

# Grade 4/Year 5

## Scope and Sequence

### Contents

G4/Y5 Overview	Page 2
<b>Objectives and Lessons</b>	
Place Value	Page 3
Addition & Subtraction	Page 4
Multiplication & Division Part A	Page 5
Multiplication & Division Part B	Page 6
Fractions	Page 7
Measurement	Page 8
Shape and Space	Page 9
Statistics, Probability and Data Handling	Page 10
Time	Page 11
G4/Y5 Yearly Objective Checklist	Page 12-14



# G4/Y5 Overview

Number	Addition	Subtraction	Multiplication	Division
<ul style="list-style-type: none"> <li>- Read, write, and order whole numbers beyond the hundred thousands using base ten numerals, number names, and expanded form.</li> <li>- Recognise that the place value system can extend beyond hundredths.</li> <li>- Compare, order and represent decimals to at least the hundredths.</li> <li>- Round numbers to the nearest 10, 100 and 1,000.</li> </ul>	<ul style="list-style-type: none"> <li>- Develop effective mental strategies for manipulating and adding numbers with and without regrouping (exchanging).</li> <li>- Utilise effective written strategies for adding large numbers with and without regrouping.</li> <li>- Add decimals to at least the hundredths with and without regrouping.</li> <li>- Use rounding and other strategies to check for reasonableness of answers.</li> <li>- Solve addition word problems using a range of strategies.</li> </ul>	<ul style="list-style-type: none"> <li>- Develop effective mental strategies for manipulating and subtracting numbers with and without regrouping.</li> <li>- Gain a conceptual understanding of the process of regrouping (exchanging).</li> <li>- Utilise effective written strategies to subtract large numbers with and without regrouping.</li> <li>- Subtract decimal amounts to at least the hundredths with and without regrouping.</li> <li>- Use addition, rounding and other strategies to check for reasonableness of answers.</li> <li>- Solve word problems involving addition and subtraction using a range of strategies.</li> </ul>	<ul style="list-style-type: none"> <li>- Investigate multiples and make connections between multiples and factors.</li> <li>- Investigate factors, including finding common factors.</li> <li>- Use multiplication vocabulary.</li> <li>- Use place value to multiply by multiples of 10, 100 and 1,000.</li> <li>- Multiply by multiples of 10 using flexible thinking.</li> <li>- Develop and apply mental and written strategies to multiply larger numbers.</li> <li>- Solve one and multi-step word problems involving multiplication.</li> </ul>	<ul style="list-style-type: none"> <li>- Use division vocabulary.</li> <li>- Explore equal groups and division involving remainders.</li> <li>- Use inverse operations to divide and verify answers.</li> <li>- Divide by 10, 100 and 1,000 using place value.</li> <li>- Develop and apply mental and written strategies to divide.</li> <li>- Use multiplication and a range of division strategies to solve word problems.</li> </ul>

Fractions	Measurement	Shape and Space	Statistics, Probability & Data Handling
<ul style="list-style-type: none"> <li>- Connect fractions to real life scenarios.</li> <li>- Use fraction vocabulary.</li> <li>- Identify equivalent fractions.</li> <li>- Compare fractions with unlike denominators using lowest common multiples.</li> <li>- Simplify fractions.</li> <li>- Calculate fractions of amounts.</li> <li>- Add and subtract fractions with unlike denominators (including mixed numbers &amp; improper fractions).</li> <li>- Convert improper fractions into mixed numbers.</li> <li>- Make connections between fractions, decimals and percentages.</li> </ul>	<ul style="list-style-type: none"> <li>- Identify and choose appropriate units of measurement.</li> <li>- Measure and convert units of distance, such as mm, cm, m and km.</li> <li>- Calculate the perimeter and area of compound shapes.</li> <li>- Measure and convert units of capacity.</li> <li>- Measure and convert units of mass.</li> <li>- Find and read the scale of various measuring instruments.</li> </ul>	<ul style="list-style-type: none"> <li>- Connect 3D objects with their nets and 2D representations.</li> <li>- Describe locations using a grid reference system.</li> <li>- Employ directional language and use landmarks to describe routes.</li> <li>- Describe translations, reflections and rotations of 2D shapes.</li> <li>- Identify line and rotational symmetries.</li> <li>- Use enlargement transformation with 2D shapes and describe and compare the properties of the enlarged result with the original.</li> <li>- Estimate, measure and compare lines and angles using geometric vocabulary and a protractor.</li> </ul>	<ul style="list-style-type: none"> <li>- Pose questions and collect data by observation or survey.</li> <li>- Choose appropriate scales and construct appropriate displays, graphs, dot plots and tables to represent data.</li> <li>- Use fractions, percentages and/or scales to describe outcomes of chance experiments involving equally likely outcomes.</li> <li>- Recognise that probabilities range from 0 to 1</li> <li>- Describe and interpret different data sets in context.</li> <li>- Use mode, mean, median and range as a way of summarising data.</li> </ul>

# Place Value

## Objectives

- Read, write, and order whole numbers beyond the hundred thousands using base ten numerals, number names, and expanded form.
- Recognise that the place value system can extend beyond hundredths.
- Compare, order and represent decimals to at least the hundredths.
- Round numbers to the nearest 10, 100 and 1,000.

