

Place Value Pathway (WRM)

Count to **ten**, forwards and backwards, beginning with 0 or 1, or from any given number.

Count, read and write numbers to **10** in numerals and words.

Given a number, identify one more or one less.

Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.

Count to **twenty**, forwards and backwards, beginning with 0 or 1, from any given number.

Count, read and write numbers to **20** in numerals and words.

Given a number, identify one more or one less.

Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.

Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.

Count, read and write numbers to 100 in numerals.

Given a number, identify one more and one less.

Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least.

Read and write numbers to at least 100 in numerals and in words.

Recognise the place value of each digit in a two digit number (tens, ones)

Identify, represent and estimate numbers using different representations including the number line.

Compare and order numbers from 0 up to 100; use <, > and = signs.

Use place value and number facts to solve problems.

Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward.

Year 1

Count to **50** forwards and backwards, beginning with 0 or 1, or from any number.

Count, read and write numbers to **50** in numerals.

Given a number, identify one more or one less.

Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.

Count in multiples of twos, fives and tens.

Year 2

Year 3

Year 4

Count in multiples of 6, 7, 9, 25 and 100.

Find 1000 more or less than a given number.

Recognise the place value of each digit in a four digit number (thousands, hundreds, tens and ones)

Order and compare numbers beyond 1000

Identify, represent and estimate numbers using different representations.

Round any number to the nearest 10, 100 or 1000

Solve number and practical problems that involve all of the above and with increasingly large positive numbers.

Count backwards through zero to include negative numbers.

Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.

Identify, represent and estimate numbers using different representations.

Find 10 or 100 more or less than a given number

Recognise the place value of each digit in a three-digit number (hundreds, tens, ones).

Compare and order numbers up to 1000

Read and write numbers up to 1000 in numerals and in words.

Solve number problems and practical problems involving these ideas.

Count from 0 in multiples of 4, 8, 50 and 100

Year 5

Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit.

Round any whole number to a required degree of accuracy.

Use negative numbers in context, and calculate intervals across zero.

Solve number and practical problems that involve all of the above.

Read, write, order and compare numbers to at least 1000000 and determine the value of each digit.

Count forwards or backwards in steps of powers of 10 for any given number up to 1000000.

Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero.

Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000

Solve number problems and practical problems that involve all of the above.

Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

Year 6

New Vocabulary

Year 1

Number	Pair
Zero, one, two, three to twenty, and beyond	Units, ones, tens
None	Ten more/less
Count (on/up/to/from/down)	Digit
Before, after	Numeral
More, less, many, few, fewer, least, fewest, smallest, greater, lesser	Figure(s)
Equal to, the same as	Compare
Odd, even	(In) order/a different order
	Size
	Value
	Between, halfway between
	Above, below

Year 2

Numbers to one hundred

Hundreds

Partition, recombine

Hundred more/less

Year 3

Numbers to one thousand

Year 4

Tenths, hundredths

Decimal (places)

Round (to nearest)

Thousand more/less than

Negative integers

Count through zero

Roman numerals (I to C)

Year 5

Powers of 10

Year 6

Numbers to ten million

Number Addition, Subtraction, multiplication and division Pathway (WRM)

Represent and use number bonds and related subtraction facts **within 10**

Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.

Add and subtract one digit numbers **to 10**, including zero.

Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems.

Year 1

Represent and use number bonds and related subtraction facts within 20

Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.

Add and subtract one-digit and two-digit numbers to 20, including zero.

Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$

Count in multiples of twos, fives and tens.

Solve one step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.

Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.

Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers.

Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.

Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods.

Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

Year 2

Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers.

Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs.

Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.

Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.

Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three digit number and hundreds.

Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.

Estimate the answer to a calculation and use inverse operations to check answers.

Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

Year 3

Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.

Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.

Count from 0 in multiples of 4, 8, 50 and 100

Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.

Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.

Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objectives.

Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objectives.

Year 4

Recall and use multiplication and division facts for multiplication tables up to 12×12 .

Count in multiples of 6, 7, 9, 25 and 1000

Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.

Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objectives.

Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.

Estimate and use inverse operations to check answers to a calculation.

Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why.

Recall and use multiplication and division facts for multiplication tables up to 12×12 .

Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.

Recognise and use factor pairs and commutativity in mental calculations.

Multiply two digit and three digit numbers by a one digit number using formal written layout.

Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objectives.

Year 5

Add and subtract numbers mentally with increasingly large numbers.

Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.

Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Multiply and divide numbers mentally drawing upon known facts.

Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 digit numbers.

Divide numbers up to 4 digits by a one digit number using the formal written method of short division and interpret remainders appropriately for the context.

Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign.

Multiply and divide numbers mentally drawing upon known facts.

Multiply and divide whole numbers by 10, 100 and 1000.

Year 6

Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why.

Multiply multi-digit number up to 4 digits by a 2-digit number using the formal written method of long multiplication.

Divide numbers up to 4 digits by a 2-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding as appropriate for the context.

Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division, interpreting remainders according to the context.

Perform mental calculations, including with mixed operations and large numbers.

Identify common factors, common multiples and prime numbers.

Use their knowledge of the order of operations to carry out calculations involving the four operations.

Solve problems involving addition, subtraction, multiplication and division.

Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy.

Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.

Recognise and use square numbers and cube numbers and the notation for squared (2) and cubed (3)

Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.

Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.

Establish whether a number up to 100 is prime and recall prime numbers up to 19

New Vocabulary

Year 1 + 2

Number bonds, number line

how much more is..?

Subtract, take away, minus

How many fewer is...than..?, how much less is..?

Odd, even

Count in twos, threes, fives

Count in tens (forwards from/backwards from)

How many times?

Lots of, groups of

Once, twice, three times, five times

Multiple of, times, multiply, multiply by

Repeated addition

Array, row, column

Double, halve

Share, share equally

Group in pairs, threes, etc.

