LONG TERM PLAN

MATHS

Reception

	Autumn	Spring	Summer
Number	• To use number names and mathematical language in the context of play and conversation. • To recognise numerals up to 10 • To count sets of objects to at least 5 with correct 1-1 correspondence. • To explore the composition of numbers to 5 and begin to develop some automatic recall of these number facts. • To subitise amounts within 5.	• To recognise and write numerals up to 10. • To explore the composition of numbers to 10 and begin to develop some automatic recall of these number facts • To use manipulatives to explore the composition of numbers to 6 and then 10 • To use part whole models to represent the composition of numbers to 10 • To begin to combine groups in the course of play.	• Count objects, actions & sounds beyond 10 • Count quantities beyond 10 (Development Matters) • Order numbers to 10 • Recall some number bonds to 10 • Link numerals to value • **Have a deep understanding of number to 10, including the composition of each number. (Early Learning Goal)** • **Subitise (recognise quantities without counting) up to 5 (Early Learning Goal)** • **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)**

Numerical Pattern	• Verbally count to at least 10. • To say the number one more or one less than a number within 5.	• To say number names in order to at least 20 • To order numerals to 10	• **Verbally count beyond 20, recognising the pattern of the counting system** • **Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.** • **Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.** • Say one more /one less than numbers to at least 10 • Recognise and make equal groups
Shape, Space and Measure	• Select, rotate and manipulate shapes to develop spatial reasoning skills. (Development Matters) • To notice how shapes can fit together to make other shapes. • To name common 2d shapes (circle, square, rectangle, triangle)	• To name common 3D shapes in the course of building (Cylinder, Cube, Cuboid, Cone) • To use everyday language to sequence events in a day. (First, Then, Next) • To choose criteria ('rules') to sort objects into sets. • To replicate a simple 3D structure.	• Know that shapes can have more shapes within them. (Development Matters) • Name some common 3d shapes and recognise these in the environment. (Cylinder, Cube, Cuboid, Cone) • Develop awareness of the passage of time (Yesterday, today, tomorrow) • Compare length, weight and capacity. "This is heavier than that." "Which container holds more?" (Development Matters)

*** 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.

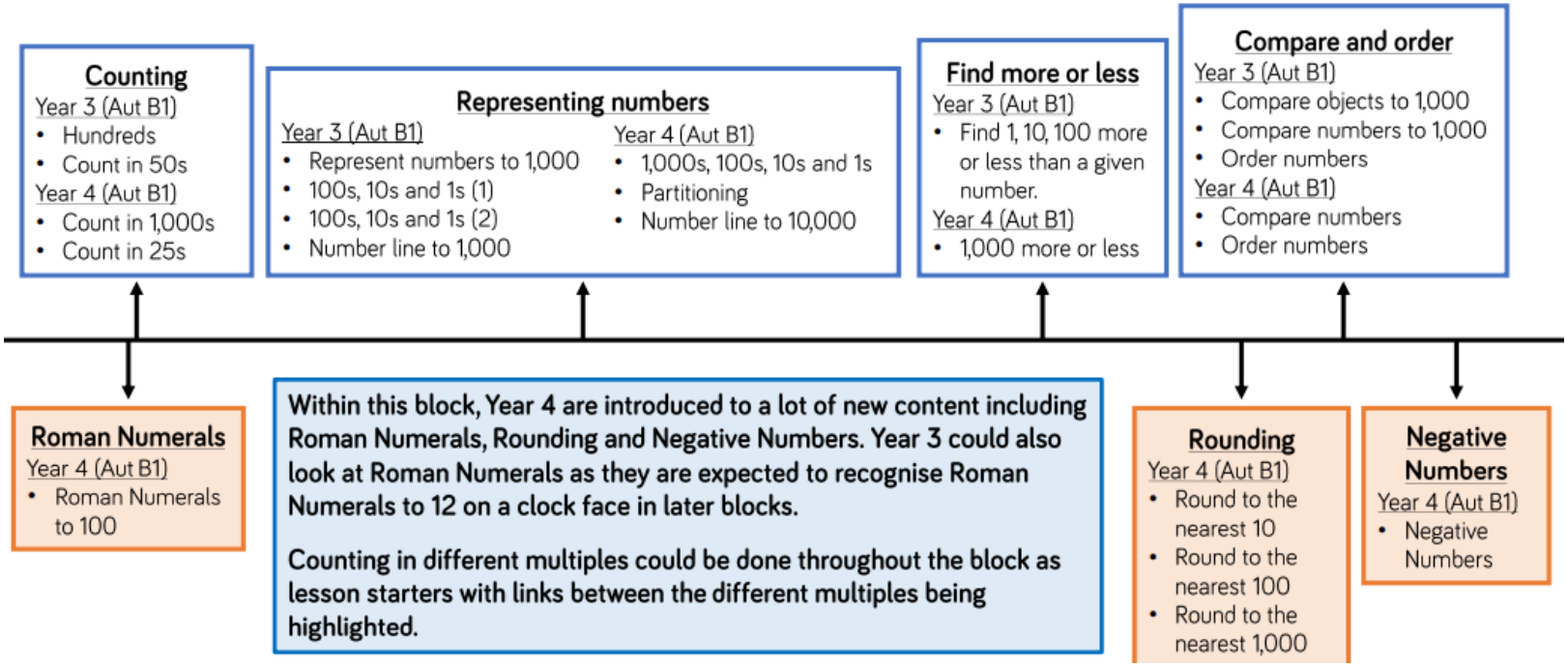
How we cater for mixed-aged Mathematics in our Key Stage 2 classes

