

## Place value in years 4, 5 and 6 – what are the expectations of the National Curriculum?

Year 4	Year 5	Year 6
<ul style="list-style-type: none"> <li>• count in multiples of 6, 7, 9, 25 and 1,000</li> <li>• find 1,000 more or less than a given number</li> <li>• count backwards through 0 to include negative numbers</li> <li>• recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s)</li> <li>• order and compare numbers beyond 1,000</li> <li>• identify, represent and estimate numbers using different representations</li> <li>• round any number to the nearest 10, 100 or 1,000</li> <li>• solve number and practical problems that involve all of the above and with increasingly large positive numbers</li> <li>• read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value</li> </ul>	<ul style="list-style-type: none"> <li>• read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit</li> <li>• count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000</li> <li>• interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero</li> <li>• round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000</li> <li>• solve number problems and practical problems that involve all of the above</li> <li>• read Roman numerals to 1000 (M) and recognise years written in Roman numerals.</li> </ul>	<ul style="list-style-type: none"> <li>• Consolidate learning from years 4 and 5</li> <li>• read, write, order and compare numbers up to 10,000,000 and determine the value of each digit</li> <li>• round any whole number to a required degree of accuracy</li> <li>• use negative numbers in context, and calculate intervals across 0</li> <li>• solve number and practical problems that involve all of the above</li> </ul>

Understanding place value is vital in your child’s sense of number awareness and ability to calculate. These ideas can be used at home when you are working together, to help you support your child’s understanding of the number system. If the ideas are either too hard or easy for your child, take a look at some of the ideas from the year above or below. Year 6 is mainly consolidating work from Year 4 and 5 in place value and so the ideas below can be used to revise your child’s understanding.

## How can I help my child?

### Years 5 and 6

Objective	Activities
<ul style="list-style-type: none"><li>• read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit</li></ul>	<ul style="list-style-type: none"><li>• Start with 4 digit numbers to check that your child has a good grasp of these – write them out and ask your child to read them out loud, and write them out in words. Move onto 5, 6 and 7 digit numbers.</li><li>• Write out a series of 5 and 6 digit numbers. Ask your child what each digit is worth. Check that they understand that in 762,948, the 6 is worth 60,000, 7 is 700,000 etc.</li><li>• Ask your child to partition (break up) numbers into their parts –</li><li>• <math>876,907 = 800,000 + 70,000 + 6000 + 900 + 7</math>. When they are confident, ask them to partition in different ways. For example, 876,907 could also be <math>600,000 + 220,000 + 56,000 + 700 + 207</math></li><li>• Write out a series of numbers with one of the digits underlined – e.g.,</li><li>• <u>8</u>76,907. Ask your child to write out the value of the underlined digit in the number.</li><li>• Give your child 6 digits – e.g., 8, 5, 2, 7, 0, 3. Ask them to make as many 6 digit numbers as they can in one minute using these digits. Now ask them to order them from lowest to highest. Ask them to write some numbers in between the numbers they have written e.g., between 370,258 and 372,058, they could write 371,000, 372,009 etc.</li></ul>

- count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000

- interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero

- round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000

- A power of 10 is 10 multiplied by itself any number of times. For example  $100 = 10 \times 10$ ,  $1000 = 10 \times 10 \times 10$ ,  $10,000 = 10 \times 10 \times 10 \times 10$  etc. Check that your child understands that this how we can make 100, 1000, 10,000, 100,000, 1,000,000 – by repeating the same multiplication. Ask them what they notice about the number of zeros they end up with when they multiply by 10 twice or three times etc.

- No get them counting forwards and backwards in 100s, then 1000s, 10,000s, 100,000s. If they are confident and grasp that when we get to 90,000, the next number is 100,000 if we count in 10,000s and when we get to 900,000, the next number is 1,000,000 if we count in 100,000s, then let them play around with counting in jumps of 20,000s, 300,000s etc.

- Draw a line on a page. Put 0 in the middle. Ask your child to mark the numbers 1 -10 where they should go. Ask what happens if we go in the other direction – what is 1 less than 0? Ask your child to mark in -1 down to -100. Ask questions such as “What is 1 more than -7?” “What is 3 less than -5?” Encourage your child to use the line to start with. When they feel confident, ask the questions without using the line.

- Ask your child to tell you how to round numbers. If they are unsure, start with rounding to 10. Give them a number, say 73, and draw a line with 70 at one end and 80 at the other. Ask them to show you where 73 would fit on the line. Is it closer to 70 or 80? How much of a difference is there between 70 and 73 and 73 and 80? Establish that the nearest 10 is 70. Remind them of the rule about 75 – if the number is in the middle of 70 and 80 we round up. Less than 5, we round down.

- solve number problems and practical problems that involve all of the above

- If you move onto rounding to the nearest 100, start with numbers such as 670 and 560 - ending in 0. If we are being asked to round to the nearest 100, we check the hundreds digit first – that will either stay the same or increase by one. Next we check the tens digit beside it – if it is 5 or more, we round up, If less than 5, we round down. Move onto numbers such as 457, 956 etc. Make sure the children know that the ones digit is not important when rounding to the nearest 100 – we always look at the hundreds and then check the size of the tens digit to make our rounding decision. Repeat for 1000s and 10,000s and 100,000s if they are ready.
  - When your child is confident, give them a series of numbers which they have to round to the nearest 10, 100, 1000 etc.  
e.g.,
- |        |            |        |        |        |
|--------|------------|--------|--------|--------|
| Number | nearest 10 | 100    | 1000   | 10,000 |
| 67,543 | 67,540     | 67,500 | 68,000 | 70,000 |

Challenge your child with questions such as “I have rounded a number to the nearest 100 and got 800. What could the number be?”

Rounding is useful when shopping. If your child is confident using pounds and pence, this can be applied. You can use old receipts and ask the children to round to the nearest 10p or nearest pound to estimate. They can add their rounded figures and then add their actual prices and see what the difference is.

Children can use the web to research different numbers – e.g., heights of mountains in the UK, populations of areas in Birmingham, cities in the world etc to order and round numbers, and find the difference between the largest and smallest. There are lots of “top 10 largest ...” examples on the web and a good way to research a bit of Geography!

- Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

This link shows how the Roman numeral system works if you want to explore it with your child. If this has been covered in class, your child may have found it hard to grasp and if you are not confident, you would be better to focus on the work above

<https://www.rapidtables.com/math/symbols/roman-numerals-1-100.html>

You could help your child to spot where Roman numerals are used – some books, end of TV programmes and films and on clocks, so that they are familiar with the characters.

















