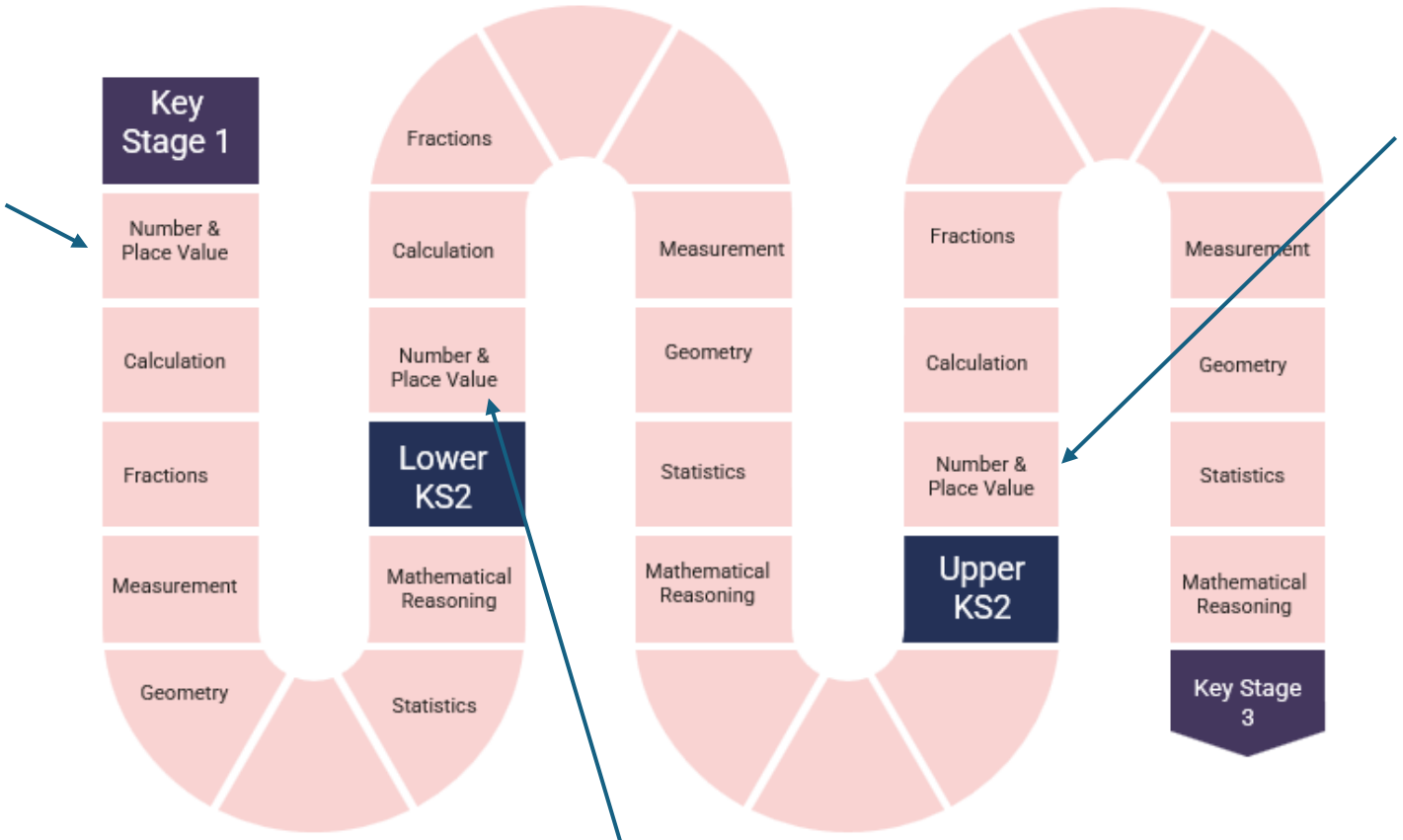
Progression in Mathematics

Progression of Maths Skills: Number & Place Value

Key Stage 1
Number & Place Value

- Count, read and write numbers to **100**; count in 1s, 2s, 5s, 10s.
- Understand **place value** in 2-digit numbers (tens and ones).
- Compare and order numbers; use <, >, =



Upper Key Stage 2
Number & Place Value

- Read/write numbers to **1,000,000** and **10,000,000**
- Interpret negative numbers; count through zero.
- Round numbers to any degree of accuracy (nearest 10 → million).
- Understand **Roman numerals** to 1000.

