

Correlation of Mathematics Readers Grade 5 to the Ontario Mathematics Curriculum

Number Sense and Numeration

OVERALL EXPECTATION

A.3.

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

Correlated Lessons:

Night Skies, It Started with Pizza Objective 30 Students will develop fluency in adding, subtracting, multiplying, and dividing whole numbers.

SPECIFIC EXPECTATION

A.4.

Students will demonstrate an understanding of proportional reasoning by investigating whole-number rates.

Correlated Lessons:

Ocean Maps, Shipwreck Detectives Objective 39 Students understand how the scale in maps and drawings show relative size and distance.

SPECIFIC EXPECTATION

A.1.1.

Represent, compare, and order whole numbers and decimal numbers from 0.01 to 100 000, using a variety of tools;

Correlated Lessons:

My Store in the Mall, Grandpa's Birthday Present Objective 25 Students will recognize and generate equivalent forms of commonly used fractions, decimals, and percents.

My Store in the Mall, Grandpa's Birthday Present Objective 26 Students will develop and use strategies to estimate computations involving fractions and decimals in situations relevant to students' experience

SPECIFIC EXPECTATION

A.3.1.

Solve problems involving the addition, subtraction, and multiplication of whole numbers, using a variety of mental strategies;

Correlated Lessons:

Night Skies, It Started with Pizza Objective 30 Students will develop fluency in adding, subtracting, multiplying, and dividing whole numbers.

SPECIFIC EXPECTATION

A.3.3.

Multiply two-digit whole numbers by two-digit whole numbers, using estimation, student-generated algorithms, and standard algorithms;

Correlated Lessons:

Night Skies, It Started with Pizza Objective 30 Students will develop fluency in adding, subtracting, multiplying, and dividing whole numbers.

SPECIFIC EXPECTATION

A.3.4.

Divide three-digit whole numbers by one-digit whole numbers, using concrete materials, estimation, student-generated algorithms, and standard algorithms;

Correlated Lessons:

Night Skies, It Started with Pizza Objective 30 Students will develop fluency in adding, subtracting, multiplying, and dividing whole numbers.

SPECIFIC EXPECTATION

A.4.2.

Determine and explain, through investigation using concrete materials, drawings, and calculators, the relationship between fractions (i.e., with denominators of 2, 4, 5, 10, 20, 25, 50, and 100) and their equivalent decimal forms;

Correlated Lessons:

My Store in the Mall, Grandpa's Birthday Present Objective 25 Students will recognize and generate equivalent forms of commonly used fractions, decimals, and percents.

Measurement

OVERALL EXPECTATION

B.1.

Students will estimate, measure, and record perimeter, area, temperature change, and elapsed time, using a variety of strategies.

Correlated Lessons:

At the Aquarium, Hot Air Balloons Objective 46 Students will use geometric models to solve problems in other areas of mathematics, such as number and measurement.

The Winning Angle, Basketball Angles Objective 34 Students will use geometric models to solve problems in other areas of mathematics, such as number and measurement.

The Winning Angle, Basketball Angles Objective 35 Students will recognize geometric ideas and relationships and apply them to other disciplines and to problems that arise in the classroom or in everyday life.

The Winning Angle, Basketball Angles Objective 36 Students will solve problems that arise in mathematics and in other contexts.

Towns and Cities, Amusement Parks Objective 42 Students will develop, understand, and use formulas to find the area of rectangles.

Towns and Cities, Amusement Parks Objective 43 Students will develop strategies for estimating the perimeters and areas of irregular shapes.

Towns and Cities; Amusement Parks Pages 132, 137 Objective 13 Students will measure the perimeter and area of objects.

SPECIFIC EXPECTATION

B.2.

Students will determine the relationships among units and measurable attributes, including the area of a rectangle and the volume of a rectangular prism.

Correlated Lessons:

At the Aquarium, Hot Air Balloons Objective 48 Students will develop strategies to determine the surface areas and volumes of various shapes.

SPECIFIC EXPECTATION

B.1.4.

Estimate and measure the perimeter and area of regular and irregular polygons, using a variety of tools and strategies.

Correlated Lessons:

At the Aquarium, Hot Air Balloons Objective 46 Students will use geometric models to solve problems in other areas of mathematics, such as number and measurement.

The Winning Angle, Basketball Angles Objective 34 Students will use geometric models to solve problems in other areas of mathematics, such as number and measurement.

The Winning Angle, Basketball Angles Objective 35 Students will recognize geometric ideas and relationships and apply them to other disciplines and to problems that arise in the classroom or in everyday life.

The Winning Angle, Basketball Angles Objective 36 Students will solve problems that arise in mathematics and in other contexts.

Towns and Cities, Amusement Parks Objective 42 Students will develop, understand, and use formulas to find the area of rectangles.

Towns and Cities, Amusement Parks Objective 43 Students will develop strategies for estimating the perimeters and areas of irregular shapes.

Towns and Cities; Amusement Parks Pages 132, 137 Objective 13 Students will measure the perimeter and area of objects.

SPECIFIC EXPECTATION

B.2.5.

Determine, through investigation using a variety of tools and strategies, the relationships between the length and width of a rectangle and its area and perimeter, and generalize to develop the formulas [i.e., Area = length x width; Perimeter = (2 x length) + (2 x width)];

Correlated Lessons:

Towns and Cities, Amusement Parks Objective 42 Students will develop, understand, and use formulas to find the area of rectangles.

SPECIFIC EXPECTATION

B.2.6.

Solve problems requiring the estimation and calculation of perimeters and areas of rectangles;

Correlated Lessons:

Towns and Cities, Amusement Parks Objective 42 Students will develop, understand, and use formulas to find the area of rectangles.

