



Maths Meeting in: Year 3

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 3 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 3, **time**, **money** and **angles** should be regularly incorporated into Maths Meetings. After Unit 11 (Fractions), counting up and back in tenths should also feature regularly.

Term	Detail
Autumn	<p><u>Number:</u></p> <ul style="list-style-type: none"> • Consolidate mental addition and subtraction for 2-digit numbers (with and without regrouping) using a range of calculation strategies • Represent numbers to 1000 with concrete manipulatives and images, including number lines • Place value of digits in numbers with up to three digits • Derive multiplication and division equations using arrays (multiples of 2, 5 & 10) • Recognise, find and write fractions of lengths, shapes and quantities • Choose and discuss efficient calculation strategies for 3-digit addition and subtraction, emphasising using number bonds / make ten • Derive facts from known facts 'If I know..., what else do I know?' (number bonds) • Doubles & halves (continue throughout the year) <p><u>Shape and Pattern:</u></p> <ul style="list-style-type: none"> • Name and describe 2-D and 3-D shapes according to their properties • Describe position, direction and movement in terms of straight line movements and rotations including angles • Identify horizontal and vertical lines <p><u>Measures:</u></p> <ul style="list-style-type: none"> • Read scales with intervals of 2, 5, 10 and 100 (comparing to increments of 1) <p><u>Time:</u></p> <ul style="list-style-type: none"> • Tell the time to the nearest five minutes <p><u>Money:</u></p> <ul style="list-style-type: none"> • Coin recognition of all coins and notes (£5, £10, £20)
Spring	<p><u>Number:</u></p> <ul style="list-style-type: none"> • Recognise that two halves/three thirds/four quarters are equal to one whole • Count in halves, thirds and quarters within 10 • Choose and justify efficient calculation strategies for age-appropriate calculations • Derive facts from known facts (multiplication / division and addition / subtraction) • Introduce counting in tenths during Unit 9 • Multiply by 10 and 100 recognising the importance of place value • Doubles & halves <p><u>Data:</u></p> <ul style="list-style-type: none"> • Read scales in steps of 2, 3, 4, 5 and 10 <p><u>Shape and measure:</u></p> <ul style="list-style-type: none"> • Identify right angles and that two right angles make a half turn • Calculate the perimeter of simple 2-D shapes <p><u>Time:</u></p> <ul style="list-style-type: none"> • Tell the time to the nearest minute • Tell the time from an analogue clock using Roman numbers I to XII



Summer

Number:

- Recognise equivalent fractions using a fraction wall
- Count in halves, thirds, quarters and tenths from any number
- Find fractions (thirds, halves and quarters) of simple amounts (linked to division)
- Multiplication and division by 10 and 100
- Choose efficient calculation strategies for age-appropriate calculations
- Derive new facts from known number facts (all four operations)
- Given a number, pupils identify calculations (from all four operations) that could result in that number.

Data:

- Read scales in steps of 2, 3, 4, 5, 10, 50 and 100
- Interpret tallies, tables, bar charts and pictograms

Measures:

- Read scales with intervals of 2, 5, 10, 25, 50, 100, 250 and 500

Shape and pattern:

- Identify pairs of perpendicular and parallel lines

Money:

- Recognise British coins and notes and use in practical contexts



Additional concepts and activities for Year 3 Maths Meetings

Detail	
Autumn	<p>Calendar maths</p> <ul style="list-style-type: none">○ Discuss using vocabulary: century, calendar and leap year● Days of the week<ul style="list-style-type: none">○ <i>Today is, yesterday was, tomorrow will be</i>○ Days of the Week song (Adams family tune) http://www.youtube.com/watch?v=HtQcnZ2JWsY● Months of the year<ul style="list-style-type: none">○ <i>This month is, last month was, next month will be</i>○ Months of the Year song (found on YouTube) http://www.youtube.com/watch?v=5enDRrWyXaw○ Time, date and year○ Ordering the months of the year● Weather<ul style="list-style-type: none">○ Collate and compile weather data using a bar chart○ Measure and read the temperature in degrees Celsius○ Record the daily temperature using a bar chart <p>Number</p> <ul style="list-style-type: none">● Multiplication tables of 2, 3, 4, 5, 6 and 10 and related division facts● Patterns of numbers within 100<ul style="list-style-type: none">○ 'Pass the teddy' counting game – the teddy is passed around the class with each child saying 2, 3, 5 or 10 more or less than the previous number○ Use a hundred square to show patterns within 100○ 100 square puzzle – show one part of the hundred square with only 2 or 3 numbers showing. Fill in the remaining numbers● Say cardinal numbers' names in order within 10 000● Estimate a set of objects within 100<ul style="list-style-type: none">○ Use jars of marbles, pencils, counters, etc. for estimation○ Pictorial estimation – show a picture of 50+ objects, estimate and then count in groups of 3, 4, etc.● Order numbers within 1000 on a number line (vertical and horizontal)● Compare numbers within 1000 using < and > signs● Place value of digits in numbers within 1000<ul style="list-style-type: none">○ Number of the day or week – count on and back in tens to and from the number; how many tens and ones?; reverse the digits – what is the number now?○ Guess my number: it is odd, it has 6 in the thousands column, zero hundreds, it has a digit total of 9, etc.● Bar model representations for addition and subtraction● Bar model representations for multiplication and division <p>Data handling</p> <ul style="list-style-type: none">● Solve problems using pictograms, bar charts, tallies and tables● Represent data using pictograms, bar charts and tallies.● Understand and use simple scales in pictograms and bar charts



