Ashbury Meadow Primary School Mathematics Curriculum **Progression in Measures**

Year Group	Knowledge and Skills Supporting Resource: Maths No Problem Essential & most valuable knowledge for the next key stage is highlighted in yellow	Vocabulary
Nursery	N/A	
Reception	**Length** Children compare objects by size, length and weight Children will use practical contexts to sort objects according to different criteria and describe what they notice **Time** Children learn 0 clock Children learn half past Children learn quarter past Children learn quarter to Children can identify O'clock, Half past, quarter past and quarter to on a traditional clock. End Point – ELG Number ELG Children at the expected level of development will: • Have a deep understanding of number to 10, including the composition of each number; • Subitise (recognise quantities without counting) up to 5; • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. Numerical Patterns ELG Children at the expected level of development will: • Verbally count beyond 20, recognising the pattern of the counting system; • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity; • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.	measure size compare guess, estimate enough, not enough too much, too little too many, too few nearly, close to, about the same as just over, just under length, width, height, depth long, short, tall high, low wide, narrow deep, shallow thick, thin longer, shorter, taller, higher… and so on longest, shortest, tallest, highest… and so on far, near, close weigh, weighs, balances heavy/light, heavier/lighter, heaviest/lightest balance, scales, weight full half full empty holds container time days of the week: Monday, Tuesday… day, week birthday, holiday morning, afternoon, evening, night bedtime, dinnertime, playtime today, yesterday, tomorrow before, after next, last now, soon, early, late quick, quicker, quickest, quickly slow, slower, slowest, slowly old, older, oldest new, newer, newest takes longer, takes less time hour, o'clock clock, watch, hands money, coin, penny, pence, pound (£) price, cost, buy, sell, spend, spent pay change dear, costs more, cheap, costs less, cheaper how much…? how many…? total
Year 1	**Height & Length** • To compare height and length by using key terminology. • To be able to measure objects using other items, such as pencils or books.	*All of the above, plus:* roughly, metre, ruler, metre stick

	• To be able to measure items using other things - parts of the body in particular • To introduce the concept of using rulers for measuring **Time** • To develop familiarity with the analogue clock, including the minute and hour hands; to tell time to the hour on an analogue clock. • To improve familiarity with the analogue clock; to tell time to the half hour using the term 'half past.' • To sequence events in order of time; to use the terms 'next', 'before' and 'after' to describe the order of events. • To estimate an amount of time using seconds, minutes and hours. • To use the terms 'quicker', 'slower', 'earlier' and 'later' when comparing time. • To learn the days of the week and the months of the year and to be able to put them in the correct order. **Money** • To recognise coins and determine their value using size, colour, markings and shape. • To recognise notes and determine their value using colour and markings. **Volume & Capacity** • To compare volume and capacity using the terms 'more than' and 'less than', 'full' and 'empty'. • To find the volume and capacity of a container using non-standard ones. • To describe volume using the terms 'half' and 'quarter'. **Mass** • To compare the mass of objects using the terms 'heavy' and 'light', 'heavier than', 'lighter than' and 'as heavy as'. • To find the mass of an object using non-standard ones; to use visualisation skills to estimate the number of ones. Y1 National Curriculum – End Point: Pupils will be taught to: - compare, describe and solve practical problems for: - lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] - mass/weight [for example, heavy/light, heavier than, lighter than] - capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] - time [for example, quicker, slower, earlier, later] - measure and begin to record the following: - lengths and heights - mass/weight - capacity and volume - time (hours, minutes, seconds) - recognise and know the value of different denominations of coins and notes	seasons, spring, summer, autumn, winter, month, year, weekend, midnight, fast, faster, fastest half past, how long ago? How long will it be to…? How long will it take to…? How often? always, never, often, sometimes, usually, once, twice £, bought, sold

	- sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] - recognise and use language relating to dates, including days of the week, weeks, months and years - tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	
Year 2	**Length** ● To measure length in metres. ● To measure length in centimetres. ● To be able to compare length for objects using 'greater than' and 'less than' symbols. ● To be able to compare different lengths using centimetres as the unit of measure. ● To be able to compare and measure various line lengths: both straight and curvy. ● To be able to solve problems involving measurement in the context of word problems. ● To be able to solve addition and multiplication word problems involving measurement. ● To be able to solve addition and division word problems involving measurement **Mass** ● To understand that mass is measured in kilograms and by using weighing scales. ● To be able to measure mass in grams and to understand that it is a smaller unit of measure than a kilogram. ● To be able to measure mass accurately in grams using weighing scales. ● To be able to compare the mass of two different objects accurately. ● To be able to compare the mass of three objects and use the appropriate vocabulary. ● To solve word problems in the context of mass. ● To solve word problems involving mass. **Temperature** ● To be able to accurately read temperature in Celsius. ● To be able to estimate temperature and to read thermometers to confirm the estimate **Money** ● To identify standard UK coins and notes and write their names. ● To count notes in sequences of 5 and 10; to recognise the value of notes by appearance. ● To count coins in sequences of their value; to recognise the value of coins by appearance. ● To represent amounts of money using coins and notes; to count coins and notes using their denominations. ● To create equal amounts of money using different coins. ● To exchange denominations of money for different coins.	*All of the above, plus:* further, furthest m, centimetre cm, tape measure Kilogram kg, half kilogram, gram g temperature Celsius Thermometer £ bought sold

	• To compare different amounts of money using coins. • To add money together to determine the total amount. • To calculate change from £100 or less; to use the bar model approach to represent amounts of money. • To solve more complex word problems using bar modelling as a primary method **Time** • To tell and write time to 5-minute intervals. • To tell time to 5-minute intervals and to the hour. • To sequence events of the day by looking at analogue clocks and pictures. • To draw hands on an analogue clock to show the correct time. • To find the duration of time using an analogue clock in 30- and 60-minute intervals. • To find the duration of time to 5-minute intervals. • To find the ending of a duration of time from different 5-minute starting points. • To find the ending time in intervals of 5 minutes from delayed starts. • To find the starting time from 30-minute and 1-hour interval durations. • To find the start of multiple durations of time using a common end time. • To compare durations of time from the least amount to the most amount of time and vice versa **Volume** • To compare volume in different-sized containers using the terms 'greater than,' 'less than,' 'greatest' and 'least.' • To compare the volume of different containers using non-standard units. • To measure volume using litres and determine whether an amount is 'more than,' 'less than' or 'equal to' a litre. • To measure volume using millilitres and litres; to determine how many ml there are in 1 L. • To solve word problems involving bar models with litres as the standard unit. • To solve word problems using ml and l, including problems involving difference. • To solve word problems involving volume and multiplication Y2 National Curriculum – End Point: Pupils will be taught to: - choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels - compare and order lengths, mass, volume/capacity and record the results using >, < and = - recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value - find different combinations of coins that equal the same amounts of money	Days of the week: Monday, Tuesday etc… Months of the year: January, February etc… Fortnight, minute, second, quarter to, quarter past, digital, analogue, clock, watch, timer capacity, contains, litre L, half litre, millimetre ml

	- solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change - compare and sequence intervals of time - tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times - know the number of minutes in an hour and the number of hours in a day.	
Year 3	**Length** ● To use metres and centimetres to measure objects. ● To write length in centimetres only by converting metres to centimetres. ● To convert kilometres to metres. ● To convert length from metres to kilometres and metres. ● To compare two lengths. ● To solve measurement-related word problems. ● To solve other word problems. ● To solve word problems further, involving multiplication. ● To solve word problems associated with length using division. ● To solve more challenging word problems. **Mass** ● To measure mass using weighing scales and compare the mass of objects using grams and kilograms. ● To use weighing scales to measure mass when the mass is between multiples of 100 g. ● To read values on a scale which are 1 kg or more. ● To weigh heavier items where the markers in the scales represent 200 g each. ● To solve word problems relating to mass with addition and subtraction. ● To solve word problems relating to mass using multiplication. ● To solve word problems relating to mass using division. **Volume** ● To measure volume in millilitres. ● To measure capacity in millilitres. ● To measure volume using millilitres and litres. ● To measure volume in millilitres and litres from a 'homemade' bottle with markings. ● To measure volume using millilitres and litres in comparison to 1 l.	*All of the above, plus:* distance apart/between, distance to… from… mile

