Maths Measure curriculum

Concepts in Maths

Maths Concepts

		1	2	3	4	5	6	7	
Estimation	Reasoning	Equivalence	Number line and place value			Basic number facts		Patterns & sequencing	Algebra

Oakwood 5

Maths Measure curriculum

Key vocabulary	Concrete	Abstract
Volume, centimetre cubed (cm3), kilometre, decimal places, metric, imperial, gallon, pint, yard, foot, feet, inches, inch, tonne, ounce (oz), pound (lb), perimeter, area, square centimetres (cm2), square metres (m2,)relationship, convert,	Children **solve practical problems** by **estimating and measuring using standard metric units**. They consider benchmarks to help them to estimate lengths, such as the height of a door (about 2 metres) or the length of a pencil (about 20 cm). Children are given practical experiences of working with imperial units still in everyday use, comparing and relating them to their metric equivalent. Children are given practical opportunities to estimate volume using 1cm3 blocks. Children given practical opportunities to estimate capacity. Children continue to explore **area and perimeter of rectilinear shapes**. For example, they draw different shapes (using whole and half squares) that have an area of 12 cm squared, then find which has the longest perimeter. They predict whether a 14 cm square piece of paper or the label around a tin of soup will have the bigger area or longer perimeter. They work out how to check and then compare the actual measurements with their prediction	Children **solve multi-step problems** involving measures, time and money including decimals up to **2dp**. They decide what calculation(s) to do and estimate the answers. They make sure that measurements are converted to the same unit before calculation. They choose **appropriate** and **efficient** methods, including mental methods, and using a calculator where appropriate. They check their answers against their estimates and consider them in the context of the problem to make sure that they are reasonable. Children calculate the area of shapes in different contexts based on rectangles: for example, the area of a path 1 metre wide around a swimming pool, given the dimensions of the pool, or the smallest area of paper needed to cover a cuboid box that is 15 m long, 10m deep and 7m tall.

	Perimeter and area	Weight and volume	Time	Money

Maths Measure curriculum

• Children convert between different units of length and choose the appropriate unit for measurement. They recap converting between millimetres, metres and kilometre to now include centimetres (cm). Children see that they need to divide by different multiples of 10 to convert between the different measurements. • Pupils measure the perimeter of rectilinear shapes from diagrams without grids • They will recap measurement skills and recognise that they need to use their ruler accurately in order to get the correct answer • They could consider alternative methods when dealing with rectangles eg. L + w + l + w or (l + w) x 2 • Pupils apply their knowledge of measuring and finding perimeter to find the unknown side lengths • They find the perimeter of shapes with and without grids • When calculating perimeter of shapes, encourage pupils to mark off the sides as they add them up to prevent repetition of counting / omission of sides • Pupils build on previous knowledge in Level 4 by counting squares to find the area. They then move on to using a formula to find the area of rectangles • Pupils learn to calculate area of compound shapes. They need to be careful when splitting shapes up to make sure they know which lengths correspond to the whole shape, and which to the smaller shapes they have	• Children focus on the use of the prefix 'kilo' in units of length and mass, meaning a thousand. They convert from metres to kilometres (km), grams to kilograms (kg) and vice versa. It is useful for children to feel the weight of a kilogram and various other weights in order for them to have a better understanding of their value. Bar Models or double number lines are useful for visualising the conversions. • Children understand that volume is the amount of solid space something takes up. They look at how volume is different to capacity, as capacity is related to the amount a container can hold. Children could use centimetre cubes to make solid shapes. Through this, they recognise the conservation of volume by building different solids using the same amount of centimetre cubes. • Children use their understanding of volume (the amount of solid space taken up by an object) to compare and order different solids that are made of cubes. They develop their understanding of volume by building shapes made from centimetre cubes and directly comparing two or more shapes • Children estimate volume and capacity of different solids and objects. They build cubes and cuboids to aid their estimates. Children need to choose the most suitable unit of measure for different objects e.g. using m3 for the volume of a room. Children should understand that volume is the amount of solid space taken up by an object	• Children convert between different units of time including years, months, weeks, days, hours, minutes and seconds. Bar modelling will support these conversions. Use of time lines, calendars, clocks is recommended to enhance pupils' understanding. It is worth reminding pupils that time is not decimal so some methods may not be effective for conversions • Children use timetables to retrieve information. They convert between different units of time in order to solve problems using the timetables. Children will be tempted to use the column method to find the difference between times. Time lines are a more efficient method since time is not decimal. Children create their own timetables based on start and end times of their day.	NOT ON WRM

Maths Measure curriculum