# Awesomenicity 3rd Grade/Year 4 Curriculum Guide

## Contents

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# G3/Y4 Overview

| Number | Addition | Subtraction | Multiplication | Division |
|---|---|---|---|---|
| - Explain the properties of odd and even numbers.<br>- Apply place value to partition, rearrange and regroup number to at least tens of thousands. .<br>- Expand numbers to at least 100,000s.<br>- Compare numbers to at least 100,000s using mathematical symbols (>, < , = ).<br>- Read and write numbers to at least the millions.<br>- Round numbers to the nearest 10, 100 and 1,000.<br>- Model, read, write and compare decimal amounts to at least the thousandths. | - Understand and explain the connection between addition and subtraction.<br>- Develop strategies to add four-digit numbers, including regrouping, using effective mental and written methods.<br>- Use rounding to solve and check for reasonableness of answers.<br>- Explore adding decimal numbers to at least the hundredths using column addition with regrouping.<br>- Decode, develop strategies for, and solve two-step addition word problems. | - Understand and explain the connection between addition and subtraction.<br>- Develop strategies to subtract four-digit numbers using effective mental and written methods.<br>- Explore the concept of borrowing and regrouping to subtract.<br>- Find unknown quantities in number sentences involving addition and subtraction and find equivalent number sentences..<br>- Explore subtraction decimal numbers to at least the hundredths using column subtraction with regrouping.<br>- Decode, develop strategies for, and solve two-step word problems involving addition and subtraction | - Investigate multiples.<br>- Investigate factors, including finding common factors.<br>- Use multiplication vocabulary.<br>- Use place value to multiply by multiples of 10, 100 and 1,000.<br>- Multiply by multiples of 10 using flexible thinking.<br>- Investigate number patterns and strategies.<br>- Develop and apply mental and written strategies to multiply larger numbers.<br>- Recall number facts up to 10 x 10.<br>- Solve one and multi-step word problems involving multiplication. | - Understand and explain the connection between multiplication and division.<br>- Use division vocabulary.<br>- Explore equal groups and division involving remainders.<br>- Use inverse operations to divide and verify answers.<br>- Divide by 10, 100 and 1,000 using place value.<br>- Develop and apply mental and written strategies to divide.<br>- Use multiplication and a range of division strategies to solve word problems. |

| Fractions | Measurement | Shape and Space | Statistics, Probability & Data Handling | Money and Time |
|---|---|---|---|---|
| - Connect fractions to real life scenarios.<br>- Use fraction vocabulary.<br>- Explore and identify equivalent fractions.<br>- Compare fractions with unlike denominators using lowest common multiples.<br>- Simplify fractions.<br>- Calculate fractions of amounts.<br>- Add and subtract fractions with unlike denominators (including mixed numbers & improper fractions).<br>- Convert improper fractions into mixed numbers.<br>- Make connections between fractions, decimals and percentages. | - Identify and choose appropriate units of measurement.<br>- Measure and convert units of length, such as mm, cm, m and km.<br>- Calculate the perimeter and area of compound shapes.<br>- Measure and convert units of capacity.<br>- Measure and convert units of mass.<br>- Find and read the scale of various measuring instruments. | - Use geometrical vocabulary.<br>- Describe, sort and compare the areas of regular and irregular shapes by informal means.<br>- Sort, compare and describe two dimensional shapes that result from combining and splitting common shapes.<br>- Identify and describe transformations, such as translation, rotation and reflection.<br>- Interpret information on a map using simple scales, legends and directions.<br>- Identify and create symmetrical patterns, pictures and shapes.<br>- Measure, compare and classify angles as equal to, greater than, or less than, a right angle.<br>- Explore nets for 3D shapes. | - Demonstrate and order the chances of possible everyday events happening.<br>- Identify everyday events that are not possible if another event happens.<br>- Identify events that are not affected by the occurrence of other events.<br>- Design a survey or experiment of chance and systematically collect, organise and display data.<br>- Identify mode and range in data. | - Solve problems involving purchases and the calculation of change to the lowest denomination of the currency.<br>- Read and write digital and analogue time to 1 minute intervals using am, pm and 24 hours.<br>- Measure time intervals to the nearest 5 minutes. |

