

Grade 4/Year 5

Scope and Sequence

Contents

G4/Y5 Overview	Page 2
Objectives and Lessons	
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"> - 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. 	<ul style="list-style-type: none"> - Develop effective mental strategies for manipulating and adding numbers with and without regrouping (exchanging). - 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. 	<ul style="list-style-type: none"> - Develop effective mental strategies for manipulating and subtracting numbers with and without regrouping. - Gain a conceptual understanding of the process of regrouping (exchanging). - 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. 	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - 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	Measurement	Shape and Space	Statistics, Probability & Data Handling
<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - 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.

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: **Exploring place value**

Lesson 2: **Identifying the value of digits (expanding numbers)**

Lesson 3: **Applying expanding form**

Lesson 4: **Comparing numbers**

Lesson 5: **Writing numbers in written form (No. 1)**

Lesson 6: **Writing numbers in written form (No. 2)**

Lesson 7: **Applying place value knowledge**

Lesson 8: **Rounding numbers to the nearest 10, 100 and 1,000**

Lesson 9: **Applying rounding skills**

Lesson 10: **Introduction to decimals - tenths and hundredths**

Lesson 11: **Introduction to decimals - thousandths**

Lesson 12: **Rounding to the nearest whole number**

Lesson 13: **Problem-Solving and Consolidation**



Consolidation and assessment.

Lesson 14: **Place Value Assessment**



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: **Explore mental addition strategies**

Lesson 2: **Adding using bump strategy**

Lesson 3: **Introduction to compensation strategy**

Lesson 4: **Using rounding and mental strategies to problem-solve**

Lesson 5: **Using jump & split strategy to subtract mentally**

Lesson 6: **Intro to bump strategy subtraction**

Lesson 7: **Introduction to subtraction compensation strategy**

Lesson 8: **Applying subtraction strategies in a game**

Lesson 9: **Adding multi-digit numbers using column addition**

Lesson 10: **Introduction to adding decimals**

Lesson 11: **Use column method to investigate adding decimals**

Lesson 12: **Using REPS to apply problem-solving skills**

Lesson 13: **Use column method to subtract multi-digit numbers**

Lesson 14: **Introduction to subtracting decimals using column subtraction**

Lesson 15: **Investigation using addition and subtraction with decimals**



Consolidation and assessment.

Lesson 16: **Solving word problems**

Lesson 17: **Using strategies to problem-solve**

Lesson 18: **Addition and Subtraction Assessment**



Addition and subtraction

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: **Applying times table strategies**

Lesson 2: **Investigating multiples**

Lesson 3: **Investigating factors**

Lesson 4: **Identifying common factors**

Lesson 5: **Investigating factors and multiples**

Lesson 6: **Using division to make equal groups**

Lesson 7: **Identifying remainders**

Lesson 8: **Using inverse operations to divide**

Lesson 9: **Multiply and divide by 10, 100 and 1,000**

Lesson 10: **Applying \times and \div by 10, 100 and 1,000**



Consolidation and assessment.

Lesson 11: **Part A Assessment**



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: **Multiply multiples of 10 and 100**

Lesson 2: **Multiply up to 4-digit numbers**

Lesson 3: **Use grid method to multiply**

Lesson 4: **Exploring creative ways to multiply**

Lesson 5: **Learning partial product strategy**

Lesson 6: **Applying partial product strategy**

Lesson 7: **Learning short multiplication**

Lesson 8: **Applying short multiplication**

Lesson 9: **Solving word problems**

Lesson 10: **Learning jump strategy division**

Lesson 11: **Applying jump strategy**

Lesson 12: **Learning chunking strategy to divide**

Lesson 13: **Applying chunking strategy**

Lesson 14: **Exploring divisibility**

Lesson 15: **Learning long division**

Lesson 16: **Dividing 4-digit dividends**

Lesson 17: **Using REPs to solve word problems**



Consolidation and assessment.

Lesson 18: **Applying problem-solving skills**

Lesson 19: **X and ÷ Part B Assessment**



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: Identifying fractions in real life

Lesson 2: Exploring and identifying equivalent fractions

Lesson 3: Create Equivalent Fractions

Lesson 4: Introduction to simplifying fractions

Lesson 5: Simplifying fractions

Lesson 6: Simplifying fractions

Lesson 7: Comparing fractions

Lesson 8: Apply comparing fraction knowledge

Lesson 9: Calculate fractions of amounts

Lesson 10: Lesson 10: Problem-solve with fractions of amounts

Lesson 11: Exploring mixed numbers and improper fractions

Lesson 12: Converting improper fractions into mixed numbers

Lesson 13: Add and subtract fractions with unlike denominators

Lesson 14: Solve fraction puzzles

Lesson 15: Connecting fractions to decimals and percentages

Lesson 16: Making connections between fractions, decimals and percentages

Lesson 17: Multiplying fractions by whole numbers



Fractions

Consolidation and assessment.

Lesson 18: Fractions Assessment

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: **Identifying different types of measurement**
- Lesson 2: **Measuring length with accuracy**
- Lesson 3: **Measuring and converting length**
- Lesson 4: **Converting between mm, cm, m and km**
- Lesson 5: **Calculating perimeter**
- Lesson 6: **Calculating perimeter using compound shapes**
- Lesson 7: **Calculating the area of rectangles**
- Lesson 8: **Calculating the area of compound shapes**
- Lesson 9: **Applying area and perimeter**
- Lesson 10: **Introduction to capacity**
- Lesson 11: **Measuring capacity and converting between units**
- Lesson 12: **Introduction to mass**
- Lesson 13: **Problem-solving mass investigation**
- Lesson 14: **Metric Olympics!**

Consolidation and assessment.

Lesson 15: **Measurement Assessment**



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**



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**



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



Data and probability

Consolidation and 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**



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.	
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.	

G4/Y5 Checklist


Measurement

Objectives	
Identify and choose appropriate units of measurement.	
Measure and convert units of length, 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.	

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.	
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Describe and interpret different data sets in context.	
Use mode, mean, median and range as a way of summarising data.	

Wave goodbye to maths anxiety

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