



## LONG TERM PLAN

### MATHS

#### Reception

	Autumn	Spring	Summer
Number	<ul style="list-style-type: none"> <li>To use number names and mathematical language in the context of play and conversation.</li> <li>To recognise numerals up to 10</li> <li>To count sets of objects to at least 5 with correct 1-1 correspondence.</li> <li>To explore the composition of numbers to 5 and begin to develop some automatic recall of these number facts.</li> <li>To subitise amounts within 5.</li> </ul>	<ul style="list-style-type: none"> <li>To recognise and write numerals up to 10.</li> <li>To explore the composition of numbers to 10 and begin to develop some automatic recall of these number facts</li> <li>To use manipulatives to explore the composition of numbers to 6 and then 10</li> <li>To use part whole models to represent the composition of numbers to 10</li> <li>To begin to combine groups in the course of play.</li> </ul>	<ul style="list-style-type: none"> <li>Count objects, actions &amp; sounds beyond 10</li> <li>Count quantities beyond 10 (Development Matters)</li> <li>Order numbers to 10</li> <li>Recall some number bonds to 10</li> <li>Link numerals to value</li> <li>Have a deep understanding of number to 10, including the composition of each number. (Early Learning Goal)</li> <li>Subitise (recognise quantities without counting) up to 5 (Early Learning Goal)</li> <li>Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. (Early Learning Goal)</li> </ul>

Numerical Pattern	<ul style="list-style-type: none"> <li>Verbally count to at least 10.</li> <li>To say the number one more or one less than a number within 5.</li> </ul>	<ul style="list-style-type: none"> <li>To say number names in order to at least 20</li> <li>To order numerals to 10</li> </ul>	<ul style="list-style-type: none"> <li>Verbally count beyond 20, recognising the pattern of the counting system</li> <li>Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.</li> <li>Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.</li> <li>Say one more /one less than numbers to at least 10</li> <li>Recognise and make equal groups</li> </ul>
Shape, Space and Measure	<ul style="list-style-type: none"> <li>Select, rotate and manipulate shapes to develop spatial reasoning skills. (Development Matters)</li> <li>To notice how shapes can fit together to make other shapes.</li> <li>To name common 2d shapes (circle, square, rectangle, triangle)</li> </ul>	<ul style="list-style-type: none"> <li>To name common 3D shapes in the course of building (Cylinder, Cube, Cuboid, Cone)</li> <li>To use everyday language to sequence events in a day. (First, Then, Next)</li> <li>To choose criteria ('rules') to sort objects into sets.</li> <li>To replicate a simple 3D structure.</li> </ul>	<ul style="list-style-type: none"> <li>Know that shapes can have more shapes within them. (Development Matters)</li> <li>Name some common 3d shapes and recognise these in the environment. (Cylinder, Cube, Cuboid, Cone)</li> <li>Develop awareness of the passage of time (Yesterday, today, tomorrow)</li> <li>Compare length, weight and capacity. "This is heavier than that." "Which container holds more?" (Development Matters)</li> </ul>

\* No ELG specifically related to Shape, Space and Measure in the new EYFS framework 2021. The Mathematics Educational Programme states, "to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures."

Year 1

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value (within 10)				Number: Addition and Subtraction (within 10)					Geometry: Shape	Number: Place Value (within 20)	
Spring	Consolidation	Number: Addition and Subtraction (within 20)			Number: Place Value (within 50)			Measurement: Length and Height		Measurement: Weight and Volume		Consolidation
Summer	Consolidation	Number: Multiplication and Division			Number: Fractions		Geometry: Position and Direction	Number: Place Value (within 100)		Measurement: Money	Measurement: Time	

Year 2

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction				Measurement: Money		Number: Multiplication and Division	Consolidation	
Spring	Number: Multiplication and Division				Statistics		Geometry: Properties of Shape			Number: Fractions		
Summer	Measurement: Length and Height		Geometry: Position and Direction		Consolidation and problem solving		Measurement: Time		Measurement: Mass, Capacity and Temperature			Consolidation

Year 3

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction				Number: Multiplication and Division				
Spring	Number: Multiplication and Division			Measurement: Money	Statistics		Measurement: Length and Perimeter			Number: Fractions		Consolidation
Summer	Number: Fractions			Measurement: Time			Geometry: Properties of Shape	Measurement: Mass and Capacity				Consolidation

Year 4

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value				Number: Addition and Subtraction			Measurement: Length and Perimeter	Number: Multiplication and Division			
Spring	Number: Multiplication and Division			Measurement: Area	Number: Fractions				Number: Decimals			Consolidation
Summer	Number: Decimals	Measurement: Money		Measurement: Time	Statistics	Geometry: Properties of Shape		Geometry: Position and Direction		Consolidation		

## Year 5

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction		Statistics		Number: Multiplication and Division			Measurement: Perimeter and Area	
Spring	Number: Multiplication and Division			Number: Fractions						Number: Decimals and Percentages		Consolidation
Summer	Consolidation	Number: Decimals			Geometry: Properties of Shape		Geometry: Position and Direction		Measurement: Converting Units		Measurement: Volume	

## Year 6

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition, Subtraction, Multiplication and Division					Number: Fractions				Geometry: Position and Direction
Spring	Number: Decimals		Number: Percentages		Number: Algebra		Measurement: Converting Units	Measurement: Perimeter, Area and Volume		Number: Ratio		Consolidation
Summer	Statistics		Geometry: Properties of Shape			Consolidation and themed projects						

\* The order of some units of work may change slightly in Key Stage 2 to enable teachers to match like objectives between different year groups within a class. Coverage will be complete by the end of each year.

