

# Grade 5/Year 6 Scope and Sequence

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# G5/Y6 Overview

Number	Addition	Subtraction	Multiplication	Division	Fractions
<ul style="list-style-type: none"> <li>- Read, write, compare and order whole numbers up to the millions.</li> <li>- Investigate and identify properties of prime, composite, square and triangular numbers.</li> <li><i>*Note, prime and composite are explored in multiplication.</i></li> <li>- Understand and use powers of ten.</li> <li>- Explore real-life situations that use integers and decimals and locate and represent these on a number line.</li> <li>- Round to the nearest 10, 100, 1,000 and beyond.</li> <li>- Round decimals to the nearest tenth, hundredth and whole number.</li> <li>- Use the order of operations (PEMDAS) to write number sentences.</li> </ul>	<ul style="list-style-type: none"> <li>- Choose and apply effective mental and written strategies to solve addition.</li> <li>- Develop mental and written strategies to add decimal amounts.</li> <li>- Use rounding, subtraction or other addition strategies to check answers.</li> <li>- Solve addition word problems using a range of strategies.</li> </ul>	<ul style="list-style-type: none"> <li>- Choose and apply effective mental and written strategies to solve subtraction.</li> <li>- Develop mental and written strategies to subtract decimal amounts.</li> <li>- Use rounding, addition or other subtraction strategies to check answers.</li> <li>- Solve word problems that involve addition and subtraction using a range of strategies.</li> </ul>	<ul style="list-style-type: none"> <li>- Apply times table patterns and strategies to recall multiplication facts.</li> <li>- Investigate multiples, factors and common factors, including prime and composite numbers.</li> <li>- Multiply and divide by 10, 100 and 1,000.</li> <li>- Explore number flexibility and find creative strategies to multiply large numbers.</li> <li>- Develop efficient mental and written strategies to multiply decimals and whole numbers.</li> <li>- Solve word problems involving the multiplication of whole numbers and/or decimals.</li> </ul>	<ul style="list-style-type: none"> <li>- Identify rules of divisibility.</li> <li>- Use multiplication to divide.</li> <li>- Develop efficient mental and written strategies to multiply integers and decimal amounts.</li> <li>- Divide by whole numbers where the results are terminating decimals.</li> <li>- Solve word problems involving multiplying and dividing whole numbers and decimals.</li> </ul>	<ul style="list-style-type: none"> <li>- Identify equivalent fractions.</li> <li>- Find fractions of amounts.</li> <li>- Compare fractions using the lowest common multiple.</li> <li>- Convert improper fractions to mixed numbers and vice versa.</li> <li>- Add and subtract fractions, including mixed numbers and improper fractions.</li> <li>- Investigate the connection between fractions, decimals and percentages.</li> <li>- Convert and order fractions, decimals and percentages.</li> <li>- Investigate and calculate percentage discounts.</li> </ul>

Measurement	Shape and Space	Statistics, Probability & Data Handling	Ratio and Proportion	Algebra
<ul style="list-style-type: none"> <li>- Connect decimals and fractions to measurement.</li> <li>- Read and interpret scales on a range of measuring instruments.</li> <li>- Convert between common units of length, mass and capacity.</li> <li>- Solve problems involving the comparison of length, mass and capacity.</li> <li>- Problem solve using the perimeter and area of compound shapes and triangles.</li> <li>- Connect volume and capacity.</li> <li>- Interpret and use timetables.</li> </ul>	<ul style="list-style-type: none"> <li>- Create simple prisms and pyramids and make real-world connections.</li> <li>- Explore translations, reflections and rotations.</li> <li>- Graph and interpret coordinates using all four quadrants of the Cartesian coordinate system.</li> <li>- Find unknown angles using angles on a straight line, at a point and vertically-opposite angles.</li> </ul>	<ul style="list-style-type: none"> <li>- Use fractions, percentages and decimals to describe probability.</li> <li>- Create experiments using chance and collect, record and display data in the most appropriate graph.</li> <li>- Compare observed frequencies across experiments with expected frequencies.</li> <li>- Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables.</li> <li>- Interpret secondary data.</li> </ul>	<ul style="list-style-type: none"> <li>- Use appropriate ratio and proportion vocabulary.</li> <li>- Identify ratios in collections and make connections to fractions.</li> <li>- Use multiplication and division to identify ratios and solve problems.</li> <li>- Use proportion to manipulate quantities and calculate discounts.</li> <li>- Solve problems involving scale factors.</li> </ul>	<ul style="list-style-type: none"> <li>- Solve problems involving unknown input and output amounts.</li> <li>- Form and solve expressions.</li> <li>- Solve equations where there is one or more unknown amounts.</li> <li>- Create formula from linear patterns.</li> <li>- Identify value pairs.</li> <li>- Solve formulae with two unknowns.</li> </ul>

