Misunderstands meaning of 'one more' and 'one less'; does not consistently identify the number before or after a given number

Opportunity for: solving problems

Resources

- Number track
- Number cards (Resource sheets 1 and 2)
- Paper clips
- Fish shapes
- Magnet on string
- Blue paper

Key vocabulary

one more
one less
next one
count on/back one
how many?
how many left?

Teaching activity

Time 15 minutes

Put ten fish shapes on the table with paper clips on the nose of each fish.

'Today we are going to play a fishing game and you will be learning about numbers that are one more or one less.'

Let the child catch a fish with the magnet and put it alongside the number 1 on the number track.

? **How many fish have you caught?**

? **If you catch another fish, how many fish will you have?**

? **What is one more than one?**

If the child predicts wrongly, catch another fish and count the number of fish to check the answer.

Ensure that you say 'One more than one is two', and so on, and that the child repeats this.

'Catch another fish.'

? **How many fish will you have then?**

If the child predicts incorrectly, ask the child to count up from one with their fingers on the number track.

? **'What is one more than two?', and so on.**

? **Let's catch another fish. How many will we have then?**

If the child counts from one each time, continue with this activity but you will need to repeat this kind of counting activity in different contexts, for example putting apples in a bowl or jumping along a floor number track, emphasising one more and one less. You need to be clear that: 'You don't need to count from one each time. We knew there were three fish, so one more makes four.' This can take some time to establish in the child's counting skills, and you might decide to do some more work using the set of activities in *1 YR +/-*.

? **If you catch one more fish, how many will you have then?**

Continue catching all the fish, ensuring that the child is predicting what one more will be.

If the child does not seem to be grasping the idea, you might want to check that they can put number cards 0–10 or 0–20 in order. This needs to be practised before the child is likely to be able to understand one more and one less.

You can demonstrate the meaning of 'one less' in a similar way. You could put ten fish on a piece of blue paper for the pond, and mark the number track with a paper clip starting at 10.

Count the fish with the child and then let them catch one.

? **How many fish are left in the pond?**

? **What is one less than ten?**

Let the child move the paper clip on the number track to one less than ten.

If the child cannot work out the answer, take all the fish out of the pond and put them along the number track.

? **How many fish are there?**

Then remove a fish and ask:

? **How many are there now?**

Put all the fish in the pond and ask:

? **How many are there?**

Ask again:

? **How many will there be if I catch one?**

? **What do you think you have learned today?**

Spotlight 1

Misunderstands meaning of 'one more' and 'one less'; does not consistently identify the number before or after a given number

Opportunity for: communicating mathematical ideas

Party stories

Time 15 minutes

Resources

- Number track
- Paper clips
- Bead string
- Number cards (Resource sheets 1 and 2)
- Cups, plates, spoons
- Food items

Key vocabulary

one more
one less
next one
count on/back one
how many?
how many left?

Teaching activity

'Today we are going to pretend that we are going to have a party and we are going to tell some stories about "one more" and "one less". Let's put some biscuits on a plate and see how many people could have one biscuit.'

Let the child count out an appropriate number of biscuits and put out the matching number card.

? **If one more person came to the party, how many more biscuits would we need?**

? **What is one more than six?**

? **What if one person went home or didn't want a biscuit?**

? **What is one less than six?**

Help the child to find the numbers on the number track.

> If the child is struggling to use the words 'one more' or 'one less', use another image such as spoons in a cup, using just small numbers.
>
> If the child seems to grasp the idea, using food items, or beads on a string, extend the numbers up to or beyond ten, if appropriate.

'Let's imagine there are nine people at the party so we make nine hot dogs, but then another person comes.'

? **How many more hot dogs would we need?**

? **What is one more than nine?**

? **What is one more than ten?**

Use the bead string or party food items to challenge the child.

? **How far can you count using the bead string?**

? **What is one more than/less than** *(a number the child can count to)***?**

? **What do you think you did really well today?**

? **What would you like more practice with?**

? **What is one more than nineteen? ... twenty-nine? ... thirty-nine? ... ninety-nine? ... one hundred? ... one hundred and ninety-nine?**

? **What is one less than one? ... twenty? ... thirty? ... one hundred? ... one thousand?**

Spotlight 2

Misunderstands meaning of 'one more' and 'one less'; does not consistently identify the number before or after a given number

Opportunity for: using mathematical symbols

Beanbags

Time 15 minutes

Resources

- Number track
- Hoop and beanbags
- Number cards (Resource sheets 1 and 2)

Key vocabulary

one more
one less
next one
count on/back one
how many?
how many left?

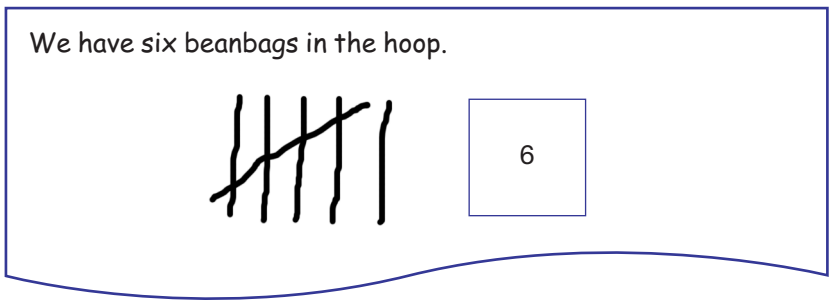
Teaching activity

'Today we are going to play a beanbag game and we are going to think about numbers that are "one more".'

Put out a number track and make sure the child can count along it forwards and back.

