inequalities and non-linear equations with rational number solutions, using concrete and informal methods

SPECIFIC EXPECTATION

D.2.4.

Determine the solution to a simple equation with one variable, through investigation using a variety of tools and strategies.

Correlated Lessons:

Land Animals, Sea Creatures Page Reader: Objective 41 Students solve linear equations using concrete, informal, and formal methods

Land Animals, Sea Creatures Page Reader: Objective 42 Students solve simple inequalities and non-linear equations with rational number solutions, using concrete and informal methods

Data Management and Probability

OVERALL EXPECTATION

E.1.

Students will collect and organize discrete or continuous primary data and secondary data and display the data using charts and graphs, including continuous line graphs.

Correlated Lessons:

Hurricane Hunters, Tornado Chasers, Tonight's Concert, Battle of the Bands Page Reader: Objective 51 Students organize and display data using tables, graphs (e.g., line, circle, bar), frequency distributions, and plots (e.g., box-and-whiskers)

Tonight's Concert, Battle of the Bands Page 204, 209: Objective 21 Students will understand how to read and construct statistical graphs.

SPECIFIC EXPECTATION

E.1.2.

Collect and organize discrete or continuous primary data and secondary data and display the data in charts, tables, and graphs (including continuous line graphs) that have appropriate titles, labels, and scales that suit the range and distribution of the data, using a variety of tools;

Correlated Lessons:

Hurricane Hunters, Tornado Chasers, Tonight's Concert, Battle of the Bands Page Reader: Objective 51
Students organize and display data using tables, graphs (e.g., line, circle, bar), frequency distributions, and plots (e.g., box-and-whiskers)

SPECIFIC EXPECTATION

E.1.3.

Select an appropriate type of graph to represent a set of data, graph the data using technology, and justify the choice of graph (i.e., from types of graphs already studied, such as pictographs, horizontal or vertical bar graphs, stem-and-leaf plots, double bar graphs, broken-line graphs, and continuous line graphs);

Correlated Lessons:

Tonight's Concert, Battle of the Bands Page Reader: Objective 52 Students understand that the same set of data can be represented using a variety of tables, graphs, and symbols

SPECIFIC EXPECTATION

E.2.1.

Read, interpret, and draw conclusions from primary data and from secondary data;

Correlated Lessons:

Hurricane Hunters, Tornado Chasers Page 180, 185: Objective 19 Students will learn to use measures of central tendency. They will also learn to use a box plot.

Hurricane Hunters, Tornado Chasers, Tonight's Concert, Battle of the Bands Page Reader: Objective 49
Students read and interpret data in charts, tables, and plots

Tonight's Concert, Battle of the Bands Page 204, 209: Objective 21 Students will understand how to read and construct statistical graphs.

SPECIFIC EXPECTATION

E.2.2.

Compare, through investigation, different graphical representations of the same data;

Correlated Lessons:

Tonight's Concert, Battle of the Bands Page Reader: Objective 52 Students understand that the same set of data can be represented using a variety of tables, graphs, and symbols

SPECIFIC EXPECTATION

E.2.4.

Demonstrate an understanding of mean, and use the mean to compare two sets of related data, with and without the use of technology;

Correlated Lessons:

Hurricane Hunters, Tornado Chasers Page 180, 185: Objective 19 Students will learn to use measures of central tendency. They will also learn to use a box plot.

Hurricane Hunters, Tornado Chasers Page Reader: Objective 46 Students understand basic characteristics of measures of central tendency (i.e., mean, mode, median)

Hurricane Hunters, Tornado Chasers Page Reader: Objective 48 Students understand the basic concepts of center and dispersion of data

SPECIFIC EXPECTATION

E.2.5.

Demonstrate, through investigation, an understanding of how data from charts, tables, and graphs can be used to make inferences and convincing arguments.

Correlated Lessons:

Hurricane Hunters, Tornado Chasers, Tonight's Concert, Battle of the Bands Page Reader: Objective 50 Students use data and statistical measures for a variety of purposes (e.g., formulating hypotheses, making predictions, testing conjectures)