Maths Meetings non-negotiables term-by-term

The topics below must be included each term as some of the areas are **not** covered in the Mathematics Mastery units of work.

Teachers should also consult the more detailed guidelines in this document for suggested activities and other areas to include.

Term	Detail:
Autumn	Number: • Consolidate addition and subtraction within 1000 with and without regrouping using a range of calculation strategies • Represent numbers up to 1000 with concrete materials and images including number lines • Place value of digits in numbers within 1000 • Derive multiplication and division equations using arrays • Recognise, find and write fractions of lengths, shapes and quantities • Choose efficient calculation strategies for age-appropriate calculations, including practice using number bonds / make ten • Derive facts from known facts (addition / subtraction) • Doubles & halves Shape and Pattern: • 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 Time: • Tell the time to the nearest five minutes Measures • Read scales with intervals of 2, 5, 10 and 100 Money • Recognise British coins and notes, using appropriate amounts to buy
Spring	Number: • Recognise that two halves/three thirds/four quarters are equal to one whole • Count in halves, thirds and quarter within 10 • Choose efficient calculation strategies for age-appropriate calculations • Doubles and halves • 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 Data: • Read scales in steps of 2, 3, 4, 5 and 10 Shape and measure: • Identify right angles and that two right angles make a half turn • Calculate the perimeter of simple 2-D shapes Time: • Tell the time to the nearest minute • Tell the time from an analogue clock using Roman numbers I to XII.

Maths Meetings non-negotiables term-by-term (contd.)

The topics below must be included each term as some of the areas are **not** covered in the Mathematics Mastery units of work.

Teachers should also consult the more detailed guidelines in this document for suggested activities and other areas to include.

Term	Detail:
Summer	Number: • Recognise equivalent fractions using a fraction wall • Count in halves, thirds, quarters and tenths from any number • Multiplication and division by 10 and 100 • Choose efficient calculation strategies for age-appropriate calculations • Doubles and halves • Derive new facts from known number facts (all four operations) Data: • Read scales in steps of 2, 3, 4, 5, 10, 50 and 100 • Interpret tallies, tables, bar charts and pictograms Time: • Tell the time to the nearest minute on 12-hour digital and analogue clocks Shape and patterns: • Identify pairs of perpendicular and parallel lines (from Unit 10) Measures: • Read scales with intervals of 2, 5, 10, 25, 50, 100, 250 and 500 Money: • Recognise British coins and notes and use in practical contexts

Other possible areas to include in Maths Meetings

	Areas to include (starting from term specified but to be consolidated throughout)	**Suggested ideas**
Calendar Maths	**Autumn 1 & 2, spring & summer:** • **Days of the week** • Today is, yesterday was, tomorrow will be • **Months of the year** • This month is, last month was, next month will be • Time, date and year • Weather • Measure and read the temperature in degrees Celsius • Data handling e.g. travel to school, lunches • Number patterns of 7 on the calendar • Discuss using vocabulary: century, calendar and leap year	***Days of the Week* song (Adams family tune)** http://www.youtube.com/watch?v=HtQcnZ2JWsY ***Months of the Year* song (found on YouTube)** http://www.youtube.com/watch?v=5enDRrWyXaw *What's the Weather* song (several versions are available on YouTube) • Today is Monday the 11th – what will the date be next Monday? What was the date last Monday? • Collate and compile weather data using a bar chart • Record the daily temperature using a
Data handling and representation	**Autumn 1 & 2:** • 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 **Spring:** • Using and reading scales of 2, 3, 4, 5 and 10 **Summer:** • Using and reading scales of 2, 4, 5, 10, 100 and 1000 on 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

