



## Maths Meeting in: Year 4

Maths Meetings are a vital part of the Mathematics Mastery programme. Their purpose is to consolidate key areas of mathematics and develop fluency in recall of key knowledge. To be most effective, it is recommended that Maths Meetings occur daily for 10 – 15 minutes. A Maths Meeting should cover several curricular areas, broken down into short segments; each segment should take approximately 2 – 3 minutes.

Maths Meetings should:

- Give pupils repeated practice of basic skills and concepts (fluency, consolidation, mastery of what has been taught)
- Provide opportunities to develop number sense, for example, exploring conservation of number, cardinality, subitising, using known facts, near doubles, commutativity, inverse etc.
- Be an exciting whole-class ritual around the Meeting Board or IWB
- Establish a routine for mathematical thinking in the day, building classroom culture, and making connections with mathematics in everyday life.

Maths Meetings expectations:

- Everyone in the class must be ready to respond
- Everyone in the class must look at and listen to the teacher, or pupil if Maths Meeting is pupil led.
- Teacher only accepts appropriate responses, including technical vocabulary and full sentences when appropriate.

Teachers should plan their own Maths Meetings depending on the needs of pupils, focusing on key knowledge to consolidate. Teachers should prioritise key learning areas for their class and also incorporate current learning in the Maths Meetings where necessary. Assessments will also inform the content of the Maths Meetings.



## Important concepts for Year 4 Maths Meetings

The topics below must be included each term for both fluency and because some key learning will not be revisited until a later term and requires ongoing consolidation. Teachers should also consult the more detailed guidelines in this document for suggested activities and other areas to include.

Throughout Year 4, **times tables** and **Roman numerals** should be regularly incorporated into Maths Meetings.

Term	Detail
<b>Autumn</b>	<p><u>Number:</u></p> <ul style="list-style-type: none"> <li>• Count in multiples of 6, 8, 25, 100 and 1000</li> <li>• Using the multiplication tables up to <math>12 \times 12</math></li> <li>• Roman numerals to 100 (I to C)</li> <li>• Derive facts from known facts (number bonds and multiplication facts, using knowledge of place value, inverse relationship, commutativity etc.) 'If I know..., what else do I know?' using all four operations</li> <li>• Add and subtract 3-digit numbers mentally using a range of calculation strategies</li> <li>• Calculate multiplications and divisions mentally using a range of strategies (including known facts, halving, doubling, applying place value, inverse, commutativity etc).</li> <li>• Compare and order fractions</li> <li>• Find fractions of simple amounts and quantities (linking this to division)</li> <li>• Count in tenths and hundredths forwards and backwards</li> </ul> <p><u>Shape and Pattern:</u></p> <ul style="list-style-type: none"> <li>• Recognise 3-D shapes in different orientations and describe their properties</li> <li>• Identify right angles, compare angles and classify angles as acute or obtuse</li> <li>• Recognise quarter, half, three-quarter and whole turns and their equivalent number of right angles</li> <li>• Identify lines of symmetry in the surrounding environment and regular 2-D shapes</li> <li>• Identify horizontal and vertical lines and pairs of perpendicular and parallel lines</li> </ul> <p><u>Time:</u></p> <ul style="list-style-type: none"> <li>• Tell and write the time from an analogue clock, including Roman numerals from I to XII and 12-hour and 24-hour clocks</li> <li>• Estimate and read the time to the nearest minute</li> </ul> <p><u>Money:</u></p> <ul style="list-style-type: none"> <li>• Add and subtract money, including mixed units, and give change in practical contexts</li> </ul>
<b>Spring</b>	<p><u>Number:</u></p> <ul style="list-style-type: none"> <li>• Divide by ten and 100 (using knowledge of place value) to get a decimal fraction</li> <li>• Use the number line to represent numbers (including decimals), fractions (including mixed numbers) and measures</li> <li>• Recognise and use factor pairs and commutativity in mental calculations</li> <li>• Multiply three numbers together</li> </ul> <p><u>Geometry and shape:</u></p> <ul style="list-style-type: none"> <li>• Calculate the perimeters of rectilinear 2-D shapes on cm grids</li> <li>• Identify lines of symmetry in 2-D shapes</li> </ul> <p><u>Measures including money:</u></p> <ul style="list-style-type: none"> <li>• Solve problems, including missing number problems using number facts, place value and more complex addition and subtraction problems</li> <li>• Add and subtract money, including mixed units, and give change in practical contexts</li> </ul> <p><u>Time:</u></p> <ul style="list-style-type: none"> <li>• Estimate and read time to the nearest minute</li> <li>• Compare time in terms of seconds, minutes and hours</li> <li>• Convert units of time e.g. minutes to seconds, weeks to days</li> </ul>