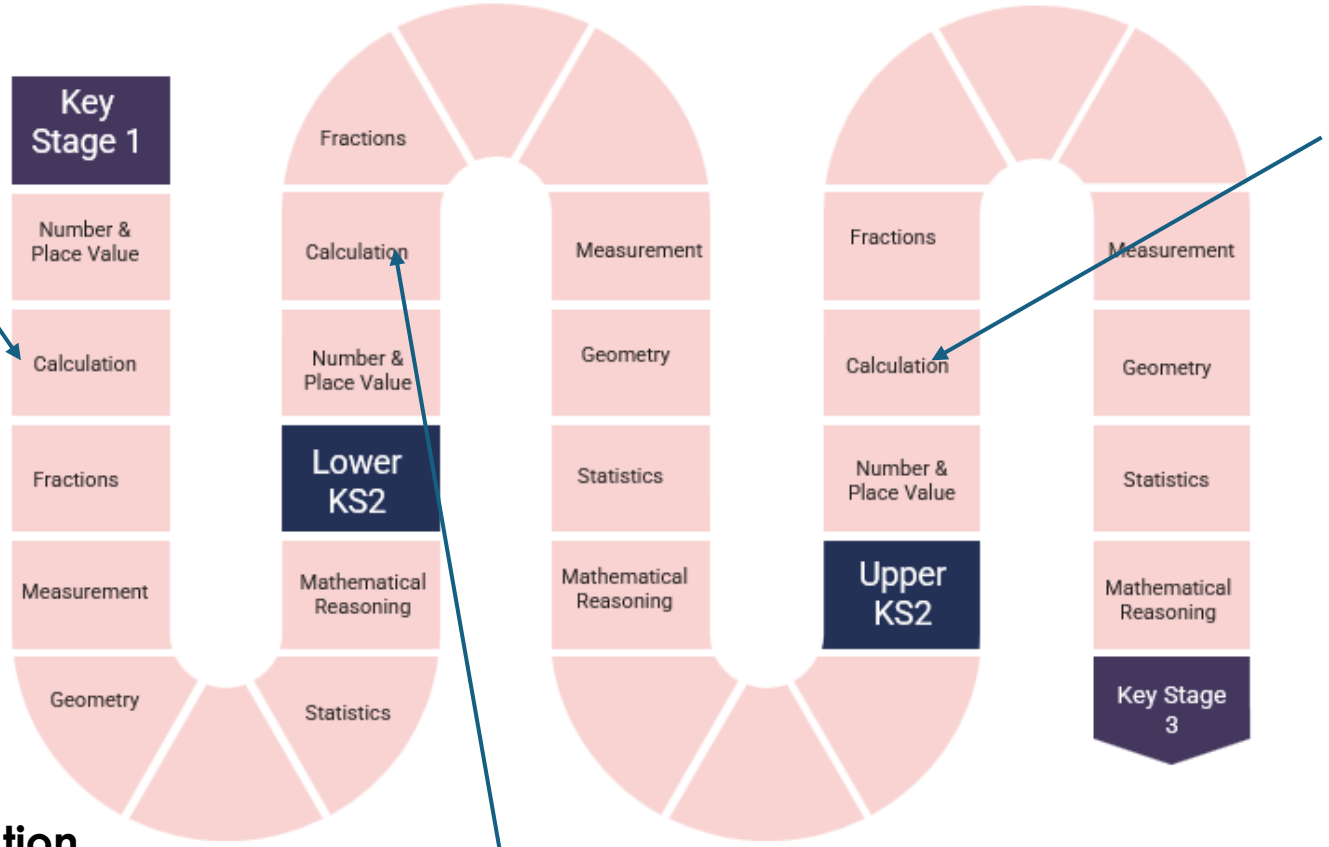
Lower Key Stage 2 Number & Place Value

- Read, write and compare numbers to **1000** (Y3) and **10,000**
- Count in multiples of **4, 8, 50, 100** (Y3) and **6, 7, 9, 25, 1000**
- Recognise place value in 3-digit and 4-digit numbers.
- Round numbers to nearest 10, 100, 1000.

