



# Awesomenicity 4<sup>th</sup> Grade/Year 5 Curriculum Guide

## Contents

G4/Y5 Overview	Page 2
<b>Objectives and Lessons</b>	
Place Value	Page 3
Addition & Subtraction	Page 4
Multiplication	Page 5
Division	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

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>

Objectives	Awesomenicity Lessons
<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>	<p><u><a href="#">Lesson 1: Let's make place value connections</a></u></p> <p><u><a href="#">Lesson 2: Let's expand numbers</a></u></p> <p><u><a href="#">Lesson 3: Let's apply expanded form</a></u></p> <p><u><a href="#">Lesson 4: Let's compare numbers</a></u></p> <p><u><a href="#">Lesson 5: Let's write numbers in written form</a></u></p> <p><u><a href="#">Lesson 6: Let's round numbers: nearest 10, 100 and 1,000</a></u></p> <p><u><a href="#">Lesson 7: Let's applying rounding skills</a></u></p> <p><u><a href="#">Lesson 8: Let's explore and order decimals</a></u></p> <p><u><a href="#">Lesson 9: Let's explore decimals</a></u></p> <p><u><a href="#">Lesson 10: Let's round to the nearest whole number</a></u></p> <p><u><a href="#">Lesson 11: Let's solve place value puzzles</a></u></p> <p><u><a href="#">Lesson 12: Let's show what we know! (Assessment)</a></u></p>

## 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 & 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 investigate adding decimals

Lesson 12: Let's use REPS to apply problem-solving skills

Lesson 13: Let's use column method to subtract multi-digit numbers

Lesson 14: Let's subtract decimals using column subtraction

Lesson 15: Let's investigate using addition & subtraction with 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! (Assessment)

## 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.

## Awesomenicity Lessons

Lesson 1: Multiply numbers using a variety of strategies

Lesson 2: Investigate Multiples

Lesson 3: Investigate factors

Lesson 4: Finding common factors

Lesson 5: Investigate multiple and factor connections

Lesson 6: Multiplying by 10, 100 and 1,000

Lesson 7: Multiplying multiples of 10 and 100

Lesson 8: Multiply using place value dot strategy

Lesson 9: Introduction to grid method

Lesson 10: Applying grid method to multiply

Lesson 11: Exploring creative ways to multiply

Lesson 12: Introduction to lattice method

Lesson 13: Applying lattice method

Lesson 14: Introduction to partial product strategy

Lesson 15: Applying partial product strategy

Lesson 16: Introduction to short multiplication

Lesson 17: Apply Short Multiplication

Lesson 18: Solve multiplication word problems

Lesson 19: Multiplication Assessment

## 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.

## Awesomenicity Lessons

Lesson 1: Explore dividing amounts into equal groups

Lesson 2: Identifying remainders

Lesson 3: Use inverse operations to divide

Lesson 4: Dividing by 10 and 100

Lesson 5: Dividing by 10, 100 and 1,000

Lesson 6: Dividing using jump strategy

Lesson 7: Using jump strategy to divide larger numbers

Lesson 8: Use chunking strategy to divide large numbers

Lesson 9: Apply chunking strategy

Lesson 10: Identifying divisibility rules

Lesson 11: Using long division to divide large numbers

Lesson 12: Applying long division to divide large numbers

Lesson 13: Solving word problems

Lesson 14: Applying problem-solving skills

Lesson 15: Division Assessment

## 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: Comparing fractions

Lesson 7: Apply comparing fraction knowledge

Lesson 8: Find fractions of amounts

Lesson 9: Problem-solve with fractions of amounts

Lesson 10: Add and subtract fractions (includes mixed numbers, improper fractions)

Lesson 11: Converting improper fractions into mixed numbers

Lesson 12: Add and subtract fractions with unlike denominators

Lesson 13: Connecting fractions to decimals and percentages

Lesson 14: Making connections between fractions, decimals and percentages

Lesson 15: Multiplying fractions by whole numbers

Lesson 16: Fractions Assessment

## 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!](#)

[Lesson 15: Measurement Assessment](#)

## 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](#)

## 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](#)

## 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](#)


[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.	



# awesomenicity