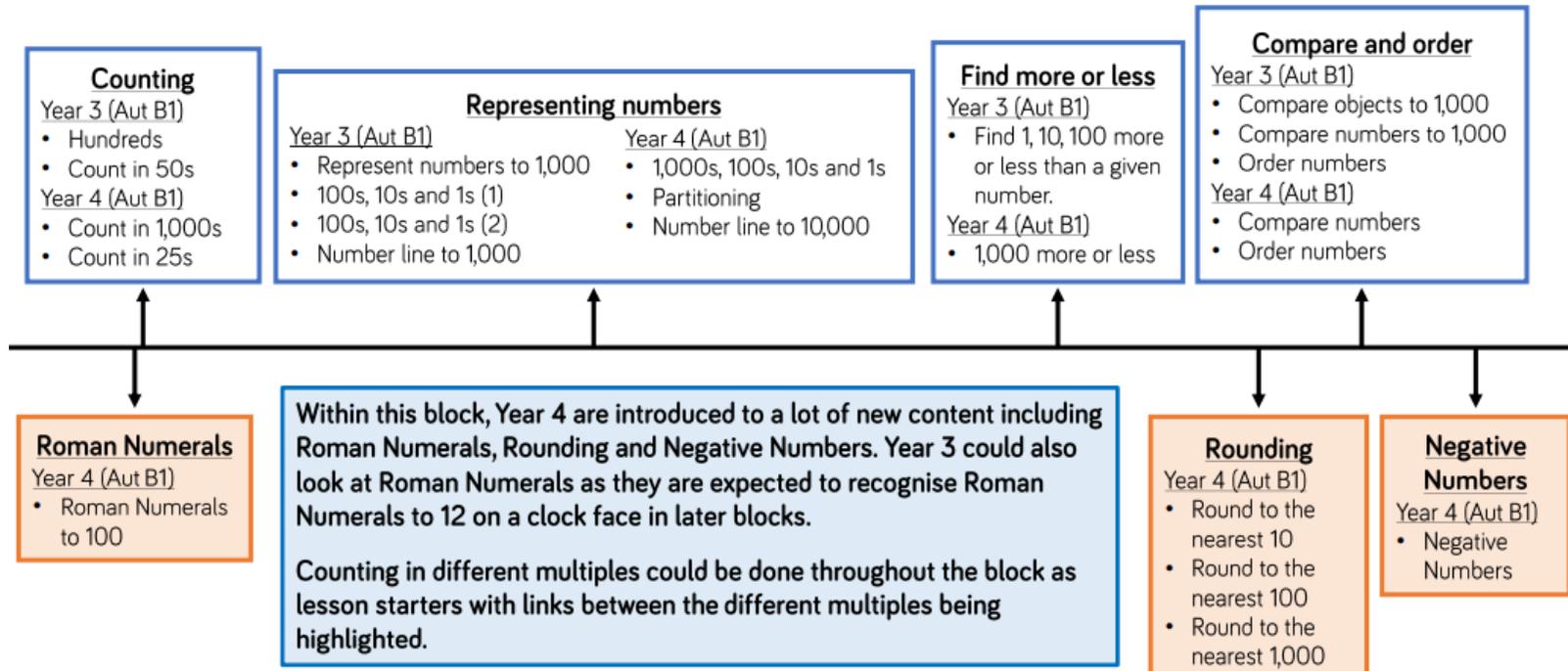
How we cater for mixed-aged Mathematics in our Key Stage 2 classes

Year 3/4

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value				Number: Addition and Subtraction				Number: Multiplication and Division			
Spring	Number: Multiplication and Division	Measurement: Length, Perimeter and Area		Number: Fractions				Y3: Measurement: Mass and Capacity		Consolidation		
								Y4: Number: Decimals				
Summer	Number: Decimals (including Money)		Measurement: Time		Statistics		Geometry: Properties of Shape (including Y4 Position and Direction)			Consolidation		

# Place Value

## Common Content



# Addition and Subtraction (1)

## Common Content

### Add and subtract multiples

#### Year 3 (Aut B2)

- Add and subtract multiples of 100
- 3-digit and 1-digit numbers
- 3-digit and 2-digit numbers
- Add and subtract 100s
- Spot the pattern

#### Year 4 (Aut B2)

- Add and subtract 1s, 10s, 100s and 1,000s

### Addition - adding more

#### Year 3 (Aut B2)

- Add 3-digit and 1-digit - crossing 10
- Add 3-digit and 2-digit - crossing 100
- 2-digit and 3-digit - not crossing 10/100 (addition)
- 2-digit and 3-digit - crossing 10 or 100
- 3-digit numbers - not crossing 10 or 100
- 3-digit numbers - crossing 10 or 100

#### Year 4 (Aut B2)

- Add two 4-digit numbers - no exchange
- Add two 4-digit numbers - one exchange
- Add two 4-digit numbers - more than one exchange

Children start by pattern spotting when adding ones and multiples of 10

When adding, children begin by adding numbers with no exchange before moving onto exploring exchange by using concrete and pictorial representations to support their understanding.

