

Correlation of Mathematics Readers Level 6 to

Québec Education Program Progression of Learning

**Arithmetic: Understanding and writing numbers**

**Natural numbers less than 1,000,000**

**Essential Knowledge**

Identifies properties of natural numbers: Square, prime or composite numbers

Correlated Lessons:
Watch It Grow, Where Germs Lurk Page Reader: Objective 36 Students understand exponentiation of rational numbers (e.g., squares and cubes)

**Essential Knowledge**

Represents the power of a natural number

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

Watch It Grow, Where Germs Lurk Page Reader: Objective 36 Students understand exponentiation of rational numbers (e.g., squares and cubes)

**Fractions (using objects or drawings)**

**Essential Knowledge**

Verifies whether two fractions are equivalent

Correlated Lessons:
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)

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

**Essential Knowledge**

Matches a decimal or percentage to a fraction

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

**Decimals up to thousandths**

**Essential Knowledge**

Recognizes equivalent expressions (e.g. 12 tenths is equivalent to 1 unit and 2 tenths; 0.5 is equivalent to 0.50)

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

**Essential Knowledge**

Matches: A fraction to its decimal

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

**Essential Knowledge**

Matches: A fraction or percentage to its decimal

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

**Arithmetic: Meaning of operations involving numbers**

**Natural numbers less than 1,000,000**

**Essential Knowledge**

Transformation (adding, taking away), uniting, comparing

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

**Essential Knowledge**

Translates a situation using a series of operations in accordance with the order 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

**Decimals up to thousandths**

**Essential Knowledge**

Transformation (adding, taking away), uniting, comparing

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

**Essential Knowledge**

Composition of mixed transformations

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

**Essential Knowledge**

Translates a situation into a series of operations in accordance with the order 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

**Arithmetic: Operations involving numbers**

**Natural numbers (based on the benchmarks for each cycle)**

**Essential Knowledge**

Determines the missing term in an equation (relationships between operations): a + b = □, a + □ = c, □ + b = c, a – b = □, a – □ = c, □ – b = c

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

**Essential Knowledge**

Determines the missing term in an equation (relationships between operations):a × b = □, a × □ = c, □ × b = c, a ÷ b = □, a ÷ □ = c, □ ÷ b = c

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

**Essential Knowledge**

Calculates the power of a number

Correlated Lessons:
Watch It Grow, Where Germs Lurk Page Reader: Objective 36 Students understand exponentiation of rational numbers (e.g., squares and cubes)

**Essential Knowledge**

Performs a series of operations in accordance with the order 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

**Fractions (using objects or diagrams)**

**Essential Knowledge**

Generates a set of equivalent fractions

Correlated Lessons:
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)

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

**Essential Knowledge**

Adds and subtracts fractions when the denominator of one fraction is a multiple of the other fraction(s)

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

What Did I Eat?, How Do They Make That? Page Reader: Objective 33 Students add and subtract fractions with unlike denominators; multiples and divides fraction

**Essential Knowledge**

Multiplies a natural number by a fraction

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

**Decimals**

**Essential Knowledge**

Approximates the result of**:** An addition or a subtraction

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

**Essential Knowledge**

Develops processes for mental computation: Adds and subtracts decimals

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

**Essential Knowledge**

Performs operations involving decimals (multiplication, division by a natural number)

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

**Essential Knowledge**

Develops processes for written computation: Adds and subtracts decimals whose result does not go beyond the second decimal place

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

**Essential Knowledge**

Multiplies decimals whose product does not go beyond the second decimal place

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

**Essential Knowledge**

Divides a decimal by a natural number less than 11

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

**Using Numbers**

**Essential Knowledge**

Expresses a decimal as a fraction, and vice versa

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

**Essential Knowledge**

Expresses a decimal as a percentage, and vice versa

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

**Essential Knowledge**

Expresses a fraction as a percentage, and vice versa

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

**Essential Knowledge**

Chooses an appropriate number form for a given context

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

**Geometry**

**Frieze patterns and tessellations**

**Essential Knowledge**

Identifies congruent figures

Correlated Lessons:
On the Road, Our New Car Page Reader: Objective 31 Students understand the mathematical concepts of similarity (e.g., scale, proportion, growth rates) and congruency

**Measurement**

**Lengths**

**Essential Knowledge**

Calculates the perimeter of plane figures

Correlated Lessons:
A Sense of Art, Landscape by Design Page 132, 137: Objective 13 Students will find the perimeter and area of polygons and circles in mathematical and real-world contexts

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)

**Surface areas**

**Essential Knowledge**

Estimates and measures surface area**:** Using conventional units

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

**Volumes
Essential Knowledge**

Estimates and measures volume: Using conventional units

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

**Statistics**

**Essential Knowledge**

Collects, describes and organizes data (classifies or categorizes) using tables

Correlated Lessons:
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

**Essential Knowledge**

Interprets data using: A table, a bar graph, a pictograph, a broken-line graph and a circle graph

Correlated Lessons:
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

**Essential Knowledge**

Displays data using: A table, a bar graph, a pictograph and a broken-line graph

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

**Essential Knowledge**

Understands and calculates the arithmetic mean

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