

Has difficulty with counting reliably in tens from a multiple of ten

Opportunity for: looking for patterns

Resources

- 100-square
- Tens cards (Resource sheet 24)
- Multiples of ten (10–100) written on A5 pieces of paper
- Beanbags

Key vocabulary

ten, twenty, thirty, and so on to a hundred
backwards
forwards

Teaching activity

Time 10–15 minutes

Explain to the child that the activity today is a game called **Whisper and jump**, and it will help them to count in tens.

? What do you think counting in tens means? Can you count in tens?

Show the child the number cards (10, 20, and so on to 100).

? Can you put these cards in order?

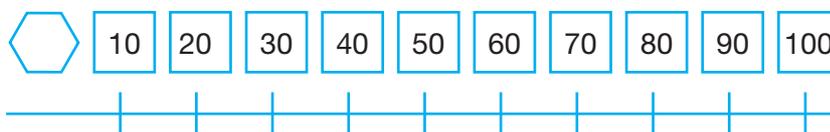
If the child finds this hard, support putting them in order and refer to a 100-square, clearly indicating the vertical line of tens numbers. The child might prefer to order the cards vertically rather than horizontally.

Help the child to count in tens, by rote at first, pointing to the cards.

Suggest that the child tries to do the count with their eyes shut, making a picture of the next ten number in their head.

? Can you start at forty and count on? Which number comes just before one hundred?

If the child needs further support, put a spaced out paper tens number line to 100 on the floor, with something for zero. Put a beanbag by each ten number (but not by zero).



How to play

1. The player stands on zero and counts from one to nine in a whisper, but when they get to ten they say it loudly and jump onto the 10 paper. (If you do this in the hall or playground, so that they can shout the tens numbers, it can be good fun and leave a lasting impression!)
2. Then they whisper the numbers from eleven to nineteen inclusive and shout and jump to 20, and so on to 100.

? How many jumps and shouts did you do? How many beanbags are there?

Ask the child to shut their eyes while you move some of the tens numbers out of order.

? Can you put the numbers back in the right order?

If the child finds this hard, encourage them to look closely at the numbers to see the patterns of one, two, three, and so on to ten, within the numbers.

Repeat the activity, counting either with cards or the floor number track, but counting back in tens from one hundred to zero. (Counting by whispering all the numbers between the tens is quite hard, so that might be a supporting whole-class task.)

You can say the counting back numbers as a different way, to blast off a rocket – one hundred, ninety, eighty, and so on to zero or ‘blast off’!

? When you are counting back in tens, which number do you say just after twenty? Just before fifty?**? Can you tell me something you learned today?**

Go over counting in tens, forward and back, and the vertical pattern down the edge of a 100-square, and keep this on display.

Count back from one hundred by whispering ninety-nine to ninety-one then shouting ninety, and so on back to zero.

Spotlight 1

Has difficulty with counting reliably in tens from a multiple of ten

Opportunity for: solving practical problems

Ten trains

Time 10–15 minutes

Resources

- 'Ten trains' of cubes in different colours
- Bead string in tens
- Tens cards (Resource sheet 24)

Key vocabulary

- ten, twenty, thirty, and so on to a hundred
- backwards
- forwards

Teaching activity

Explain that the activity today will help them to be better at counting in tens.

With the 'ten trains', count to a hundred in tens, moving one 'ten train' at a time. 'Ten, twenty, thirty', and so on.

? How many 'ten trains' do we have? How many cubes is that?

'Ten groups of ten make a hundred altogether. Let's count them in tens again.'

? Can you count aloud in tens with your eyes shut and get all the numbers in the right order?

If the child needs further support, count in tens by 'throwing' all ten fingers with each count of ten, twenty, thirty, and so on. Refer to the tens number cards as you do this.

? Can you put the number cards in the right order? Which tens number comes before sixty, after seventy?

Put the different coloured 'ten trains' on the table in a line and ask the child to position the number cards at the right place up to one hundred.



If the child finds this hard, repeat the activity with a bead string in tens, supporting the child putting the tens number cards in the right place.

Ask the child to shut their eyes while you cover or remove one of the tens numbers. Point to the place without the card.

? Which tens number goes here?

? Which one is number thirty? Which two numbers are either side of thirty?