Year 3 focus on adding 3-digit numbers whilst Year 4 focus on adding 4-digit numbers.

# Multiplication and Division

## Common Content

### Times-tables

Year 3 (Aut B3)

- Multiply by 3
- Divide by 3
- 3 times-table
- Multiply by 4
- Divide by 4
- 4 times-table
- Multiply by 8
- Divide by 8
- 8 times-table

Year 4 (Aut B4, Spr B1)

- Multiply and divide by 6
- 6 times table and division facts
- Multiply and divide by 9
- 9 times table and division facts
- Multiply and divide by 7
- 7 times table and division facts
- 11 and 12 times table

### Comparing and applying

Year 3 (Spr B1)

- Comparing statements
- Related calculations

Year 4 (Spr B1)

- Multiply 3 numbers
- Efficient multiplication

### Equal groups

Year 3 (Aut B3)

- Multiplication-equal groups

### Multiplying and dividing by 10,100, 1 and 0

Year 4 (Aut B4)

- Multiply by 10
- Multiply by 100
- Divide by 10
- Divide by 100
- Multiply by 1 and 0
- Divide by 1

In this block, children have a focus on times tables. Once introduced, children should practice every day to improve their fluency.

Year 4 also look at how place value is affected when multiplying and dividing by multiples of 10

Both year groups apply their knowledge of times tables by looking at related calculations and efficient multiplication.

### Factors

Year 4 (Spr B1)

- Factor pairs

## Year Specific

# Fractions

## Common Content

### Recognising Fractions

Year 3 (Spr B5)

- Unit and non-unit fractions
- Making the whole
- Fractions on a number line

Year 4 (Spr B3)

- What is a fraction?
- Fractions greater than 1
- Count in fractions

### Equivalent Fractions

Year 3 (Sum B1)

- Equivalent fractions (1)
- Equivalent fractions (2)
- Equivalent fractions (3)

Year 4 (Spr B3)

- Equivalent fractions (1)
- Equivalent fractions (2)

### Fractions of an Amount

Year 3 (Spr B5)

- Fractions of an amount (1)
- Fractions of an amount (2)
- Fractions of an amount (3)

Year 4 (Spr B3)

- Calculate fractions of a quantity
- Problem solving- calculate quantities

### Add & Subtract

Year 3 (Sum B1)

- Add fractions
- Subtract fractions

Year 4 (Spr B3)

- Add 2 or more fractions
- Subtract 2 fractions
- Subtract from whole amounts

### Compare & Order

Year 3 (Sum B1)

- Compare fractions
- Order fractions

In this block, there is a great deal of common content, which gives teachers many opportunities to teach the class as a whole.

Year 4 move to working with fractions greater than 1 and use bar models to support their understanding including when they add fractions where the total is greater than 1.

# Decimals (including Money)

## Common Content

### Writing and comparing money

Year 3 (Spr B2)

- Pounds and pence
- Convert pounds and pence

Year 4 (Sum B2)

- Pounds and pence
- Ordering money

### Calculating with money

Year 3 (Spr B2)

- Add money
- Subtract money
- Give change

Year 4 (Sum B2)

- Four operations

### Decimals

Year 4 (Sum B1)

- Make a whole
- Write decimals
- Compare decimals
- Order decimals
- Round decimals
- Halves and quarters

### Estimate money

Year 4 (Sum B2)

- Estimating money

Year 4 start with a focus on decimals, building on their learning from the Spring term. During this time, teachers may recap fractions and decimals learning with Year 3, filling any gaps in knowledge.

Both year groups then convert between pounds and pence.

Year 4 apply their rounding skills with decimals to money.

Both year groups add and subtract money, with Year 4 moving on to multiply and divide money.

# Statistics

## Common Content

### Bar Charts

Year 3 (Spr B3)

- Bar Charts

Year 4 (Sum B4)

- Interpreting Charts
- Comparison, Sum and Difference

In this block, teachers may decide to teach pictograms to the whole class in order to recap learning with Year 4.

Both year groups look at bar charts and answer questions relating to them.

Year 4 then move on to interpreting line graphs whilst Year 3 focus on tables.

### Pictograms

Year 3 (Spr B3)

- Pictograms

### Tables

Year 3 (Spr B3)