# Place Value

## Objectives

- Read, write, compare and order whole numbers up to the millions.
- Investigate and identify properties of prime, composite, square and triangular numbers.  
*\*Note, prime and composite are explored in multiplication.*
- Understand and use powers of ten.
- Explore real-life situations that use integers and decimals and locate and represent these on a number line.
- Round to the nearest 10, 100, 1,000 and beyond.
- Round decimals to the nearest tenth, hundredth and whole number.
- Use the order of operations (PEMDAS) to write number sentences.

## Awesomenicity Lessons

Lesson 1: **Recapping place value and expanding numbers**

Lesson 2: **Compare large numbers**

Lesson 3: **Rounding numbers to the nearest 10, 100, 1,000 (and beyond)**

Lesson 4: **Introducing decimals to the thousandths**

Lesson 5: **Comparing and ordering decimals**

Lesson 6: **Finding decimals on a number line**

Lesson 7: **Rounding to the nearest whole number**

Lesson 8: **Rounding to the nearest tenth, hundredth and whole number**

Lesson 9: **Exploring Powers of Ten**

Lesson 10: **Introduction to square numbers**

Lesson 11: **Applying order of operations**

Lesson 12: **Negative Numbers**

Lesson 13: **Investigating triangular numbers**

Lesson 14: **Consolidate place value knowledge**



Place value

Consolidation and assessment.

Lesson 15: **Place Value Assessment**

# Addition & Subtraction

## Objectives

- Choose and apply effective mental and written strategies to solve addition and subtraction.
- Develop mental and written strategies to add and subtract decimal amounts.
- Use rounding, inverse operations or other strategies to check answers.
- Solve word problems that involve addition and subtraction using a range of strategies.

## Awesomenicity Lessons

Lesson 1: Using bump strategy to add

Lesson 2: Using bump strategy to subtract

Lesson 3: Applying bump strategy to add and subtract

Lesson 4: Using split strategy to add decimals

Lesson 5: Using split strategy to subtract tenths

Lesson 6: Using compensation strategy to add decimals

Lesson 7: Using compensation strategy to subtract decimals

Lesson 8: Intro to adding decimals (hundredths) using written methods

Lesson 9: Using column method to subtract decimals (hundredths)

Lesson 10: Adding and subtracting decimals

Lesson 11: Estimating and budgeting using addition and subtraction

Lesson 12: Addition and subtraction problem-solving

Lesson 13: Solving word problems

Lesson 14: Applying problem solving skills



Consolidation and assessment.

Lesson 15: Addition and subtraction assessment



Addition and subtraction

# Multiplication/Division Part A

## Objectives

- Apply times table patterns and strategies to recall multiplication facts.
- Investigate multiples, factors and common factors, including prime and composite numbers.
- Multiply and divide by 10, 100 and 1,000.
- Explore number flexibility and find creative strategies to multiply large numbers.
- Solve word problems involving the multiplication of whole numbers and/or decimals.