## Summer

### Number:

- Identify the place value of the digits in a number with up to two decimal places
- Suggest a decimal fraction that is equivalent to a fraction in tenths or hundredths
- Round decimals with one decimal place to the nearest whole number
- Compare numbers with the same number of decimal places up to two decimal places
- Add and subtract 4-digit numbers mentally using a range of calculation strategies

### Geometry, position and direction:

- Use flags to identify angles, shapes, symmetry, parallel and perpendicular lines
- Describe positions on a 2-D grid as coordinates in the first quadrant

### Measures:

- Recognise and write decimal equivalents to one quarter, one half and three quarters in the context of capacity, length and mass
- Recognise centimetres written in metres; ml written in litres
- Round lengths to the nearest metre

### Money:

- Recognise how many ten pence pieces equal one pound, how many one pence pieces equal one pound and relate them to tenths and hundredths of a pound
- Compare amounts of money up to two decimal places

### Time:

- Look at timetables using correct vocabulary e.g. arrive / depart, first, last.



## Additional concepts and activities for Year 4 Maths Meetings

Detail	
Autumn	<p><b>Calendar maths</b></p> <ul style="list-style-type: none"><li>• Days of the week<ul style="list-style-type: none"><li>○ <i>Today is, yesterday was, tomorrow will be</i></li><li>○ Today is Monday the 11th - what will the date be next Monday? What was the date last Monday?</li></ul></li><li>• Months of the year<ul style="list-style-type: none"><li>○ <i>This month is, last month was, next month will be</i></li><li>○ Date and year including Roman numerals</li><li>○ Ordering the months of the year</li></ul></li><li>• Weather<ul style="list-style-type: none"><li>○ Collate and compile weather data using a bar chart</li><li>○ Record the daily temperature using a line graph</li><li>○ Compile the total weekly rainfall in ml</li><li>○ Display and compare dates of birth</li></ul></li></ul> <p><b>Number</b></p> <ul style="list-style-type: none"><li>• Order and compare numbers within 10 000</li><li>• Round any number to the nearest ten, hundred and thousand</li><li>• Recognise and use fractions as numbers</li><li>• Add and subtract fractions with the same denominator within one whole<ul style="list-style-type: none"><li>○ Number of the week - pick a number to focus on every week and complete such activities as: count on or back in tens; place value; reverse the digits – what is the number now? What is the biggest, smallest number you can make using the same digits?</li><li>○ Secret number: it is even, it has 6 in the tens column, it is greater than 500, etc.</li><li>○ Roman numeral of the day – (could correspond to the date); change the number by adding one more or less</li><li>○ Convert numbers to roman numerals</li></ul></li></ul> <p><b>Data handling</b></p> <ul style="list-style-type: none"><li>• Interpret and present data using bar charts, pictograms and tables</li><li>• Solve one-step and two-step problems using information presented in bar charts, pictograms and tables<ul style="list-style-type: none"><li>○ Temperature and rainfall of the day can be represented on line graphs and tables. At the end of a set period of time, e.g. 1 week or 1 month, the teacher should set problems based on pupils' findings</li><li>○ Compile bar charts, pictograms and tables based on other opportunities that may arise in the classroom, e.g. a daily timetable for the class</li></ul></li></ul> <p><b>Geometry: shape and symmetry</b></p> <ul style="list-style-type: none"><li>• Recognise common 3-D shapes in different orientations<ul style="list-style-type: none"><li>○ Feely bag activities</li><li>○ Use the classroom, current or previous Big Pictures, or general landscape pictures to identify horizontal and vertical lines as well as perpendicular and parallel lines</li></ul></li></ul>