Equal groups of

Divide, divided by, left, left over

Year 3

Column addition and subtraction

Product

Multiples of four, eight, fifty and one hundred

Scale up

Year 4

Multiplication facts (up to 12×12)

Division facts

Inverse

Derive

Year 5

Factor pairs

Composite number, prime number, prime factors, square number, cubed number

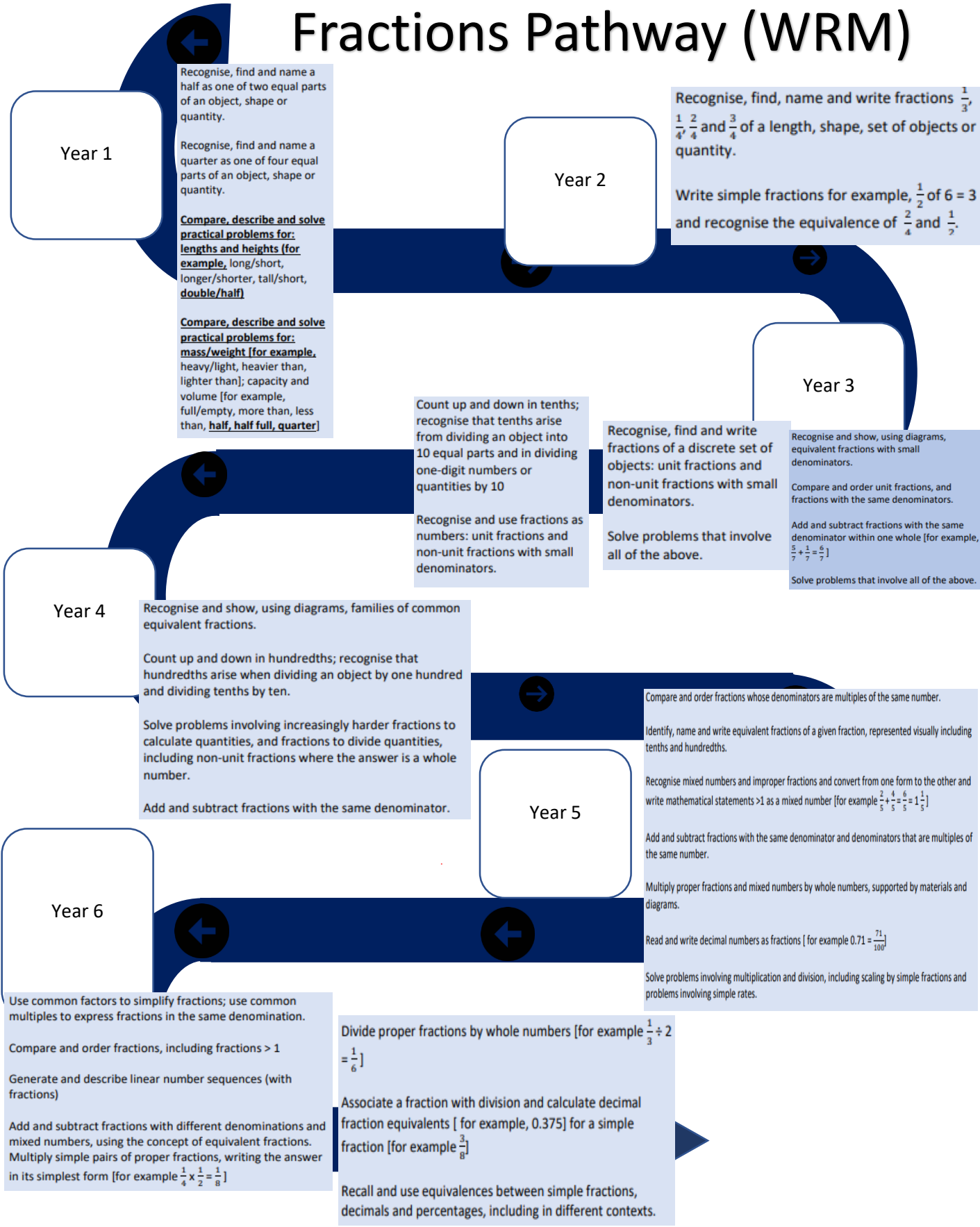
Formal written method

Year 6

Order of operations

Common factors, common multiples

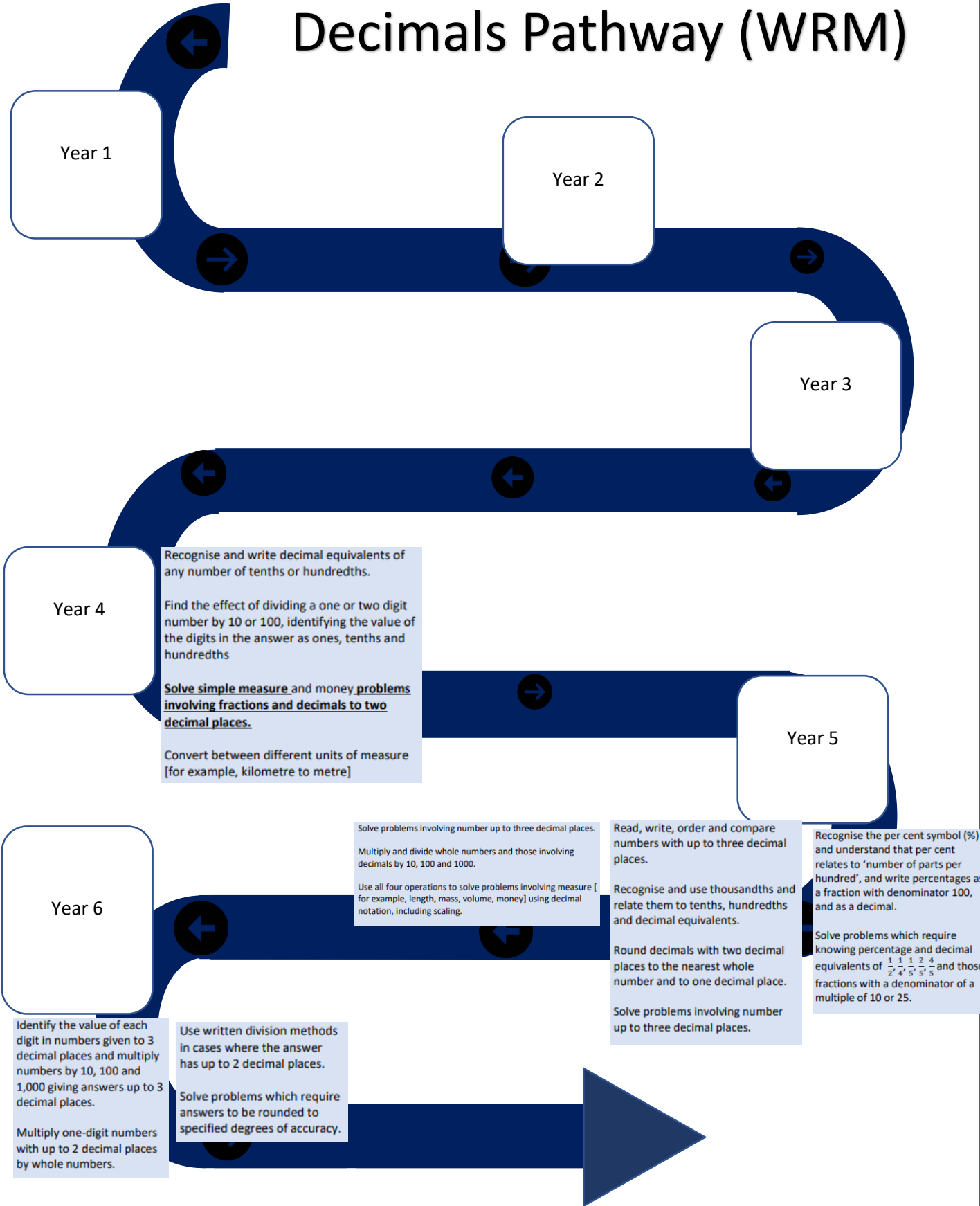
Fractions Pathway (WRM)



