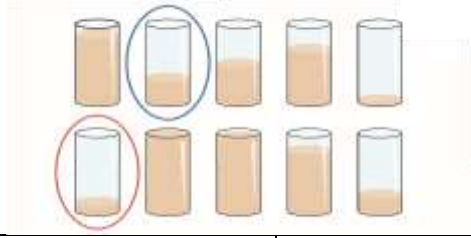
Knowledge Progression in Measure

Describe, Measure, Compare and Solve (All Strands)		
Three and Four-Year-Olds	Mathematics	• Make comparisons between objects relating to size, length, weight and capacity.
Reception	Mathematics	• Compare length, weight and capacity.
Telling the Time		
Three and Four-Year-Olds	Mathematics	• Begin to describe a sequence of events, real or fictional, using words, such as 'first', 'then…'

Year Group	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measures	•Compare, describe and solve practical problems for: length/height, weight/mass, capacity/volume & time through comparison, like long/short, longer/shorter, heavier/ lighter/ quicker, slower, earlier, later •Measure and begin to record length/height, weight/mass, capacity/volume using non-standard units	• In practical contexts, choose and use appropriate standard units to estimate and measure length/height (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels •To know 100 cm = 1m, 1000g = 1kg, 1000ml= 1L	•measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) To be able to use simple scaling in the context of measures and problem solving <u>To know simple conversions between grams and kg, ml and l, m and km</u> <u>e.g. ¼ of a kg = 250g</u> <u>½ of a kg = 500g</u> <u>¾ of a kg = 750 g</u> <u>1kg = 1000g</u>	•Convert between different units of measure eg. km to metres estimate, compare and calculate different measures, including money in pounds and pence	•Convert between different units of metric measure •Understand and use approximate equivalences between metric units and common imperial units such as inches and cm to make simple conversions •Estimate volume and capacity	•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

		•Compare and order lengths, mass, volume/capacity and record the results using >, < and = <u>To know basic units of measure e.g.1kg = 1000g 50 cm = ½ metre, 500g = ½ kg, 500ml = ½ litre and relate to fractions and division</u>				convert between miles and kilometres •Understand and use equivalences between other metric and imperial units e.g. pints and litres
Year 1 examples	**Working at** Sid has a full bottle of drink. He pours it into a jug. Which has the greater capacity, the bottle or the jug? 			**Greater depth** Point to a glass which is about half as full as the glass in the red oval? Can you point to a glass which is about twice as full as the glass in the blue oval? 		
Time	•Sequence events in chronological order using language recognise and use language relating to dates, including days of the week, weeks, months and years	•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	•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	•Convert between different units of measure (e.g. Hours to minutes) •Read, write and convert time between analogue and digital 12- and 24-hour clocks	•Solve problems involving converting between units of time eg. hours to weeks, calculating with timetables	•Convert between standard units, of time from a smaller unit of measure to a much larger unit, and vice versa,

	•Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times	clock face to show these times •Know the number of minutes in an hour and the number of hours in a day	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	•Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days		
Year 1 examples	**Working at** Sam leaves for school at 8 o'clock. Jay leaves half an hour later than Sam. Circle the clock which shows when Jay leaves for school. Explain your reasoning. Circle the times which are shorter than 1 week. 1 year 1 day 1 minute 1 hour 1 month			**Greater depth** I walk to school every day. On Monday my journey takes 10 minutes. On Tuesday I walk more slowly. Does my journey take more or less time than on Monday? Explain your answer. On Wednesday it takes me 8 minutes to walk to school. On which of the 3 days do I walk quickest? On which of the 3 days do I walk slowest? Explain your reasoning.		
Key Vocabulary	Time, days of the week, seasons, day, week, month, year,	Quarter past/to, metres, kilometres, grams, kilograms,	Convert, Roman numerals, 24 hour clock, digital, volume (	, negative , positive	Volume, imperial units, metric units, inches, pints, pounds, gallons	Miles, tonnes 1 inch ≈ 2.5 cm

	weekend, birthday, holiday, morning, afternoon, evening, night, midnight, bedtime, dinnertime, playtime, today, yesterday, tomorrow Before, after, next, last, now, soon, early, late, quick, quicker, quickest, quickly , fast, faster, fastest, slow, slower, slowest, slowly, old, older, oldest, new, newer, newest Takes longer, takes less time, hour, o'clock, half past, clock, watch, hands, how long ago?, How long will it be to … ?, How long will it take to … ?, How often?, always, never, often, sometimes, usually, once, twice, first, second, third, etc., estimate, close to, about the same as, just over, just under, too many, too few, not enough, enough Length, width, height, depth, long, longer, longest, short, shorter shortest, tall, taller, tallest, high, higher, highest, Low, wide, narrow, deep,	millimetres, litres, temperature, degrees, analogue	when discussing quantities held)			• 1 foot = 12 inches • 1 pound = 16 ounces • 1 stone = 14 pounds • 1 gallon = 8 pints

	shallow, thick, thin, far, near, close, metre, ruler, metre stick					