Progression of Maths Skills: Calculation

Key Stage 1 Calculation

- Use concrete/pictorial methods to add and subtract.
- Solve addition and subtraction problems using number facts.
- Begin multiplication/division through **counting in groups** (2, 5, 10)



Upper Key Stage 2 Calculation

- Use formal written methods for **all four operations** confidently.
- Multiply up to 4-digit numbers by 2-digit numbers; divide using short/long division.
- Check answers using estimation and inverse operations.

Lower Key Stage 2 Calculation

- Add/subtract using **formal written methods** for 3- and 4-digit numbers
- Recall and use multiplication/division facts for all tables up to 12×12
- Use mental and written strategies for multiplication and division

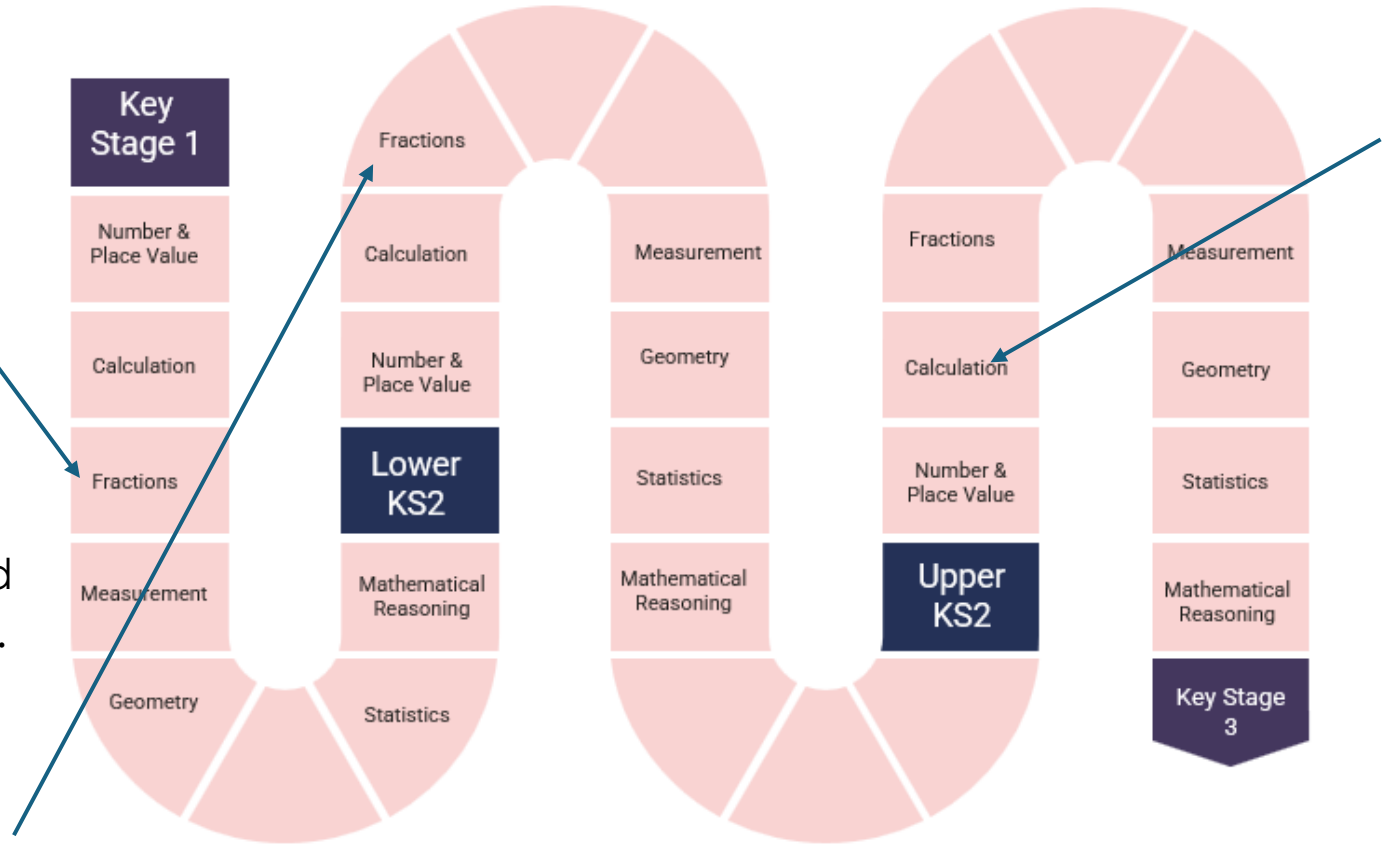
Progression of Maths Skills: Fractions/Decimals/Percentages

Key Stage 1
Fractions

- Recognise and find **1/2, 1/3, 1/4, 2/4, 3/4** of shapes or sets.