## Awesomenicity Lessons

Lesson 1: **Applying the 4 operations**

Lesson 2: **Investigating factors**

Lesson 3: **Connecting multiples and factors**

Lesson 4: **Identifying common factors**

Lesson 5: **Exploring divisibility**

Lesson 6: **Applying inverse operations**

Lesson 7: **Applying problem solving skills**

Lesson 8: **X and  $\div$  by 10, 100 and 1,000**

Lesson 9: **Creating and solving word problems**



Consolidation and assessment.

Lesson 10: **X and  $\div$  Part A Assessment**



Multiplication &  
Division Part A

# Multiplication/Division Part B

## Objectives

- Identify rules of divisibility.
- Use multiplication to divide.
- Develop efficient mental and written strategies to multiply and divide decimals and whole numbers
- Divide by whole numbers where the results are terminating decimals. .
- Solve word problems involving the multiplication of whole numbers and/or decimals

## Awesomenicity Lessons

Lesson 1: Exploring creative ways to multiply

Lesson 2: Learning grid method (area models)

Lesson 3: Learning partial product strategy

Lesson 4: Using multiplication to problem-solve

Lesson 5: Learning short multiplication

Lesson 6: Applying short multiplication

Lesson 7: Multiplying decimals (tenths)

Lesson 8: Multiplying decimals (hundredths)

Lesson 9: Learning chunking strategy division

Lesson 10: Applying chunking strategy

Lesson 11: Learning long division

Lesson 12: Using long division to divide decimals

Lesson 13: Learning short division

Lesson 14: Using short division to problem-solve

Lesson 15: Using factors to divide (2-digit divisor)

Lesson 16: Long division and 2-digit divisors

Lesson 17: Solving word problems

Lesson 18: Use multiplication and division to problem-solve



Multiplication &  
Division Part B

Consolidation and assessment.

Lesson 19: X and ÷ Part B Assessment

# Fractions

## Objectives

- Identify equivalent fractions.
- Find fractions of amounts.
- Compare fractions using the lowest common multiple.
- Convert improper fractions to mixed numbers and vice versa.
- Add and subtract fractions, including mixed numbers and improper fractions.
- Investigate the connection between fractions, decimals and percentages.
- Convert and order fractions, decimals and percentages.
- Investigate and calculate percentage discounts.

## Awesomenicity Lessons

Lesson 1: Identifying fractions

Lesson 2: Creating equivalent fractions

Lesson 3: Simplifying fractions

Lesson 4: Simplifying fractions in a game

Lesson 5: Comparing unlike fractions

Lesson 6: Comparing unlike fractions in a game

Lesson 7: Calculating fractions of amounts

Lesson 8: Problem-solving with fractions of amounts

Lesson 9: Mixed numbers and improper fractions

Lesson 10: Improper fractions and mixed numbers

Lesson 11: Adding and subtracting unlike fractions

Lesson 12: Solving addition and subtraction puzzles

Lesson 13: Connecting fractions, decimals and percentages

Lesson 14: Converting fractions, decimals and percentages

Lesson 15: Converting fractions to decimals

Lesson 16: Ordering decimals, fractions and percentages

Lesson 17: Calculating percentages

Lesson 18: Calculating percentages and problem-solving

Lesson 19: Multiplying fractions by whole numbers

Lesson 20: Multiplying fractions by fractions



Consolidation and assessment.

Lesson 21: Dividing fractions by whole numbers

Lesson 22: Fractions Assessment



Fractions

# Measurement

## Objectives

- Connect decimals and fractions to measurement.
- Read and interpret scales on a range of measuring instruments.
- Convert between common units of length, mass and capacity.
- Solve problems involving the comparison of length, mass and capacity.
- Problem solve using the perimeter and area of compound shapes and triangles.
- Connect volume and capacity.
- Interpret and use timetables.

