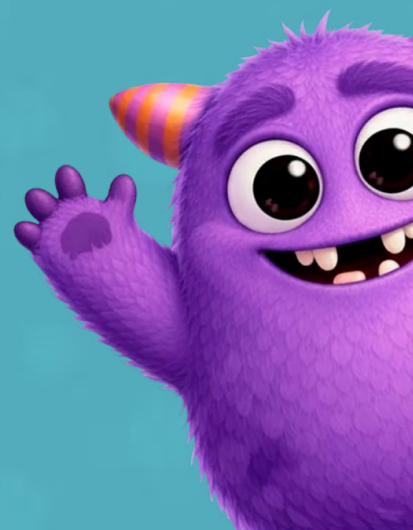
Grade 4/Year 5
Scope and Sequence

Contents



awesomenicity

G4/Y5 Overview

Number	Addition	Subtraction	Multiplication	Division
- 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.	- 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.	- 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.	- 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.	- 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
- 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.	- 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.	- 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.	- 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	Awesomenicity Lessons
• 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.	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!**

Addition & Subtraction

Objectives	Awesomenicity Lessons
• 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.	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**
Consolidation and assessment.	Lesson 16: **Let's solve word problems** Lesson 17: **Let's using strategies to problem-solve** Lesson 18: **Let's show what we know!**

Multiplication & Division Part A

Objectives	Awesomenicity Lessons
• 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.	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	Awesomenicity Lessons
• 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.	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	Awesomenicity Lessons
• 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.	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: **Lets 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**
Consolidation and assessment.	Lesson 18: **Let's show what we know!**

Fractions

Measurement

Objectives	Awesomenicity Lessons
• 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.	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 of compound shapes** Lesson 7: **Calculating 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	Awesomenicity Lessons
• 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.	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**
Consolidation and assessment.	Lesson 14: **Shape and Space Assessment**

Shape and space

Statistics, Probability and Data

Objectives	Awesomenicity Lessons
• 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.	Lesson 1: **Interpreting graphs** Lesson 2: **Creating line graphs** Lesson 3: **Gathering and organising data** Lesson 4: **Calculating means and averages** Lesson 5: **Mean, mode, median and range** Lesson 6: **Introduction to chance and probability** Lesson 7: **Using probability to make predictions**
Consolidation and assessment.	Lesson 8: **Statistics, Probability and Data Assessment**

Data and probability

Time

Objectives	Awesomenicity Lessons
• Measure and convert between units of time. • Convert between 12 and 24 hour time. • Calculate elapsed time.	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**

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

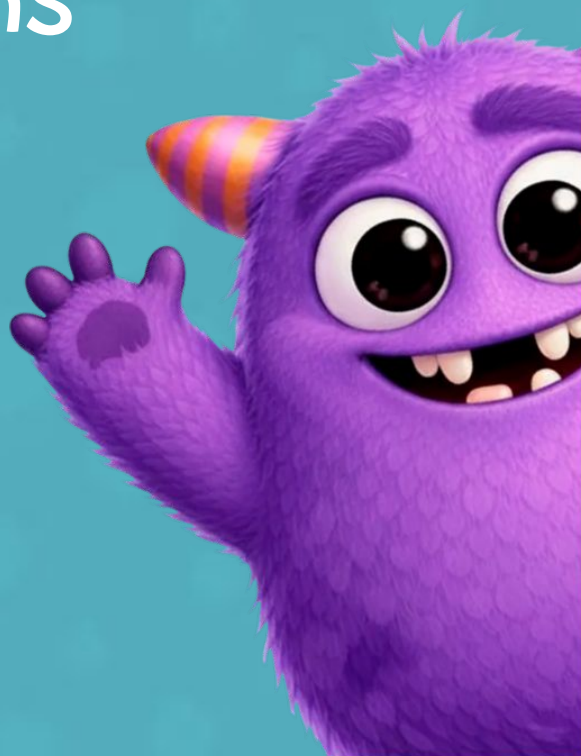
Objectives	✓
Connect 3D objects with their nets and 2D representations.	
Describe locations using a grid reference system.	
Employ directional language and use landmarks to describe routes.	
Describe translations, reflections and rotations of 2D shapes.	
Identify line and rotational symmetries.	
Use 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.	
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



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