Lower Key Stage 2
Fractions & Decimals

- Recognise unit and non-unit fractions; find fractions of quantities.
- Show equivalence of simple fractions.
- Count up/down in hundredths; begin understanding simple decimals.



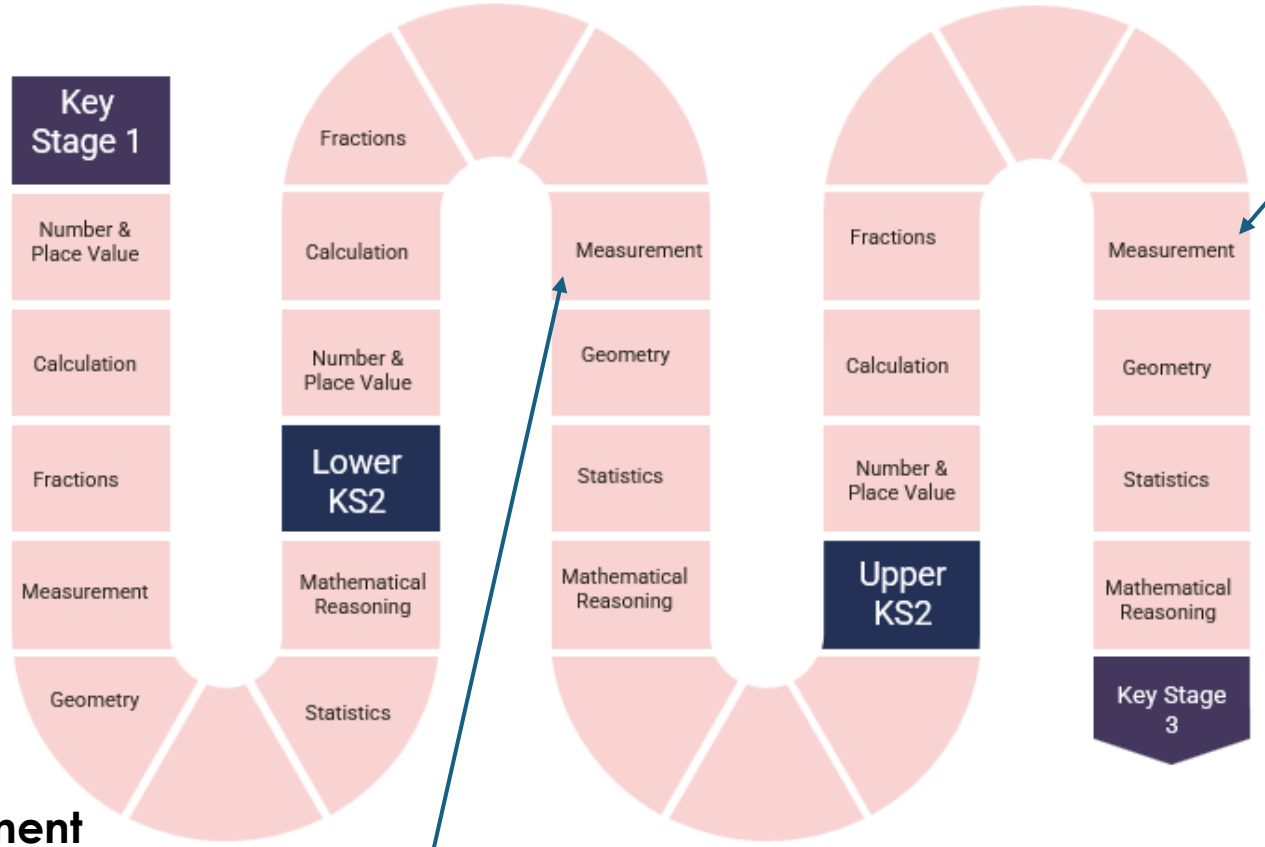
Upper Key Stage 2
Fractions, Decimals & Percentages

- Compare, order and simplify fractions; add/subtract fractions with unlike denominators.
- Multiply fractions; divide fractions by whole numbers.
- Convert between fractions, decimals & percentages.