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-digt 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

Year Specific

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

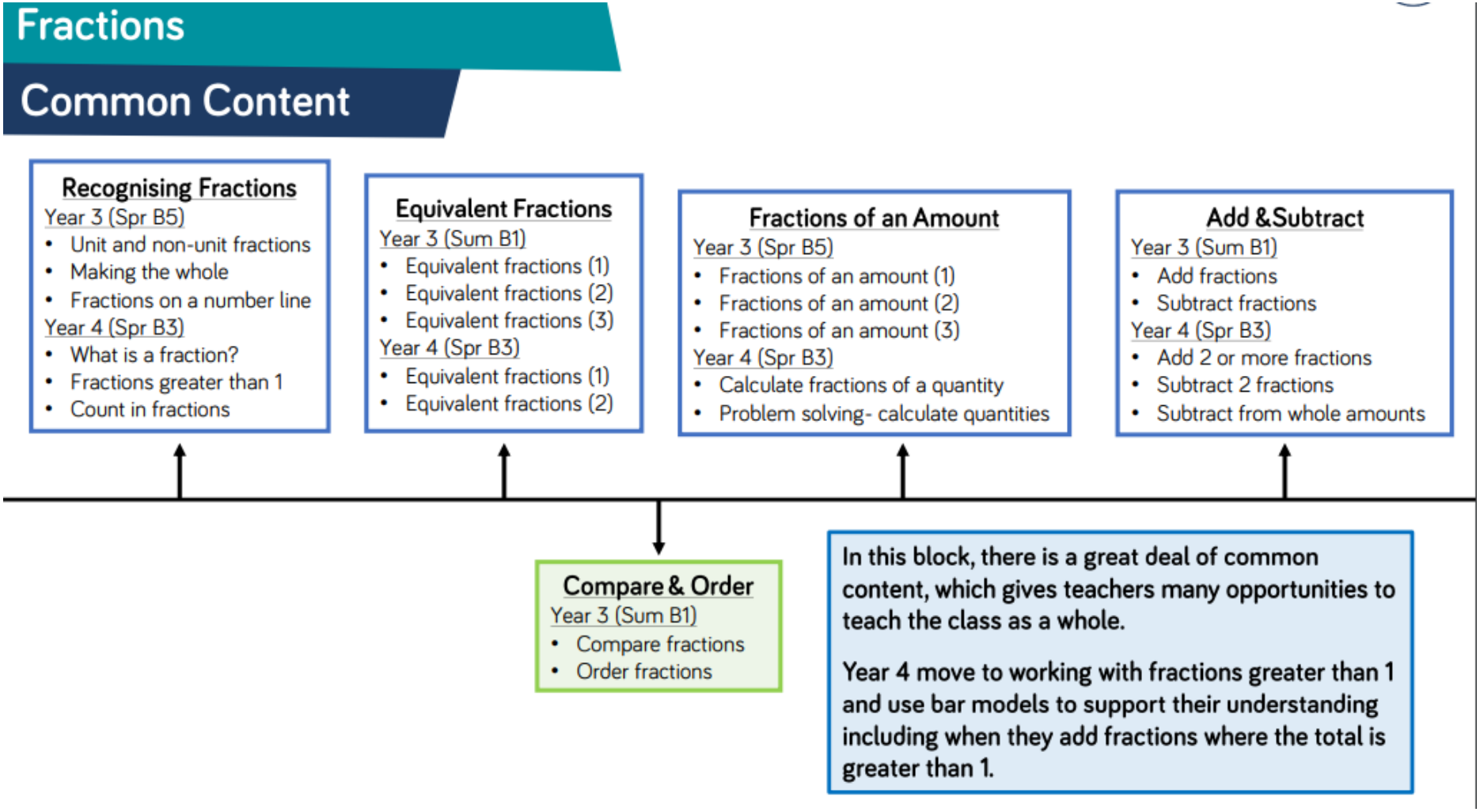
Both year groups apply their knowledge of times tables by looking at related calculations and efficient multiplication.