## Awesomenicity Lessons

Lesson 1: **Let's make place value connections**

Lesson 2: **Let's expand numbers**

Lesson 3: **Let's apply expanded form**

Lesson 4: **Let's compare numbers**

Lesson 5: **Let's write numbers in written form**

Lesson 6: **Let's round numbers: nearest 10, 100 and 1,000**

Lesson 7: **Let's applying rounding skills**

Lesson 8: **Let's explore and order decimals**

Lesson 9: **Let's explore decimals**

Lesson 10: **Let's round to the nearest whole number**

Lesson 11: **Let's solve place value puzzles**



Consolidation and assessment.

Lesson 12: **Let's show what we know!**



Place value

# Addition & Subtraction

## Objectives

- Develop effective mental strategies for manipulating, adding, and subtracting numbers with and without regrouping (exchanging).
- Gain a conceptual understanding of the process of regrouping.
- Utilise effective written strategies for adding and subtracting large numbers with and without regrouping.
- Add and subtract decimals to at least the hundredths.
- Use inverse operations, rounding and other strategies to check for reasonableness of answers.
- Solve addition and subtraction word problems using a range of strategies.

## Awesomenicity Lessons

Lesson 1: **Let's explore mental addition strategies**

Lesson 2: **Let's add using bump strategy**

Lesson 3: **Let's explore compensation strategy**

Lesson 4: **Let's use rounding and mental strategies to problem-solve**

Lesson 5: **Let's use jump and split strategy to subtract mentally**

Lesson 6: **Let's use bump strategy subtraction**

Lesson 7: **Let's explore subtraction compensation strategy**

Lesson 8: **Let's apply subtraction strategies in a game**

Lesson 9: **Let's add multi-digit numbers using column addition**

Lesson 10: **Let's explore adding decimals**

Lesson 11: **Let's use column method to add decimals**

Lesson 12: **Let's use REPS to problem-solve**

Lesson 13: **Let's subtract multi-digit numbers**

Lesson 14: **Let's subtract decimals using column subtraction**

Lesson 15: **Let's add and subtract decimals**



Lesson 16: **Let's solve word problems**

Lesson 17: **Let's using strategies to problem-solve**

Lesson 18: **Let's show what we know!**



Addition and subtraction

Consolidation and assessment.

# Multiplication & Division Part A

## Objectives

- Investigate multiples and make connections between multiples and factors.
- Investigate factors, including finding common factors.
- Use multiplication vocabulary.
- Use division vocabulary.
- Explore equal groups and division involving remainders.
- Use inverse operations to multiply, divide and verify answers.
- Use place value to multiply and divide by multiples of 10, 100 and 1,000.

## Awesomenicity Lessons

  
Lesson 1: **Let's multiply using different strategies**

Lesson 2: **Let's investigate multiples**

Lesson 3: **Let's investigate factors**

Lesson 4: **Let's identify common factors**

Lesson 5: **Let's investigate factors and multiples**

Lesson 6: **Let's divide to make equal groups**

Lesson 7: **Let's identify remainders**

Lesson 8: **Let's use inverse operations to divide**

Lesson 9: **Let's x and ÷ by 10, 100 and 1,000**

Lesson 10: **Let's x and ÷ by 10, 100, etc. in a game**

Consolidation and assessment.

Lesson 11: **Let's show what we know**



Multiplication &  
Division Part A

# Multiplication & Division Part B

## Objectives

- Multiply by multiples of 10 using flexible thinking.
- Develop and apply mental and written strategies to multiply and divide larger numbers.
- Solve one and multi-step word problems involving multiplication and division.