? Are you better at counting in tens now? What do you need to practise a bit more?

Spotlight 2

Has difficulty with counting reliably in tens from a multiple of ten

Opportunity for: working systematically



Lots of spots

Time 5–10 minutes

Resources

- Sets of five spots (Resource sheet 29)
- Cubes
- Bead string
- Place value (arrow) cards

Key vocabulary

ten, twenty, thirty, and so on to a hundred
backwards
forwards

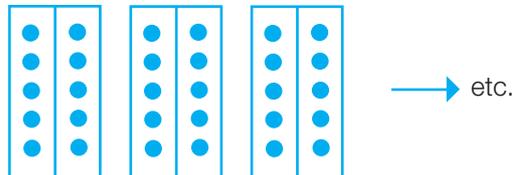
Teaching activity

Explain that we are going to do an activity with spots to help us to count in tens. Show Resource sheet 29 (*Sets of five spots*), cut in half vertically to make one long row of sets of ten (see below).

? Can you count the spots in this first line? (*Ten in two groups of five.*)

If the child finds the counting difficult, or finds it hard to see the spots, make 'five trains' out of cubes, in different colours so that there are two fives in red, two fives in blue, and so on, so that you can construct 'ten trains'. Lay these out in the same arrangement as on Resource sheet 29 (*Sets of five spots*).

Count the spots/cubes in each set of ten to establish that every group of five and five makes ten.



Ask the child to place the right place value card at the end of each set, starting with ten. Try to get the child to predict the next tens number.

? How many spots do you think there are in the next set? Can you guess without counting them?

If the child is finding it hard to work out the next number of tens, look at the 'five and another five' dots and make the link to their fingers.

Remind them how to chant the sequence ten, twenty, thirty and so on. You could use a bead string if the child is finding it hard to get to a hundred.

Work down the sheet, putting the tens place value cards in order, asking the child to predict the next one each time, then to find the right place value card.

? Can you see the pattern of the numbers we are making?

? If the sheet was bigger and had the next sets of dots, how many would there be?

If the child is finding it difficult to remember the pattern of tens, use cube 'ten trains' or a bead string to count in tens again, emphasising that on the sheet the dots are in groups of two fives, which is ten. It might help to point with a finger as the tens of dots are counted.

? Which number comes after sixty? And what is next?

End by asking the child to chant the sequence of counting in tens with their eyes closed. If they can count forwards to a hundred, see if they can start at one hundred and count in tens backwards.

? What did you like doing best today?



Chant in tens to two hundred or beyond with the whole class. Remember to chant backwards as well as forwards.

Spotlight 3

Has difficulty with counting reliably in tens from a multiple of ten

Opportunity for: exploring a real-life context

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Hidden tens

Time 10–15 minutes

Resources

- Place value (arrow) cards
- 10p coins and rewards
- Small world person, character toy

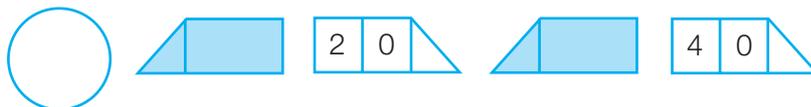
Key vocabulary

ten, twenty, thirty, and so on to a hundred

Teaching activity

Explain that this is an activity to help with counting in tens up to a hundred and back again, but today some of the numbers will be hidden.

Ask the child to put out the place value cards, in order from ten, as a line across the table. Help them to count along it and back again saying the tens numbers. Then turn some of the cards over. You can use a toy to jump along the line, or let children use their fingers as legs to count along the line. (You might want to put a plastic circle for zero.)



? Can you work out which card is thirty?

? Can you use the toy to count on from thirty and stop when you get to seventy?

Repeat with a variety of numbers. For example: 'Stand on fifty and jump to ninety. Turn the card over and see if you are right.'

If this proves too challenging, let the child turn the numbers over one at a time, guessing which number is hidden. Repeat this as a game, giving some kind of reward for correct numbers, for example, a plastic ten pence coin (if they win ten of these they can have a biscuit).

Work towards all the numbers being out of sight and the child jumping along the line forwards and backwards saying the sequence of numbers.

? Can you stand on the number that is ten more than seventy/ten less than fifty/twenty more than twenty?