Factors

Year 4 (Spr B1)
- Factor pairs

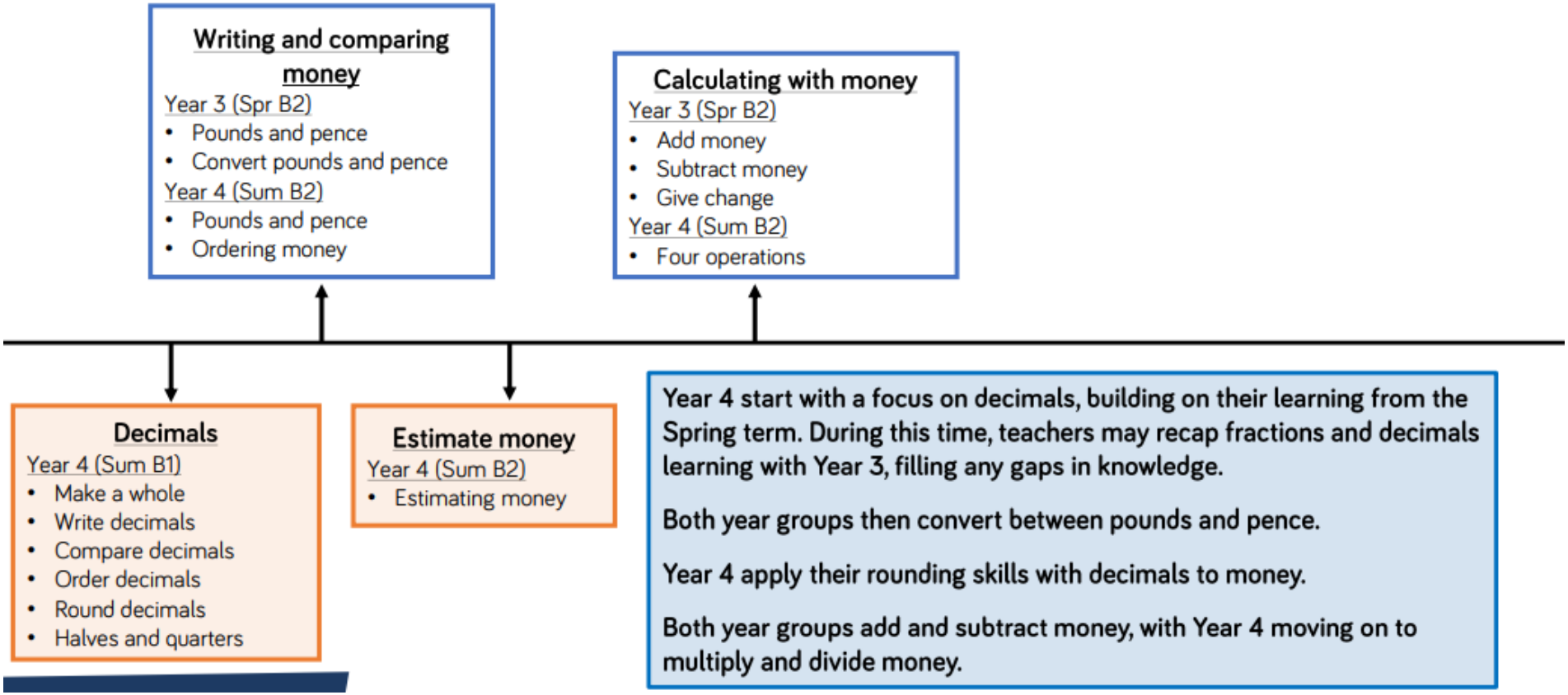
Fractions

Common Content



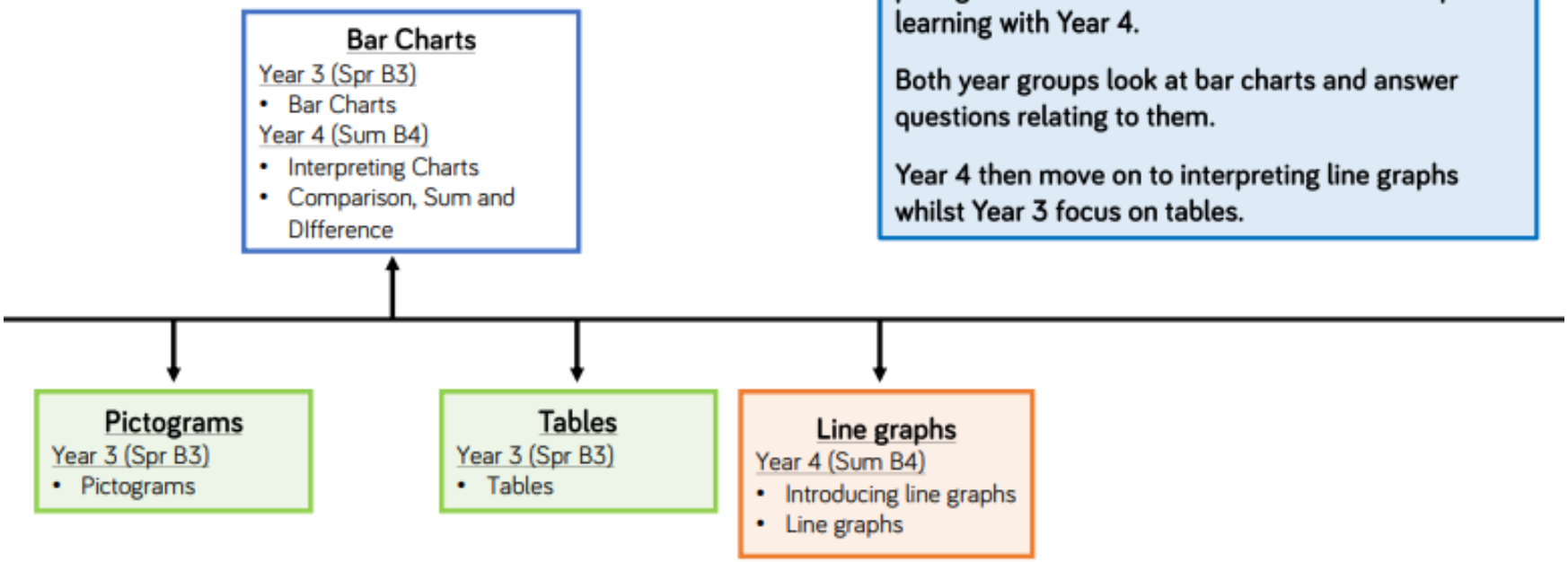
Decimals (including Money)