	<p><b>Measures including money</b></p> <ul style="list-style-type: none"> <li>• Comparison of lengths, including simple scaling by integers e.g. twice as long or five times as high <ul style="list-style-type: none"> <li>○ Scale questions could include find something in the classroom that is twice as long as the book or half as long as the table.</li> <li>○ Which is heavier – 300 g or 300 kg?</li> </ul> </li> <li>• Compare, add and subtract masses in kg and g <ul style="list-style-type: none"> <li>○ Practical word problems, including addition and subtraction problems, could integrate with measures, e.g. 300 g of carrots costs 61p. How much would 900 g cost? If I had £2, how much change would I receive?</li> <li>○ Menu of prices and calculations to follow using the menu. A bar chart could be used to represent quantities of food sold.</li> </ul> </li> </ul> <p><b>Time</b></p> <ul style="list-style-type: none"> <li>• Use time vocabulary, including: o'clock, a.m. / p.m.</li> </ul>
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Detail	
<p><b>Spring &amp; Summer</b></p>	<p><b>Calendar maths</b></p> <ul style="list-style-type: none"> <li>• 24 hours in one day</li> </ul> <p><b>Number</b></p> <ul style="list-style-type: none"> <li>• Use number line to show fractions, numbers and measures <ul style="list-style-type: none"> <li>○ Place these decimals on a line from 0 to 2: 0.3, 0.1, 0.9, 0.5, 1.2, 1.9</li> </ul> </li> <li>• Estimate the answer when adding and subtracting and use inverse operations to check</li> <li>• Count in decimal fractions (after Unit 8)</li> <li>• Suggest a decimal fraction that is equivalent to a fraction in tenths or hundredths <ul style="list-style-type: none"> <li>○ What is the decimal fraction equivalent to two tenths and five hundredths? Twenty-nine hundredths?</li> </ul> </li> <li>• Suggest decimal fractions between numbers <ul style="list-style-type: none"> <li>○ Suggest a decimal fraction between 4.1 and 4.2</li> </ul> </li> </ul> <p><b>Data handling</b></p> <ul style="list-style-type: none"> <li>• Interpret and present discrete and data using bar charts, pictograms, tables, Venn and Carroll diagrams and time graphs</li> </ul> <p><b>Geometry: Shape and coordinates</b></p> <ul style="list-style-type: none"> <li>• Use flags to identify angles, shapes, symmetry, parallel and perpendicular lines <ul style="list-style-type: none"> <li>○ Select a flag and investigate the shapes, angles, lines of symmetry, parallel and perpendicular lines on the flag. Change the flag each week (<a href="http://nrich.maths.org/7749">http://nrich.maths.org/7749</a>)</li> </ul> </li> <li>• Describe positions on a 2-D grid as coordinates in the first quadrant</li> </ul> <p><b>Measures including money</b></p> <ul style="list-style-type: none"> <li>• Solve simple measure problems <ul style="list-style-type: none"> <li>○ Problem of the day/week: a full bucket holds <math>5\frac{1}{2}</math> litres. A full jug holds <math>\frac{1}{2}</math> a litre. How many jugs full of water will fill the bucket?</li> </ul> </li> </ul>



- Alan jumped 2.25 metres on his second try at the long jump. This was 75 centimetres longer than on his first try. How far in metres did he jump on his first try?
- A box of four cakes costs £2.96. How much does each cake cost? Mike and Lucy buy 3 boxes of cakes between them. Mike pays £4.50. How much must Lucy pay?
- Recognise and compare weights written in kg with up to two decimal places
  - Show pupils a rectilinear shape drawn on square paper and ask them to calculate the area and perimeter. Use a different shape each day and then compare the areas and the perimeters of the five shapes on a Friday.

**Time**

- Time a Maths Meeting and record its duration
- Compare durations of Maths Meetings at the end of every week