

Bigger or beaten

Activity 1

Focus of activity: Partitioning and comparing 2-digit numbers.

Working together: conceptual understanding

- Give each child a set of 10s and 1s place value cards and a 100 bead string.
- Show how we can use the cards to make 25, by putting 20 and 5 together, aligning the arrows. Ask chn to do the same.



- Ask chn to show 25 beads. *Do we need to count them in ones? Why not?* Ensure that chn realise that they can pull two groups of 10 beads to one side before sliding along five single beads.



- We can partition 25 into 20 and 5. Record $25 = 20 + 5$ on a big piece of paper so that all chn can see it. *If we take away 5, how much is left? What if we took away the 20 instead?* Show this using the place value cards and the beads. $25 - 5 = 20$ and $25 - 20 = 5$.
- Ask chn to make the number 49 using the place value cards and show this number on the bead string. *This number was just before the middle of the beads!*
- Record the place value addition: $49 = 40 + 9$.
- Repeat for other numbers, e.g. 17 and 70 which chn may get confused. Stress the '-teen' and '-ty' on the end of each word. *'-ty' numbers, cup of tea numbers, are 10s numbers.*
- Next ask one child in each pair to make the number 27 with both place value cards and the bead string, and the other child to make 72.
- *Which number is more 27, or 72?* Agree that 72 has more beads than 27 and record $72 > 27$.
- Repeat with 48 and 84. *These numbers look very similar, they use the same digits, but 84 is much bigger than 48! The 10s digit in 2-digit numbers tells us which is going to be the bigger number.*

Up for a challenge?

Write the following missing number sentences. Can chn work out which numbers are missing? They can use their place value cards or bead strings to help.

$$28 = 20 + \square$$

$$37 = \square + 7$$

Now it's the children's turn:

- Chn work in pairs. They each make a given number using place value cards and a bead string, then ring the bigger number (see child instructions).
- Go round the group and mark their answers as they work, e.g. initially after three examples.

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

If chn cope well, ask them to think of a number between each pair of numbers they have made.

Things to remember

Remember that 2-digit numbers can be partitioned into 10s and 1s. The 10s digit is the most important when comparing 2-digit numbers. Write 39 and 82 on two separate cards. Ask chn to point to the larger number. Repeat with 19 and 91.

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">• Place value cards (10s and 1s)• Bead strings (100 beads)• Practice sheet (see child instructions)	<ol style="list-style-type: none">1. Chn can partition 2-digit numbers.2. Chn can compare pairs of 2-digit numbers.3. Chn begin to say a number between a pair of 2-digit numbers.

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Activity 1

Work in pairs

Things you will need:

- 10s and 1s place value cards
- A 100 bead string
- A pencil



What to do:

- One person makes the first number in each pair using place value cards.
- That person finds that number of beads on their bead string.
- The other person makes the other number.
- They show it on their bead string.
- Which is the bigger number? Ring it.



1. 21 and 36
2. 43 and 39
3. 51 and 20 (*Watch out, one of these numbers only needs one card!*)
4. 16 and 61
5. 37 and 73
6. 90 and 99

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

Look at the two numbers in the first question. Write a number which is between these two numbers.

Do the same for questions 2 to 6.

Learning outcomes:

- I can partition 2-digit numbers into 10s and 1s.
- I can compare pairs of 2-digit numbers.
- I am beginning to say a number between a pair of 2-digit numbers.