Progression of Maths Skills: Measurement

Key Stage 1 Measurement

- Compare, describe and measure:
  - length/height
  - mass/weight
  - capacity/volume
  - time (hours/minutes), telling the time to the hour/half-hour
- Recognise coins and notes.



Upper Key Stage 2 Measurement

- Convert between units of measure (including metric → imperial).
- Calculate **area**, **perimeter** and **volume**.
- Use timetables, scaling and units fluently.

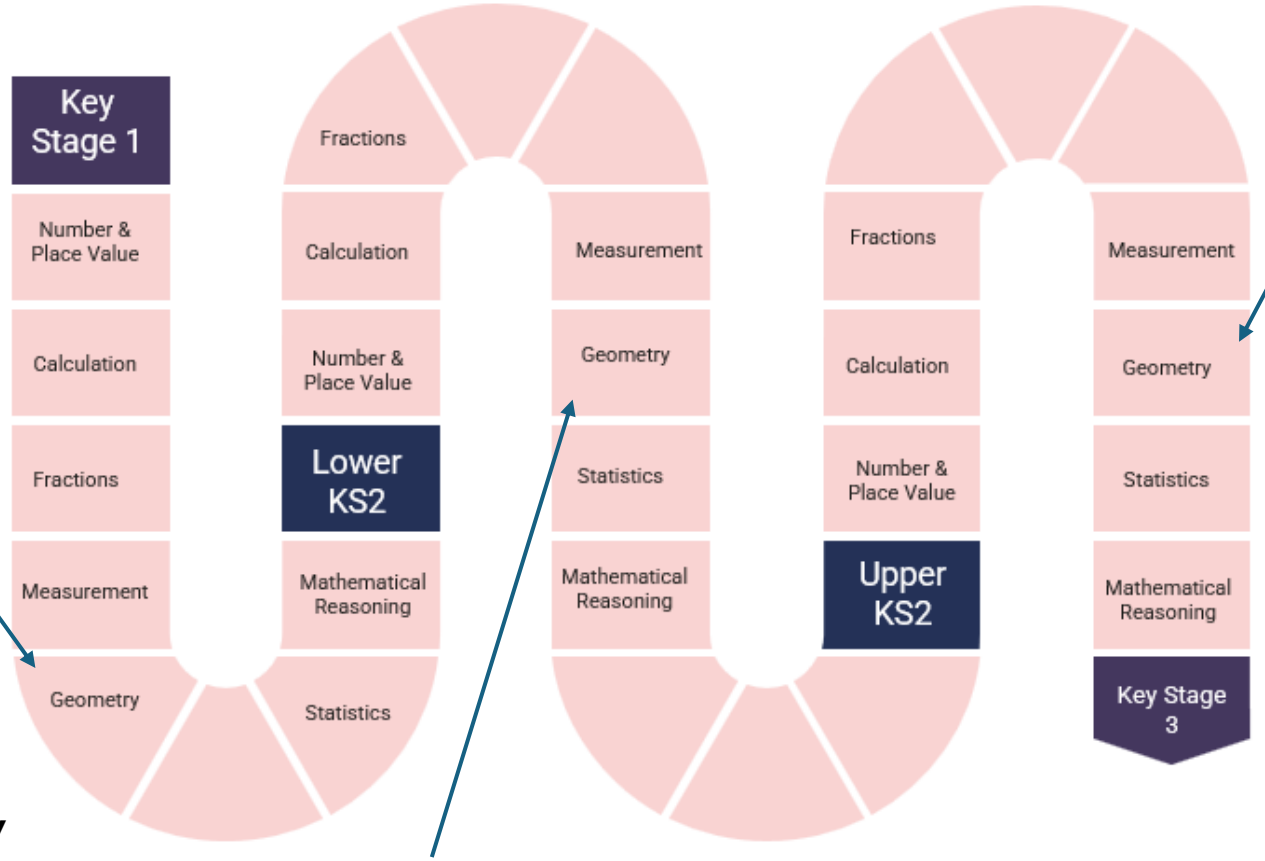
Lower Key Stage 2 Measurement

- Convert between units (m/cm/mm, kg/g, litres/ml).
- Measure and calculate perimeter; find area of simple shapes.
- Tell and write the time to the minute; use 12/24-hour clocks.

Progression of Maths Skills: Geometry

Key Stage 1 Geometry (Shape & Position)

- Recognise and name **2-D and 3-D shapes**.
- Describe position, direction and movement including **quarter/half turns**.