Move on to using 10p coins. Count out the coins until you have a pound. Ask the child to count out fifty pence, and so on.

? What is ten pence more than fifty pence?

Now hide the coins and ask the child to shut their eyes and make pictures of the coins in their head.

? What is ten pence more than sixty pence/twenty pence less than fifty pence?

Return to the number line with a few of the numbers showing.

? Can you tell me any of the hidden tens numbers?

? Are you getting better at counting in tens?

Spotlight 4

Has difficulty with counting reliably in tens from a multiple of ten

Opportunity for: using and applying mathematical knowledge

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Tens race

Time 5–15 minutes

Resources

- A few sets of tens number cards (Resource sheet 24)
- Timer or stop-watch, or plastic tocker timers

Key vocabulary

ten, twenty, thirty, and so on to a hundred
backwards
forwards

Teaching activity

'Today you are going to play **Tens race** to help you to get better at counting in tens.'

How to play

1. Ask the child to put one pack of tens cards in order. These are left on the desk for the child to refer to as they play the game. Use your knowledge of the child to decide how many packs of cards to play with and how much time to allow them.

Time the activity so that if the child has struggled to put out the first set of cards, you can time them again with the stop-watch as they put out the next set and challenge them to beat their own time.

2. Gradually make the timing more challenging.

? Can you put these two packs of tens cards in order in one minute?

3. When the child is confident with this, put away the pack of cards left on the desk so they have to remember the order.

? Can you put this set of tens cards in order before the timer stops?

? Can you put the cards in order starting with the 100 card and counting backwards?

? What did you enjoy about the game today?

? Are you getting better at counting in tens?

? What would you like more help with?

 Challenge the class to make up their own card race games, which they can time and try to get quicker and quicker. Some might be able to race to put cards in order, counting in threes or fours or sevens. Remember to challenge them to count backwards as well as forwards.

Spotlight 5: a learning check

Has difficulty with counting reliably in tens from a multiple of ten

Opportunity for: explaining and discussing

Eyes closed

Time 5–15 minutes

Resources

- Large blank 100-square
- Two sets of tens cards (Resource sheet 24)
- Real 2p coin with 'b' on one side and 'f' on the other
- Counting stick, metre stick, scales
- Reward

Check: does the child use key vocabulary?

- ten, twenty, thirty, and so on to a hundred
- backwards
- forwards

Teaching activity

'The task today is a game, **Eyes closed**, where you are going to shut your eyes and do some counting in tens. We are going to toss the coin. If it lands so we can see "b" for backwards, you should count back all the way to zero, and if it lands with "f" for forwards, you should count forwards all the way to a hundred.'

How to play

1. First, ask the child to put tens cards from 10 up to and including 100 in the right place on the 100-square, and explain that they can look at that if they get stuck.
2. With a shuffled set of tens cards, ask the child to take one, for example, twenty. Then toss the coin. If it lands on 'f', the child counts from twenty all the way to a hundred, but with their eyes shut. If it lands on a 'b' they count from twenty back to zero.

3. If they are correct, they win a reward. (The card is not put back in the pile you are using.)

If this proves too challenging, or the child gets confused, let them look up at the 100-square at any time, then go back to having their eyes closed.

4. Repeat the card game a few times with different cards.

? Can you tell me which tens number comes after seventy?

? Do you find it easier to count forwards or backwards?

? If you are counting forwards, which number comes just after forty? Explain to me how you knew that.

? Can you explain to me why counting in tens is so important?

If the child is unsure about this, remind them of 10p coins and look at a metre stick and a dial on metric scales where the tens are marked boldly.

Using an unmarked counting stick, ask the child to count along it in tens, silently, pointing at the right place on the stick. After they have understood what you mean, explain that you are going to stop them sometimes and ask them the number that is in their head. This should be the number that they are pointing to.



Extend the silent counting using a counting stick during whole-class mental mathematics times.

Learning outcomes

By the end of this set of activities, children should be able to:

- tackle related learning tasks with increased motivation and confidence;
- use and understand connected mathematical vocabulary;
- count in tens forwards and backwards from any tens number up to a hundred;
- say a number that is either side of a tens number;
- be able to recognise a simple number pattern and talk about it.