

Grade 5/Year 6 Scope and Sequence

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G5/Y6 Overview

| Number | Addition | Subtraction | Multiplication | Division | Fractions |
|---|---|--|--|--|---|
| <ul style="list-style-type: none"> - Read, write, compare and order whole numbers up to the millions. - Investigate and identify properties of prime, composite, square and triangular numbers. <i>*Note, prime and composite are explored in multiplication.</i> - Understand and use powers of ten. - Explore real-life situations that use integers and decimals and locate and represent these on a number line. - Round to the nearest 10, 100, 1,000 and beyond. - Round decimals to the nearest tenth, hundredth and whole number. - Use the order of operations (PEMDAS) to write number sentences. | <ul style="list-style-type: none"> - Choose and apply effective mental and written strategies to solve addition. - Develop mental and written strategies to add decimal amounts. - Use rounding, subtraction or other addition strategies to check answers. - Solve addition word problems using a range of strategies. | <ul style="list-style-type: none"> - Choose and apply effective mental and written strategies to solve subtraction. - Develop mental and written strategies to subtract decimal amounts. - Use rounding, addition or other subtraction strategies to check answers. - Solve word problems that involve addition and subtraction using a range of strategies. | <ul style="list-style-type: none"> - Apply times table patterns and strategies to recall multiplication facts. - Investigate multiples, factors and common factors, including prime and composite numbers. - Multiply and divide by 10, 100 and 1,000. - Explore number flexibility and find creative strategies to multiply large numbers. - Develop efficient mental and written strategies to multiply decimals and whole numbers. - Solve word problems involving the multiplication of whole numbers and/or decimals. | <ul style="list-style-type: none"> - Identify rules of divisibility. - Use multiplication to divide. - Develop efficient mental and written strategies to multiply integers and decimal amounts. - Divide by whole numbers where the results are terminating decimals. - Solve word problems involving multiplying and dividing whole numbers and decimals. | <ul style="list-style-type: none"> - Identify equivalent fractions. - Find fractions of amounts. - Compare fractions using the lowest common multiple. - Convert improper fractions to mixed numbers and vice versa. - Add and subtract fractions, including mixed numbers and improper fractions. - Investigate the connection between fractions, decimals and percentages. - Convert and order fractions, decimals and percentages. - Investigate and calculate percentage discounts. |

| Measurement | Shape and Space | Statistics, Probability & Data Handling | Ratio and Proportion | Algebra |
|--|---|---|--|--|
| <ul style="list-style-type: none"> - Connect decimals and fractions to measurement. - Read and interpret scales on a range of measuring instruments. - Convert between common units of length, mass and capacity. - Solve problems involving the comparison of length, mass and capacity. - Problem solve using the perimeter and area of compound shapes and triangles. - Connect volume and capacity. - Interpret and use timetables. | <ul style="list-style-type: none"> - Create simple prisms and pyramids and make real-world connections. - Explore translations, reflections and rotations. - Graph and interpret coordinates using all four quadrants of the Cartesian coordinate system. - Find unknown angles using angles on a straight line, at a point and vertically-opposite angles. | <ul style="list-style-type: none"> - Use fractions, percentages and decimals to describe probability. - Create experiments using chance and collect, record and display data in the most appropriate graph. - Compare observed frequencies across experiments with expected frequencies. - Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables. - Interpret secondary data. | <ul style="list-style-type: none"> - Use appropriate ratio and proportion vocabulary. - Identify ratios in collections and make connections to fractions. - Use multiplication and division to identify ratios and solve problems. - Use proportion to manipulate quantities and calculate discounts. - Solve problems involving scale factors. | <ul style="list-style-type: none"> - Solve problems involving unknown input and output amounts. - Form and solve expressions. - Solve equations where there is one or more unknown amounts. - Create formula from linear patterns. - Identify value pairs. - Solve formulae with two unknowns. |

Place Value

Objectives

- Read, write, compare and order whole numbers up to the millions.
- Investigate and identify properties of prime, composite, square and triangular numbers.
**Note, prime and composite are explored in multiplication.*
- Understand and use powers of ten.
- Explore real-life situations that use integers and decimals and locate and represent these on a number line.
- Round to the nearest 10, 100, 1,000 and beyond.
- Round decimals to the nearest tenth, hundredth and whole number.
- Use the order of operations (PEMDAS) to write number sentences.