Upper Key Stage 2 Geometry

- Draw and measure angles with accuracy; use protractors.
- Classify shapes based on properties; understand nets of 3-D shapes.
- Use coordinates in four quadrants; translate and reflect shapes.

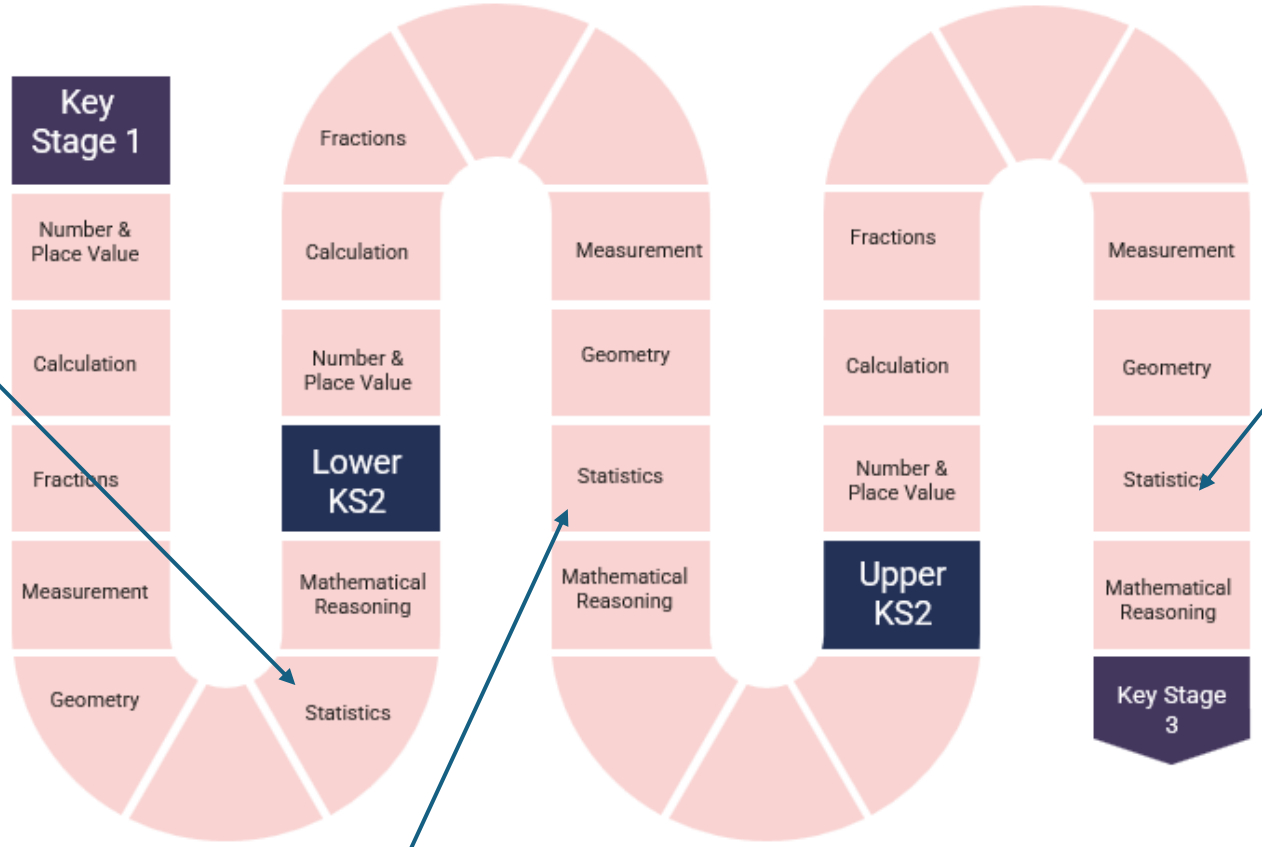
Lower Key Stage 2 Geometry

- Compare and classify **2-D shapes** (triangles, quadrilaterals).
- Identify lines of symmetry.
- Recognise and describe **angles** (right, acute, obtuse).

Progression of Maths Skills: Statistics

Key Stage 1 Statistics

Interpret and create simple **pictograms, tally charts and block diagrams**.



Upper Key Stage 2 Statistics

- Interpret and construct **line graphs**, bar charts and pie charts.
- Calculate and interpret the **mean** as an average.