Common Content



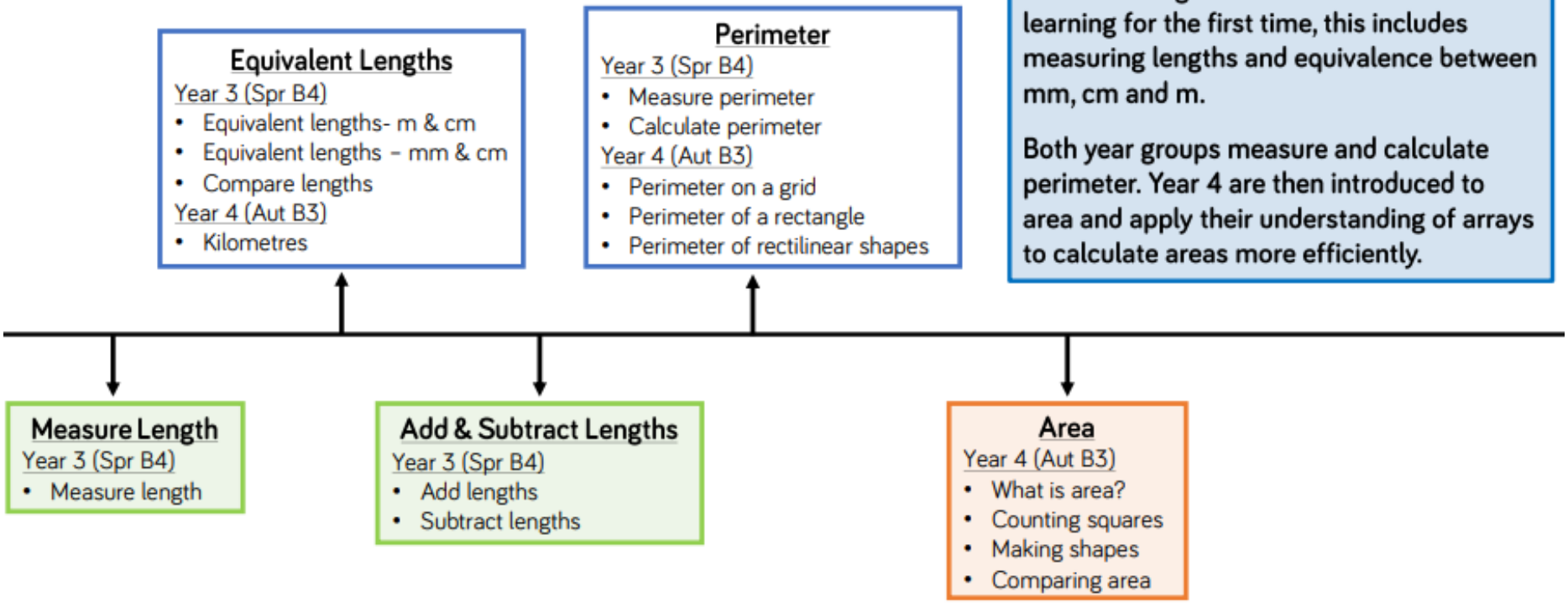
Statistics

Common Content



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

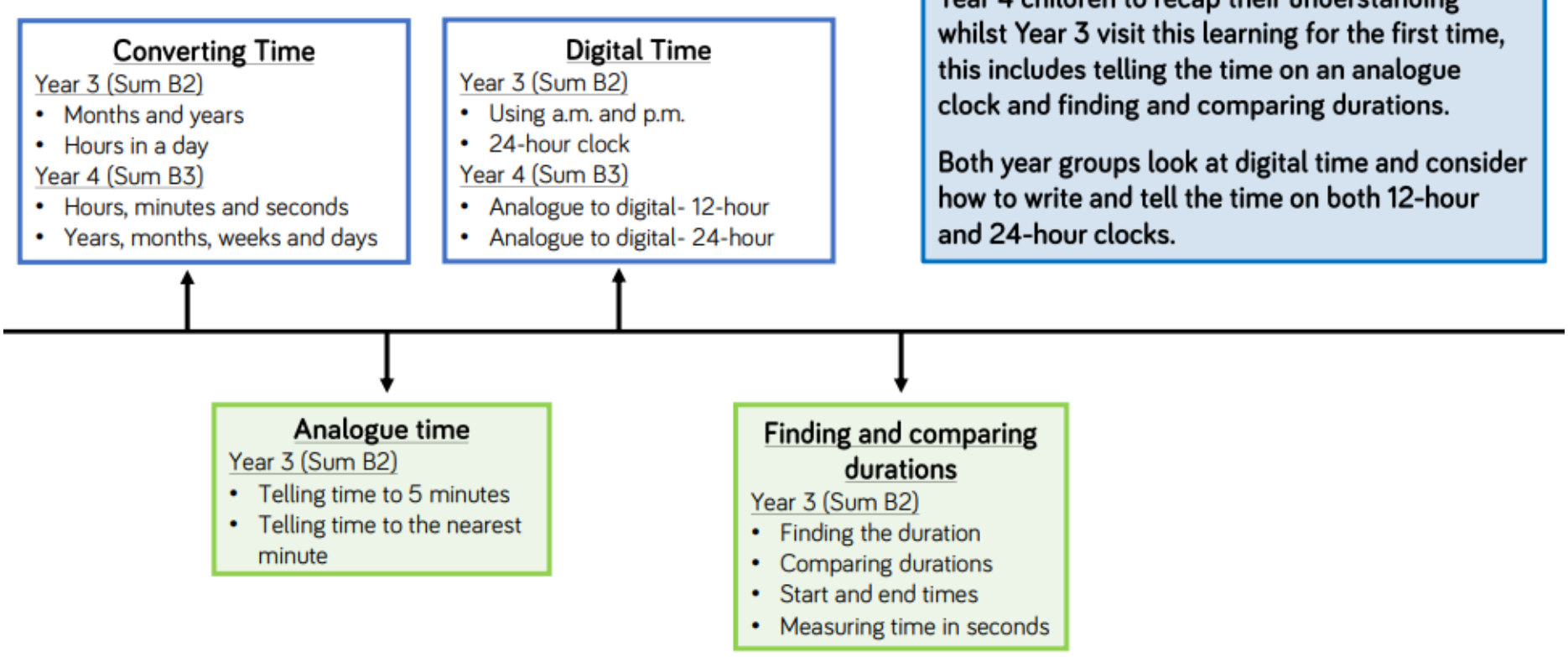
Year 3 (Sum B4)
- Measure mass (1)
- Measure mass (2)
- Compare mass
- Add and subtract mass
- Measure capacity (1)
- Measure capacity (2)
- Compare capacity
- Add and subtract capacity