Awesomenicity Lessons

Lesson 1: **Recapping place value and expanding numbers**

Lesson 2: **Compare large numbers**

Lesson 3: **Rounding numbers to the nearest 10, 100, 1,000 (and beyond)**

Lesson 4: **Introducing decimals to the thousandths**

Lesson 5: **Comparing and ordering decimals**

Lesson 6: **Finding decimals on a number line**

Lesson 7: **Rounding to the nearest whole number**

Lesson 8: **Rounding to the nearest tenth, hundredth and whole number**

Lesson 9: **Exploring Powers of Ten**

Lesson 10: **Introduction to square numbers**

Lesson 11: **Applying order of operations**

Lesson 12: **Negative Numbers**

Lesson 13: **Investigating triangular numbers**

Lesson 14: **Consolidate place value knowledge**



Place value

Consolidation and assessment.

Lesson 15: **Place Value Assessment**

Addition & Subtraction

Objectives

- Choose and apply effective mental and written strategies to solve addition and subtraction.
- Develop mental and written strategies to add and subtract decimal amounts.
- Use rounding, inverse operations or other strategies to check answers.
- Solve word problems that involve addition and subtraction using a range of strategies.

Awesomenicity Lessons

Lesson 1: Using bump strategy to add

Lesson 2: Using bump strategy to subtract

Lesson 3: Applying bump strategy to add and subtract

Lesson 4: Using split strategy to add decimals

Lesson 5: Using split strategy to subtract tenths

Lesson 6: Using compensation strategy to add decimals

Lesson 7: Using compensation strategy to subtract decimals

Lesson 8: Intro to adding decimals (hundredths) using written methods

Lesson 9: Using column method to subtract decimals (hundredths)

Lesson 10: Adding and subtracting decimals

Lesson 11: Estimating and budgeting using addition and subtraction

Lesson 12: Addition and subtraction problem-solving

Lesson 13: Solving word problems

Lesson 14: Applying problem solving skills



Consolidation and assessment.

Lesson 15: Addition and subtraction assessment



Addition and subtraction

Multiplication/Division Part A

Objectives

- Apply times table patterns and strategies to recall multiplication facts.
- Investigate multiples, factors and common factors, including prime and composite numbers.
- Multiply and divide by 10, 100 and 1,000.
- Explore number flexibility and find creative strategies to multiply large numbers.
- Solve word problems involving the multiplication of whole numbers and/or decimals.

Awesomenicity Lessons

Lesson 1: **Applying the 4 operations**

Lesson 2: **Investigating factors**

Lesson 3: **Connecting multiples and factors**

Lesson 4: **Identifying common factors**

Lesson 5: **Exploring divisibility**

Lesson 6: **Applying inverse operations**

Lesson 7: **Applying problem solving skills**

Lesson 8: **X and \div by 10, 100 and 1,000**

Lesson 9: **Creating and solving word problems**



Consolidation and assessment.

Lesson 10: **X and \div Part A Assessment**



Multiplication &
Division Part A

Multiplication/Division Part B

Objectives

- Identify rules of divisibility.
- Use multiplication to divide.
- Develop efficient mental and written strategies to multiply and divide decimals and whole numbers
- Divide by whole numbers where the results are terminating decimals. .
- Solve word problems involving the multiplication of whole numbers and/or decimals

Awesomenicity Lessons

Lesson 1: Exploring creative ways to multiply

Lesson 2: Learning grid method (area models)

Lesson 3: Learning partial product strategy

Lesson 4: Using multiplication to problem-solve

Lesson 5: Learning short multiplication

Lesson 6: Applying short multiplication

Lesson 7: Multiplying decimals (tenths)

Lesson 8: Multiplying decimals (hundredths)

Lesson 9: Learning chunking strategy division

Lesson 10: Applying chunking strategy

Lesson 11: Learning long division

Lesson 12: Using long division to divide decimals

Lesson 13: Learning short division

Lesson 14: Using short division to problem-solve

Lesson 15: Using factors to divide (2-digit divisor)

Lesson 16: Long division and 2-digit divisors

Lesson 17: Solving word problems

Lesson 18: Use multiplication and division to problem-solve



Multiplication & Division Part B

Consolidation and assessment.

Lesson 19: X and ÷ Part B Assessment

Fractions

Objectives

- Identify equivalent fractions.
- Find fractions of amounts.
- Compare fractions using the lowest common multiple.
- Convert improper fractions to mixed numbers and vice versa.
- Add and subtract fractions, including mixed numbers and improper fractions.
- Investigate the connection between fractions, decimals and percentages.
- Convert and order fractions, decimals and percentages.
- Investigate and calculate percentage discounts.