- Tables

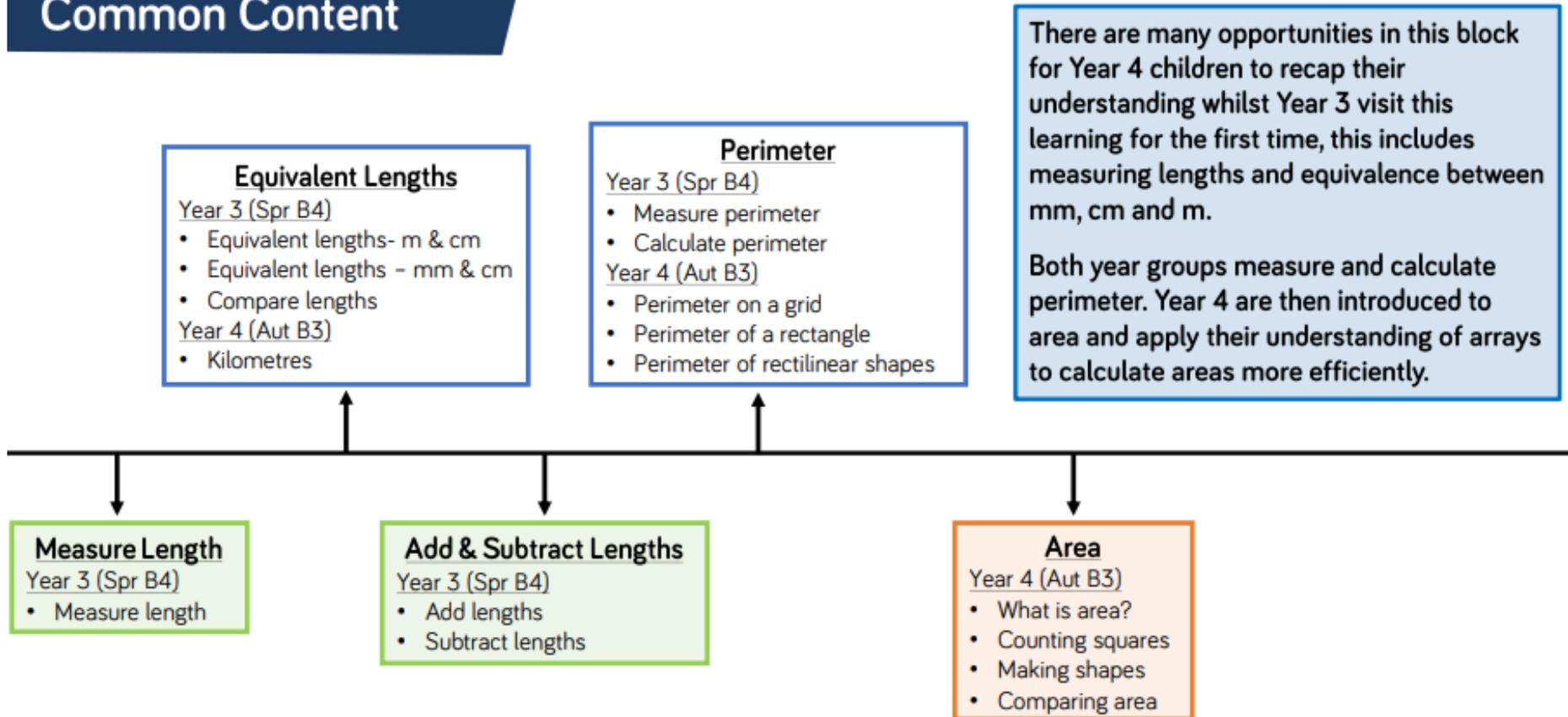
### Line graphs

Year 4 (Sum B4)

- Introducing line graphs
- Line graphs

# Length, Perimeter and Area

## Common Content



# Mass and Capacity / Decimals

## Common Content

### Tenths

Year 3 (Spr B5)

- Tenths
- Count in tenths
- Tenths as decimals

Year 4 (Spr B4)

- Recognise tenths and hundredths
- Tenths as decimals
- Tenths on a place value grid
- Tenths on a number line

In this block, the year groups start the block together looking at tenths.

Due to the difference in National Curriculum content, the year groups then move onto two separate topics with Year 3 looking at Mass and Capacity and Year 4 continuing to focus on Decimals.

### **Mass & Capacity**

Year 3 (Sum B4)

- Measure mass (1)
- Measure mass (2)
- Compare mass
- Add and subtract mass
- Measure capacity (1)
- Measure capacity (2)
- Compare capacity
- Add and subtract capacity

### **Decimals**

Year 4 (Spr B4)

- Divide 1-digit by 10
- Divide 2-digits by 10
- Hundredths
- Hundredths as decimals
- Hundredths on a place value grid
- Divide 1 or 2-digits by 100

# Time

## Common Content

### Converting Time

Year 3 (Sum B2)

- Months and years
- Hours in a day

Year 4 (Sum B3)

- Hours, minutes and seconds
- Years, months, weeks and days

### Digital Time

Year 3 (Sum B2)

- Using a.m. and p.m.
- 24-hour clock

Year 4 (Sum B3)

- Analogue to digital- 12-hour
- Analogue to digital- 24-hour

There are many opportunities in this block for Year 4 children to recap their understanding whilst Year 3 visit this learning for the first time, this includes telling the time on an analogue clock and finding and comparing durations.

Both year groups look at digital time and consider how to write and tell the time on both 12-hour and 24-hour clocks.

### Analogue time

Year 3 (Sum B2)

- Telling time to 5 minutes
- Telling time to the nearest minute

### Finding and comparing durations

Year 3 (Sum B2)

- Finding the duration
- Comparing durations
- Start and end times
- Measuring time in seconds

# Properties of Shape

## Common Content

### Angles

Year 3 (Sum B3)

- Turns and angles
- Right angles in shapes
- Compare angles

Year 4 (Sum B5)

- Identify angles
- Compare and order angles

### 2-D shapes

Year 3 (Sum B3)

- Recognise and describe 2-D shapes

Year 4 (Sum B5)

- Triangles
- Quadrilaterals

In this block, both year groups look at angles in shapes and compare them. They use the language, right angle, acute angle and obtuse angle.