## Awesomenicity Lessons

Lesson 1: **Identifying different types of measurement**

Lesson 2: **Measuring length with accuracy**

Lesson 3: **Measuring length and converting between units**

Lesson 4: **Identifying scale and exploring capacity/volume**

Lesson 5: **Introduction to mass**

Lesson 6: **Measurement problem-solving**

Lesson 7: **Calculate perimeter of compound shapes**

Lesson 8: **Calculating the area of compound shapes**

Lesson 9: **Calculating the area of triangles**

Lesson 10: **Calculating the area and perimeter of parallelograms**

Lesson 11: **Exploring volume**

Lesson 12: **Applying understanding of volume**



Consolidation and assessment.

Lesson 13: **Metric Olympics!**

Lesson 14: **Measurement Assessment**



Measurement

# Shape and Space

## Objectives

- Create simple prisms and pyramids and make real-world connections.
- Explore translations, reflections and rotations.
- Graph and interpret coordinates using all four quadrants of the Cartesian coordinate system.
- Find unknown angles using angles on a straight line, at a point and vertically-opposite angles.

## Awesomenicity Lessons

Lesson 1: Identifying and measuring angles



Lesson 2: Calculating angles

Lesson 3: Classifying triangles and measuring their angles

Lesson 4: Making connections between quadrilaterals

Lesson 5: Finding missing angles

Lesson 6: Investigating circle vocabulary connections

Lesson 7: Constructing cuboids from nets

Lesson 8: Creating nets and constructing cuboids

Lesson 9: Locating and plotting coordinates

Lesson 10: Plotting coordinates

Lesson 11: Translating shapes on a grid

Lesson 12: Reflecting shapes

Lesson 13: Making & describing translations



Lesson 14: Shape and Space Assessment



Shape and space

Consolidation and assessment.

# Statistics, Probability and Data

## Objectives

- Use fractions, percentages and decimals to describe probability.
- Create experiments using chance and collect, record and display data in the most appropriate graph.
- Compare observed frequencies across experiments with expected frequencies.
- Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables.
- Interpret secondary data.

## Awesomenicity Lessons

Lesson 1: **Interpreting graphs**

Lesson 2: **Interpreting pie graphs**

Lesson 3: **Drawing pie graphs**

Lesson 4: **Gathering and presenting data**

Lesson 5: **Calculating mean average**

Lesson 6: **Mean, mode, median and range**

Lesson 7: **Exploring timetables**

Lesson 8: **Exploring probability**

Lesson 9: **Using probability to make predictions**

Lesson 10: **Applying probability**



Consolidation and assessment.

Lesson 11: **Statistics, Probability and Data Assessment**



Data and probability

# Ratio and Proportion

## Objectives

- Use appropriate ratio and proportion vocabulary.
- Identify ratios in collections and make connections to fractions.
- Use multiplication and division to identify ratios and solve problems.
- Use proportion to manipulate quantities and calculate discounts.
- Solve problems involving scale factors.

## Awesomenicity Lessons

Lesson 1: **Introduction to ratio vocabulary**

Lesson 2: **Identifying ratio and fractions**

Lesson 3: **Solving ratio problems**

Lesson 4: **Solving proportion problems**

Lesson 5: **Using proportion to manipulate quantities**

Lesson 6: **Introducing scale factor**



Consolidation and assessment.

Lesson 7: **Ratio and Proportion Assessment**



Ratio and proportion

# Algebra

## Objectives

- Solve problems involving unknown input and output amounts.
- Form and solve expressions.
- Solve equations where there is one or more unknown amounts.
- Create formula from linear patterns.
- Identify value pairs.
- Solve formulae with two unknowns.

## Awesomenicity Lessons

Lesson 1: **Exploring input and outputs**

Lesson 2: **Solving 2-step input/output functions**

Lesson 3: **Forming Expressions**

Lesson 4: **Solving Equations**

Lesson 5: **Introduction to applying formulae**

Lesson 6: **Creating formulae from linear patterns**

Lesson 7: **Finding Value Pairs**

Lesson 8: **Solve formulae with two unknowns**



Consolidation and assessment.