Awesomenicity Lessons

Lesson 1: Identifying fractions

Lesson 2: Creating equivalent fractions

Lesson 3: Simplifying fractions

Lesson 4: Simplifying fractions in a game

Lesson 5: Comparing unlike fractions

Lesson 6: Comparing unlike fractions in a game

Lesson 7: Calculating fractions of amounts

Lesson 8: Problem-solving with fractions of amounts

Lesson 9: Mixed numbers and improper fractions

Lesson 10: Improper fractions and mixed numbers

Lesson 11: Adding and subtracting unlike fractions

Lesson 12: Solving addition and subtraction puzzles

Lesson 13: Connecting fractions, decimals and percentages

Lesson 14: Converting fractions, decimals and percentages

Lesson 15: Converting fractions to decimals

Lesson 16: Ordering decimals, fractions and percentages

Lesson 17: Calculating percentages

Lesson 18: Calculating percentages and problem-solving

Lesson 19: Multiplying fractions by whole numbers

Lesson 20: Multiplying fractions by fractions



Lesson 21: Dividing fractions by whole numbers

Lesson 22: Fractions Assessment



Fractions

Consolidation and assessment.

Metric Measurement

Objectives

- Connect decimals and fractions to measurement.
- Read and interpret scales on a range of measuring instruments.
- Convert between common units of length, mass and capacity.
- Solve problems involving the comparison of length, mass and capacity.
- Problem solve using the perimeter and area of compound shapes and triangles.
- Connect volume and capacity.
- Interpret and use timetables.

Awesomenicity Lessons

Lesson 1: **Identifying units of measurement**

Lesson 2: **Converting between units of length**

Lesson 3: **Identifying scale and liquid volume**

Lesson 4: **Exploring mass**

Lesson 5: **Solving measurement word problems**

Lesson 6: **Calculating the perimeter of compound shapes**

Lesson 7: **Calculating the area of compound shapes**

Lesson 8: **Calculating the area of triangles**

Lesson 9: **Calculating the area of parallelograms**

Lesson 10: **Exploring volume**

Lesson 11: **Applying understanding of volume**



Consolidation and assessment.

Lesson 12: **Metric Olympics!**

Lesson 14: **Measurement Assessment**



Measurement

Shape and Space

Objectives

- Create simple prisms and pyramids and make real-world connections.
- Explore translations, reflections and rotations.
- Graph and interpret coordinates using all four quadrants of the Cartesian coordinate system.
- Find unknown angles using angles on a straight line, at a point and vertically-opposite angles.

Awesomenicity Lessons

Lesson 1: Identifying and measuring angles



Lesson 2: Calculating angles

Lesson 3: Classifying triangles and measuring their angles

Lesson 4: Making connections between quadrilaterals

Lesson 5: Finding missing angles

Lesson 6: Investigating circle vocabulary connections

Lesson 7: Constructing cuboids from nets

Lesson 8: Creating nets and constructing cuboids

Lesson 9: Locating and plotting coordinates

Lesson 10: Plotting coordinates

Lesson 11: Translating shapes on a grid

Lesson 12: Reflecting shapes

Lesson 13: Making & describing translations



Shape and space

Consolidation and assessment.

Lesson 14: Shape and Space Assessment

Statistics, Probability and Data

Objectives

- Use fractions, percentages and decimals to describe probability.
- Create experiments using chance and collect, record and display data in the most appropriate graph.
- Compare observed frequencies across experiments with expected frequencies.
- Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables.
- Interpret secondary data.

Awesomenicity Lessons

Lesson 1: **Interpreting graphs**

Lesson 2: **Interpreting pie graphs**

Lesson 3: **Drawing pie graphs**

Lesson 4: **Gathering and presenting data**

Lesson 5: **Calculating mean average**

Lesson 6: **Mean, mode, median and range**

Lesson 7: **Exploring timetables**

Lesson 8: **Exploring probability**

Lesson 9: **Using probability to make predictions**

Lesson 10: **Applying probability**



Consolidation and assessment.

Lesson 11: **Statistics, Probability and Data Assessment**



Data and probability

Ratio and Proportion

Objectives

- Use appropriate ratio and proportion vocabulary.
- Identify ratios in collections and make connections to fractions.
- Use multiplication and division to identify ratios and solve problems.
- Use proportion to manipulate quantities and calculate discounts.
- Solve problems involving scale factors.

Awesomenicity Lessons

Lesson 1: **Introduction to ratio vocabulary**

Lesson 2: **Identifying ratio and fractions**

Lesson 3: **Solving ratio problems**

Lesson 4: **Solving proportion problems**

Lesson 5: **Using proportion to manipulate quantities**

Lesson 6: **Introducing scale factor**



Consolidation and assessment.

Lesson 7: **Ratio and Proportion Assessment**



Ratio and proportion

Algebra

Objectives

- Solve problems involving unknown input and output amounts.
- Form and solve expressions.
- Solve equations where there is one or more unknown amounts.
- Create formula from linear patterns.
- Identify value pairs.
- Solve formulae with two unknowns.