	• To measure larger capacity in litres and millilitres. • To solve basic word problems related to volume. • To solve more word problems. • To solve word problems through division. • To solve two-step word problems. **Money** • To consolidate previous learning about denominations of both notes and coins; to use simple addition to count amounts of money. • To name amounts of money including coins above 100p; to regroup and rename 100p as £1 as a key strategy. • To find multiple ways of showing an amount of money. • To add money by adding together the pounds and pence separately. • To add amounts of money together using different methods; to consolidate the addition of pounds and pence separately. • To consolidate 'making a pound' as a strategy for adding amounts of money where the coins equal more than 99p. • To learn the 'make a pound' strategy with number bond diagrams; to consolidate the strategies associated with the addition of money. • To use multiple methods for subtracting amounts of money, including concrete materials and the column method. • To use visual comparison to subtract amounts of money; to consolidate column subtraction where there is no regrouping of pence required. • To use number bonds to subtract amounts of money; to develop number sense through decision making. • To use number bonds as the primary strategy for subtracting amounts of money; to split pounds and pence simultaneously when subtracting amounts of money. • To learn the 'counting on' strategy for calculating change; to consolidate the number bonds strategy for calculating change. • To solve word problems involving money using bar modelling as the key strategy; to learn how to use comparative models where pupils are solving by seeing the smaller amount inside of the larger amount. • To use part-whole bar models to represent word problems; to apply addition and subtraction strategies to solve word problems **Time** • To use the terms 'a.m.' and 'p.m.' correctly to identify morning or afternoon/evening. • To learn to tell time to the minute; to understand the relationship between the minute hand and hour hand. • To consolidate and apply a variety of vocabulary used to express the time. • To compare analogue and digital time; to represent time using both analogue and digital methods. • To tell time before the hour using the hour and minute hands.	note, more/most expensive, less/least expensive, amount, value, worth century, calendar, date am, pm earliest, latest Roman numerals

	• To learn to tell time using 24-hour notation; to use analogue time and 24-hour notation interchangeably. • To tell the time on an analogue clock using Roman numerals. • To measure time in seconds and milliseconds. • To measure time in seconds using a stopwatch; to consolidate previous learning about seconds. • To consolidate measuring time in seconds; to conduct a time experiment using seconds. • To measure time in hours using an analogue clock. • To consolidate the measurement of time in hours. • To measure time in hours using analogue clocks and timelines; to count backwards in time by the hour. • To measure the passage of time in minutes using an analogue clock and a timeline. • To measure time to the minute when it crosses into the next hour; to use number bonds to calculate the passage of time. • To measure time in minutes, counting backwards to determine the starting point; to use number bonds and timelines to calculate the passage of time. • To determine how many seconds are in a minute; to use multiplication to calculate the number of seconds in a number of minutes. • To convert seconds into minutes using number bonds. • To calculate the number of days in a month; to learn which months have 31, 30 and 28/29 days. • To find the duration of days for different activities **Perimeter of Figures** • To determine the perimeter of basic shapes; to use grid paper to measure the perimeter of a shape. • To measure the perimeter of a shape using 1 cm grid paper. • To determine the perimeter of different shapes; to create shapes with a specific perimeter. • To find the perimeter of shapes using 2 cm grids; to identify mistakes in others' work. • To calculate the perimeter of a shape using a ruler to measure the side lengths. • To calculate the perimeter of a rectangle using multiplication and addition. • To calculate the perimeter of a square using addition and multiplication; to calculate the perimeter of rectangles and irregular shapes by adding up the length of each side. • To consolidate learning about perimeter using practical word problems; to calculate the perimeter of a rectangle using properties of shapes. • To calculate the perimeter of a square and a rectangle using information previously learned about the properties of shapes. • To calculate the perimeter of a rectangle when a square piece has been removed; to determine the lengths of sides that are not marked based on information about the piece removed. Y3 National Curriculum – End Point:	Perimeter

	Pupils will be taught to: - measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) - measure the perimeter of simple 2-D shapes - add and subtract amounts of money to give change, using both £ and p in practical contexts - tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks - estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight - know the number of seconds in a minute and the number of days in each month, year and leap year - compare durations of events [for example to calculate the time taken by particular events or tasks].	
Year 4	**Time** ● To tell the time on a 24-hour clock. ● To convert between minutes and seconds. ● To convert between hours and minutes. ● To solve time problems. ● To convert between units of time. ● To solve word problems (duration). **Money** ● To record amounts of money. ● To record amounts of money. ● To compare total amounts of money. ● To round to the nearest pound (whole number). ● To solve money problems (addition and subtraction). ● To solve money problems (multiplication). ● To solve money problems (comparison). ● To estimate amounts of money. **Mass, Volume and Length** ● To measure mass. ● To convert units of mass. ● To measure volume. ● To convert units of volume. ● To measure height.	*All of the above, plus:* leap year, millennium, date of birth, noon, timetable, arrive, depart measurement, unit, standard unit mass, heavy, weigh pint, measuring cylinder