Teachers may decide to recap Year 3 learning on lines and 3-D shapes with the whole class if needed. Both year groups look at 2-D shapes with Year 4 learning more specific language related to triangles and quadrilaterals.

Year 4 then move on to look at symmetry and co-ordinates. Teachers may use this time to recap other learning with Year 3.

### Lines

Year 3 (Sum B3)

- Draw accurately
- Horizontal and vertical
- Parallel and perpendicular

### 3-D shapes

Year 3 (Sum B3)

- Recognise and describe 3-D shapes
- Make 3-D shapes

### Symmetry

Year 4 (Sum B5)

- Lines of symmetry
- Complete a symmetric figure

### Co-ordinates

Year 4 (Sum B6)

- Describe position
- Draw on a grid
- Move on a grid
- Describe movement on a grid

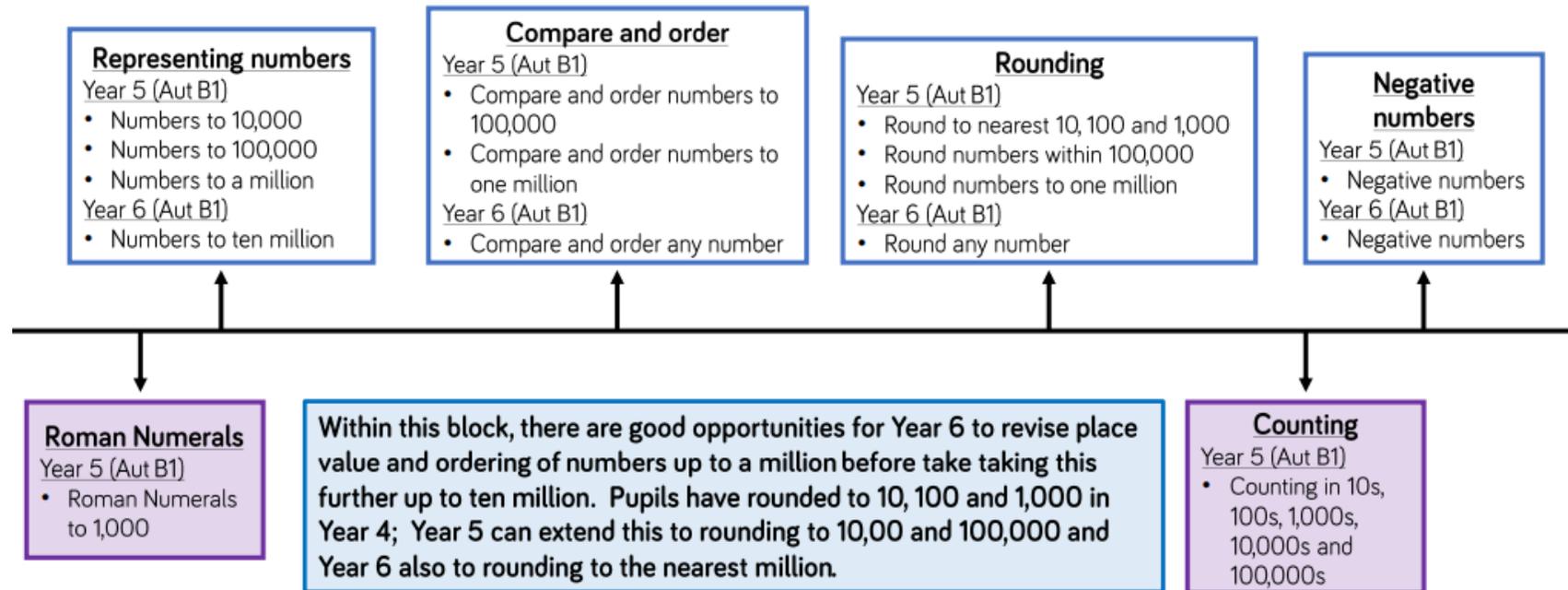
How we cater for mixed-aged Mathematics in our Key Stage 2 classes

Year 5/6

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Four Operations					Number: Fractions				
Spring	Y5: Number: Fractions	Number: Decimals and Percentages				Y5: Number: Decimals		Measurement: Converting Units	Measurement: Perimeter, Area and Volume		Statistics	
	Y6: Number: Ratio					Y6: Number: Algebra						
Summer	Geometry: Properties of Shape		Geometry: Position and Direction	Y5: Four Operations consolidation			Y5: FDP consolidation		Y5: Measure consolidation		Consolidation	
				Y6: SATS			Investigations					

# Place Value

## Common Content



# Four Operations (1)

## Common Content

### Addition and subtraction

Year 5 (Aut B2)

- Add whole numbers with more than 4-digits
- Subtract whole numbers with more than 4-digits
- Inverse operations
- Multi-step addition and subtraction problems

Year 6 (Aut B2)

- Add and subtract whole numbers

### Multiples

Year 5 (Aut B4)

- Multiples

Year 6 (Aut B2)

- Common multiples

### Multiplication

Year 5 (Spr B1)

- Multiply 4-digits by 1-digit
- Multiply 2-digits (area model)
- Multiply 2-digits by 2-digits
- Multiply 3-digits by 2-digits
- Multiply 4-digits by 2-digits

Year 6 (Aut B2)

- Multiply 4-digits by 2-digits

### Factors

Year 5 (Aut B4)

- Factors
- Common factors

Year 6 (Aut B2)

- Common factors

### $\times$ and $\div$ by multiples of 10

Year 5 (Aut B4)

- Multiply by 10, 100 and 1,000
- Divide by 10, 100 and 1,000
- Multiples of 10, 100 and 1,000

In this block, Year 6 have a lot of opportunities to recap prior learning as Year 5 are introduced to content for the first time.