# Place Value

| Objectives | Awesomenicity Lessons |
| --- | --- |
| • Explain the properties of odd and even numbers.<br>• Apply place value to partition, rearrange and regroup number to at least tens of thousands.<br>• Expand numbers to at least 10,000s.<br>• Compare numbers to at least 10,000s using mathematical symbols (>, < , = ).<br>• Read and write numbers to at least hundred thousands.<br>• Round numbers to the nearest 10, 100 and 1,000.<br>• Model, read, write and compare decimal amounts to at least the hundredths. | Lesson 1: Let's explore place value<br>Lesson 2: Let's show the value of each digit<br>Lesson 3: Let's compare numbers<br>Lesson 4: Let's order numbers<br>Lesson 5: Let's read and write numbers<br>Lesson 6: Let's write numbers<br>Lesson 7: Let's round numbers to 10<br>Lesson 8: Let's round numbers to the nearest hundred<br>Lesson 9: Let's round to the nearest 1,000<br>Lesson 10: Let's write and draw decimal numbers<br>Lesson 11: Let's compare decimal numbers<br>Lesson 12: Let's regroup amounts<br>Lesson 13: Let's apply our regrouping skills<br>Lesson 14: Let's apply place value skills<br>Lesson 15: Let's show what we know! (Assessment) |

# Addition & Subtraction

| Objectives | Awesomenicity Lessons |
| --- | --- |
| • Understand and explain the connection between addition and subtraction.<br>• Develop strategies to add and subtract multi-digit numbers.<br>• Explore regrouping when adding and subtracting.<br>• Develop mental strategies to add up to three-digit numbers.<br>• Use rounding to solve and check for reasonableness of answers.<br>• Decode, develop strategies for, and solve two-step word problems involving addition and subtraction. | Lesson 1: Let's explore near doubles and number flexibility<br>Lesson 2: Let's apply number bond skills to add mentally<br>Lesson 3: Let's bridge through to the next ten<br>Lesson 4: Let's count on and find number complements to 100<br>Lesson 5: Let's explore jump and split strategy<br>Lesson 6: Let's bridge down to the next ten to subtract<br>Lesson 7: Let's use jump/split strategy to subtract mentally<br>Lesson 8: Let's apply mental strategies to subtract<br>Lesson 9: Let's explore column method with regrouping<br>Lesson 10: Let's use rounding to problem-solve<br>Lesson 11: Let's apply addition to add 3 multi-digit numbers<br>Lesson 12: Let's use column method to subtract<br>Lesson 13: Let's use subtraction to make change<br>Lesson 14: Let's apply subtraction strategies<br>Lesson 15: Let's add and subtract money<br>Lesson 16: Let's solve addition and subtraction word problems<br>Lesson 17: Let's apply problem-solving skills<br>Lesson 18: Let's show what we know! (Assessment) |

# Multiplication

| Objectives | Awesomenicity Lessons |
| --- | --- |
| • Understand the concept of equal groups.<br>• Explore multiplication patterns for the 2 and 4, 3 and 6, 4 and 8, 7, and 9.<br>• Multiply numbers by 10, 100, and 1,000.<br>• Find and connect patterns in multiples.<br>• Comprehend and identify factors.<br>• Multiply by multiples of 10 using flexible thinking.<br>• Develop mental and written strategies to multiply larger numbers.<br>• Recall facts up to 10 x 10.<br>• Solve word problems involving multiplication. | Lesson 1: Introduction to equal groups<br>Lesson 2: Using skip counting to identifying multiples<br>Lesson 3: Multiplying by 2 and 4<br>Lesson 4: Multiplying by 3 and 6<br>Lesson 5: Multiplying by 4 and 8<br>Lesson 6: Multiplying by 7<br>Lesson 7: Multiplying by 9<br>Lesson 8: Multiplying larger numbers by 10<br>Lesson 9: Multiplying numbers by 10, 100 and 1,000<br>Lesson 10: Exploring multiples<br>Lesson 11: Investigating factors<br>Lesson 12: Identifying factor friends<br>Lesson 13: Identifying factors<br>Lesson 14: Multiplying multiples of 10<br>Lesson 15: Using place value dots to multiply<br>Lesson 16: Introduction to grid method<br>Lesson 17: Applying grid method<br>Lesson 18: Introduction to compensation strategy<br>Lesson 19: Exploring creative ways to multiply<br>Lesson 20: Introduction to partial product strategy<br>Lesson 21: Solve multiplication word problems<br>Lesson 22: Multiplication assessment |

