Confuses numbers when counting in twos; has difficulty understanding that a pair consists of two objects

Opportunity for: solving problems in a real-life context

Resources

- Obvious pairs of socks and gloves, some odd socks
- Box
- Large 100-square
- Number cards (Resource sheets 1 and 2)

Key vocabulary

pair

count in twos

go together

match

Teaching activity

Time 10–15 minutes

'Look at all these things. We're going to make some pairs and you will be learning to count in twos.'

? **What do you think it means to have a pair of something?**

Clarify that things make pairs because they match and have the same colour or pattern. Let the child find the pairs and identify the odd socks.

> If the child is unsure about matching patterns or cannot identify what makes a pair, identify what is the same in a pair, for example, a blue zigzag pattern on mittens. Use some odd socks to illustrate and clarify what isn't a pair.

? **How many things make up a pair?**

Clarify that there are two objects in a pair. For example, we have two feet, so we need two matching socks.

? **Can you count the pairs?**

> If the child is uncertain about counting the pairs, move on to counting in twos, because this is a more important concept at this stage.

? **Can you count the socks?**

> If the child counts the socks in ones, support counting in twos.

Help the child to recite 'two, four, six, eight, who do we appreciate?' (A team-game chant.)

Ask the child to put out number cards 2, 4, 6, 8, and so on.

Extend the counting in twos to about ten or twenty and support the child in learning to recite these numbers.

Link the chant to numbers on a 100-square.

? **What did you learn today?**

Spotlight 1

Confuses numbers when counting in twos; has difficulty understanding that a pair consists of two objects

Opportunity for: reasoning about numbers

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Two, four, six, eight

Time 5–10 minutes

Resources

- Cubes or small objects, for example dinosaurs, toy cars
- Box
- Number cards (Resource sheets 1 and 2)

Key vocabulary

pair

count in twos

order

how many altogether?

two more

Teaching activity

'Today we will be using some dinosaurs (or other objects) to count in twos.'

Support the child in putting about ten of the objects in twos.

? **Can you count them in twos?**

> If the child falters on this, or counts in ones, reduce the objects to just six or eight and show how to move and count the objects, saying 'two, four, six'. (See also *1 YR +/–*.)

Ask the child to copy what you did. Establish that moving objects as we count them can help us to get the right number.

? **How many objects are there altogether?**

? **If we take two more objects out of the box, how many are there now?**

With the number cards, ask the child to point out the numbers we say when we count in twos.

? **Can you say each number and point to the right number card as you say it?**

Muddle up the number cards.

? **Can you put the number cards in the right order?**

Finish by asking the child to recite the numbers in twos as far as they can without looking at the number cards or objects.

'Let's all count in twos and see if we can get to three hundred and fifty.'

Spotlight 2

Confuses numbers when counting in twos; has difficulty understanding that a pair consists of two objects

Opportunity for: solving practical problems

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Smile, please!   **Time** 5–10 minutes

Resources

● Several smiley faces without eyes

Key vocabulary

pair   count in twos

Teaching activity

'We are going to use these smiley faces to find out more about pairs and counting in twos.'

? How many eyes have you got?

Explain about pairs of eyes. Ask the child to draw pairs of eyes on an appropriate number of smiley faces.

? How many eyes are you going to put on each face?

? Can you count the eyes in twos?

Support pointing at the faces and counting in twos. If appropriate, show some more smiley faces, ask the child to draw pairs of eyes, then count all the eyes in twos again.

? How many pairs of eyes are there?

Establish that a pair always has two things, so to count the pairs we can count the smiley faces.

? How many eyes are there?

> If the child is still struggling with pairs, support them in finding more pairs over the next few weeks during ordinary classroom activities.
>
> It is important to move on to counting in twos and not spend too much time on pairs.

Finish by asking the child to count in twos as far as they can.

Spotlight 3

Confuses numbers when counting in twos; has difficulty understanding that a pair consists of two objects

Opportunity for: looking for patterns

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Whisper and shout

Time 5–10 minutes

Resources

- A5 pieces of paper with numbers 1 to 10 or 20 or 30 on them
- Red circle (or a zero)
- Pieces of string or rope
- Sticks, such as lolly sticks

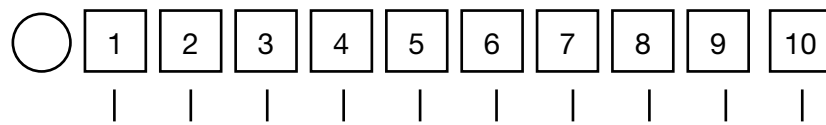### Key vocabulary

words for counting in twos

Teaching activity

(It is fun to go out of the class to do this activity, so that the numbers can be shouted!)

Explain to the child that this activity will help them to learn to count in twos along a number line.

? **How far can you count in twos?**

Lay out paper numbers on the floor with a red circle at the zero space.

Ask the child to stand on the red circle and step onto the paper with 1 on it, saying 'one' in a whisper. Then step onto the 2 and say that loudly. Continue counting in twos loudly, whispering the numbers in between.

> If the child is finding this hard, support them by counting with them. The child might need to repeat the activity a few times over the next few days.

Ask the child to go back to the red circle and jump along the number line, landing only on the numbers 2, 4, 6, 8, and so on, and say those numbers out loud.

Then ask them to do it again, explaining that you will count the number of jumps they do in your head.