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

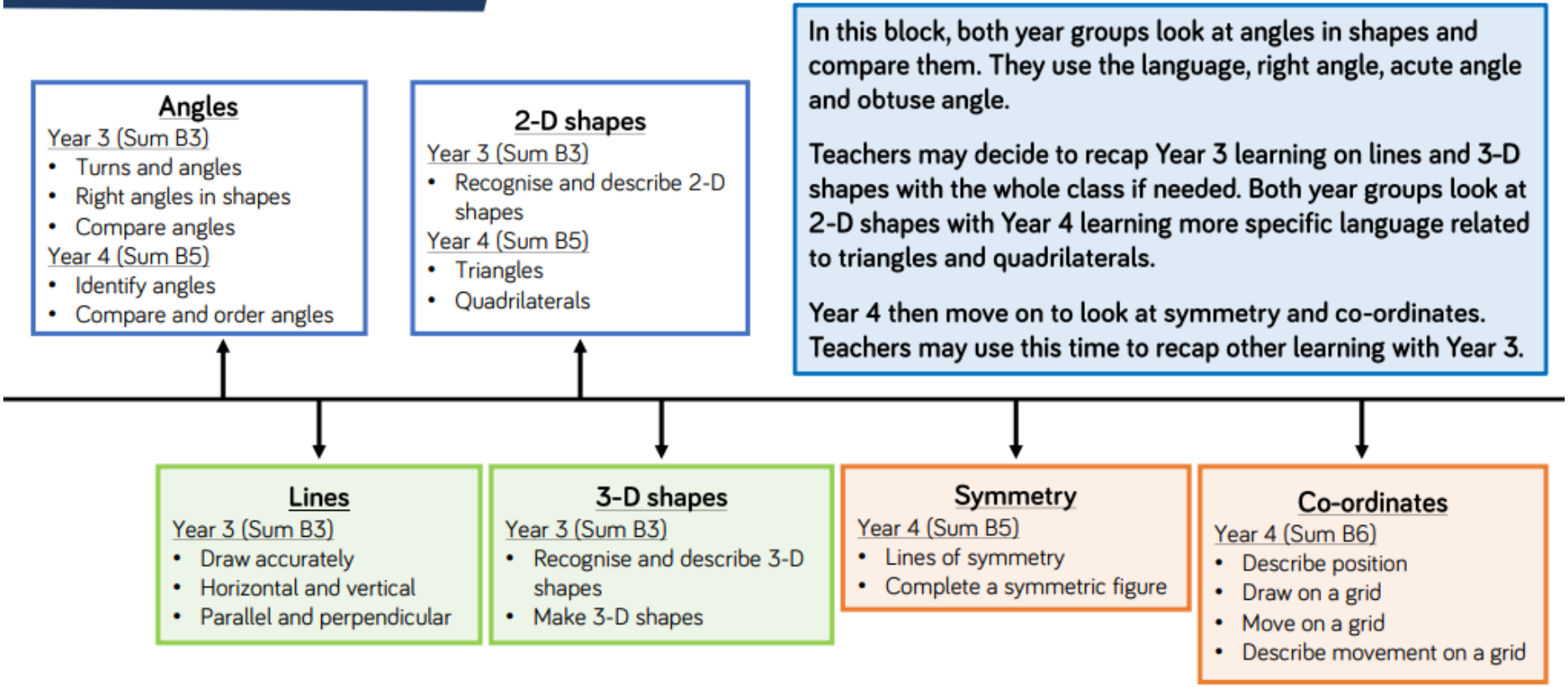
Time

Common Content



Properties of Shape

Common Content



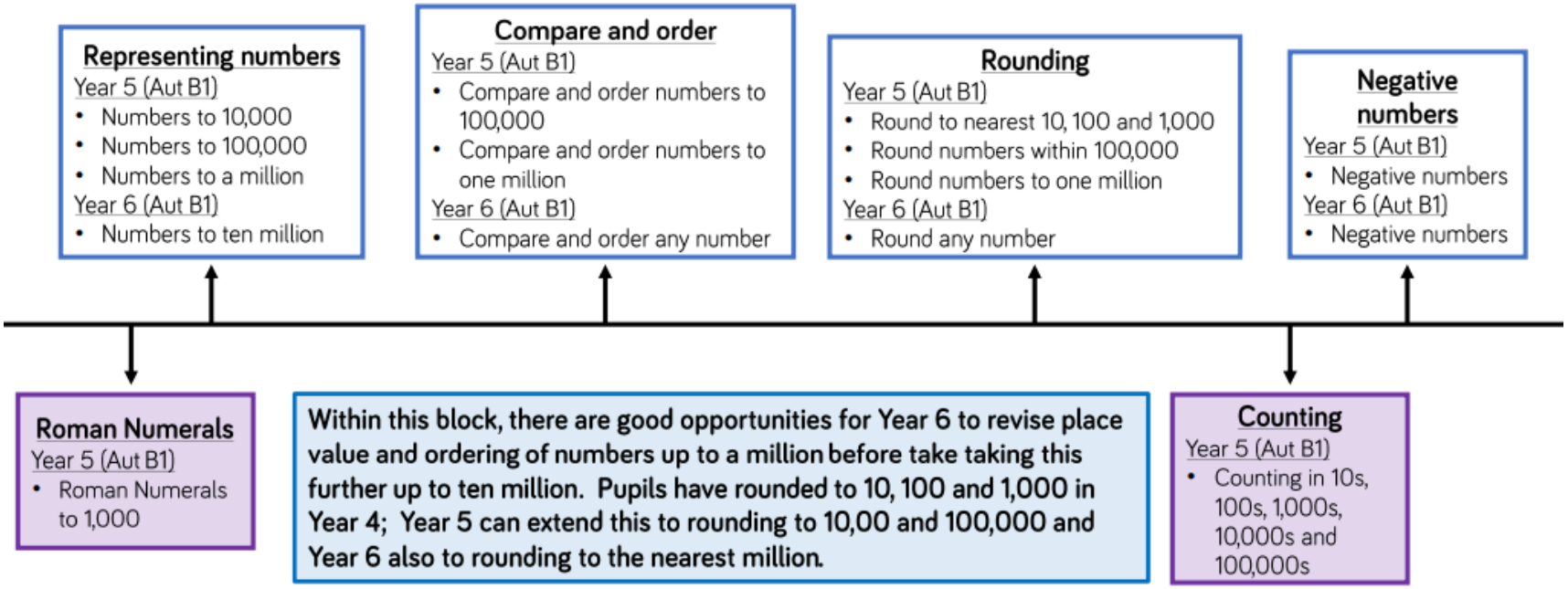
How we cater for mixed-aged Mathematics in our Key Stage 2 classes

Year 5/6

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

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

× and ÷ 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.