# Division

| Objectives | Awesomenicity Lessons |
| --- | --- |
| • Understand and explain the connection between multiplication and division.<br>• Use division vocabulary.<br>• Understand the concept of equal groups and remainders.<br>• Use inverse operations to divide and verify answers.<br>• Divide by 10, 100 and 1,000 using place value.<br>• Develop and apply mental and written strategies to divide.<br>• Investigate and describe rules of divisibility.<br>• Use a range of strategies to solve word problems involving division and multiplication. | Lesson 1: Sharing in equal groups<br>Lesson 2: Applying doubling a halving skills<br>Lesson 3: Division vocabulary and skip counting<br>Lesson 4: Identifying remainders<br>Lesson 5: Exploring remainders<br>Lesson 6: Introduction to inverse operations<br>Lesson 7: Applying inverse operations<br>Lesson 8: Dividing by 10 and 100<br>Lesson 9: Applying dividing by 10 and 100<br>Lesson 10: Intro to place value dot division<br>Lesson 11: Dividing 2-digit and 3-digit numbers using jump strategy<br>Lesson 12: Exploring divisibility<br>Lesson 13: Use chunking strategy to divide<br>Lesson 14: Applying chunking strategy to divide<br>Lesson 15: Applying problem-solving skills<br>Lesson 16: Creating word problems<br>Lesson 17: Using questions to problem-solve<br>Lesson 18: Division Assessment |

# Fractions

| Objectives | Awesomenicity Lessons |
| --- | --- |
| • Identify and create fractions using number lines.<br>• Use fraction vocabulary.<br>• Identify equivalent fractions.<br>• Compare fractions with unlike denominators using lowest common multiples.<br>• Simplify fractions.<br>• Calculate fractions of amounts.<br>• Add and subtract fractions with unlike denominators (including mixed numbers & improper fractions).<br>• Convert improper fractions into mixed numbers.<br>• Make connections between fractions, decimals and percentages to the hundredths place value column. | Lesson 1: Identifying fractions<br>Lesson 2: Creating fractions<br>Lesson 3: Locating fractions on a number line<br>Lesson 4: Identifying equivalent fractions<br>Lesson 5: Finding and identifying equivalent fractions<br>Lesson 6: Locating equivalent fractions<br>Lesson 7: Adding and subtracting fractions with like denominators<br>Lesson 8: Calculating fractions of amounts<br>Lesson 9: Applying fractions of amounts<br>Lesson 10: Ordering fractions & intro to mixed numbers<br>Lesson 11: Connecting mixed numbers to improper fractions<br>Lesson 12: Connecting fractions to decimals (tenths)<br>Lesson 13: Connecting fractions to decimals (hundredths)<br>Lesson 14: Fractions Assessment |