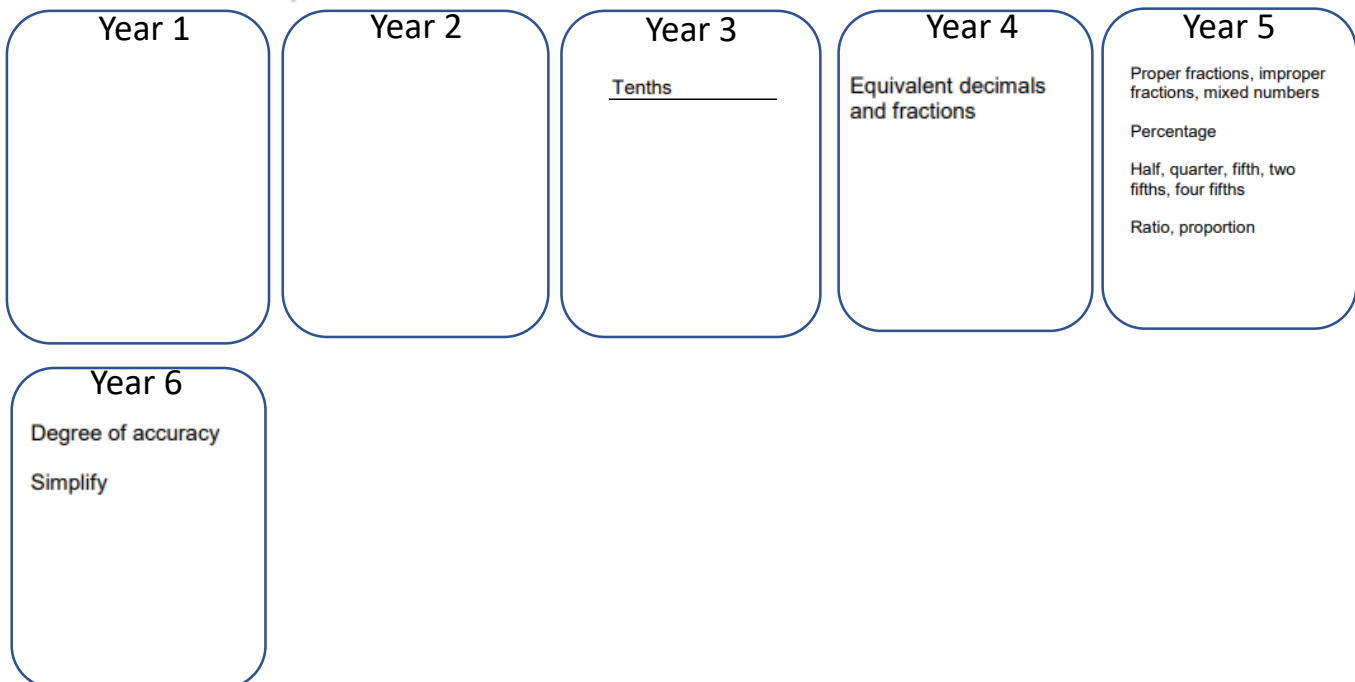
New Vocabulary

Year 1	Year 2	Year 3	Year 4	Year 5
Whole Equal parts, four equal parts One half, two halves A quarter, two quarters	Three quarters, one third, a third Equivalence, equivalent	Numerator, denominator Unit fraction, non-unit fraction Compare and order Tenth	Equivalent decimals and fractions	Proper fractions, improper fractions, mixed numbers Percentage Half, quarter, fifth, two fifths, four fifths Ratio, proportion
Year 6 Degree of accuracy Simplify				

