



Hooked on Thinking Working With and For Local Families

Recent research shows us that:

Lead author Dr Emma Norris (UCL Centre for Behaviour Change, UCL Psychology & Language Sciences) states: "Physical activity is good for children's health, and the biggest contributor of sedentary time in children's lives is the seven or eight hours a day they spend in classrooms. Our study shows that physically active lessons are a useful addition to the curriculum. They can create a memorable learning experience, helping children to learn more effectively."

Developing children's understanding of measure at Hindhayes - Measure becomes an important part of young children's lives. It is a huge part of how they make sense of what is happening around them; when do we go home? Why doesn't the string go all the way around? What can we use for baby bear's porridge? Therefore, experiences around measure need to feature in our daily routines, such as describing the timetable for the day, problem solving around the use of ribbons for different jobs etc. In the foundation stage, we are fortunate to have a purpose made outdoor area for physical activity that lends itself to practical experiments related to length, weight and capacity. Into key stage 1, we still promote the use of the outdoors through forest school, maths of the day investigations and science experiments eg do shadows stay the same? Alongside the physical element of exploring measure, we want the experiences to be helpful to real life, such as counting money, calculating change etc. We always seek to make connections with wider mathematics, so the use of times tables (counting coins, scales, use of weights), addition and subtraction and estimating are used integrally.

Essential Prior Knowledge	Development of skills Stage	Foundation	Year 1	Year 2	Year 3
<p>Length, weight and capacity That sizes, lengths and heights can be different. Enabling environments and play leads will support language and enquiry based around comparison and measure:</p> <ul style="list-style-type: none"> - playing and exploring - children investigate and experience things, and 'have a go' • active learning - children concentrate and keep on trying if they encounter difficulties, and enjoy achievements • creating and thinking critically - children have and develop their own ideas, make links between ideas, and develop strategies for doing things 	<p>ELG does not make specific reference to measures.</p> <p>Although the ELG does not make specific reference to measure, the children will be learning to:</p> <p>Make comparisons between objects relating to size, length, weight and capacity.</p> <p>Begin to describe a sequence of events, real or fictional, using words such as 'first' then'....</p> <p>Stories, role play scenarios and adult led activities such as cooking will drive many of these learning opportunities.</p>	<p>-compare, describe and solve practical problems for: lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]</p> <p>-mass/weight [for example, heavy/light, heavier than, lighter than]</p> <p>-capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]</p> <p>-time [for example, quicker, slower, earlier, later]</p> <p>-measure and begin to record the following: lengths and heights mass/weight capacity and volume</p> <p>Practical investigations, reasoning problems and real life scenarios (including science) drive the opportunities for teaching about measure.</p> <p>Children investigate first using non standard measures and then standard measures.</p> <p>Opportunities to revisit and apply addition and subtraction and place value skills are used when investigating measure eg Bob has 2 sticks. His first stick measures 5 cm and his second measures 8 cm. How long would they be if joined together?</p>	<p>-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</p> <p>-compare and order lengths, mass, volume/capacity and record the results using >, < and =</p> <p>Children in year 2 are introduced to scales. They solve problems using the scales and revisit multiplication facts to help them solve problems. Addition, subtraction, multiplication and division facts are revisited to support problem solving activities – one step and two step problems eg the swimming pool is 10 metres long. Sam swims 6 lengths of the pool. How many metres does he swim?</p>	<p>-measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</p> <p>-measure the perimeter of simple 2-D shapes</p>	
<p>Time That we name parts of the day eg morning, night time. Children begin to recognise routines of the day.</p>		<p>-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</p>	<p>- compare and sequence intervals of time</p> <p>-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</p>	<p>-tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</p>	

		<p>tell the time to the hour and half past the hour and draw the hands on a clock face to show these times -Measure time (hours, minutes, seconds)</p> <p>We use Aramazu to teach telling the time in KS1. The children are taught how time is measured, how the analogue clock is made up and how to recognise o'clock and half past through stories and videos.</p> <p>As much as possible, time is referred to throughout the school day and year to support connections between lunchtime and hometime etc. Seasonal comparisons, birthdays and festivals are regularly discussed.</p>	<p>-know the number of minutes in an hour and the number of hours in a day.</p> <p>The Aramazu stories are continued to support children in telling the time to quarter past and quarter to the hours.</p> <p>Again, time is referred to and discussed as much as possible during school life.</p>	<p>-estimate and read time with increasing accuracy to the nearest minute;</p> <p>-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-</p> <p>compare durations of events [for example to calculate the time taken by particular events or tasks].</p> <p>-know the number of seconds in a minute and the number of days in each month, year and leap year</p>
<p>Money That we exchange coins and notes for wanted items.</p>		<p>- recognise and know the value of different denominations of coins and notes</p> <p>The value of different coins is taught practically with base ten eg a 1p coin is matched to a one, a 10p to a tens bar. Children sort the coins, reason about them and play shops. Addition and subtraction skills are revisited to support shopping scenarios as well as doubles and halves eg everything is half price today!. Counting in 2s, 5s and 10s is practised with coins.</p>	<p>-recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value</p> <p>-find different combinations of coins that equal the same amounts of money</p> <p>-solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change</p> <p>Children use their understanding of coins and number facts to investigate different ways of making the same amount of money. Notes and coins are used in problem solving activities. The greater than, less than, equal to symbols are revisited and applied to coins and notes eg 100p = £1. Multiplication, division, addition and subtraction skills are applied to different real life problems and scenarios.</p>	<p>-add and subtract amounts of money to give change, using both £ and p in practical contexts</p>
	<p>Key Vocab: count out, share out , size, long, short, tall, high, low thick, thin, longer, shorter, taller, higher... and so on longest, shortest, tallest, highest... and so on</p> <p>heavy/light, heavier/lighter, heaviest/lightest</p>	<p>Key Vocab: compare double, half, halve, money, coin, penny, pence, pound, how much...? how many...? Measure, compare, guess, nearly, close to, about the same as, enough, not enough, too much, too little, too many, too few just over, just under wide, narrow, deep, shallow weigh, weighs, balances, full, half full, empty, holds, container</p>	<p>Key Vocab: price, cost, change costs the same as, total estimate far, near, close balance, weight, scales Capacity</p>	

