



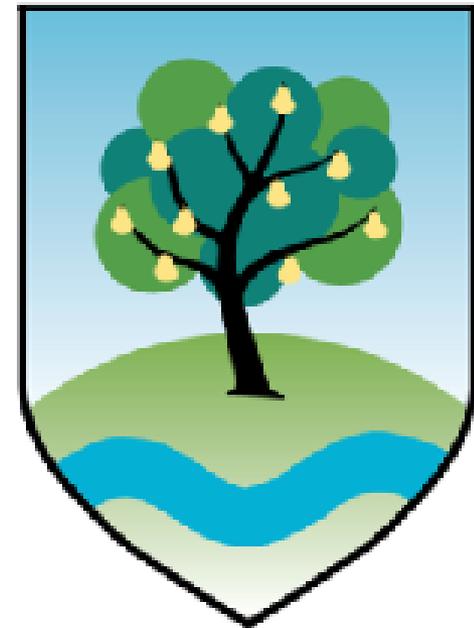
KS2 Mathematics Workshop

Monday 14th November
2022



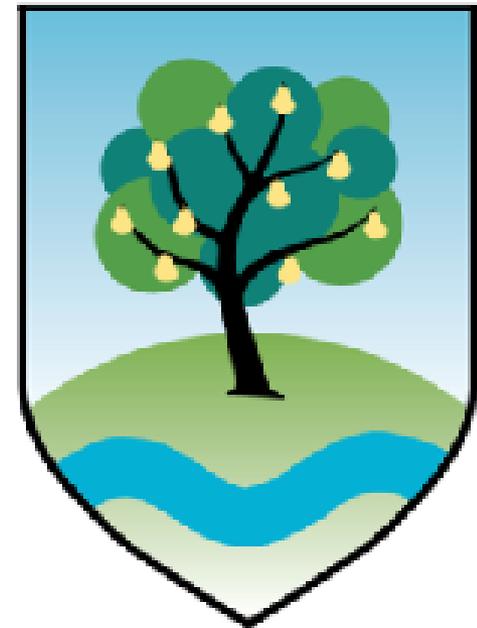
Structure of the evening

- **Curriculum content**
- **Calculation methods**
- **Homework**
- **Questions**



Year 5 Curriculum

Curriculum calendar can be found on school website



Our curriculum – autumn term

Topic	Learning aims
Number 1	<ul style="list-style-type: none">- Rounding- Read, write, order and compare numbers- Roman numerals- Negative numbers
Calculations 1	<ul style="list-style-type: none">- Add and subtract decimals- Estimate and approximate- Inverse operations- Mental and written addition and subtraction
Statistics 1	<ul style="list-style-type: none">- Timetables and two-way tables- Line graphs, bar charts and pictograms
Number 2	<ul style="list-style-type: none">- Multiply and divide by 10, 100 and 1000- Prime, square and cube numbers- Factors and multiples
Measurement 1	<ul style="list-style-type: none">- Area- Perimeter- Volume

Our curriculum – spring term

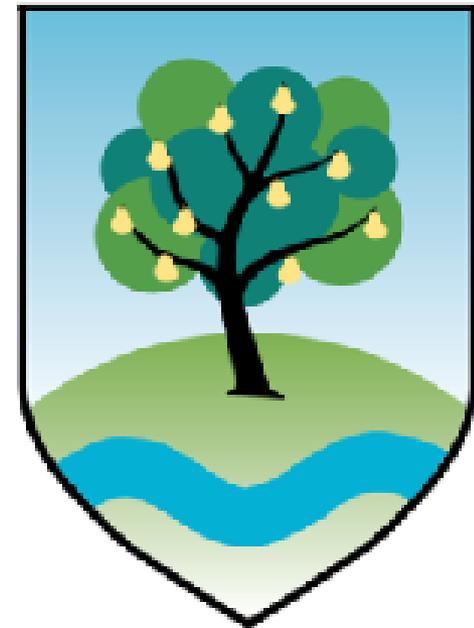
Topic	Learning aims
Calculations 2	<ul style="list-style-type: none">- Multiply and divide by 2-digit numbers- Solve multiplication and division word problems
Number 3	<ul style="list-style-type: none">- Compare and order fractions and mixed numbers- Convert between improper fractions and mixed numbers- Identify equivalent fractions- Add, subtract and multiply fractions, integers and mixed numbers- Calculate fractions of amounts
Number 4	<ul style="list-style-type: none">- Order and compare decimals- Equivalent fractions, decimals and percentages- Round decimals