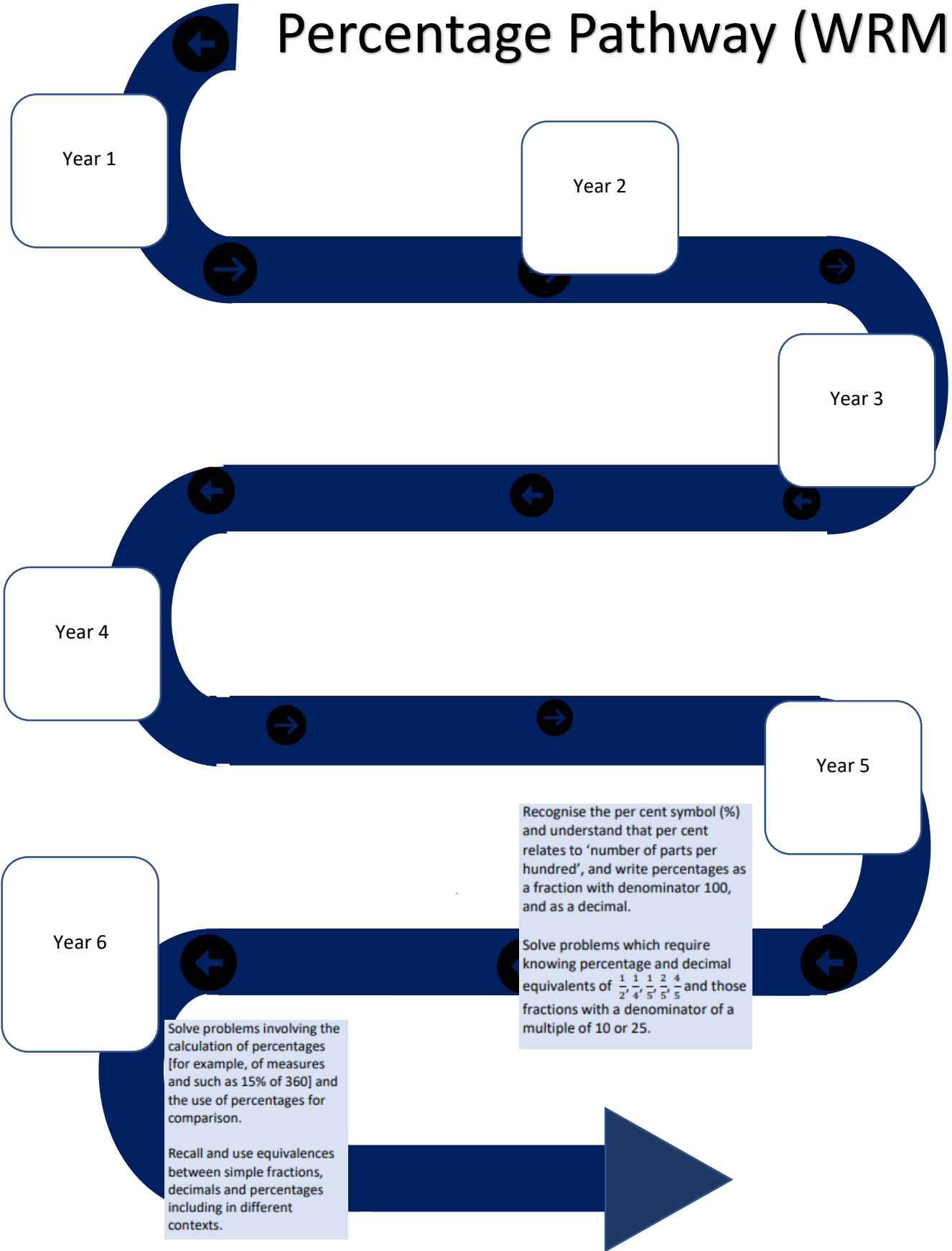
Decimals Pathway (WRM)



New Vocabulary



Percentage Pathway (WRM)



Solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison.

Recall and use equivalences between simple fractions, decimals and percentages including in different contexts.

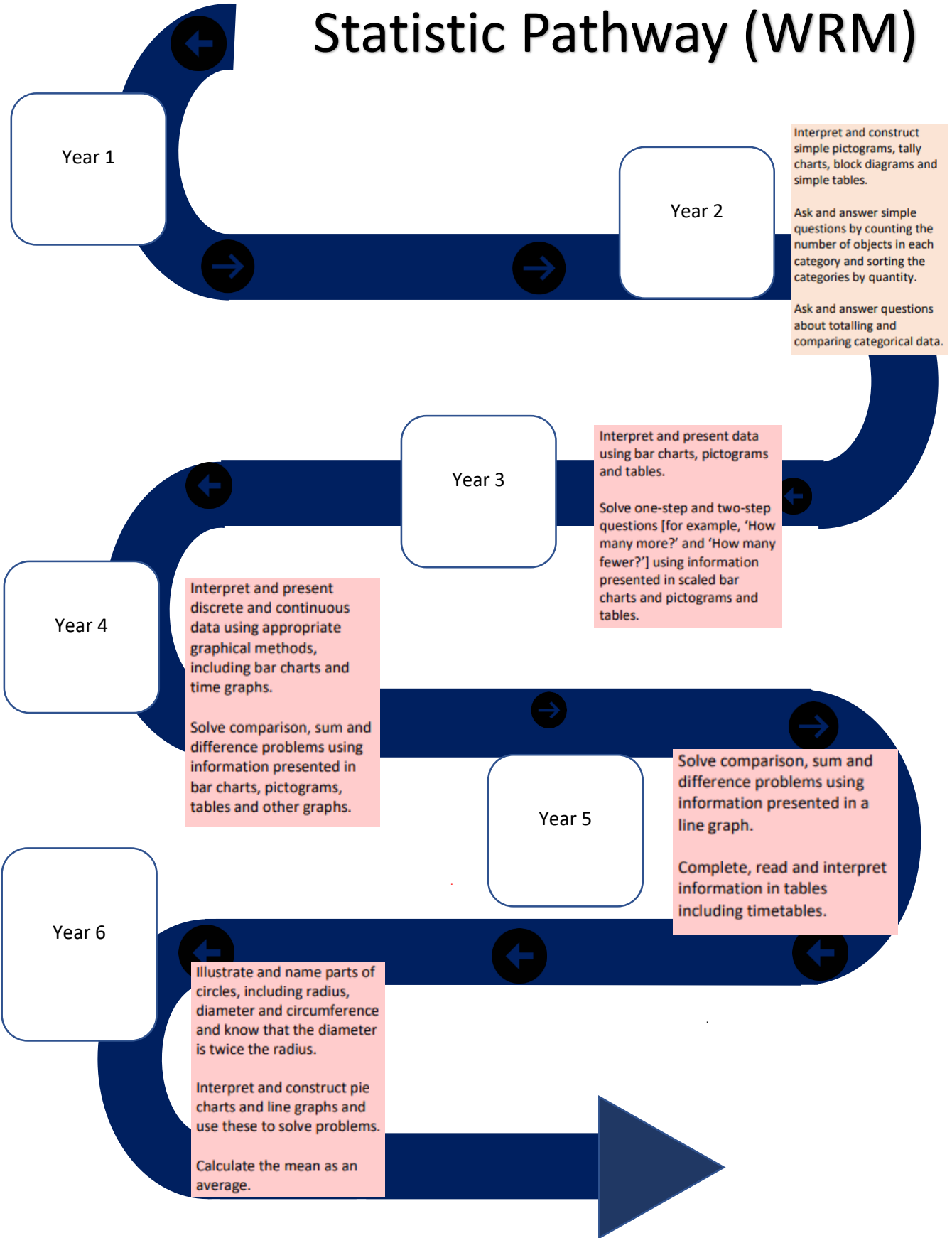
Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.

Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.

New Vocabulary

Year 1	Year 2	Year 3	Year 4	Year 5 Percentage
Year 6				

Statistic Pathway (WRM)



New Vocabulary

Year 1	Year 2	Year 3	Year 4	Year 5
	Count, tally, sort Vote Graph, block graph, pictogram, Represent Group, set, list, table Label, title Most popular, most common, least popular, least common	Chart, bar chart, frequency table, Carroll diagram, Venn diagram Axis, axes Diagram	Continuous data Line graph	
Year 6 Mean Pie chart Construct				

Geometry: Position and direction Pathway (WRM)

Year 1

Describe position, direction and movement, including whole, half, quarter and three quarter turns

Year 2

Use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).

