


Year 6 Mathematics plan Date: September 2020 Teachers: Miss Cameron and Mr Trewick Topic: Place Value	 Hudson Road Primary School
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Learning Outcomes: <ul style="list-style-type: none"> • Read and write numbers up to 10 000 000 • Determine the value of each digit in numbers up to 10 000 000 • Compare and order numbers up to 10 000 000 • Round any whole number to a required degree of accuracy • Use negative numbers in context, and calculate intervals across zero • identify, represent and estimate numbers using different representations • solve number and practical problems that involve all of the Y6 number criteria • solve problems which require answers to be rounded to specified degrees of accuracy 	Tens of thousands Hundreds of thousands Millions Digit Ascending Descending Round Round up Round down Negative Positive Minus
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Previous Learning Outcomes: <ul style="list-style-type: none"> • Read and write numbers to at least 1 000 000 • Determine the value of each digit in numbers to at least 1 000 000 • Compare and order numbers to at least 1 000 000 • Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • Count forwards and 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 • Identify, represent and estimate numbers using different representations • Solve number problems and practical problems that involve all of the Y5 number criteria 	
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Day	Learning objective	Teacher and child activities	Assessment	Additional Lesson (if required)
1	T: I can read and write numbers up to 10 000 000.	Memory Jogger <u>Main Lesson</u> Recap place value of numbers with up to six-digits. Look at numbers up to 10 000 000. Discuss the value of each digit and how to partition the number. Look at reading and writing numbers up to 10 000 000. Independent activity – Chn to complete varied fluency activities that focus on reading and writing numbers up to 10 000 000. Tasks will involve reading and writing the numbers in words and numbers. Reasoning and Problem Solving –		

		<p>Use the digit cards and statements to work out my number.</p> <p>0 3 3 5 5 6 7</p> <ul style="list-style-type: none"> • The ten thousands and hundreds have the same digit. • The hundred thousand digit is double the tens digit. • It is a six-digit number. • It is less than six hundred and fifty-five thousand. <p>Is this the only possible solution?</p> <p>SEND – chn to begin with partitioning two-digit numbers and complete varied fluency activities. The chn will then move on to partitioning three-digit numbers if secure with the place value of two-digit numbers.</p> <p><u>Plenary</u> At the end of the lesson, discuss problem with whole class and the different ways chn approached it. ‘Which clue did you use to get started? Why?’</p>		
2	T: I can compare and order numbers up to 10 000 000.	<p>Memory Jogger</p> <p>Recap learning from last lesson. Look at the value of each digit in numbers with up to eight digits.</p> <p>Begin with comparing two numbers and then move on to ordering up to five numbers. Discuss the words ‘ascending’ and ‘descending’.</p> <p>Independent activity – chn to complete varied fluency activities involving comparing and ordering numbers.</p> <p>SEND – Chn compare numbers with up to three digits. They will begin by comparing two numbers and build up to comparing four numbers.</p> <p>Reasoning and Problem Solving –</p>		

		<p>Put a digit in the missing spaces to make the statement correct.</p> <p>4,62 __ ,645 < 4,623,64 __</p> <p>Is there more than one option? Can you find them all?</p> <p>Extend learning by using 'What if...' questions.</p> <p><u>Plenary</u> At the end of the lesson, discuss problem with whole class and the different ways chn approached it.</p>		
3	T: I can round any whole number to a required degree of accuracy.	<p>Memory Jogger</p> <p>Recap learning of last lesson.</p> <p>Recap rounding and the rules. Look at rounding to the nearest 10, 100, 1000, 10 000, 100 000 and 1 000 000.</p> <p>Independent activity – chn to complete varied fluency activities. Chn to round numbers with up to eight digits to the nearest 10, 100, 1000, 10 000, 100 000 and 1 000 000.</p> <p>SEND – Chn to round two-digit numbers to the nearest 10.</p> <p>Reasoning and Problem Solving - What do you notice? Give an example of a six digit number which rounds to the same number when rounded to the nearest 10 000 and 100 000. Why does this happen? Can you think of any other numbers that do this?</p> <p><u>Plenary</u> Discuss the problem and collect chn's examples and discuss what we notice.</p>		
4	T: I can use negative numbers in context, and calculate intervals across zero.	<p>Memory Jogger</p> <p>Recap negative numbers. Discuss when you would use negative numbers in real life. Look at both vertical and horizontal number lines to emphasise the position of zero. Begin by counting forwards and backwards through zero. Move on to calculating intervals across zero using a number line.</p>		

		<p>Independent activity – chn to complete varied fluency activities. Questions will include using negative numbers in relevant contexts e.g. temperature. Chn will calculate intervals across zero. They will choose their own way of working out the answer e.g. they may use a number line.</p> <p>SEND – Chn to place negative numbers on a number line and then work out calculations using a number line from 10 to -10.</p> <p>Problem Solving and Reasoning – Chn will work out mistakes in examples of negative number calculations that include errors e.g. Spot the mistake: -80,-40,10,50 What is wrong with this sequence of numbers?</p> <p><u>Plenary</u> At the end of the lesson, discuss the mistakes as a whole class and how they have been made.</p>		
5	T: I can use negative numbers in context, and calculate intervals across zero.	<p>Memory Jogger</p> <p>Recap learning of last lesson.</p> <p><u>INVESTIGATION</u></p> <p>Chn apply their learning from last lesson to the investigation ‘Sea Level’. This investigation will increase the children’s familiarity with negative numbers on a number line and using negative numbers in context.</p> <p>Chn must place negative numbers on a lighthouse below sea level and then work out how far from sea level the animals are. Let the children have 10</p>		

		<p>minutes approaching the investigation without any guidance and then bring the chn back together to see how they are doing. If chn require scaffolding, then do so appropriately in order to allow them to continue with the investigation.</p> <p>SEND – Chn to be supported by TA.</p> <p><u>Plenary</u> Discuss investigation as a whole class at the end of the lesson.</p>		
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