Number and Place Value: Count Forwards and Backwards Through Zero

Aim:	**Success Criteria:**	**Resources:**
Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero. To count forwards and backwards through zero.	I can use a number line to count forwards and backwards through zero. I can use negative numbers when counting through zero.	Lesson Pack
	Key/New Words: Negative, below, zero, step, count, integer, digit, subtract.	**Preparation:** -20 to 20 Number Line – one per child/pair -50 to 50 Number Line – one per child/pair Race to Zero Cards – one per child/pair Diving into Mastery sheets – as required

Prior Learning: It will be helpful if children have been introduced to the concept of negative numbers. Click here to find lessons that seek to consolidate this step.

Learning Sequence

	**Remember It:** Using the numbers shown on the Lesson Presentation, match the powers of 10 to the correct answer in the table. Children find out which power of 10 does not match with an answer.	
	**Counting Forwards:** Show children the number lines on the Lesson Presentation and explain that they represent counting forwards. Can children identify the next number they would count on each number line?	
	**Counting Backwards:** Introduce the representations of counting backwards as shown on the Lesson Presentation. Can children identify the next number they would count on each number line?	
	**Counting Through Zero:** Discuss counting backwards and counting through zero, referring to the number line on the Lesson Presentation. Explain negative numbers and their function in counting. Children count back from 18 in steps of five. Can children identify the first negative number they would get to as they count through zero? Model counting backwards, clicking to show the process on the number line. Model how to read negative numbers - for example, -7 is read as 'negative seven' not 'minus seven'.	
	**Race to Zero:** Children play the game described on the Lesson Presentation. The aim of the game is to be the first player to hit zero exactly while counting backwards and forwards on their number line. Children take turns to draw a differentiated Race to Zero Card, and follow the counting instructions. Children record their steps on the Race to Zero Activity Sheet.  Use a -20 to 20 Number Line. Counting instructions go up to forwards or backwards 10.  Use a -50 to 50 Number Line. Counting instructions go up to forwards or backwards 25.  Children draw a simple table to record their steps.	
	**Diving into Mastery:** Schools using a mastery approach may prefer to use the following as an alternative activity. 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.  Children identify missing positive and negative numbers on a number line. They then follow counting instructions.  Children respond to statements involving negative numbers, explaining their thinking with written responses.  Children complete problem-solving activities linked to negative numbers.	

	**Counting Challenge:** Children take turns to set counting challenges for each other by giving a starting number, counting direction and step or interval. Children could record their counting sequences in their books or on whiteboards. Use the -20 to 20 Number Line as required. Can children count forwards and backwards through zero?	

ExploreIt

CountIt: Use this _____ to consolidate children's understanding of counting forwards and backwards through zero.

ResearchIt: Challenge children to find the average temperatures for different cities around the world. Can children count forwards and backwards through zero to find the difference between the temperatures of two places?

LearnIt: Children will find this visually exciting a useful tool for understanding place value.