Order and arrange combinations of mathematical objects in patterns and sequences

Year 3

Recognise angles as a property of shape or a description of a turn.

Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle.

Year 4

Describe positions on a 2-D grid as coordinates in the first quadrant.

Plot specified points and draw sides to complete a given polygon.

Describe movements between positions as translations of a given unit to the left/ right and up/ down.

Year 5

Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.

Year 6

Describe positions on the full coordinate grid (all four quadrants).

Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

New Vocabulary

Year 1

Position	Direction
Over, under, underneath, above, below, top, bottom, side	Journey
on, in, outside, inside	Left, right, up, down, forwards, backwards, sideways
around, in front, behind	Across
Front, back	Close, far, near
Before, after	Along, through
Beside, next to, Opposite	To, from, towards, away from
Apart	Movement
Between, middle, edge, centre	Slide, roll, turn, whole turn, half turn
Corner	Stretch, bend

Year 2

Rotation
Clockwise,
anticlockwise

Straight line

Ninety degree turn, right angle

Year 3

Greater/less than ninety degrees

Orientation (same orientation, different orientation)

Year 4

Coordinates

Translation

Quadrant

x-axis, y-axis

Perimeter and area

Year 5

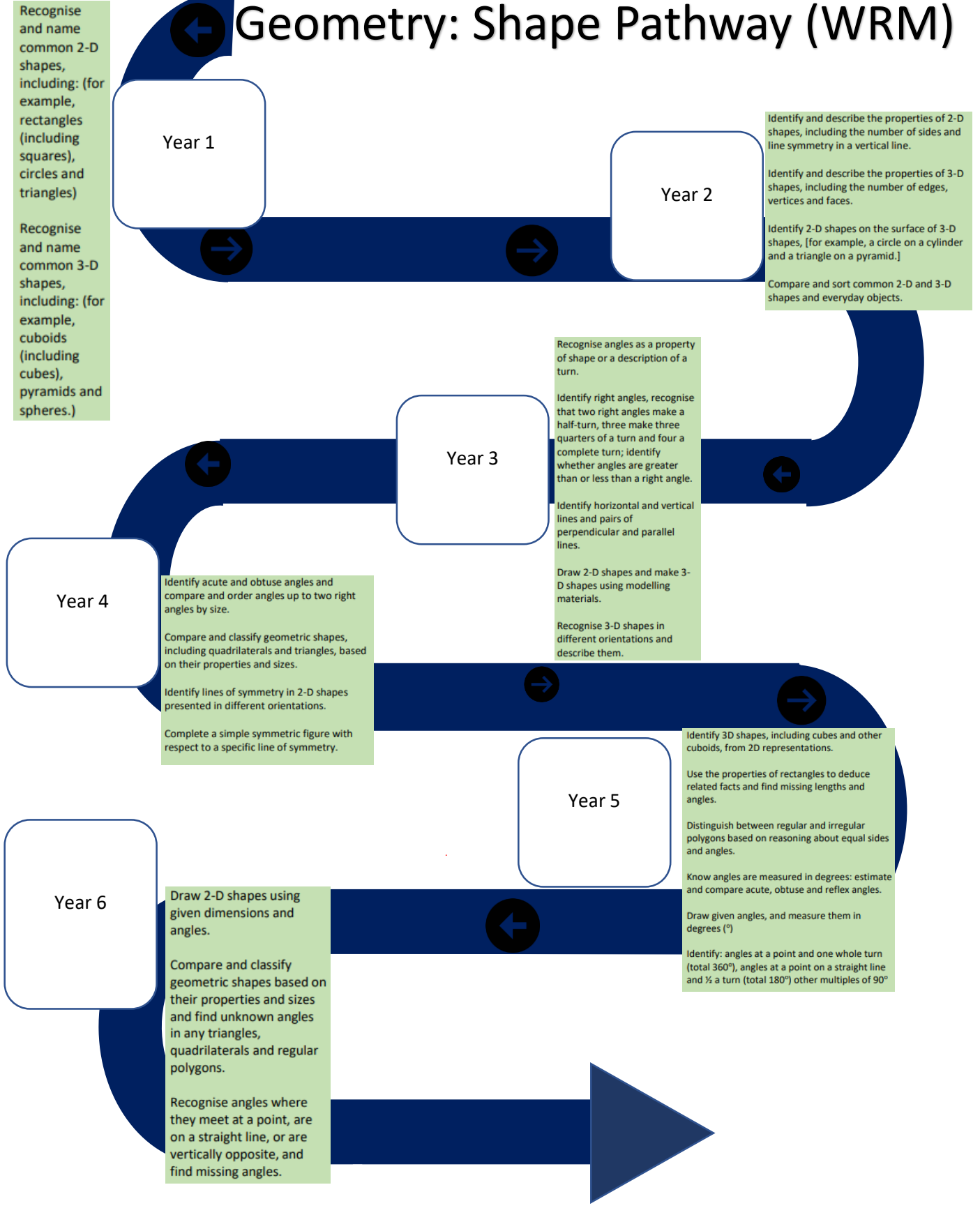
Reflex angle

Dimensions

Year 6

Four quadrants (for coordinates)

Geometry: Shape Pathway (WRM)



New Vocabulary

<p>Year 1</p> <p>Group, sort</p> <p>Cube, cuboid, pyramid, sphere, cone, cylinder, circle, triangle, square</p> <p>Shape</p> <p>Flat, curved, straight, round</p> <p>Hollow, solid</p> <p>Corner (point, pointed)</p> <p>Face, side, edge</p> <p>Make, build, draw</p> <p>Direction</p> <p>Journey</p> <p>Left, right, up, down, forwards, backwards, sideways</p> <p>Across</p> <p>Close, far, near</p> <p>Along, through</p> <p>To, from, towards, away from</p> <p>Movement</p> <p>Slide, roll, turn, whole turn, half turn</p> <p>Stretch, bend</p>	<p>Year 2</p> <p>Size</p> <p>Bigger, larger, smaller</p> <p>Symmetrical, line of symmetry</p> <p>Fold</p> <p>Match</p> <p>Mirror line, reflection</p> <p>Pattern, repeating pattern</p>	<p>Year 3</p> <p>Horizontal, vertical, perpendicular and parallel lines</p>	<p>Year 4</p>	<p>Year 5</p> <p>Reflex angle</p> <p>Dimensions</p>
<p>Year 6</p> <p>Vertically opposite (angles)</p> <p>Circumference, radius, diameter</p>				

Measurement: Time Pathway (WRM)

Year 1

Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening].