Our curriculum – summer term

Topic	Learning aims
Number 5	<ul style="list-style-type: none">- Add and subtract decimals- Compare and order decimals- Multiply and divide decimals by 10, 100 and 1000
Geometry 1	<ul style="list-style-type: none">- Name, measure, draw, compare and order angles- Draw lines accurately- Name and identify properties of triangles and quadrilaterals- Calculate missing lengths and angles- Name and identify regular and irregular polygons
Geometry 2	<ul style="list-style-type: none">- Write coordinates- Plot points- Identify lines of symmetry- Translate and reflect points and shapes
Measurement 2	<ul style="list-style-type: none">- Convert between units of length, mass and capacity- Convert between units of time- Read and solve problems using timetables
Measurement 3	<ul style="list-style-type: none">- Describe and name units of capacity and volume- Estimate and compare volume and capacity

Year 6 Curriculum

Curriculum calendar can be found on school website



Our curriculum- autumn term

Topic	Learning aims
Number 1	<ul style="list-style-type: none">- Rounding- Read, write, order and compare numbers- Roman numerals- Negative numbers
Calculations 1	<ul style="list-style-type: none">- Multiplying and dividing by 2-digit numbers- Multi-step addition and subtraction problems- Inverse operations- Order of operations- Square, cube and prime numbers- Factors and multiples
Number 2	<ul style="list-style-type: none">- Add, subtract, multiply and divide fractions- Compare and order fractions- Convert between improper fractions and mixed numbers- Simplify fractions- Equivalent fractions- Fractions of amounts
Geometry 1	<ul style="list-style-type: none">- Missing coordinates- Reflect and translate shapes- Read and plot coordinates in four quadrants

Our curriculum- spring term

Topic	Learning aims
Number 3	<ul style="list-style-type: none">- Place value- Multiply and divide integers- Multiply and divide decimals by 10, 100 and 1000- Convert between fractions and decimals
Number 4	<ul style="list-style-type: none">- Convert between fraction and percentages- Equivalent fractions, decimals and percentages- Order fractions, decimals and percentages- Percentages of amounts
Algebra 1	<ul style="list-style-type: none">- Calculate inputs, outputs and functions- Solve one and two-step equations- Find pairs of numbers to satisfy equations- Form expressions, formulas and equations- Identify rules- Substitute numbers into expressions
Measurement 1	<ul style="list-style-type: none">- Convert between units of length, mass and capacity- Convert between units of time- Read and solve timetable problems

Our curriculum- spring term continued

Topic	Learning aims
Measurement 2	<ul style="list-style-type: none">- Shapes with the same area and different perimeters- Volume of cubes, cuboids and compound shapes- Area of quadrilaterals and triangles
Ratio and proportion	<ul style="list-style-type: none">- Writing ratios- Ratios as fractions- Calculate ratios- Calculate scale factors and use to enlarge shapes- Solve ratio and proportion problems
Statistics 1	<ul style="list-style-type: none">- Name parts of a circle- Read, interpret and draw line graphs and pie charts- Calculate the mean
Geometry 2	<ul style="list-style-type: none">- Name, estimate, draw and measure angles- Calculate missing angles around a point, on a straight and within shapes- Draw shapes and their nets accurately

Our curriculum- summer term

Consolidation

Teachers will cover areas for development identified across all topics in preparation for SATs.

Algebra - Sequences

- Describe and continue sequences
- Predict next terms
- Explain the term-to-term rule
- Understand sequences in table and graphically

Algebra - Notation

- Work with inputs and outputs
- Use inverse operations
- Substitute values into expressions and equations
- Two-step function machines
- Represent functions graphically
- Solve equations
- Simplify like terms

Ways we prepare the pupils for SATs:



- Consolidation lessons built in to revise in preparation
- Weekly homework tasks (My Maths and TTR)
- Learning boost sessions organised
- Ten 4 Ten revision materials in Spring Term
- Three formal practice papers (October/January/March)

Please avoid using the practice SATs papers online.

Calculation Methods



- Pupils are expected to use the traditional methods.
- Arithmetic lessons.