## Awesomenicity Lessons

Lesson 1: **Let's multiply by multiples of 10 and 100**

Lesson 2: **Let's multiply up to 4-digit numbers**

Lesson 3: **Let's use grid method to multiply**

Lesson 4: **Let's use partial product to multiply**

Lesson 5: **Let's multiply multi-digit numbers**

Lesson 6: **Let's learn short multiplication strategy**

Lesson 7: **Let's apply short multiplication**

Lesson 8: **Let's solve word problems**

Lesson 9: **Let's divide using jump strategy**

Lesson 10: **Let's apply jump strategy to divide**

Lesson 11: **Let's use chunking strategy to divide**

Lesson 12: **Let's apply chunking strategy**

Lesson 13: **Let's explore divisibility**

Lesson 14: **Let's learn the steps for long division**

Lesson 15: **Let's apply long division**

Lesson 16: **Let's solve word problems**

Lesson 17: **Let's problem-solve**



Consolidation and assessment.

Lesson 18: **Let's show what we know**



Multiplication &  
Division Part B

# Fractions

## Objectives

- Connect fractions to real life scenarios.
- Use fraction vocabulary.
- Identify equivalent fractions.
- Compare fractions with unlike denominators using lowest common multiples.
- Simplify fractions.
- Calculate fractions of amounts.
- Add and subtract fractions with unlike denominators (including mixed numbers & improper fractions).
- Convert improper fractions into mixed numbers.
- Make connections between fractions, decimals and percentages.

## Awesomenicity Lessons

Lesson 1: **Let's identify fractions**

Lesson 2: **Let's explore equivalent fractions**

Lesson 3: **Let's create equivalent fractions**

Lesson 4: **Let's identify equivalent fractions**

Lesson 5: **Let's simplify fractions**

Lesson 6: **Let's simplify fractions**

Lesson 7: **Let's compare unlike fractions**

Lesson 8: **Let's continue to compare fractions**

Lesson 9: **Let's calculate fractions of amounts**

Lesson 10: **Let's problem-solve with fractions of amounts**

Lesson 11: **Let's explore mixed numbers and improper fractions**

Lesson 12: **Let's convert improper fractions into mixed numbers**

Lesson 13: **Let's add and subtract unlike fractions**

Lesson 14: **Let's solve fraction puzzles**

Lesson 15: **Let's connect fractions, decimals and percentages**

Lesson 16: **Let's convert fractions, decimals and percentages**

Lesson 17: **Let's multiply fractions by whole numbers**



Fractions

Consolidation and assessment.

Lesson 18: **Let's show what we know!**

# Measurement

## Objectives

- Identify and choose appropriate units of measurement.
- Measure and convert units of distance, such as mm, cm, m and km.
- Calculate the perimeter and area of compound shapes.
- Measure and convert units of capacity.
- Measure and convert units of mass.
- Find and read the scale of various measuring instruments.

## Awesomenicity Lessons



Lesson 1: **Let's identify units of measurement**

Lesson 2: **Let's convert between units of length**

Lesson 3: **Let's identify scale and liquid volume**

Lesson 4: **Let's explore mass**

Lesson 5: **Let's solve measurement word problems**

Lesson 6: **Let's find the perimeter of compound shapes**

Lesson 7: **Let's calculate the area of compound shapes**

Lesson 8: **Let's calculate the area of triangles**

Lesson 9: **Let's calculate the area of parallelograms**

Lesson 10: **Let's explore volume**

Lesson 11: **Let's apply our understanding of volume**

Consolidation and assessment.

Lesson 15: **Let's show what we know!**



Measurement

# Shape and Space

## Objectives

- Connect 3D objects with their nets and 2D representations.
- Describe locations using a grid reference system.
- Employ directional language and use landmarks to describe routes.
- Describe translations, reflections and rotations of 2D shapes.
- Identify line and rotational symmetries.
- Use enlargement transformation with 2D shapes and describe and compare the properties of the enlarged result with the original.
- Estimate, measure and compare lines and angles using geometric vocabulary and a protractor.

## Awesomenicity Lessons

- Lesson 1: **Introduction to angles**
- Lesson 2: **Measuring angles**
- Lesson 3: **Calculating angles**
- Lesson 4: **Drawing angles**
- Lesson 5: **Using lines to draw 2D shapes**
- Lesson 6: **Constructing and identifying 3D shapes**
- Lesson 7: **Using nets to make 3D shapes**
- Lesson 8: **Locating and plotting coordinates**
- Lesson 9: **Plotting coordinates**
- Lesson 10: **Translating shapes on a grid**
- Lesson 11: **Making & describing translations**
- Lesson 12: **Identifying lines of symmetry**
- Lesson 13: **Reflecting shapes**

Lesson 14: **Shape and Space Assessment**

Available Soon



Shape and space

Consolidation and assessment.

