

In-betweenies

Focus of activity: Placing numbers on a 0 to 100 landmarked line.

Working together: conceptual understanding

- Sketch a large 0 to 100 line on a long strip of paper, marking and labelling all the multiples of 10. Explain that this is called a landmarked line as it has landmarks (10s numbers) to help us to place numbers on it. *It's like a beaded line but all the beads have disappeared!* Count in 10s along the line from 0 to 100.
- Shuffle the 10s cards, and the 1s cards from a set of place value cards and place face down in two piles. Ask a child to take the top card from each pile and make a 2-digit number, e.g. 36. *Where does this number belong on the line?* Ask children to describe where it belongs rather than just pointing. Agree that it belongs between 30 and 40, and is just after half way between 30 and 40, as 35 is half way between 30 and 40. *Try to imagine the 10 beads between 30 and 40.*
- Repeat for each child, encouraging them to describe where numbers belong, e.g. between 50 and 60, nearer to 50 than 60, just before 70, just after 80, half way between 20 and 30.

Up for a challenge?

Draw a mark where 45 belongs on the line. *What number do you think belongs here on the line?* Repeat for 59, 61 and 72.

Now it's the children's turn:

- Child A shuffles a pack of 1 to 9 cards and takes four to make a pair of two-digit numbers, marking them on a landmarked line. They can use the digit cards in any order they like. Child B takes the next two and tries to use them to make a number between. If they can do so, they win a point. If not, child A wins the point. Swap roles and repeat.
- Go round the group and mark their placing of numbers, e.g. initially after the first game.

S-t-r-e-t-c-h:

If children cope well, ask them to think about the best order to use their digit cards to make it difficult for the other person to make a number in between.

Things to remember

Remember that the first digit in a number tells us very roughly where the number belongs on the line, e.g. in 42, the 4 tells us it has four 10s and so belongs between 40 and 50. The next digit tells us where the number belongs between the two 10s numbers, e.g. 40 and 50. Ask a child to think of a 2-digit number and mark its position (but not label it) on the large 0 to 100 landmarked line. Can the rest of the group guess their number, or be very close? Repeat.

You may want to add something that has emerged from the activity. This may refer to misconceptions or mistakes made.

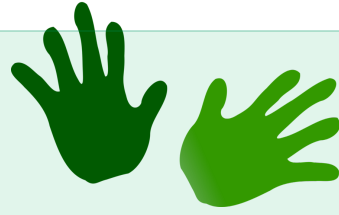
Resources	Outcomes
<ul style="list-style-type: none">• Long strips of paper• Place value cards (10s and 1s)• 1 to 9 digit cards• 0 to 100 landmarked lines (see child instructions)	<ol style="list-style-type: none">1. Children can place 2-digit numbers on a 0 to 100 landmarked line.2. Children begin to have an idea about whether numbers are close or far apart on the number line.3. Children begin to identify mystery numbers on 0 to 100 landmarked lines.

In-betweensies

Work in pairs

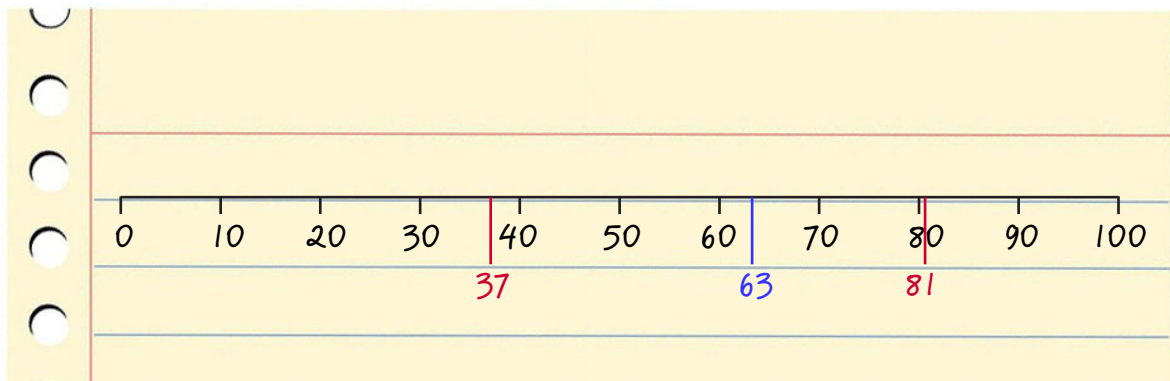
Things you will need:

- A set of 1 to 9 digit cards
- 0 to 100 landmarked lines
- Two coloured pencils



What to do:

- Shuffle the cards and place face down. Take the top four.
- Use them in any order that you like to make two 2-digit numbers. Use your coloured pencil to mark these on the line, writing the numbers underneath the marks.
- Your partner takes the next two cards and uses them in either order to make a 2-digit number. They use their coloured pencil to mark this number on the line. Can they make a number which goes between your two numbers? If so they win a point. If not, you win the point.
- Play again on a new line, but your partner shuffles the cards and takes the first four this time.
- Keep playing, taking it in turns to take the first four cards.



S-t-r-e-t-c-h:

Think about the best order to use your digit cards to make it difficult for the other person to make a number in between your two numbers on the line.

Learning outcomes:

- I can place 2-digit numbers on a 0 to 100 landmarked line.
- I am beginning to have an idea about whether numbers are close or far apart on the number line.
- I am beginning to identify mystery numbers on 0 to 100 landmarked lines.

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