

Maths through fun, everyday activities at home

Years 3 and 4

Years 5 and 6

Activities at home	Learning focus and activities	Questions and prompts to engage mathematical thinking
<p style="text-align: center;">Cooking</p> <p style="text-align: center;"><i>Counting, measuring, proportion</i></p>	<p>Get children involved in weighing ingredients and reading scales. Ask them to estimate how much before checking the amount.</p> <p>Get them to look the weight or capacity of food in packets to help them estimate and get a sense of the weight or capacity. Older children should think about the proportions of a recipe and how to make more or less as required.</p>	<p>I have 250g of butter and I need 325g of butter. How much more butter do I need?</p> <p>Read the weighing scales, which number is half way between... and ...?</p> <p>This butter comes in 250g packets. Can you estimate how much to cut off if we need 100g for our recipe?</p> <p>The recipe tells me how much of each ingredient I will need to make 12 cakes. Can you help me work out how much ingredients I will need to make 6, 24 or 18 cakes?</p>
<p style="text-align: center;">Playdough</p> <p style="text-align: center;"><i>Fractions and shapes</i></p>	<p>Use everyday language and encourage the more mathematical use of sides, equal and corners (vertices) Can you make a pizza that is a circle? Can you make a pizza that is a square? Rectangle? Triangle? Practical mathematical tasks 3 Fractions/shapes to describe 2D flat shapes or edges and faces is used with 3D shapes. With fractions children need to talk about each piece being equal in size and know how many equal pieces make a whole.</p>	<p>I am going to make a pizza using my play dough. Can you cover half the pizza with tomatoes and half the pizza with green peppers?</p> <p>How about quarters?</p> <p>Make a pizza that has 8 slices. If I eat $\frac{3}{8}$ of the pizza, how much of the pizza is left? Make a pizza that has 8 slices.</p> <p>If a person eats 1 slice of pizza, how many pizzas do you need to make in order to make enough for 17 people?</p>
<p style="text-align: center;">Bath time</p> <p style="text-align: center;"><i>Use a selection of different measuring jugs and everyday bottle and containers. Measuring capacity</i></p>	<p>Encourage children to look at the shape and size of different containers and bottles. They should understand that even though some may be taller, this does not always mean they hold the most as some are shorter yet wider. They should be able to talk about some of the common bottles they use and know how much they hold and see which are the same by pouring the contents of one into the other.</p>	<p>Which containers do you think hold the same amount of water? How can you check? How many of the 500ml ($\frac{1}{2}$ litre) containers will fill a 1 litre container? Look at other containers too asking similar questions.</p>
<p style="text-align: center;">Getting ready for bed</p> <p style="text-align: center;"><i>Estimating time</i></p>	<p>Children should be familiar with what the length of a minute feels like and use this to compare and estimate other units of time. They</p>	<p>What time did we start getting ready for bed? How long did it take you? What time is it now?</p>