# Statistics, Probability and Data

## Objectives

- Pose questions and collect data by observation or survey.
- Choose appropriate scales and construct appropriate displays, graphs, dot plots and tables to represent data.
- Use fractions, percentages and/or scales to describe outcomes of chance experiments involving equally likely outcomes.
- Recognise that probabilities range from 0 to 1
- Describe and interpret different data sets in context.
- Use mode, mean, median and range as a way of summarising data.

## Awesomenicity Lessons

- Lesson 1: **Interpreting graphs**
- Lesson 2: **Creating line graphs**
- Lesson 3: **Gathering and presenting data**
- Lesson 4: **Calculating mean averages**
- Lesson 5: **Mean, mode, median and range**
- Lesson 6: **Introduction to chance and probability**
- Lesson 7: **Using probability to make predictions**

Available Soon



Data and probability

Consolidation and assessment.

Lesson 8: **Statistics, Probability and Data Assessment**

# Time

## Objectives

- Measure and convert between units of time.
- Convert between 12 and 24 hour time.
- Calculate elapsed time.

## Awesomenicity Lessons

- Lesson 1: **Converting between units of time**
- Lesson 2: **Converting 24 hour time**
- Lesson 3: **Calculating elapsed time**
- Lesson 4: **Reading timetables**

Available Soon



Consolidation and assessment.


Lesson 5: **Time Summative Assessment**




Time

# G4/Y5 Checklist


## Number

Objectives	
Read, write, and order whole numbers beyond the hundred thousands using base ten numerals, number names, and expanded form.	
Recognise that the place value system can extend beyond hundredths.	
Compare, order and represent decimals to at least the hundredths.	
Round numbers to the nearest 10, 100 and 1,000.	

## Addition


Objectives	
Develop effective mental strategies for manipulating and adding numbers with and without regrouping.	
Utilise effective written strategies for adding large numbers with and without regrouping.	
Add decimals to at least the hundredths with and without regrouping.	
Use rounding and other strategies to check for reasonableness of answers.	
Solve addition word problems using a range of strategies.	

## Subtraction


Objectives	
Develop effective mental strategies for manipulating and subtracting numbers with and without regrouping.	
Gain a conceptual understanding of the process of regrouping.	
Utilise effective written strategies to subtract large numbers with and without regrouping.	
Subtract decimal amounts to at least the hundredths with and without regrouping.	
Use addition, rounding and other strategies to check for reasonableness of answers.	
Solve word problems involving addition and subtraction using a range of strategies.	

# G4/Y5 Checklist


## Multiplication

Objectives	
Investigate multiples and make connections between multiples and factors.	
Investigate factors, including finding common factors.	
Use multiplication vocabulary.	
Use place value to multiply by multiples of 10, 100 and 1,000.	
Multiply by multiples of 10 using flexible thinking.	
Develop and apply mental and written strategies to multiply larger numbers.	
Solve one and multi-step word problems involving multiplication.	

## Division


Objectives	
Use division vocabulary.	
Explore equal groups and division involving remainders.	
Use inverse operations to divide and verify answers.	
Divide by 10, 100 and 1,000 using place value.	
Develop and apply mental and written strategies to divide.	
Use multiplication and a range of division strategies to solve word problems.	

## Fractions


Objectives	
Connect fractions to real life scenarios.	
Use fraction vocabulary.	
Identify equivalent fractions.	
Compare fractions with unlike denominators using lowest common multiples.	
Simplify fractions.	
Calculate fractions of amounts.	
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Convert improper fractions into mixed numbers.	
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# G4/Y5 Checklist


## Measurement

Objectives	
Identify and choose appropriate units of measurement.	
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Calculate the perimeter and area of compound shapes.	
Measure and convert units of capacity.	
Measure and convert units of mass.	
Find and read the scale of various measuring instruments.	

## Space and Shape

Objectives	
Connect 3D objects with their nets and 2D representations.	
Describe locations using a grid reference system.	
Employ directional language and use landmarks to describe routes.	
Describe translations, reflections and rotations of 2D shapes.	
Identify line and rotational symmetries.	
Use enlargement transformation with 2D shapes and describe and compare the properties of the enlarged result with the original.	
Estimate, measure and compare lines and angles using geometric vocabulary and a protractor.	

## Statistics, Probability & Data Handling

Objectives	
Pose questions and collect data by observation or survey.	
Choose appropriate scales and construct appropriate displays, graphs, dot plots and tables to represent data.	
Use fractions, percentages and/or scales to describe outcomes of chance experiments involving equally likely outcomes.	
Recognise that probabilities range from 0 to 1.	
Describe and interpret different data sets in context.	
Use mode, mean, median and range as a way of summarising data.	

# Wave goodbye to math meltdowns

Every child deserves  
to feel good about maths

**awesomenicity**