Explain that the game is to throw beanbags into the hoop. Every time a beanbag lands in the hoop a point is scored. The score is marked with tallies, and also the paper clip is moved along the number track.

Ask the child to throw the beanbags into the hoop. Every time one lands in the hoop, change the score using tally marks and move the paper clip along the number track.



? **If I throw one more beanbag into the hoop what will the score be now?**

? **What is one more than six? Can you find that number card?**

If the child cannot say what the answer will be, use the number track. Ask the child to point to 6. Ask what the next number will be. Then ask what the new score will be.

If the child is still struggling, put a counter on each beanbag. Take the counters and put them on the number track.

? **How many?**

Add one more beanbag to the hoop with a counter. Take the counter and add to the number track.

? **How many now?**

If the child is ready to move on, let them count some beanbags into the hoop, perhaps using larger numbers, for example 12.

? **Where is 12 on the number track?**

? **If you take out one of the beanbags, how many will be left in the hoop?**

? **What is one less than twelve?**

If the child is struggling with this, you could ask them to lay out number cards to 12 and see if they can respond appropriately to questions about 'one less than'.

? **What did you enjoy doing today?**

? **What do you think you have learned?**

Spotlight 3

Misunderstands meaning of 'one more' and 'one less'; does not consistently identify the number before or after a given number

Opportunity for: solving problems

Dropping pennies

Time 10–15 minutes

Resources

- Tin or other container that will make a noise
- Fifteen 1p coins
- Whiteboard and pens
- Bead string
- Number track

Key vocabulary

one more
one less
next one
count on/back one
how many?
how many left?

Teaching activity

'Today we are going to play a game with these 1p coins. Listen to what happens when I drop a 1p coin.'

Let the child practise dropping 1p coins and counting them. Tell the child to listen and count as you drop some coins into the tin. Drop six coins in and ask the child how many they counted.

? **How many would there be if I dropped in one more coin?**

If the child gives the right answer, drop in the other coin, then empty them out and get the child to count them to check the answer.

If the child is struggling, relate what they are doing to a bead string and/or a number track.

'Put seven coins in the container and write the number on your whiteboard. Drop one more coin into the container.'

? **What is one more than seven?**

The child then writes the answer on their whiteboard.

Put eight coins on the table and cover them with the whiteboard. Write '8' on the whiteboard. Then remove one coin from under the whiteboard.

? **What is one less than eight?**

The child writes the answer on their whiteboard.

Try choosing some numbers at random to challenge the child.

? **What number comes after thirteen? ... fifteen? ... nineteen? ... twenty?**

? **What is one less than ten?**

You might find that it helps to record with the child what they are learning, to help them to see their progress.

Ali can say 'one more' and 'one less' correctly for numbers up to ten. (date)

Spotlight 4

Misunderstands meaning of 'one more' and 'one less'; does not consistently identify the number before or after a given number

Opportunity for: solving problems

Number card game

Time 15 minutes

Resources

- Number cards (Resource sheets 1 and 2)
- *Dotty cards* (Resource sheet 9)
- Number track

Key vocabulary

one more
one less
next one
count on/back one
how many?
how many left?

Teaching activity

'Today we are going to play a number card game to think about one more and one less.'

Place the number cards face up on the table and choose a card, for example 7.

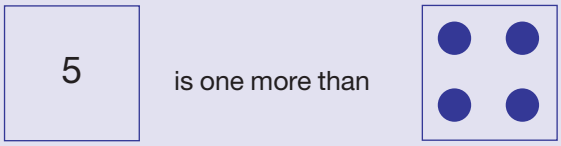
? **Now you choose a card that is one less than my card.**

If the child gets it right they keep the card, but otherwise you keep it.

If the child is not choosing the right numbers, ask them to order the cards using the number track to help them, then try to do it again, this time without looking at the number track.

Now take two cards, for example 7 and 8, and ask the child to tell you two things about them. For example, 'Seven is one less than eight and eight is one more than seven.'

If the child still needs more help, use the dotty cards, and ask the child to match each dotty card with a number that is one more (or one less), for example:



Spotlight 5: a learning check

Misunderstands meaning of 'one more' and 'one less'; does not consistently identify the number before or after a given number

Opportunity for: explaining and discussing

Ten-counter race

Time 5–15 minutes

Resources

- At least one other child
- Ten counters for each child
- Number track for each child
- One 2p coin per child
- Soft cloth or cardboard box

Check: can the child use key vocabulary?

one more	count on/back one
one less	how many?
next one	how many left?

Teaching activity

'This game, **Ten-counter race**, will help you with using the words "one more" and "one less" correctly.'

How to play

1. Each child lays their counters along their number track to 10.
2. They take turns to toss a coin, making it land quietly on the cloth or in the box.
3. If the coin lands on heads, they take one of their counters away and must say the right number sentence, in this case, 'nine is one less than ten'.
4. If a player tosses tails, they do nothing.
5. The winner is the first person to get rid of all their coins.

Variations

- Another version of this game is to let pairs work together, ideally with two pairs, and they race the other pair to get rid of all their coins. In this game, each pair has a coin and they keep on tossing it as quickly as they can to race to get rid of all their counters.

- Play the game the other way round so that they start with no counters and have to add one more each time they toss heads.
- A harder version of the game is to take one away, making the number one less each time heads is tossed and one more when tails is tossed.
- Play on a much longer number track or number line.

Picking numbers at random, assess the child's learning by selecting numbers they have used in the game, then extending to larger numbers.

? **Tell me two things about number nineteen.**

? **I'm thinking of a number and it is one less than twenty-one. What is my number?**

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;
- know what is one more and one less than numbers to ten, then twenty, then thirty and beyond.