	Areas to include (starting from term specified but to be consolidated throughout)	**Suggested ideas**
Shape and pattern	**Autumn 1 & 2:** • Name and describe 2-D and 3-D shapes • Sort 2-D and 3-D shapes • Clarify the properties of different 2-D and 3-D shapes • Repeat and continue patterns and sequences • Describe position, direction and movement in terms of straight line movements and rotations including angles • Identify horizontal and vertical lines **Spring:** • Identify right angles • Recognise that two right angles make a half turn • Identify if an angle is greater or less than a right angle • Identify pairs of perpendicular and parallel lines • Measure the perimeter of simple 2-D shapes	**Shape songs (several versions are available on YouTube)** • Feely bag of shapes • Sort shapes using a Carroll diagram • Pattern of the day – can be number, colour, size or shape • 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 • Find an angle greater or less than a right angle • Turn the picture a half turn clockwise
Capacity and volume	**Autumn 1 & 2, spring & summer** • Read volume to the nearest unit of ml or l • Measure capacity in ml and in l • Calculate capacity to the nearest ml or l • Compare capacity using < and > signs • Apply addition, subtraction, multiplication and division in the context of capacity	• Collect rainwater overnight and keep a record using a bar chart • Compile the total weekly or monthly rainfall amount
Length	**Autumn 1** • Read rulers or measuring tapes to the nearest cm and m • Measure length in cm and in m • Apply addition, subtraction, multiplication and division in the context on length **Autumn 2** • Word problems using cm and m including addition, subtraction, multiplication and division • 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 • Compare lengths using < and > signs **Spring** • Pupils suggest appropriate units of measurement depending on the object to be measured • Calculate the perimeter of a shape using its properties to identify the lengths of any unknown sides	• 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 • 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?

	Areas to include (starting from term specified but to be consolidated throughout)	**Suggested ideas**
Number	**Autumn 1 & 2:** • **Multiplication tables of 2, 3, 4, 5, 6 and 10 and related division facts** • **Patterns of numbers within 100** • **Skip counting in 2s, 3s, 4s, 5s and 10s** • Say cardinal numbers' names in order within 10 000 • Consolidate numbers within 100 • Estimate a set of objects within 100 • Count on and back in ones and tens within 1000 along number track (vertical and horizontal) • Order numbers within 1000 on a number line (vertical and horizontal) • Compare numbers within 1000 using < and > signs • Consolidate addition and subtraction within 1000 with and without regrouping • Addition and subtraction using the make ten strategy • Addition and subtraction using column method • Place value of digits in numbers within 1000 • Bar model representations for addition and subtraction • Bar model representations for multiplication and division • Multiplication and division using materials, arrays, repeated addition, mental methods and multiplication and division facts • Recognise, find and write fractions $\frac{1}{4}, \frac{1}{2}, \frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity **Spring** • **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 • Recognise that two halves are equal to one whole, three thirds are equal to one whole and four quarters are equal to one whole • **Count on in halves, thirds and quarters within 10** • Pupils identify the multiplication and division equations that an array can represent • Multiplication and division of large numbers by 10 and 100 • Recognise the commutative property of multiplication **Summer** • Recognise equivalent fractions using a fraction wall • Identify what fraction of an area model, length model or quantity is shaded/indicated	• **Number or counting songs** • **Counting in tenths** • '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 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. • 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 • 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. • Missing number: 341, 342, ___, 344 • Teacher writes 3 or 4 addition or subtraction sums on the board, ensuring that one of them is wrong. The children must work out which one it is within a given time • Finding $\frac{1}{4}, \frac{1}{2}, \frac{2}{4}$ or $\frac{3}{4}$ of the shape of the day or a set of objects • Dividing a shape into tenths

	Areas to include (starting from term specified but to be consolidated throughout)	Suggested ideas
Weight	**Autumn 1 & 2, spring & summer** • Read scales to the nearest g and kg • Measure weight in g and in kg • Apply addition, subtraction, multiplication and division in the context of weight	• Lunch boxes with or without lunches could be weighed; lightest or heaviest box, collective weight of everyone's lunch
Time	**Autumn 1 & 2:** • Tell the time in 5 minute intervals • **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. **Spring** • Tell the time to the nearest minute • Tell the time on a 12-hour digital clock • Compare time in terms of seconds, minutes and hours • Compare and sequence intervals of time using a.m. and p.m. • Tell the time from an analogue clock using Roman numerals I to XII • Compare durations of events	• Reading the time on an analogue and Roman numeral clock • Egg timers measuring 5 minutes could be used to time the length of the Maths Meeting or segments of it • 5 minutes before or after, counting in 5 minute intervals and moving the hands of the clock to reflect the time
Money	**Autumn 1 & 2, spring & summer** • Coin recognition 1p, 2p, 5p, 10p, 20p, 50p, £1, £2 • Note recognition £5, £10, £20, £50 • Represent a given amount in different ways • Addition and subtraction of money of the same unit, including giving change	• Missing notes and coins – children must calculate how much money is missing and what coins or notes are missing • Practical word problems including how addition and subtraction could integrate with weight or other measures, e.g.: 1 kg of tomatoes costs 79p. How much would 2 kg cost?