- Link data opportunities to calendar maths: recording the daily temperature, weather, lunches, etc.
- Compile data using random collections of toys or manipulatives and represent on a pictogram or bar chart

Shape and pattern

- Clarify the properties of different 2-D and 3-D shapes
 - Feely bag of shapes
 - Sort shapes using a Carroll diagram
- Repeat and continue patterns and sequences
 - Pattern of the day – can be number, colour, size or shape
- Describe position, direction and movement in terms of straight line movements and rotations including angles
 - Use a grid and guide an object from one position to another marked one using clockwise and anti-clockwise rotations as well as straight line movements
- Identify horizontal and vertical lines

Measures

- Word problems using cm and m including addition, subtraction, multiplication and division
 - Example questions: If all the objects were lined up what would the total length be? What is the difference in length between the shortest and the longest object?
- Apply addition, subtraction, multiplication and division in the context of weight
- Recognising 100 cm is equal to 1 m, 2 m is equal to 200 cm, etc.
- Read the length to the nearest m and cm
 - Pick one large object to measure weekly, e.g. door, table, whiteboard. Keep a record of each one; comparisons can be made more easily as your list grows
- Read volume to the nearest unit of ml or l; measure capacity in ml and in l
 - Collect rainwater overnight and keep a record using a bar chart
- Read scales to the nearest g and kg; measure weight in g and in kg
 - Lunch boxes with or without lunches could be weighed; lightest or heaviest box, collective weight of everyone's lunch
- Compare lengths/capacity using < and > signs

Time

- Know the number of minutes in an hour, hours in a day, days in a week and number of days in each month
 - Discuss time referring to a.m. and p.m.
 - Egg timers measuring 5 minutes could be used to time the length of the Maths Meeting or segments of it

Money

- Represent a given amount in different ways
- Addition and subtraction of money of the same unit, including giving change
 - Practical word problems including how addition and subtraction could integrate with weight or other measures, e.g., 1 kg of tomatoes costs 79 p. How much would 2 kg cost?



Detail

Spring & Summer

Calendar maths

- Discuss using vocabulary: century, calendar and leap year
- Days of the week
 - *Today is, yesterday was, tomorrow will be*
 - Days of the Week song (Adams family tune)
<http://www.youtube.com/watch?v=HtQcnZ2JWsY>
- Months of the year
 - *This month is, last month was, next month will be*
 - Months of the Year song (found on YouTube)
<http://www.youtube.com/watch?v=5enDRrWyXaw>
 - Time, date and year
 - Ordering the months of the year
 - Months of the year rhyme
- Weather
 - Collate and compile weather data using a bar chart
 - Measure and read the temperature in degrees Celsius
 - Record the daily temperature using a bar chart

Number

- Skip counting in steps of 6 and 8
- Recognise and find unit and non-unit fractions: halves, quarters and thirds of a length, shape and quantity
 - Finding fractions of the shape of the day or a set of objects
 - Dividing a shape into tenths
- Count on in halves, thirds and quarters within 10
- Recognise equivalent fractions using a fraction wall
- Identify what fraction of an area model, length model or quantity is shaded/indicated
- Pupils identify the multiplication and division equations that an array can represent
- Recognise the commutative property of multiplication
- Compare and order numbers up to 1000
- Count on and back in hundreds from any number within 1000

Data handling

- Using and reading scales of 2, 4, 5, 10, 100 and 1000 on pictograms and bar charts

Shape and pattern

- Recognise that two right angles make a half turn
- Identify if an angle is greater or less than a right angle

Measures

- Pupils suggest appropriate units of measurement depending on the object to be measured
- Word problems using cm and m including addition, subtraction, multiplication and division



- Example questions: If all the objects were lined up what would the total length be? What is the difference in length between the shortest and the longest object?
- Apply addition, subtraction, multiplication and division in the context of weight
- Calculate the perimeter of a shape using its properties to identify the lengths of any unknown sides

Time

- Compare time in terms of seconds, minutes and hours
- Compare and sequence intervals of time using a.m. and p.m.
- Compare durations of events

Money

- Represent a given amount in different ways
- Addition and subtraction of money of the same unit, including giving change
 - Practical word problems including how addition and subtraction could integrate with weight or other measures, e.g.: 1 kg of tomatoes costs 79 p. How much would 2 kg cost?