Building on previous year groups, children add and subtract larger numbers and use their skills to solve problems.

Children then focus on multiplication. Year 5 break down their learning into 5 small steps however Year 6 could also use this opportunity to build their skills towards their final aim of multiplying up to 4-digits by 1 or 2-digit numbers.

# Fractions (1)

## Common Content

### Equivalence and simplifying

Year 5 (Spr B2)

- Equivalent fractions

Year 6 (Aut B3)

- Simplify fractions
- Fractions on a number line

### Compare and order

Year 5 (Spr B2)

- Compare and order fractions less than 1
- Compare and order fractions greater than 1

Year 6 (Aut B3)

- Compare and order (denominator)
- Compare and order (numerator)

### Addition and subtraction

Year 5 (Spr B2)

- Add and subtract fractions
- Add fractions within 1
- Add 3 or more fractions
- Add fractions
- Add mixed numbers
- Subtract fractions
- Subtract mixed numbers
- Subtract-breaking the whole
- Subtract 2 mixed numbers

Year 6 (Aut B3)

- Add and subtract fractions (1)
- Add and subtract fractions (2)
- Add fractions
- Subtract fractions
- Mixed addition and subtraction

### Improper fractions and mixed numbers

Year 5 (Spr B2)

- Improper fractions to mixed numbers
- Mixed numbers to improper fractions

### Counting in fractions

Year 5 (Spr B2)

- Number sequences

In this block, children build on their previous knowledge of what a fraction is. Year 5 look at using multiplication and division to find equivalent fractions whilst Year 6 apply these skills to start to simplify fractions.

Both year groups add and subtract fractions with the same denominator and denominators that are multiples of the same number whilst Year 6 move on to adding and subtracting fractions where the denominators are not multiples of the same number.

# Fractions and Ratio

## Common Content

Year 5 and 6 are studying different topics in this unit. Skills common to both topics (multiplication, division, simplifying) could be covered together in starter activities.

This is a chance for Year 5 to consolidate their learning in fractions. Teachers can decide where they feel they need to fill the gaps in learning from this unit as there was a great deal of content covered in the Autumn term.

Year 6 make the link from fractions to Ratio as they are introduced to this new concept.

### **Fractions**

Using knowledge of the previous term's learning on fractions, consider which aspects children may need to spend longer on to deepen understanding.