# Measurement

| Objectives | Awesomenicity Lessons |
| --- | --- |
| • Identify and choose appropriate units of measurement.<br>• Measure and convert units of length, such as mm, cm, m and km.<br>• Calculate the perimeter and area of compound shapes.<br>• Measure and convert units of capacity.<br>• Measure and convert units of mass.<br>• Find and read the scale of various measuring instruments. | Lesson 1: Exploring standard units of metric measurement<br>Lesson 2: Measuring length with accuracy<br>Lesson 3: Converting mm, cm and m<br>Lesson 4: Connecting km and m<br>Lesson 5: Introduction to calculating perimeter<br>Lesson 6: Creating specific perimeters<br>Lesson 7: Calculating the area of rectangles<br>Lesson 8: Using area to create rectangles<br>Lesson 9: Applying area and perimeter<br>Lesson 10: Reading thermometers and exploring temperature<br>Lesson 11: Introduction to mass<br>Lesson 12: Adding mass<br>Lesson 13: Introduction to capacity<br>Lesson 14: Measuring capacity<br>Lesson 15: Metric Olympics!<br>Lesson 16: Measurement Assessment |

# Shape and Space

| Objectives | Awesomenicity Lessons |
| --- | --- |
| • Use geometrical vocabulary.<br>• Describe, sort and compare the areas of regular and irregular shapes by informal means.<br>• Sort, compare and describe two dimensional shapes that result from combining and splitting common shapes.<br>• Identify and describe transformations, such as translation, rotation and reflection.<br>• Interpret information on a map using simple scales, legends and directions.<br>• Identify and create symmetrical patterns, pictures and shapes.<br>• Measure, compare and classify angles as equal to, greater than, or less than, a right angle. | Lesson 1: Introduction to angles<br>Lesson 2: Introduction to position and turns<br>Lesson 3: Ordering and identifying angles<br>Lesson 4: Introduction to lines<br>Lesson 5: Identifying 2D shapes<br>Lesson 6: Classifying triangles<br>Lesson 7: Classifying quadrilaterals<br>Lesson 8: Identifying lines of symmetry<br>Lesson 9: Creating 2D shapes<br>Lesson 10: Locating coordinates<br>Lesson 11: Plotting coordinates<br>Lesson 12: Translating shapes<br>Lesson 13: Making and describing translations<br>Lesson 14: Shape and Space Assessment |

# Statistics, Probability and Data Handling

| Objectives | Awesomenicity Lessons |
| --- | --- |
| • Demonstrate and order the chances of possible everyday events happening.<br>• Identify everyday events that are not possible if another event happens.<br>• Identify events that are not affected by the occurrence of other events.<br>• Design a survey or experiment of chance and systematically collect, organise and display data.<br>• Identify mode and range in data. | Lesson 1: Interpreting pictograms and bar graphs<br>Lesson 2: Creating bar graphs<br>Lesson 3: Gathering and presenting data<br>Lesson 4: Interpreting line graphs<br>Lesson 5: Creating line graphs<br>Lesson 6: Introduction to chance and probability<br>Lesson 7: Using probability to make predictions<br>Lesson 8: Statistics, Probability and Data Assessment |

# Time

| Objectives | Awesomenicity Lessons |
| --- | --- |
| • Read and write digital and analogue time to 1 minute intervals using am, pm and 24 hours.<br>• Measure time intervals to the nearest 5 minutes. | Lesson 1: Converting between days, weeks, months and years<br>Lesson 2: Converting between seconds, minutes and hours<br>Lesson 3: Reading time to the nearest minute<br>Lesson 4: Converting 24 hour time<br>Lesson 5: Calculating elapsed time<br>Lesson 6: Time Assessment |

# Money

| Objectives | Awesomenicity Lessons |
| --- | --- |
| • Solve problems involving purchases and the calculation of change to the lowest denomination of a currency. | **U.S.**<br>Lesson 1: Reading and writing money using decimals<br>Lesson 2: Calculating and comparing money<br>Lesson 3: Adding money<br>Lesson 4: Subtracting money<br>Lesson 5: Adding and Subtracting money<br>Lesson 6: Summative Assessment<br><br>**UK**<br>Lesson 1: Reading and writing money using decimals<br>Lesson 2: Calculating and comparing money<br>Lesson 3: Adding money<br>Lesson 4: Subtracting money<br>Lesson 5: Adding and Subtracting money<br>Lesson 6: Summative Assessment<br><br>**AUSTRALIA**<br>Lesson 1: Reading and writing money using decimals<br>Lesson 2: Calculating and comparing money<br>Lesson 3: Adding money<br>Lesson 4: Subtracting money<br>Lesson 5: Adding and Subtracting money<br>Lesson 6: Summative Assessment |