Recognise and use language relating to dates, including days of the week, weeks, months and years.

Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.

Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later]

Measure and begin to record time (hours, minutes, seconds)

Year 2

Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.

Know the number of minutes in an hour and the number of hours in a day.

Compare and sequence intervals of time.

Year 3

Tell and write the time from an analogue clock, including using Roman numerals from I to XII and 12-hour and 24-hour clocks.

Estimate and read time with increasing accuracy to the nearest minute.

Record and compare time in terms of seconds, minutes and hours.

Use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight.

Know the number of seconds in a minute and the number of days in each month, year and leap year.

Compare durations of events [for example to calculate the time taken by particular events or tasks].

Year 4

Convert between different units of measure [for example, kilometre to metre; hour to minute]

Read, write and convert time between analogue and digital 12- and 24-hour clocks.

Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.

Year 5

Solve problems involving converting between units of time.

Year 6

Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3dp.

New Vocabulary

Year 1

Days of the week: Monday, Tuesday, etc.

Seasons: spring, summer, autumn, winter

Day, week, month, year, weekend

Birth day, holiday

Morning, afternoon, evening.

night, midnight

Bedtime, dinnertime, playtime

Today, yesterday, tomorrow

Before, after

Next, last

Now, soon, early, late

Quick, quicker, quickest, quickly, fast, faster, fastest, slow, slower, slowest, slowly

Old, older, oldest, new, newer, newest

Takes longer, takes less time

Hour, o'clock, half past

Clock, watch, hands

How long ago?, how long will it be to...?, how long will it take to...?, how often?

Always, never, often, sometimes, usually

Once, twice

First, second, third, etc.

Year 2

Quarter past/to

Year 3

Twelve-hour/twenty-four-hour clock

Roman numerals I to XIII

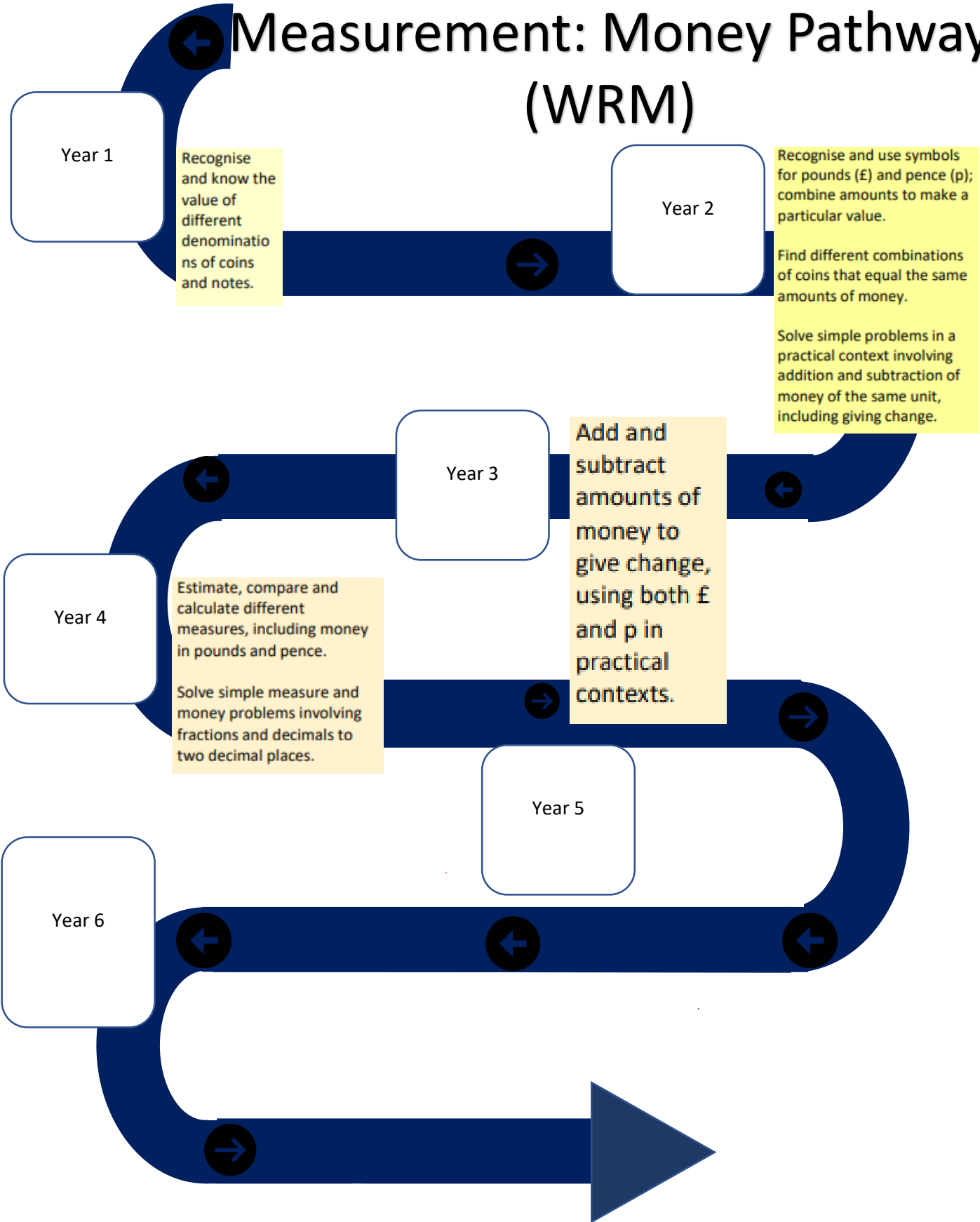
Year 4

Convert

Year 5

Year 6

Measurement: Money Pathway (WRM)



Year 1

Recognise and know the value of different denominations of coins and notes.

Year 2

Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.

Find different combinations of coins that equal the same amounts of money.

Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.

Year 3

Add and subtract amounts of money to give change, using both £ and p in practical contexts.

Year 4

Estimate, compare and calculate different measures, including money in pounds and pence.