Addition and subtraction

Addition

$$82564 + 6987$$

$$636047 + 36564$$

$$63.5 + 6.549 + 40$$

$$568 + 12 - 433$$

Subtraction

$$136096 - 54879$$

$$16.7 - 8.99$$

$$12 - 5.04$$

$$14 - 2.43$$



Multiplication and division

Multiplication

$$82 \times 6$$

$$647 \times 3$$

$$61 \times 36$$

$$568 \times 44$$

Division

$$9036 \div 3$$

$$3444 \div 7$$

$$640 \div 22$$

$$2313 \div 36$$



Multiplying and dividing fractions

Multiplying fractions

$$\frac{1}{3} \times \frac{1}{4}$$

$$\frac{6}{7} \times \frac{2}{5}$$

$$\frac{2}{3} \times 3$$

$$3\frac{1}{6} \times 3$$

Dividing fractions

$$\frac{1}{3} \div 2$$

$$\frac{5}{8} \div 3$$



Indices

Indices



$$5^2$$

$$6^2 + 10$$

$$3^3$$

$$7^2 - 2^3$$



BIDMAS



BIDMAS

- Brackets
- Indices
- Divide / Multiply
- Add / Subtract

BIDMAS



$$24 + 35 \div 5$$

$$70 - 24 \div 6$$

$$44 - 5 \times 6$$

$$5 + (4 \times 8)$$



Percentages

Percentages

20% of 1200

10% of 45

15% of 360

95% of 180



Fractions of amounts

Fractions of amounts

$\frac{1}{5}$ of 35

$\frac{3}{8}$ of 32

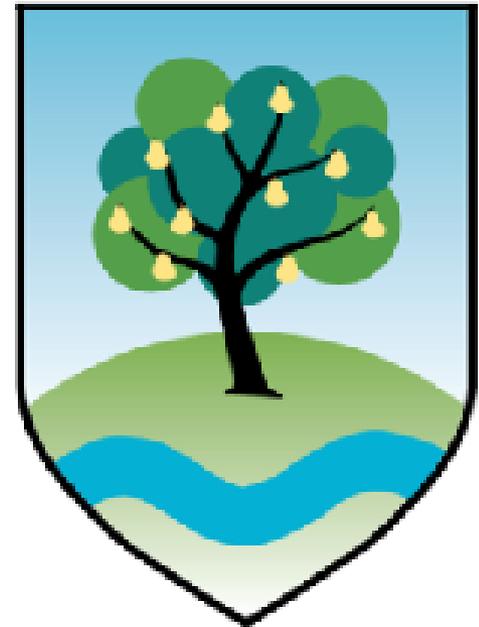
$\frac{5}{6}$ of 324

$\frac{3}{5} \times 160$

Homework

My Maths

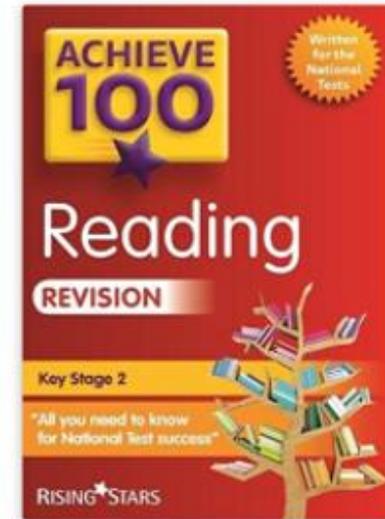
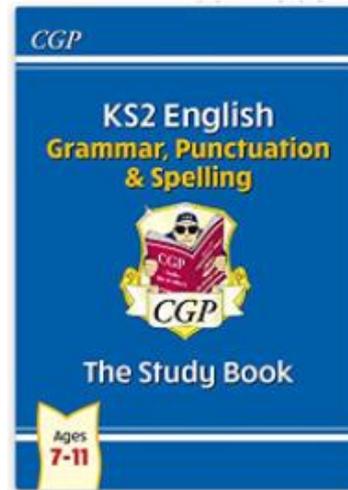
TTR





Useful books....

- ▶CGP
- ▶Letts
- ▶Collins
- ▶WHSmith
- ▶Rising Stars





Useful websites for revision:

BBC Education have produced a whole host of materials for KS2. Follow the KS2 link and then select Maths. Some aspects require a subscription.

<http://www.bbc.co.uk/education>

A site with quizzes which are marked as you go along.

<http://www.educationquizzes.com/ks2/maths/>

A site with a range of information and questions – great for revision purposes!

http://www.icteachers.co.uk/children/children_sats.htm

A revision site based upon the old Key Stage 2 Tests but still contains lots of useful information.

<http://resources.woodlands-junior.kent.sch.uk/revision/>

A site with links to revision materials, including worksheets to look at online or to print off and practise with.

<http://sats.highamstjohns.com/>

Questions?