'You did five jumps of two and landed on 10.'

Help the child to record their jumps on a drawn number line.

? **Without looking at the number line, count in twos again and see how far you can go.**

Back in class you could ask everyone about the number of jumps of two it takes to get to 30, 50, and so on. Encourage the children to make their own number line with number cards to 50 or 100 (this needs a few tables to be put together, or do it on the floor) and to count the jumps of two.

Spotlight 4

Confuses numbers when counting in twos; has difficulty understanding that a pair consists of two objects
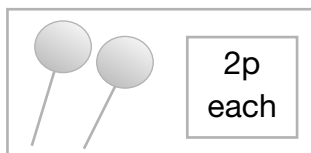
Opportunity for: real-life context

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Two pence counting

Time 5–15 minutes

Resources

- Bag of 2p coins
- Pictures, such as lollipops, labelled 2p

2p each

Key vocabulary

words for counting in twos

how much?

Teaching activity

Explain to the child that this activity will help them to count in twos with pennies – something they will find useful when they use money to do shopping.

[?] **What do you know about counting in twos?**

Let the child demonstrate what they know and, from that, decide how many 2p coins to use.

Show the pictures of the lollipops.

[?] **How much are the lollies? Can I buy one with this coin?**

Let the child pretend to buy lollies with 2p coins. Then count the coins in twos.

> If the child struggles with this, keep to just a few coins and try to move them on to be able to deal with five or six coins.

If the child is secure with this, encourage them to move on to deal with larger numbers.

[?] **How many lollies would we need if we wanted to buy one for everyone in the class?**

Count out the appropriate number of coins and support counting them in twos. Encourage the child to move the coins as they are counted and you can put them in piles of ten pence; that is, five 2p coins together in each group.

'We have been counting lots of 2p coins.
We counted in twos, then we put them in groups of ten pence.
Why do you think we did that?'

Spotlight 5: a learning check

Confuses numbers when counting in twos; has difficulty understanding that a pair consists of two objects

Opportunity for: explaining and discussing

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Pairs, twos and bees

Time 10–15 minutes

Resources

- Box with a variety of counting objects not used in the previous activities, for example shoes, bottle tops, shells, paint brushes
- Large 100-square
- Number cards (Resource sheets 1 and 2)

Check: does the child use key vocabulary?

pair	count in twos
go together	match

Teaching activity

Explain that the activity is about finding pairs and counting in twos.

[?] **Can you put some of these things in pairs?**

You might have to support the child at first in finding pairs, for example matching up a pair of two silver bottle tops, and so on.

[?] **How many red beads do you need to make a pair?**

[?] **Why did you put those two objects together? Do they make a pair?**

Accept explanations of pairs as long as there are two items put together – even when explanations seem a bit bizarre!

[?] **Can you count how many pairs you have made?**

Observe if the child counts each pair as one pair.

[?] **How many objects are there altogether here? Can you count them all?**

> If the child counts these in ones rather than in twos, prompt counting in twos, demonstrating if the child still seems confused. It often helps to move each pair as it is counted.

[?] **Can you find those numbers (two, four, six, eight, and so on) on cards and show me where they are on the 100-square?**

Observe if the child can miss out every other number and note how far they can count up to in twos.

[?] **Can you explain to me what a pair is?**

[?] **Explain to me why you think it is useful to count in twos.**

If the child still needs more help in counting in twos, suggest making a swarm of bees over the next few days and weeks, drawing simple shapes on scrap paper and giving each bee two wings. Others can join in and the bees can be made at home, then brought into school. Try to get beyond fifty bees and put up the display where you can add to it over the next term or two.

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 twos;

● identify a pair as having two matching objects;

● count a pair as one unit (this is not an essential aspect of multiplication and division so you can just ask the child to find pairs in everyday situations over the next few weeks);

● solve some practical problems.

Line up in twos

Time 10–20 minutes

Confuses numbers when counting in twos; has difficulty understanding that a pair consists of two objects.

Resources	*Check: does the child use key vocabulary?*
● *Blank loop track* (Resource sheet 21)	pair
● Cubes or pairs of animals	count in twos
● 1–6 dice	how many twos?

Teaching activity

'Today we are going to play a game, **Line up in twos**, to help you with counting in twos.'

Prepare *Blank loop track* (Resource sheet 21) perhaps with some stickers or some decoration related to the child's interests or a class theme connected with pairs if possible.

Children can cooperate in pairs or race each other.

Each player or pair needs their own game track.

How to play

1. Players take turns to throw the dice and put out that many twos – cubes or animals. So if 3 is thrown, three pairs of cubes are put out, six altogether.

2. Each pair of cubes / animals fits on a space on the track and at the end of each turn, each player counts their cubes in twos, 'two, four, six.'

3. On a player's second turn, when they count their twos, they count from the beginning each time, 'two, four, six, eight, ten' and so on.

4. When the player has a pair of cubes /animals on each space on the track, encourage them to count in twos without help.

Variations:

1. Instead of playing on the track, play by making a long line across a table, and compete to see who can get the longest line of pairs of cubes after five goes each.

2. At the end of the game combine all sets of twos and see if they can count how many altogether in twos. This number can be identified on a number line and 100-square.

Learning outcomes

By the end of a set of related activities children should be able to:

● tackle related learning tasks with increased motivation and confidence;

● use and understand connected mathematical vocabulary;

● count objects in twos.