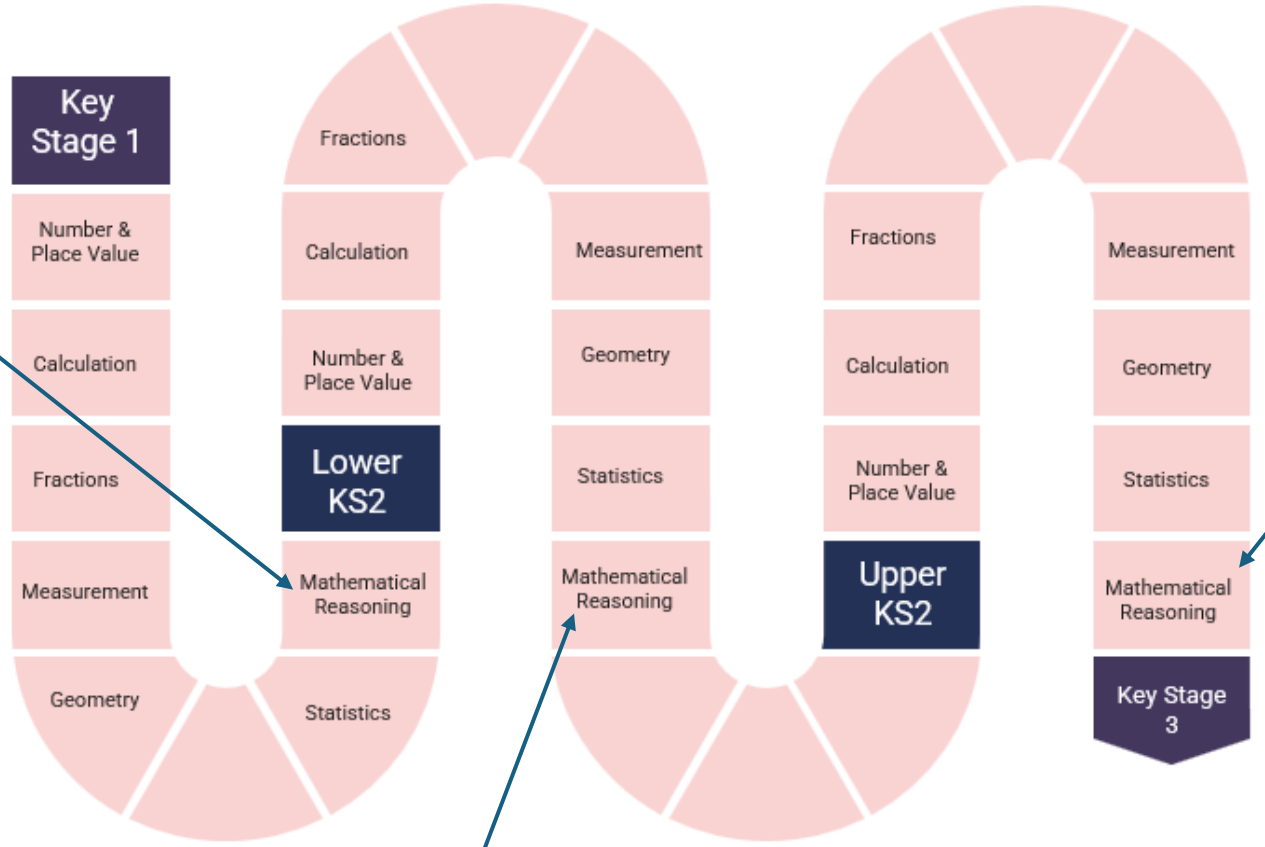
Lower Key Stage 2 Statistics

- Interpret bar charts and time graphs.
- Construct tables, bar charts and simple line graphs.

Progression of Maths Skills: Mathematical Reasoning

Key Stage 1 Mathematical Reasoning & Problem-Solving

- Use simple reasoning to solve word problems using counting and facts.
- Begin describing patterns and making simple generalisations.



Upper Key Stage 2 Mathematical Reasoning & Problem-Solving

- Apply maths to a wide range of **multi-step problems** across domains.
- Reason mathematically using conjecture, argument & proof.
- Break problems into smaller steps and persevere in solving them.

Lower Key Stage 2 Mathematical Reasoning & Problem-Solving

- Solve multi-step addition/subtraction/multiplication/division problems.
- Apply reasoning to patterns, number relationships and measures.