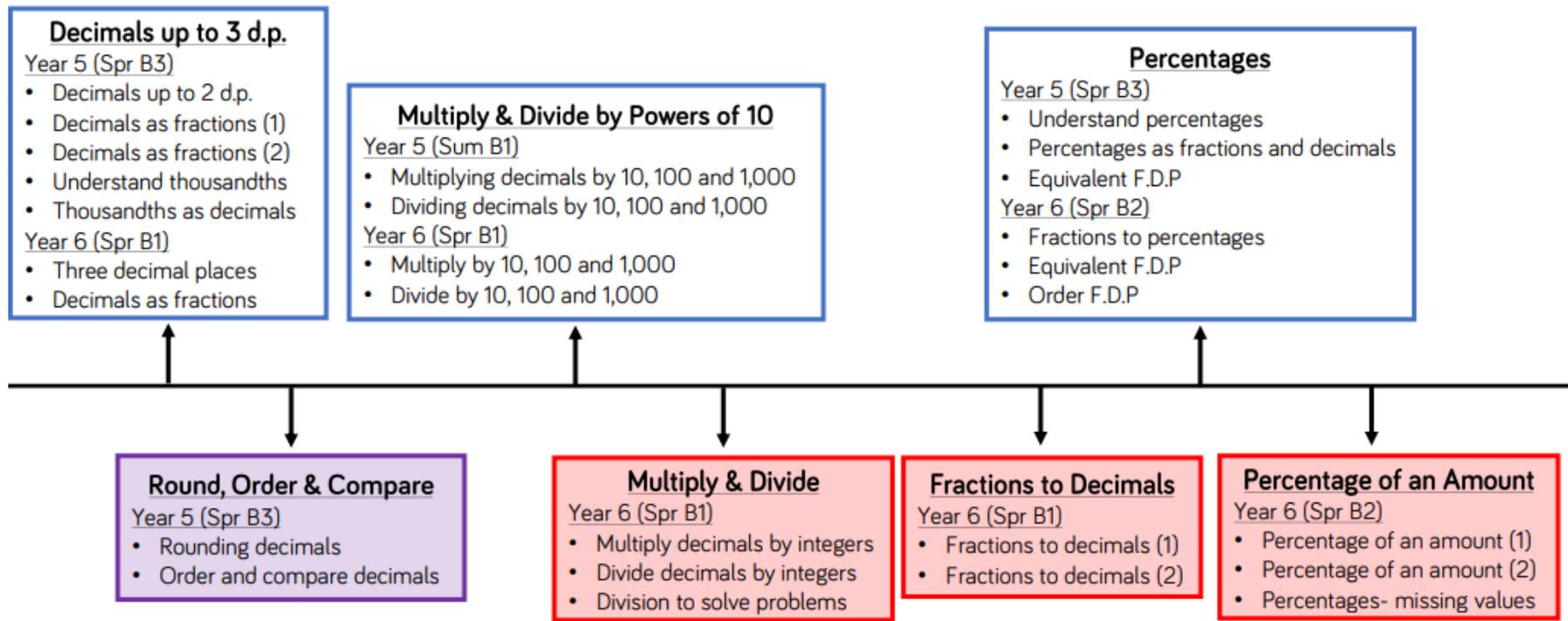
### **Ratio**

Year 6 (Spr B6)

- Using ratio language
- Ratio and fractions
- Introducing the ratio symbol
- Calculating ratio
- Using scale factors
- Calculating scale factors
- Ratio and proportion problems

# Decimals and Percentages

## Common Content



## Year Specific

Both year groups start by looking at decimals with up to 3 decimal places. Teachers may decide to recap rounding, ordering and comparing with both year groups before moving on to multiplying and dividing. Whilst Year 6 deepen their understanding of decimals and percentages, ensure Year 5 have plenty of opportunity to link their learning back to fractions.

# Decimals and Algebra

## Common Content

Year 5 and 6 are studying different topics in this unit.

Teachers may decide to recap adding and subtracting decimals with Year 6. This can then be applied throughout other topics including in their algebra block.

## Year Specific

### Decimals

#### Year 5 (Sum B1)

- Adding decimals within 1
- Subtracting decimals within 1
- Complements to 1
- Adding decimals- crossing the whole
- Adding decimals (same d.p.)
- Subtracting decimals (same d.p.)
- Adding decimals (different d.p.)
- Subtracting decimals (different d.p.)
- Adding and subtracting wholes and decimals
- Decimal sequences

### Algebra

#### Year 6 (Spr B3)

- Find a rule- one step
- Find a rule- two steps
- Forming expressions
- Substitution
- Formulae
- Forming equations
- Simple one-step equations
- Solve two-step equations
- Find pairs of values
- Enumerate possibilities

# Converting Units

## Common Content

### Metric Measures

Year 5 (Sum B4)

- Kilograms and Kilometres
- Milligrams and millilitres
- Metric Units

Year 6 (Spr B4)

- Metric measures
- Convert metric measures
- Calculate with metric measures

### Imperial Measures

Year 5 (Sum B4)

- Imperial units

Year 6 (Spr B4)

- Imperial measures

In this block, both year groups look at metric and imperial measures.

Year 6 extend their learning by looking at converting between miles and kilometres.

Teachers may decide to recap converting units of time with both year groups. Time is covered again later in the term when reading timetables in the Statistics block.

### Miles & Kilometres

Year 6 (Spr B4)

- Miles and kilometres

### Time

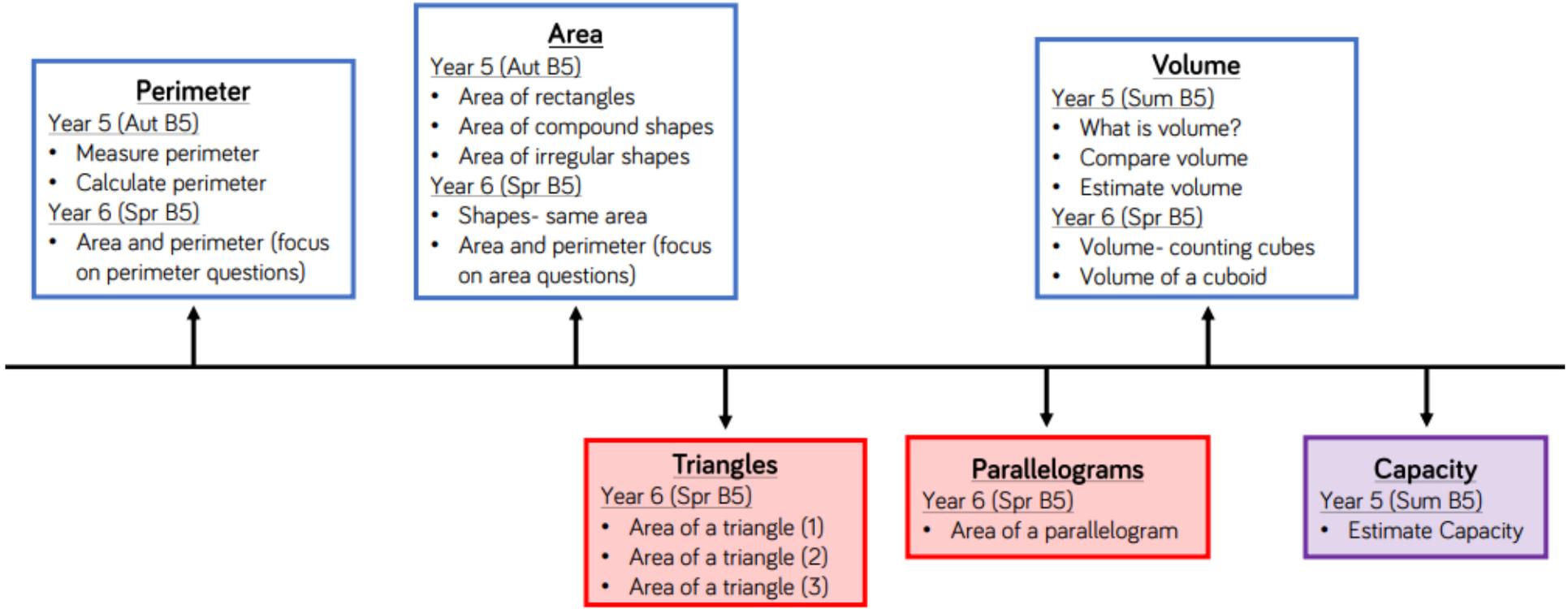
Year 5 (Sum B4)