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# G3/Y4 Checklist

## Number

| Objectives | ✓ |
|---|---|
| Explain the properties of odd and even numbers. | |
| Apply place value to partition, rearrange and regroup number to at least tens of thousands. | |
| Expand numbers to at least 10,000s. | |
| Compare numbers to at least 10,000s using mathematical symbols (>, < , = ). | |
| Read and write numbers to at least hundred thousands. | |
| Round numbers to the nearest 10, 100 and 1,000. | |
| Model, read, write and compare decimal amounts to at least the hundredths. | |

## Addition

| Objectives | ✓ |
|---|---|
| Develop strategies to add at least four-digit numbers, including regrouping using written methods. | |
| Develop mental strategies to add up to three-digit numbers. | |
| Use rounding to solve and check for reasonableness of answers. | |
| Decode, develop strategies for, and solve two-step addition word problems. | |

## Subtraction

| Objectives | ✓ |
|---|---|
| Understand and explain the connection between addition and subtraction. | |
| Develop mental strategies to add up to three-digit numbers. | |
| Explore the concept of borrowing and regrouping to subtract. | |
| Find unknown quantities in addition/subtraction number sentences and equivalent number sentences. | |
| Decode, develop strategies for, and solve two-step word problems involving addition and subtraction. | |

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# G3/Y4 Checklist

## Multiplication

| Objectives | ✓ |
|---|---|
| Understand the concept of equal groups. | |
| Explore multiplication patterns for the 2 and 4, 3 and 6, 4 and 8, 7, and 9. | |
| Multiply numbers by 10, 100, and 1,000. | |
| Find and connect patterns in multiples. | |
| Comprehend and identify factors. | |
| Multiply by multiples of 10 using flexible thinking. | |
| Develop mental and written strategies to multiply larger numbers. | |
| Recall facts up to 10 x 10. Solve word problems involving multiplication. | |

## Division

| Objectives | ✓ |
|---|---|
| Understand and explain the connection between multiplication and division. | |
| Use division vocabulary. | |
| Understand the concept of equal groups and 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. | |
| Investigate and describe rules of divisibility. | |
| Use a range of strategies to solve word problems involving division and multiplication. | |

## Fractions

| Objectives | ✓ |
|---|---|
| Identify and create fractions using number lines. | |
| 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 to the hundredths place value column. | |

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# G3/Y4 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 | ✓ |
|---|---|
| Use geometrical vocabulary. | |
| Describe, sort and compare the areas of regular and irregular shapes by informal means. | |
| Sort, compare and describe 2D shapes that result from combining and splitting common shapes. | |
| Identify and describe transformations, such as translation, rotation and reflection. | |
| Interpret information on a map using simple scales, legends and directions. | |
| Identify and create symmetrical patterns, pictures and shapes. | |
| Measure, compare and classify angles as equal to, greater than, or less than, a right angle. | |
| Explore nets for 3D shapes. | |

## Statistics, Probability & Data Handling

| Objectives | ✓ |
|---|---|
| Demonstrate and order the chances of possible everyday events happening. | |
| Identify everyday events that are not possible if another event happens. | |
| Identify events that are not affected by the occurrence of other events. | |
| Design a survey or experiment of chance and systematically collect, organise and display data. | |
| Identify mode and range in data. | |

# G3/Y4 Checklist

## Time and Money

| Objectives | ✅ |
|---|---|
| Solve problems involving purchases and the calculation of change to the lowest denomination of the currency. | |
| Read and write digital and analogue time to 1 minute intervals using am, pm and 24 hours. | |
| Measure time intervals to the nearest 5 minutes. | |

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