Place Value: Compare and Order Decimals

Aim:	Success Criteria:	Resources:
Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.	I can identify the value of each digit in decimal numbers.	Lesson Pack
Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and nonstandard partitioning. (6NPV–2)	I can compare decimal numbers.

I can order decimal numbers. | Dice - per pair |

	Key/New Words:	Preparation:
To order and compare numbers up to 10 000 000.	Order, compare, greater, less, place value, digit, decimal.	Get in Line Number Cards - cut out

Differentiated Number Line Squeeze Activity Sheet - per child

Extra Challenge Activity Sheet - as required

Blank Place Value Grids - as required

Diving into Mastery Activity Sheets - as required |

Prior Learning: It will be helpful if children have covered place value of decimal numbers and the 'greater than' and 'less than' symbols.

Learning Sequence

Remember It: Children use their knowledge of place value from previous lessons to read different representations of numbers up to 10 000 000 shown on the Lesson Presentation. Children use reasoning to explain which of the representations shown is the odd one out.

Get in Line: Give each child a Get in Line Number Card. Children attempt to line up so that their numbers are all in order from smallest to biggest. They can show their number card to others, but should not talk.

Comparing Decimals: Introduce the decimal number comparison on the Lesson Presentation. Can children use place value to explain why place value statements are incorrect?

Show how we can use place value grids to make comparisons between numbers. Progress to show how partitioning numbers helps to determine the place value of each digit. Explain how we can use the place value comparison to prove which number is bigger. Show the pairs of numbers on the Lesson Presentation. Can children find the biggest number in each pair and explain how they know? Reveal the answers on the Lesson Presentation and address any misconceptions.

Ordering Decimals: Show children the decimal numbers on the Lesson Presentation and discuss how Razia has ordered the numbers. Do they agree with the way she has ordered the numbers? Explain that the order is correct, and explain how comparison of the place value of each digit enables us to prove that they are correctly ordered. Children choose one of the sets of numbers shown on the Lesson Presentation. Can children put the numbers in order from smallest to biggest? Reveal and discuss the answers.

Number Line Squeeze: Explain this activity referring to the Lesson Presentation. Go through the example, clicking to show the different steps the children take to play the game. Children play the game on the differentiated Number Line Squeeze Activity Sheet, using the dice to roll their numbers. Children can play the game twice, once on each partner's activity sheet. Can children order the decimal numbers on the number line?

★ Roll numbers with one decimal place. Use a number line with ten marked intervals between whole numbers.

★★ Roll numbers with two decimal places. Use a number line with intervals three marked intervals between whole numbers.

★★★ Roll numbers with three decimal places. Use a number line with one marked interval between whole numbers. An Extra Challenge Activity Sheet is provided as an extension activity if required.

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 put numbers in ascending order and complete calculations involving the inequality signs.

Children reason whether number cards have been ordered correctly, explaining their answer. The reason whether numbers have been sorted into groups based on their relationship to 13.65. They match children's statements to the calculation involving two inequality signs.

Children reason about statements about ordered number cards, some of which are blank. They then problem-solve to find multiple ways of completing a calculation with five inequality signs and missing digits.

Make It True: Children choose digits and a symbol from the cards on the **Lesson Presentation** to make the number sentence true. There are several possibilities for this activity. Share two of the possibilities with the children and discuss their answers.

Exploreit

Extendit: Extend the Number Line Squeeze game by challenging children to roll and write three consecutive decimal numbers on the number line.

Orderit: Ask children to bring in an old shopping receipt, or provide some receipts for them to look at. Ask children to order the decimal prices on one of the receipts.

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