Solve simple measure and money problems involving fractions and decimals to two decimal places.

Year 5

Year 6

New Vocabulary

Year 1
Coin values
Note values

Year 2
£
p
Combinations of coins

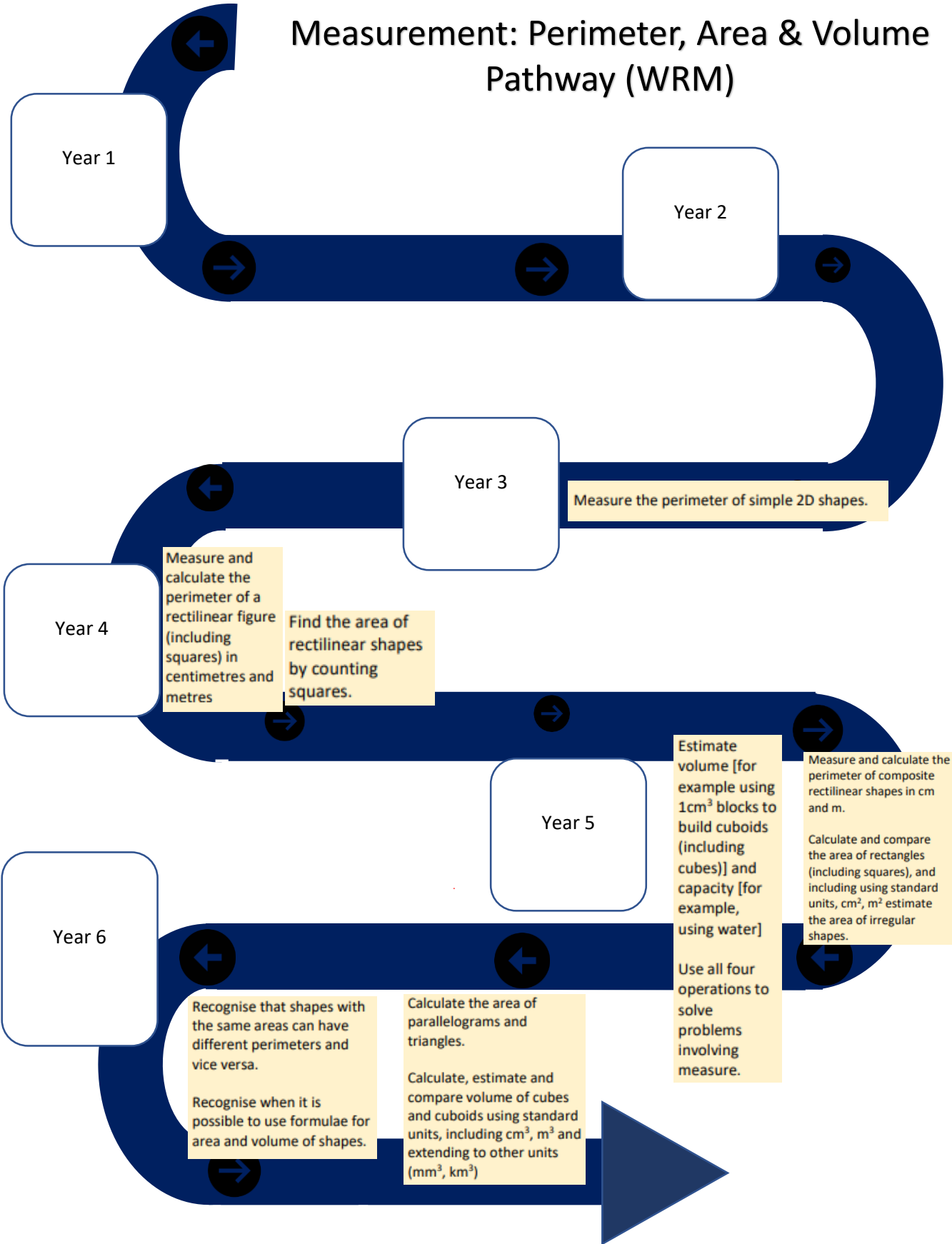
Year 3
Change

Year 4
Estimate
Compare

Year 5

Year 6

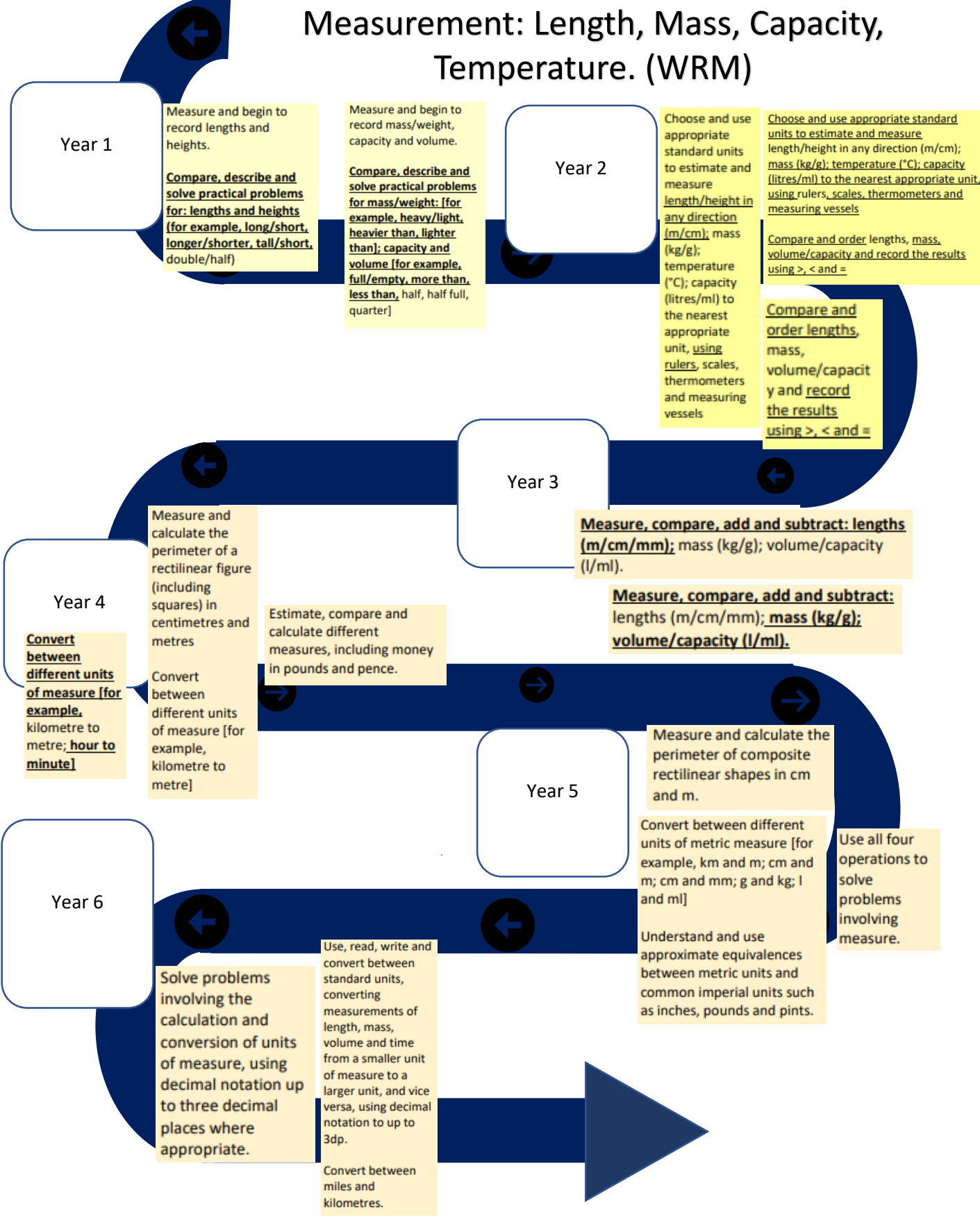
Measurement: Perimeter, Area & Volume Pathway (WRM)