- Converting units of time



# Perimeter, Area and Volume

## Common Content



# Statistics

## Common Content

### Line Graphs

#### Year 5 (Aut B3)

- Read and interpret line graphs
- Draw line graphs
- Use line graphs to solve problems

#### Year 6 (Sum B3)

- Read and interpret line graphs
- Draw line graphs
- Use line graphs to solve problems

Both year groups start by reading, drawing and interpreting line graphs.

Teachers may decide to look at tables with both year groups, this is a good opportunity to recap time from earlier in the term.

Year 6 then move on to looking at pie charts and finding the mean. At this point, teachers may decide to continue work on line graphs with Year 5 to secure their understanding.

### Tables

#### Year 5 (Aut B3)

- Read and interpret tables
- Two-way tables
- Timetables

### Circles

#### Year 6 (Sum B3)

- Circles

### Pie Charts

#### Year 6 (Sum B3)

- Read and interpret pie charts
- Pie charts with percentages
- Draw pie charts

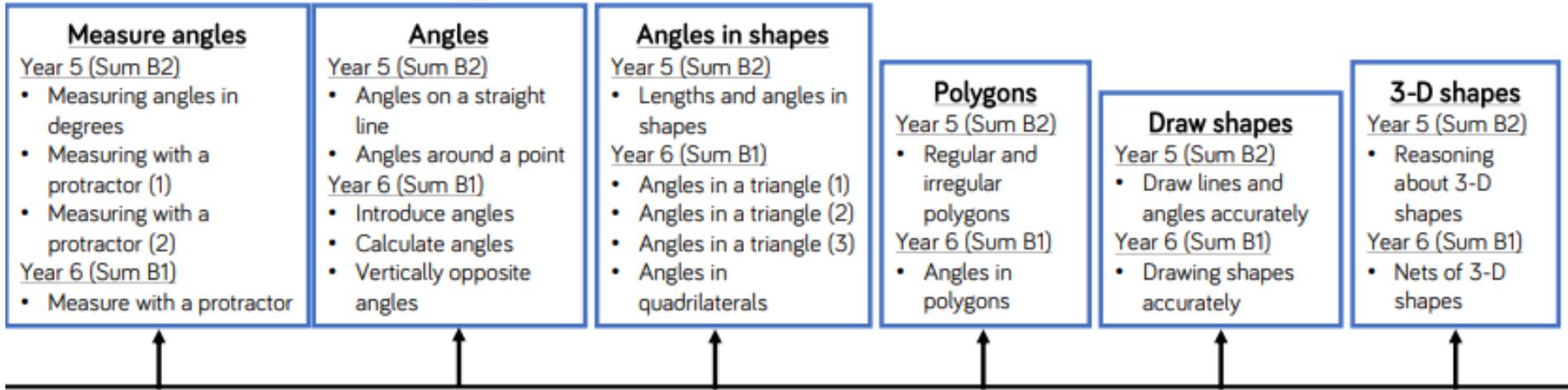
### Averages

#### Year 6 (Sum B3)

- The mean

# Properties of Shape

## Common Content



There are a lot of opportunities in this block to bring the class together to consolidate shape knowledge before moving Year 6 on to ideas that are linked to their prior learning.

Both year groups measure and draw angles using a protractor before moving on to draw shapes accurately. Year 5 focus on angles on a straight line and round a point whilst Year 6 apply this understanding to vertically opposite angles and angles in triangles and quadrilaterals.

# Position and Direction

## Common Content

### Describe position

Year 5 (Spr B3)

- Position in the first quadrant

Year 6 (Spr B1)

- The first quadrant
- Four quadrants

### Reflection

Year 5 (Sum B1)

- Reflection
- Reflection with co-ordinates

Year 6 (Spr B1)

- Reflections

### Translation

Year 5 (Sum B1)

- Translation
- Translation with co-ordinates

Year 6 (Spr B1)

- Translations

Both year groups start by looking at coordinates in the first quadrant.  
Year 6 then move on to looking at coordinates in all 4 quadrants.

Year 5 reflect and translate shapes within the first quadrant.

Year 6 reflect and translate shapes across all four quadrants.