	● To measure length. ● To convert units of length. ● To convert units of length. ● To measure perimeter in centimetres and millimetres. ● To solve problems in measurement (reading scales). **Area of Figures** ● To find area (by measuring surface coverage). ● To measure area. ● To measure area (counting squares). ● To measure area (counting squares and half squares). ● To measure area (using multiplication). ● To measure area (shapes in different orientations) Y4 National Curriculum – End Point: Pupils will be taught to: - Convert between different units of measure [for example, kilometre to metre; hour to minute] - measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres - find the area of rectilinear shapes by counting squares - estimate, compare and calculate different measures, including money in pounds and pence - read, write and convert time between analogue and digital 12- and 24-hour clocks - solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	area, covers, square centimetre (cm)
Year 5	**Measurements** ● To convert units of length. ● To convert units of length, including centimetres and metres. ● To convert units of length. ● To solve problems by converting units of length. ● To convert units of mass. ● To convert units of mass, including grams into kilograms. ● To convert units of mass. ● To convert units of mass, including kilograms and pounds. ● To convert units of time. ● To convert units of time from days into weeks and months. ● To solve problems by converting units of time.	*All of the above, plus:* Gallon

	• To read the temperature on a thermometer. **Area and Perimeter** • To find the perimeter of shapes. • To find shapes with a specific perimeter. • To find the perimeter of different shapes. • To use scale diagrams to find the perimeter of a shape. • To measure the area of shapes by counting squares. • To measure the area of squares. • To measure the area of a shape. • To measure area in square metres. • To measure area in square metres. • To find the area of shapes in square metres. • To make an estimation of area in kilometres **Volume** • To understand the volume of solids. • To find the volume of 3-D shapes. • To find the volume of solids. • To find the capacity of a cuboid. • To find the capacity of rectangular boxes. • To compare and convert units of volume. • To convert units of volume (metric and imperial). • To convert units of volume (metric and imperial). • To solve word problems involving volume. • To solve word problems involving volume Y5 National Curriculum – End Point: Pupils will be taught to: - convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) - understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints - measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	Square metre (m) volume metric imperial

	- calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes - estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] - solve problems involving converting between units of time - use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.	
Year 6	**Length** ● To convert common measurements into centimetres and millimetres. ● To convert units of measure into different units; to use knowledge of decimals and fractions to help convert units. ● To convert metres into kilometres as units of measure. ● To convert distances between miles and kilometres. ● To convert units of mass from grams to kilograms using decimals and fractions. ● To convert units of volume from millilitres to litres. ● To convert units of time from minutes to hours; to represent time using 24-hour notation **Area and Perimeter** ● To find the area and perimeter of rectangles; to calculate perimeter using the known area and vice versa. ● To find and calculate the area of a parallelogram; to use concrete materials and prior understanding of area to construct a formula for the area. ● To use prior knowledge of area to determine and solve the area of a triangle; to use and apply the formula for the area of a rectangle to solve problems involving triangles. ● To calculate the area of a triangle using a formula; to calculate the area of a triangle in multiple ways. ● To use multiple methods to solve the area of a triangle. ● To find the area of a parallelogram using an understanding of triangles; to use concrete materials to find the area of a parallelogram. **Volume** ● To find the volume of cubes and cuboids using concrete materials. ● To determine the formula for the volume of cubes and cuboids and apply it to calculate the volume of shapes.	*All of the above, plus:* yard, feet, foot, inches, inch tonne, pound, once Greenwich Mean Time, British Summer Time

	● To estimate the volume of objects and spaces; to calculate the volume of boxes using the formula for volume of cubes and cuboids. ● To calculate the volume of boxes using the formula for volume of a cube; to expose common misconceptions in volume through a 3-box arrangement. ● To solve word problems involving the volume of cubes and cuboids; to apply the formula for the volume of a cube or cuboid. Y6 National Curriculum – End Point: Pupils will be taught to: - solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate - use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places - convert between miles and kilometres - recognise that shapes with the same areas can have different perimeters and vice versa - recognise when it is possible to use formulae for area and volume of shapes - calculate the area of parallelograms and triangles - calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3].	