New Vocabulary

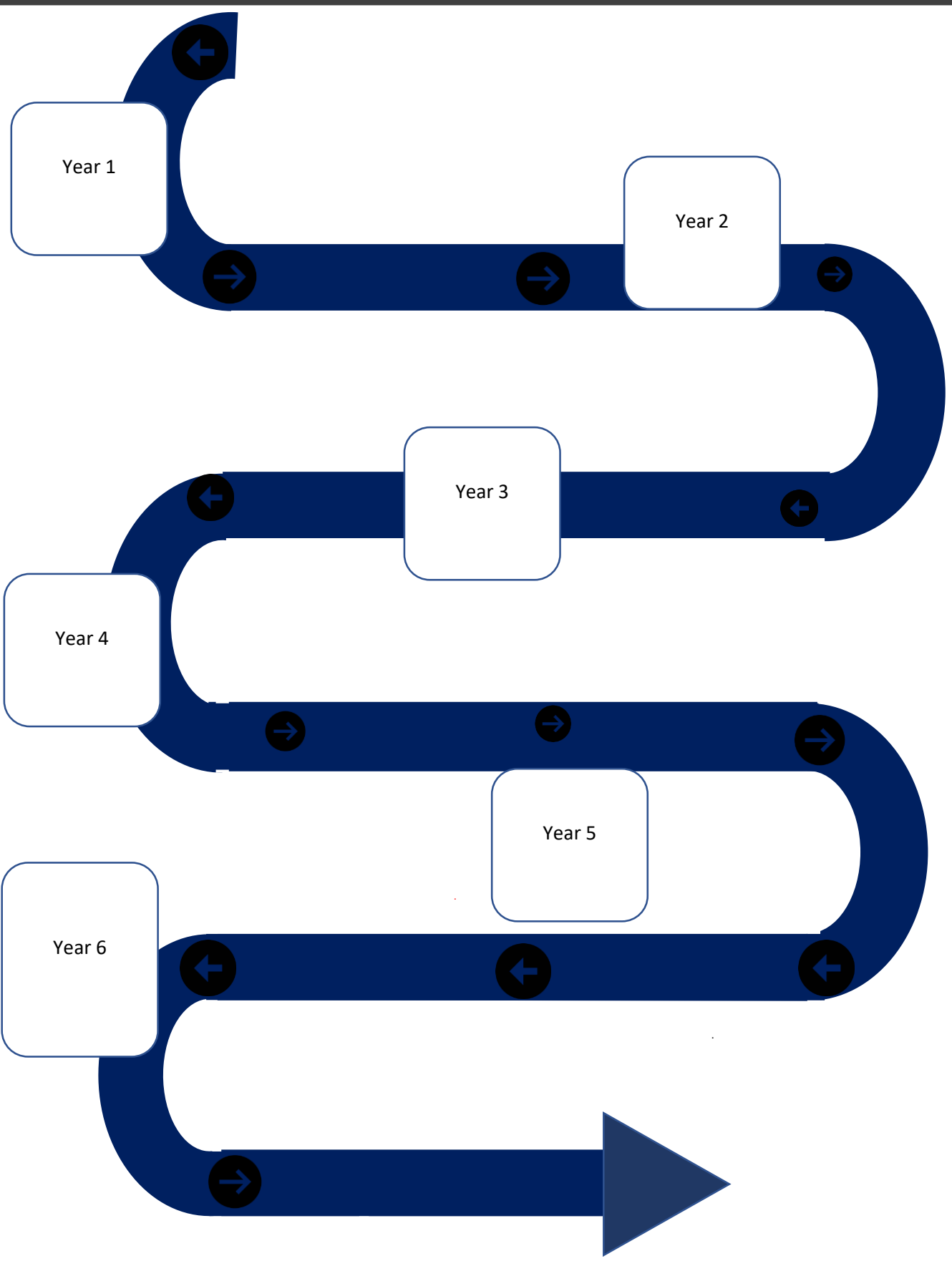
Year 1	Year 2	Year 3 Perimeter	Year 4 Rectilinear Area Metric	Year 5 Volume Imperial units, metric units
Year 6 Formulae				

Measurement: Length, Mass, Capacity, Temperature. (WRM)



New Vocabulary

<p>Year 1</p> <ul style="list-style-type: none"> Full, half full, empty Holds Container Weigh, weighs, balances Heavy, heavier, heaviest, light, lighter, lightest Scales 	<p>Year 2</p> <ul style="list-style-type: none"> m/km, g/kg, ml/l Temperature (degrees) 	<p>Year 3</p>	<p>Year 4</p> <ul style="list-style-type: none"> Convert 	<p>Year 5</p> <ul style="list-style-type: none"> Imperial units, metric units
<p>Year 6</p> <ul style="list-style-type: none"> Miles Kilometres 				



New Vocabulary

Year 1	Year 2	Year 3	Year 4	Year 5
Year 6				