	should know there are 60 minutes in 1 hour.	
Daily routines and reflections <i>Telling the time</i>	Children should be able to order events throughout the day and use some of the time connectives to help them order them. Get them involved in making timetables and talking about their routines	Talk about the day and use words such as 'first, then, next, after, finally' to order events and activities throughout the day Make a daily timetable and write the times of each activity. What will the minute/hour hand be on at... (time)?
Completing puzzles <i>Shape and pattern</i>	Jigsaws are important to develop children's understanding of pattern and their logic e.g. "that piece can't go in there as it has 2 interlocking holes"	Can you pick a range of pieces that could fit in that space? Why might they work? Try Sudoku from the newspapers or puzzle books. Where did you start? Where could it go/not go?
Playing board games <i>Number and counting</i>	Playing games are a fun way for children to develop their counting and ability to keep track and develop strategies	If you needed to land on..., how much will you need to throw with the dice? Play with 2 dice. How many different ways could you throw?
Making drinks <i>Make a drink of squash, diluting the drink with water</i>	Mixing liquids in an everyday context to develop pupils understanding of ratio and proportion. Get them to make drinks using the same amount of juice in 2 different sized glasses. Fill both to the top with water. Which is weaker/stronger in flavour? Why?	Can you measure out the juice and water to make a drink- 50ml juice and 200ml water? How much do you think the glass will hold in ml? Can you use a measuring jug to check? If I make the squash with 1 part juice and 5 parts water, what fraction of the drink is water/squash? (1 out of 6 parts juice 1 6) What is this as a ratio? (1 juice to every 5 parts water 1:5) If I used a larger glass, what would I need to do to make squash of the same strength?
Bead threading – making jewellery <i>Patterns, fractions and ratio and proportion</i>	Developing the ability to spot and continue patterns is important as pattern spotting is a key maths skill in number and shape too and helps children to look for relationships between learning. You can use dry pasta threaded if you don't have beads- and do have pasta!!	Can you create a pattern that uses different coloured beads? You need to follow these rules: $\frac{1}{8}$ of the necklace needs to be blue. There must be 32 beads on the necklace. How many blue beads will you need? Can you make a necklace following these rules? $\frac{1}{8}$ of the necklace need to be blue. $\frac{1}{2}$ of the necklace needs to be red, $\frac{1}{4}$ of the necklace can be yellow and $\frac{1}{8}$ can be green. How many beads could be on your necklace? For every one red there has to be three blue beads. What is this as a ratio? If I have 12 Practical mathematical tasks 5 blue beads in

		total on my necklace, how many red beads would I have?
<p>Creating a dance</p> <p><i>Shape and position and direction</i></p>	<p>Language associated with turning, moving helps us to follow directions which is a key life skill. Try giving directions to a blindfolded partner around a simple course using the language listed. (stay with them for safety!)</p>	<p>Create a dance that must have a half turn, a quarter turn and a three quarter turn Create a dance that includes parallel arms and perpendicular arms at some point during the dance</p> <p>Create a dance that includes a 90 degree, 180 degree, and 360 degree turn.</p>
<p>Bug hunt</p> <p><i>Statistics</i></p>	<p>Estimate and count bugs, leaves or other natural items. Sort them and record in different ways. This practises valuable counting skills and encourages children to record effectively then talk about what they have found.</p>	<p>Go on a bug hunt and create a tally chart of how many of each bug you find. Show how many of each bug you found in either a pictogram or tally chart. Which did you find most/least of?</p> <p>Show how many bugs you found in either a bar chart or pie chart. How many more... than... did you find?</p>

Counting

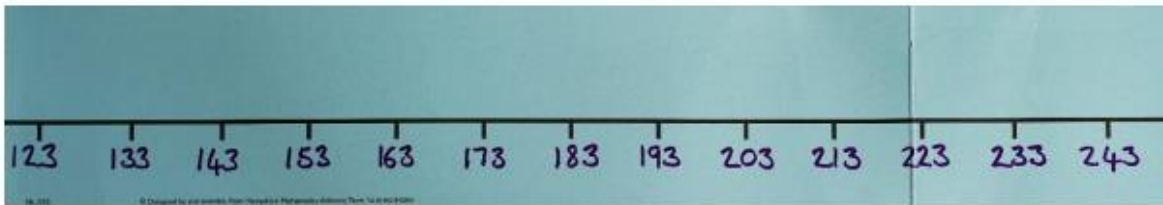
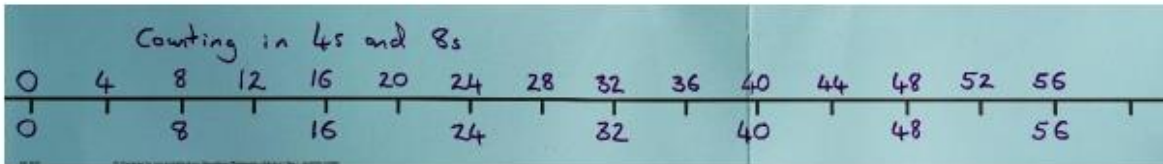
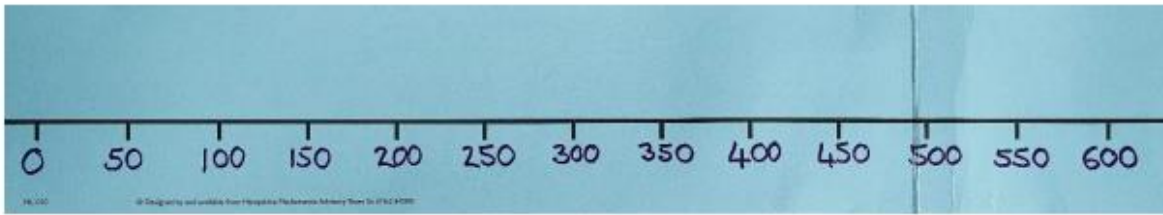
Learning to count is an important part of mathematics and helps children to become confident and successful in their learning. The National Curriculum specifies the parts of the number system that children need to learn about. Each year children's knowledge is extended further, while some re-visiting of earlier work is also very helpful. The key areas of counting the children need to learn over their primary education include the following:

- counting forwards
- counting backwards
- counting in steps of different sizes, for example counting in ones, twos, fives, tens, hundreds and so on
- counting forwards and backwards from different numbers, for example 0, 1, 15, 48, 1000 and so on
- Counting in fraction and decimal steps, for example $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, 0.1, 0.01 and so on
- Counting with negative numbers, for example counting backwards from 0: -1, -2, -3

All these activities help children to get to know the number system and this knowledge is used across a wide range of mathematics, including calculating, measures and problem solving. It is very helpful if children can link their counting to number lines. These help children to see patterns in numbers and to develop a visual picture in their minds as to where numbers are in relation to each other.

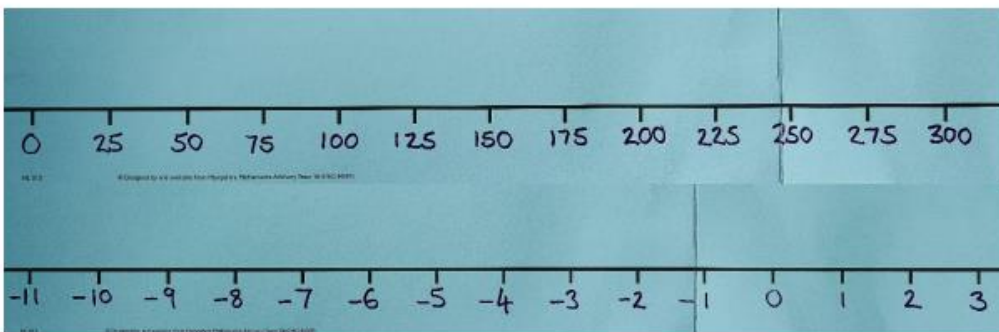
Year 3

- count from 0 in multiples of 4, 8, 50 and 100
- count in ones, tens and hundreds, with numbers up to 1000.



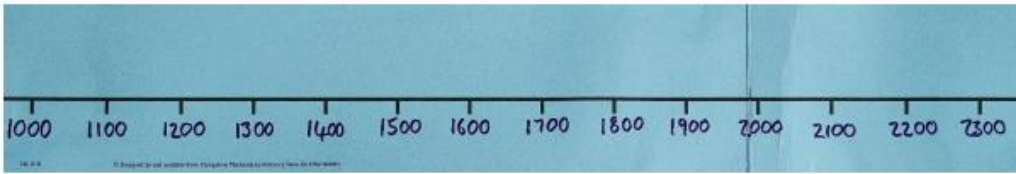
Year 4

- count in multiples of 6, 7, 9, 25 and 1000
- count backwards through zero to include negative numbers



Year 5

- count forwards and backwards in 10s, 100s, 1000s up 1,000,000
- count forwards and backwards from 0 to 3 in $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{10}$ steps.



Year 6

- count forwards and backwards in 10s, 100s, 1000s up 10,000,000
- count forwards and backwards from 0 to 3 in $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{10}$ s recognising decimal and fraction equivalences.

