
















Place Value: Estimating on a Number Line

<p>Aim: Round any whole number to a required degree of accuracy.</p> <p>DFE Ready-to-Progress Criteria: Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts. (6NPV-3)</p> <p>To estimate numbers with up to 7 digits on number lines.</p>	<p>Success Criteria:</p> <p>I can estimate where to place numbers with up to 7 digits on number lines.</p> <p>I can estimate the values of numbers with up to 7 digits indicated on number lines.</p> <p>I can use my understanding of dividing powers of 10 into equal parts to help with estimating.</p> <p>I know to use leading digits to estimate the position of a large number on a number line.</p>	<p>Resources: Lesson Pack</p>
	<p>Key/New Words: Estimate, equal parts, scale, number line, power of 10.</p>	<p>Preparation: Estimating on a Number Line Bingo Game – 1 per group Diving into Mastery Activity Sheets – as required</p>

Prior Learning: Year 5 conceptual prerequisite: Reason about the location of numbers between 0.01 and 9,999 in the linear number system.

Learning Sequence

	<p>Remember It: Use the corresponding slides of the Lesson Presentation to rehearse estimating the values of arrows shown on marked number lines with a variety of scales. Uses numbers between 0.01 and 9999.</p>	
	<p>Placing Numbers on a Number Line: Use the corresponding slides of the Lesson Presentation to introduce estimating where to place numbers with up to 7 digits on marked number lines with a variety of scales. For example, placing 12500 on a 12000 to 13000 number line, and on a 10000 to 20000 number line. Encourage the children to use their understanding of dividing powers of 10 into equal parts to help with estimation. Can the children estimate where to place numbers with up to 7 digits on number lines?</p>	
	<p>Identifying Numbers on a Number Line: Use the corresponding slides of the Lesson Presentation to move onto practising how to estimate the values of numbers with up to 7 digits indicated on number lines with a variety of scales. Again, encourage the children to use their understanding of dividing powers of 10 into equal parts to help with estimation. Can the children estimate the values of numbers with up to 7 digits indicated on number lines?</p>	
	<p>Estimating on a Number Line Bingo: Children work in mixed ability groups to play the Estimating on a Number Line Bingo Game. Can the children demonstrate that they can estimate numbers with up to seven digits on number lines?</p>	
	<p>Diving into Mastery: These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.</p> <ul style="list-style-type: none">  Children complete fluency questions involving estimating numbers with up to 7 digits on number lines.  Children answer reasoning questions involving estimating numbers with up to 7 digits on number lines, explaining their reasoning.  Children work individually or collaboratively on problem-solving questions involving estimating numbers with up to 7 digits on number lines. 	
	<p>Compare It: Use the corresponding slides of the Lesson Presentation to practise using estimation skills to compare two numbers represented on a number line.</p>	

Exploreit

Throwit: Use chalk to draw a number line on the playground. The children throw four beanbags onto the line and estimate the value of where they land.

Rollit: Children take turns to roll a dice five times to create a five-digit multiple of 100. They estimate where to place this number on a number line.

Learnit: Children will find this visually exciting _____ a useful tool for understanding the place value of seven-digit numbers.