



Maths Meeting in: Year 5

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 5 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 5, **negative numbers** and **angles** should be regularly incorporated into Maths Meetings.

Term	Detail
Autumn	<p><u>Number:</u></p> <ul style="list-style-type: none"> • Place value of 5-digit and 6-digit whole numbers • Count back past zero to include negative numbers using a number line • Recognise Roman numerals up to 1000 (M) • Count forwards and backwards in steps of powers of ten (including tenths and hundredths) • Count in multiples of 7, 9, 25, 50, 100 and 1000 • Recalling and using multiplication facts up to 12 x 12 • Add, subtract, multiply and divide numbers mentally with increasingly large numbers, drawing upon known facts (including number bonds and multiplication facts, halving, doubling, applying place value, inverse, commutativity etc). • Compare and order fractions and decimals • Find fractions of simple amounts and quantities (linking this to division) • Add and subtract fractions with the same denominator <p><u>Geometry:</u></p> <ul style="list-style-type: none"> • Name and describe the properties of 2-D and 3-D shapes • Identify acute and obtuse angles and compare and order angles (do not include reflex angles at this point) <p><u>Measures including money and time:</u></p> <ul style="list-style-type: none"> • Convert between different units of metric measure (cm/mm, cm/m, kg/g, km/m, l/ml) • Tell the time to the nearest minute with analogue and digital clocks and 12-hour and 24-hour notation • Solve problems involving converting between units of time from hours to minutes; minutes to seconds; years to months; weeks to days • Measure and calculate the perimeter of a rectilinear shape (including squares) in cm and m <p><u>Statistics:</u></p> <ul style="list-style-type: none"> • Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs
Spring	<p><u>Number:</u></p> <ul style="list-style-type: none"> • Interpret negative numbers in context and calculate intervals across zero • Continue number sequences including negative numbers • Identify the place value in a number with up to three decimal places • Compare and order fractions, including mixed number and improper fractions whose denominators are multiples of the same number • Identify multiples and factors, including finding all factor pairs and common factors of two numbers • Read decimal numbers as fractions • Read, order and compare numbers with up to three decimal places • Convert mixed numbers to improper fractions and vice versa <p><u>Measures including money and time:</u></p> <ul style="list-style-type: none"> • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • Calculate and compare the area and perimeter of rectangles • Estimate and compare acute, obtuse and reflex angles • Identify: angle at a point and one whole turn (total 360°); angles at a point on a straight line and a turn (total 180°); other multiples of 90° • Read and convert time between analogue, digital, 12- and 24-hour clock



	<p><u>Statistics:</u></p> <ul style="list-style-type: none">• Solve comparison, sum and difference problems using information presented in line graphs <p>Complete, read and interpret information in tables, including timetables</p>
Summer	<p><u>Number:</u></p> <ul style="list-style-type: none">• Write percentages as a fraction and as a decimal number• Add and subtract fractions with the same denominator and denominators that are multiples of the same number• Use all four operations to solve problems involving measure, using decimal notation <p><u>Measures, including money and time:</u></p> <ul style="list-style-type: none">• Solve problems involving converting between units of time <p><u>Geometry:</u></p> <ul style="list-style-type: none">• Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language• Know and use the angles at a point / full turn sum to 360°• Know and use the angles on a straight line / half turn sum to 180°



Additional concepts and activities for Year 5 Maths Meetings

Detail

Autumn

Calendar maths

- Time, day, date and year
 - Today is Monday the 11th - what will the date be next Monday? What was the date last Monday?
- Number of days in each month and year, including leap years
 - Months of the year rhyme
 - Date and year including Roman numerals
 - Ordering the months of the year
 - Display and compare dates of birth
- Weather
 - Collate and compile weather data using a bar chart
 - Record the daily temperature using a line graph
 - MET office WOW website <http://wow.metoffice.gov.uk>
 - Calculate the total weekly rainfall in ml

Number

- Add and subtract three-digit and four-digit numbers mentally
 - <http://nrich.maths.org/6606> supports mental/written addition
- 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
 - Completed calculations – spot the mistake
- Recall prime numbers up to 19
- Identify multiples and factors, including finding all factor pairs for a given number and common factors of two numbers
- Ordering and comparing numbers including fractions and decimals
 - Counting stick activities; skip counting and rhymes
 - Order numbers with similar digits e.g. 1.01, 0.11, 1.101
 - Number of the day (including negative numbers) – count on and back in different amounts from that number; how many hundreds, tens, ones; reverse the digits; make the largest or smallest number possible by rearranging the digits; identify factors and multiples

Statistics

- Solve one-step and two-step problems using information presented in bar charts, pictograms and tables
 - Use ITP data handling resources to create and then interpret charts and graphs http://www.taw.org.uk/lic/itp/line_graph.html

Geometry

- Compare and classify geometric shapes
 - Guess my shape - name and identify properties of 2-D and 3-D shapes.
- Estimate, in degrees, the size of a given angle
 - Angle guesser game <http://www.primaryresources.co.uk/online/angle.swf>
 - Online angle game: <http://nrich.maths.org/1235>
- Identify 3-D shapes from 2-D representations



Measures including money and time

- Solve simple measure and money problems involving fractions and decimal fractions to two decimal places
 - Recall dividing by 10, 100 and 1000 when converting units
 - Which is longer: 3 cm or 3 inches?
 - Look at and interpret a timetable
 - Analogue and digital clock on display in the classroom. Daily practice of converting analogue to digital and vice versa.

Time

- Use time vocabulary including o'clock, a.m. / p.m.

Detail

Spring & Summer

Calendar maths

- Time, day, date and year
 - Today is Monday the 11th - what will the date be next Monday? What was the date last Monday?
- Number of days in each month and year, including leap years
 - Months of the year rhyme
 - Date and year including Roman numerals
 - Ordering the months of the year
 - Display and compare dates of birth
- Weather
 - Collate and compile weather data using a bar chart
 - Record the daily temperature using a line graph
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Statistics

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Number

- Distinguish between prime and composite numbers up to 19
- Establish whether a number up to 100 is prime
 - Factor bugs drawing or physical movement to list factors
- Recognise and use square numbers and cube numbers and notation for squared (2) and cubed (3)
- Interpret negative numbers in context and calculate intervals across zero
 - <http://nrich.maths.org/5865> supports negative numbers
- Compare and order decimals and fractions
 - Odd one out activities
 - Place fractions on a number line between 0 and 1, including equivalent fractions



- Find fractions and percentages of amounts
 - Find $\frac{2}{10}$ of 20, 50, 100 and discuss patterns
 - 30% of 60 is equal to ____; 30% of ____ is equal to 60.
 - Which is greater using mixed percentages and fractions of same value

Data handling

- Interpret and present discrete and data using bar charts, pictograms, tables, Venn and Carroll diagrams and time graphs

Geometry: Shape and coordinates

- Describe position on the full coordinates grid
 - Plot and read coordinates on a graph using x and y axes in the first quadrant
 - Plot coordinates and join them up to make a picture

Measures, including money and time

- Time a Maths Meeting and record its duration. Compare durations of Maths Meetings at the end of every week
- Order amounts using mixed units of measure