



KS2 Maths

Year 3 - Information for Teachers

National Curriculum objectives:

Number and Place Value

- Recognise the place value of each digit in a three-digit number (hundreds, tens, ones).
- Read and write numbers up to 1000 in numerals and in words.
- Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number.

Addition and Subtraction

- 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.

Multiplication and division

- 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 that 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 objects.

Fractions

- Add and subtract fractions with the same denominator within one whole [for example, $5/7 + 1/7 = 6/7$].
- Compare and order unit fractions, and fractions with the same denominators.
- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.

Measurement

- Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).
- Add and subtract amounts of money to give change, using both £ and p in practical contexts.

Geometry

- Identify right angles; identify whether angles are greater than or less than a right angle.
- Recognise 3-D shapes in different orientations and describe them.
- Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.

Mother Shipton's

Activities:

Mother Shipton trail - to be used as children go through the park:

Children go through the park using their surroundings to work out mathematical calculations and problems which include:

- * Identify different types of lines (parallel, perpendicular, horizontal and vertical).
- * Complete multiplication and division problems on the benches near the café.
- * Estimation of the height of the Viaduct.
- * Identifying right angles within the park.
- * Addition and subtraction calculations linking to the trees within the park and the steps to the cave and Petrifying Well.
- * 3D shape hunt.
- * Fractions - adding, comparing and recognising $\frac{3}{4}$.
- * Multiplication and division calculations linking to the number of teddies hanging up under the Petrifying Well.
- * Coin identification and money problems linking to the Wishing Well.
- * Estimation and measurement of bench along Beech Avenue in cm.
- * Mathematical vocabulary word search.

Resources needed:

- *Pencils*
- *Paper for working out*
- *Rubbers*
- *Possibly 2D and 3D shape examples*
- *Possibly coins for support*
- *Any mathematical supporting resources normally used for each area*

Answers:

1. Café Calculations:

- ✧ 500 ✧ ✧ horizontal, vertical, parallel and perpendicular
- ✧ ✧ ✧ all four types of lines are present

2. Picnic Puzzles:

- ✧ 8 people ✧ ✧ 7 will be left standing ✧ ✧ ✧ 12 benches would be needed

Mother Shipton's

3. Eerie Estimation: The Viaduct stands at 23m.

4. Angle Hunt: dependant on angles seen.

5. Tree Tester:

✧ 67

✧✧ 40

✧✧✧ 644

6. Shape Hunt: Grid – dependent on shapes seen

7. Cackling Calculations: steps answers

✧ Twenty-one

✧✧ 1021

✧✧✧ 2042

8. Fearsome Fractions:

✧ 3 teddies should be coloured in

✧✧ $7/10$

✧✧✧ $3/5 > 2/5$

9. Petrifying Puzzles:

✧ 12 months / 1 year

✧✧ 40

✧✧✧ 20 can be hung with 1 left over

10. Wishing Well Wealth:

✧ coins - dependent on what is seen

✧✧ £1.80

✧✧✧ £1, 50p, 20p and 10p

11. Mystical Measuring:

a) dependent on estimation

b) each stride multiplied by 50cm