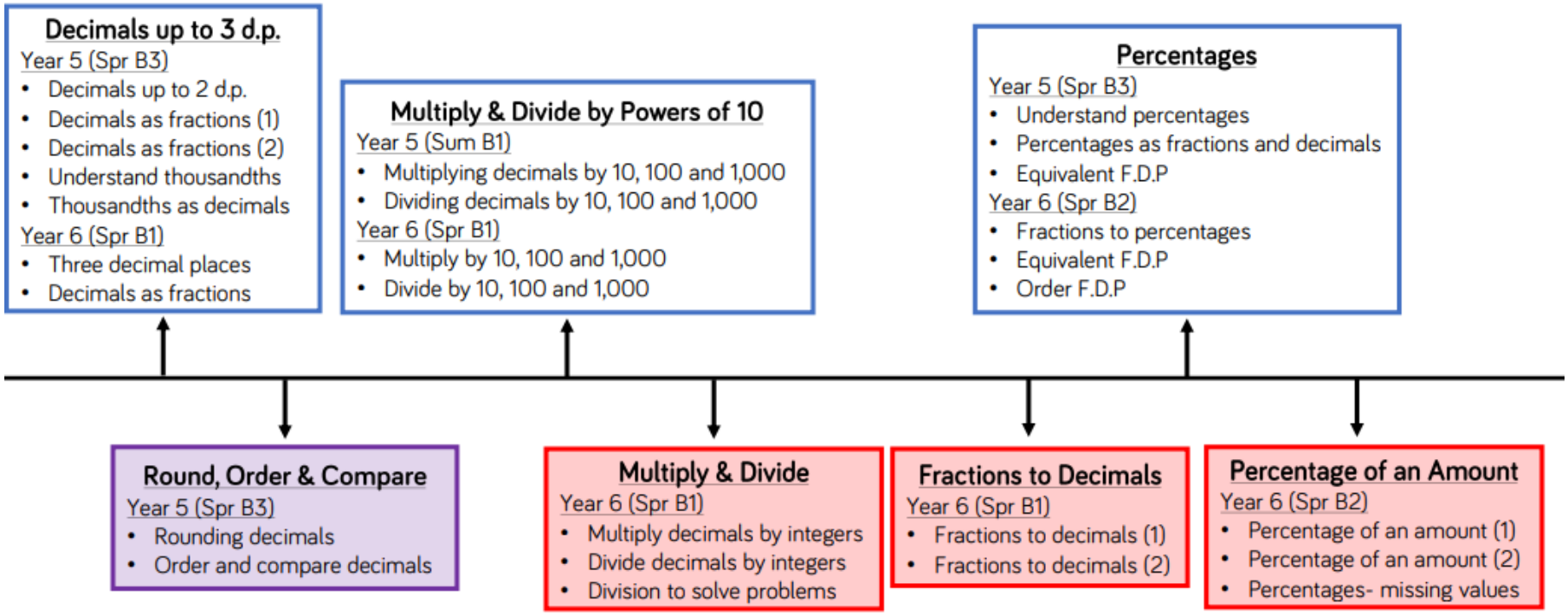
Ratio

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

Miles & Kilometres

Year 6 (Spr B4)

- Miles and kilometres

Time

Year 5 (Sum B4)

- Converting units of time

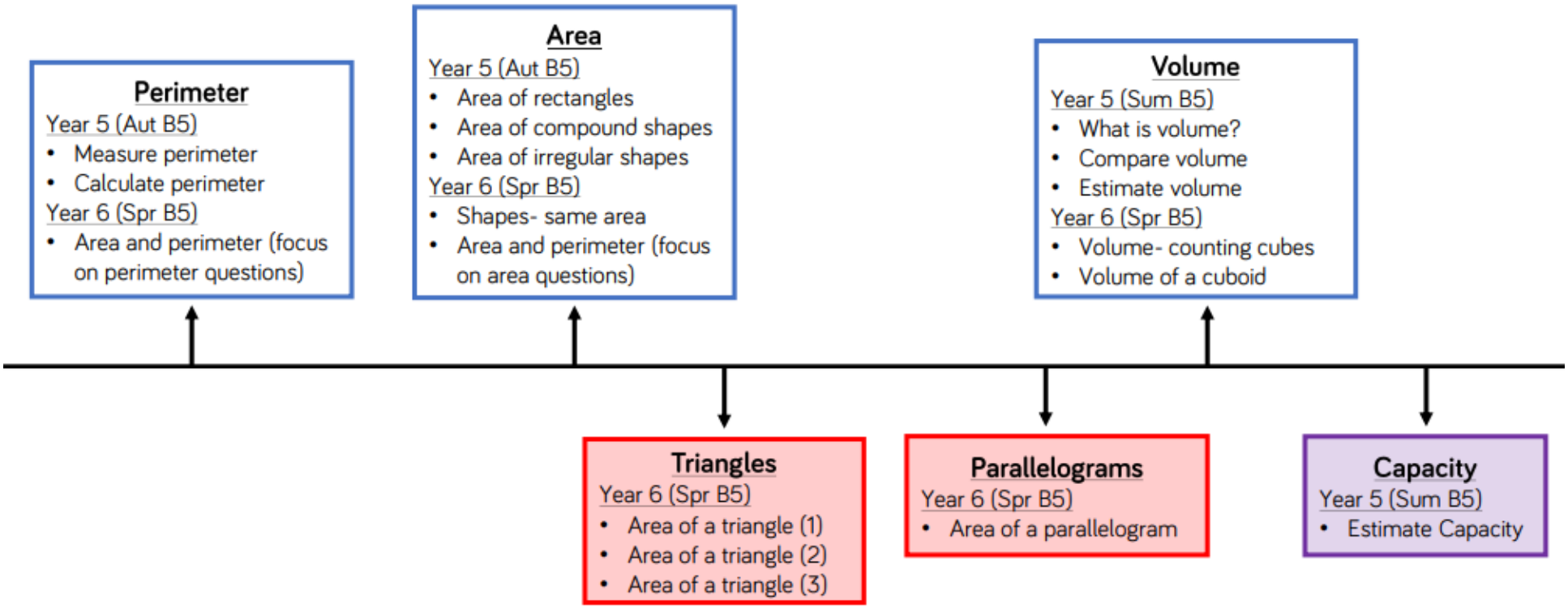
In this block, both year groups look at metric and imperial measures.