Geometry and Spatial Sense

OVERALL EXPECTATION

C.1.

Students will identify and classify two-dimensional shapes by side and angle properties, and compare and sort three-dimensional figures.

Correlated Lessons:

The Winning Angle, Basketball Angles Objective 33 Students will describe images of objects, patterns, and paths.

The Winning Angle; Basketball Angles Pages 84, 89 Objective 7 Students will understand and be able to determine the different types of angles.

SPECIFIC EXPECTATION

C.1.1.

Distinguish among polygons, regular polygons, and other two-dimensional shapes;

Correlated Lessons:

The Winning Angle, Basketball Angles Objective 33 Students will describe images of objects, patterns, and paths.

SPECIFIC EXPECTATION

C.1.2.

Distinguish among prisms, right prisms, pyramids, and other three-dimensional figures;

Correlated Lessons:

The Winning Angle, Basketball Angles Objective 33 Students will describe images of objects, patterns, and paths.

SPECIFIC EXPECTATION

C.1.3.

Identify and classify acute, right, obtuse, and straight angles;

Correlated Lessons:

The Winning Angle; Basketball Angles Pages 84, 89 Objective 7 Students will understand and be able to determine the different types of angles.

SPECIFIC EXPECTATION

C.1.4.

Measure and construct angles up to 90 degrees, using a protractor;

Correlated Lessons:

The Winning Angle; Basketball Angles Pages 84, 89 Objective 7 Students will understand and be able to determine the different types of angles.

SPECIFIC EXPECTATION

C.3.2.

Compare grid systems commonly used on maps (i.e., the use of numbers and letters to identify an area; the use of a coordinate system based on the cardinal directions to describe a specific location);

Correlated Lessons:

CSI; The Jungle Park Case Pages 180, 185 Objective 19 Students will analyze and interpret graphs.

Graphs in Action; It's Our Business Pages 204, 209 Objective 22 Students will understand how to read and write the various types of graphs, as well as determine which types of graphs are appropriate to use for different situations.

Ocean Maps, Shipwreck Detectives Objective 37 Students will use coordinate systems to specify locations and to describe paths.

Ocean Maps, Shipwreck Detectives Objective 38 Students will find the distance between points along horizontal and vertical lines of a coordinate system.

Ocean Maps; Shipwreck Detectives Pages 108, 113 Objective 10 Students will understand how to read and create coordinate planes.

Patterning and Algebra

OVERALL EXPECTATION

D.2.

Students will demonstrate, through investigation, an understanding of the use of variables in equations.

Correlated Lessons:

Night Skies, It Started with Pizza Objective 29 Students will represent the idea of a variable as an unknown quantity using a letter or a symbol.

Night Skies; It Started with Pizza Pages 60, 65 Objective 4 Students will understand the meaning of variables and expressions and how they are related to writing equations.

SPECIFIC EXPECTATION

D.1.1.

Create, identify, and extend numeric and geometric patterns, using a variety of tools;

Correlated Lessons:

The Winning Angle, Basketball Angles Objective 33 Students will describe images of objects, patterns, and paths.

SPECIFIC EXPECTATION

D.1.4.

Make predictions related to growing and shrinking geometric and numeric patterns;

Correlated Lessons:

The Winning Angle, Basketball Angles Objective 33 Students will describe images of objects, patterns, and paths.

EXPECTATION

D.2.3.

Determine the missing number in equations involving addition, subtraction, multiplication, or division and one- or two-digit numbers, using a variety of tools and strategies

Correlated Lessons:

Night Skies, It Started with Pizza Objective 29 Students will represent the idea of a variable as an unknown quantity using a letter or a symbol.

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 broken-line graphs.

Correlated Lessons:

CSI, The Jungle Park Case Objective 51 Students will understand that data comes in many different forms and that collecting, organizing, and displaying data can be done in several ways.

Graphs in Action, It's Our Business Objective 54 Students will collect data using observations, surveys, and experiments.

SPECIFIC EXPECTATION**E.2.**

Students will read, describe, and interpret primary data and secondary data presented in charts and graphs, including broken-line graphs.

Correlated Lessons:

CSI, The Jungle Park Case Objective 49 Students will understand that data represents specific pieces of information about real-world objects or activities.

Graphs in Action, It's Our Business Objective 55 Students will apply and adapt a variety of appropriate strategies to solve problems.

SPECIFIC EXPECTATION**E.1.2.**

Collect data by conducting a survey or an experiment to do with themselves, their environment, issues in their school or community, or content from another subject, and record observations or measurements;

Correlated Lessons:

Graphs in Action, It's Our Business Objective 54 Students will collect data using observations, surveys, and experiments.

SPECIFIC EXPECTATION**E.1.3.**

Collect and organize discrete or continuous primary data and secondary data and display the data in charts, tables, and graphs (including broken-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:

CSI, The Jungle Park Case Objective 51 Students will understand that data comes in many different forms and that collecting, organizing, and displaying data can be done in several ways.

Graphs in Action, It's Our Business Objective 54 Students will collect data using observations, surveys, and experiments.

SPECIFIC EXPECTATION

E.1.5.

Describe, through investigation, how a set of data is collected and explain whether the collection method is appropriate.

Correlated Lessons:

CSI, The Jungle Park Case Objective 51 Students will understand that data comes in many different forms and that collecting, organizing, and displaying data can be done in several ways.

Graphs in Action, It's Our Business Objective 54 Students will collect data using observations, surveys, and experiments.

SPECIFIC EXPECTATION

E.2.1.

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

Correlated Lessons:

CSI, The Jungle Park Case Objective 49 Students will understand that data represents specific pieces of information about real-world objects or activities.

Graphs in Action, It's Our Business Objective 55 Students will apply and adapt a variety of appropriate strategies to solve problems.