Awesomenicity Lessons

Lesson 1: **Exploring input and outputs**

Lesson 2: **Solving 2-step input/output functions**

Lesson 3: **Forming Expressions**

Lesson 4: **Solving Equations**

Lesson 5: **Introduction to applying formulae**

Lesson 6: **Creating formulae from linear patterns**

Lesson 7: **Finding Value Pairs**

Lesson 8: **Solve formulae with two unknowns**



Consolidation and assessment.

Lesson 9: **Algebra Assessment**



Algebra

G5/Y6 Checklist



Number

| Objectives | ✓ |
|--|---|
| Read, write, compare and order whole numbers up to the millions. | |
| Investigate and identify properties of prime, composite, square and triangular numbers. | |
| Understand and use powers of ten. | |
| Explore real-life situations that use integers and decimals and locate and represent these on a number line. | |
| Round to the nearest 10, 100, 1,000 and beyond. | |
| Round decimals to the nearest tenth, hundredth and whole number. | |
| Use the order of operations (PEMDAS) to write number sentences. | |

Addition


| Objectives | ✓ |
|---|---|
| Choose and apply effective mental and written strategies to solve addition. | |
| Choose and apply effective mental and written strategies to solve addition. | |
| Develop mental and written strategies to add decimal amounts. | |
| Use rounding, subtraction or other addition strategies to check answers. | |
| Solve addition word problems using a range of strategies. | |

Subtraction


| Objectives | ✓ |
|--|---|
| Choose and apply effective mental and written strategies to solve subtraction. | |
| Develop mental and written strategies to subtract decimal amounts. | |
| Use rounding, addition or other subtraction strategies to check answers. | |
| Solve word problems that involve addition and subtraction using a range of strategies. | |

G5/Y6 Checklist


Multiplication

| Objectives |  |
|---|---|
| Apply times table patterns and strategies to recall multiplication facts. | |
| Investigate multiples, factors and common factors, including prime and composite numbers. | |
| Multiply and divide by 10, 100 and 1,000. | |
| Explore number flexibility and find creative strategies to multiply large numbers. | |
| Develop efficient mental and written strategies to multiply decimals and whole numbers. | |
| Solve word problems involving the multiplication of whole numbers and/or decimals. | |

Division


| Objectives |  |
|---|---|
| Identify rules of divisibility. | |
| Use multiplication to divide. | |
| Develop efficient mental and written strategies to multiply integers and decimal amounts. | |
| Divide by whole numbers where the results are terminating decimals. | |
| Solve word problems involving multiplying and dividing whole numbers and decimals. | |

Fractions


| Objectives |  |
|---|---|
| Identify equivalent fractions. | |
| Find fractions of amounts. | |
| Compare fractions using the lowest common multiple. | |
| Convert improper fractions to mixed numbers and vice versa. | |
| Add and subtract fractions, including mixed numbers and improper fractions. | |
| Investigate the connection between fractions, decimals and percentages. | |
| Convert and order fractions, decimals and percentages. | |
| Investigate and calculate percentage discounts. | |

G5/Y6 Checklist


Measurement

| Objectives |  |
|--|---|
| Connect decimals and fractions to measurement. | |
| Read and interpret scales on a range of measuring instruments. | |
| Convert between common units of length, mass and capacity. | |
| Solve problems involving the comparison of length, mass and capacity. | |
| Problem solve using the perimeter and area of compound shapes and triangles. | |
| Connect volume and capacity. | |

Space and Shape

| Objectives |  |
|---|---|
| Create simple prisms and pyramids and make real-world connections. | |
| Explore translations, reflections and rotations. | |
| Graph and interpret coordinates using all four quadrants of the Cartesian coordinate system. | |
| Find unknown angles using angles on a straight line, at a point and vertically-opposite angles. | |

Statistics, Probability & Data Handling

| Objectives |  |
|---|---|
| Use fractions, percentages and decimals to describe probability. | |
| Create experiments using chance and collect, record and display data in the most appropriate graph. | |
| Compare observed frequencies across experiments with expected frequencies. | |
| Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables. | |
| Interpret secondary data. | |
| Interpret and use timetables. | |

G5/Y6 Checklist

Ratio and Proportion

| Objectives | ✓ |
|--|---|
| Use appropriate ratio and proportion vocabulary. | |
| Identify ratios in collections and make connections to fractions. | |
| Use multiplication and division to identify ratios and solve problems. | |
| Use proportion to manipulate quantities and calculate discounts. | |
| Solve problems involving scale factors. | |

Algebra

| Objectives | ✓ |
|---|---|
| Solve problems involving unknown input and output amounts. | |
| Form and solve expressions. | |
| Solve equations where there is one or more unknown amounts. | |
| Create formula from linear patterns. | |
| Identify value pairs. | |
| Solve formulae with two unknowns. | |



**Every child deserves
to feel awesome about maths**

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