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.

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

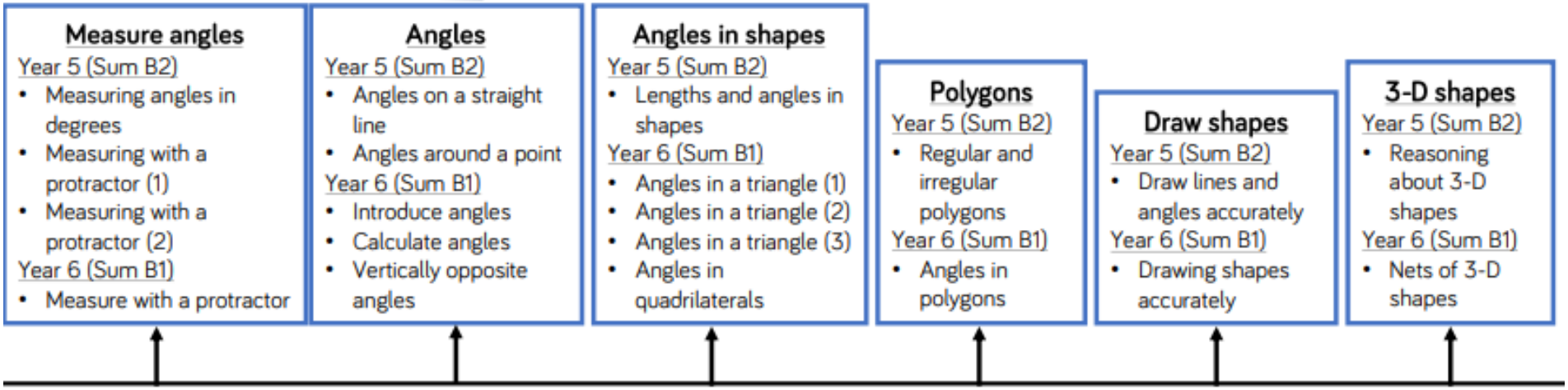
Year 6 (Sum B3)
- Read and interpret pie charts
- Pie charts with percentages
- Draw pie charts

Averages

Year 6 (Sum B3)
- The mean

Properties of Shape

Common Content

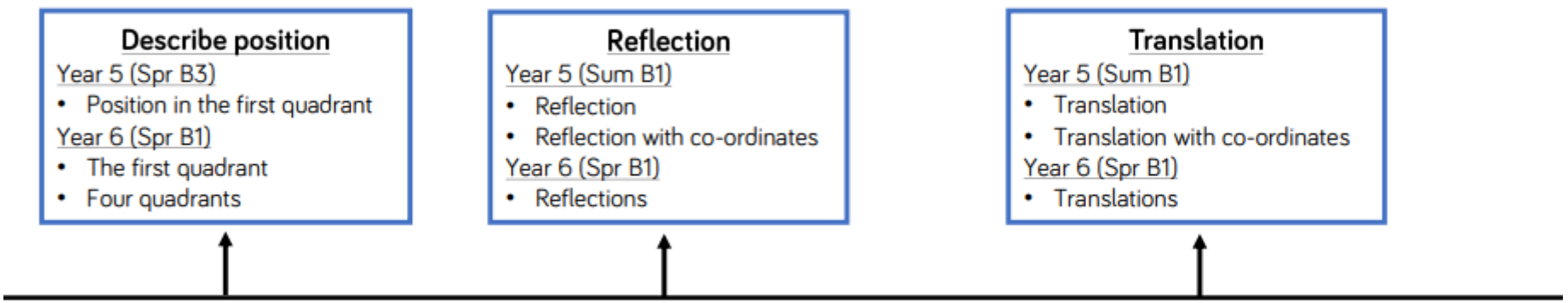


There are a lot of opportunities in this block to bring the class together to consolidate shape knowledge before moving Year 6 on to ideas that are linked to their prior learning.

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



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.