Lesson 9: **Algebra Assessment**



Algebra

# G5/Y6 Checklist



## Number

Objectives	✓
Read, write, compare and order whole numbers up to the millions.	
Investigate and identify properties of prime, composite, square and triangular numbers.	
Understand and use powers of ten.	
Explore real-life situations that use integers and decimals and locate and represent these on a number line.	
Round to the nearest 10, 100, 1,000 and beyond.	
Round decimals to the nearest tenth, hundredth and whole number.	
Use the order of operations (PEMDAS) to write number sentences.	

## Addition


Objectives	✓
Choose and apply effective mental and written strategies to solve addition.	
Choose and apply effective mental and written strategies to solve addition.	
Develop mental and written strategies to add decimal amounts.	
Use rounding, subtraction or other addition strategies to check answers.	
Solve addition word problems using a range of strategies.	

## Subtraction


Objectives	✓
Choose and apply effective mental and written strategies to solve subtraction.	
Develop mental and written strategies to subtract decimal amounts.	
Use rounding, addition or other subtraction strategies to check answers.	
Solve word problems that involve addition and subtraction using a range of strategies.	

# G5/Y6 Checklist


## Multiplication

Objectives	
Apply times table patterns and strategies to recall multiplication facts.	
Investigate multiples, factors and common factors, including prime and composite numbers.	
Multiply and divide by 10, 100 and 1,000.	
Explore number flexibility and find creative strategies to multiply large numbers.	
Develop efficient mental and written strategies to multiply decimals and whole numbers.	
Solve word problems involving the multiplication of whole numbers and/or decimals.	

## Division


Objectives	
Identify rules of divisibility.	
Use multiplication to divide.	
Develop efficient mental and written strategies to multiply integers and decimal amounts.	
Divide by whole numbers where the results are terminating decimals.	
Solve word problems involving multiplying and dividing whole numbers and decimals.	

## Fractions


Objectives	
Identify equivalent fractions.	
Find fractions of amounts.	
Compare fractions using the lowest common multiple.	
Convert improper fractions to mixed numbers and vice versa.	
Add and subtract fractions, including mixed numbers and improper fractions.	
Investigate the connection between fractions, decimals and percentages.	
Convert and order fractions, decimals and percentages.	
Investigate and calculate percentage discounts.	

# G5/Y6 Checklist


## Measurement

Objectives	
Connect decimals and fractions to measurement.	
Read and interpret scales on a range of measuring instruments.	
Convert between common units of length, mass and capacity.	
Solve problems involving the comparison of length, mass and capacity.	
Problem solve using the perimeter and area of compound shapes and triangles.	
Connect volume and capacity.	

## Space and Shape

Objectives	
Create simple prisms and pyramids and make real-world connections.	
Explore translations, reflections and rotations.	
Graph and interpret coordinates using all four quadrants of the Cartesian coordinate system.	
Find unknown angles using angles on a straight line, at a point and vertically-opposite angles.	

## Statistics, Probability & Data Handling

Objectives	
Use fractions, percentages and decimals to describe probability.	
Create experiments using chance and collect, record and display data in the most appropriate graph.	
Compare observed frequencies across experiments with expected frequencies.	
Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables.	
Interpret secondary data.	
Interpret and use timetables.	

# G5/Y6 Checklist

## Ratio and Proportion

Objectives	✓
Use appropriate ratio and proportion vocabulary.	
Identify ratios in collections and make connections to fractions.	
Use multiplication and division to identify ratios and solve problems.	
Use proportion to manipulate quantities and calculate discounts.	
Solve problems involving scale factors.	

## Algebra

Objectives	✓
Solve problems involving unknown input and output amounts.	
Form and solve expressions.	
Solve equations where there is one or more unknown amounts.	
Create formula from linear patterns.	
Identify value pairs.	
Solve formulae with two unknowns.	



# Wave goodbye to maths anxiety

Every primary age child deserves  
to feel good about maths

**awesomenicity**

