Reception - Addition and Subtraction - Change



Adding more

Guidance

The children will use real objects to see that the quantity of a group can be changed by adding more. The first, then, now structure can be used to create mathematical stories in meaningful contexts.

At first, the children may need to re-count all of the items to see how many they have altogether.

E.g. 1, 2, 3, 4... 5, 6, 7 When they are ready, encourage them to count on E.g. 4... 5, 6, 7 Play games which practice counting from different starting points to support this step.

They could represent the number stories using 10 frames, number tracks and their fingers.

Other Resources

Mouse Count – Ellen Stoll Walsh Mr Gumpy's Outing – John Burningham The Shopping Basket – John Burningham

Prompts for Learning

I count, you count is a game which can be used to practise counting on from different starting points. Begin by counting as you point to yourself. When you point to the children they continue the count. This is great for creating rhythmic patterns:

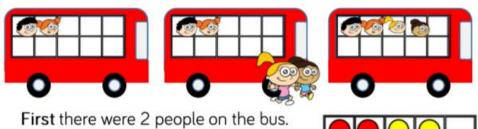
Show me 5 fingers. Now show me 2 more.

How many fingers now? How do you know there are 7?

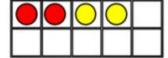
Did you count them all 1, 2, 3, 4, 5, 6, 7?

Is there another way to count them? We know we have 5 on this hand? Can we count on? 6, 7?

Use **first**, **then now** to tell simple maths stories to practise adding more in real life contexts.



Then 2 more people got on the bus. Now there are 4 people on the bus.





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Taking away

Guidance

The children use real objects to see that the quantity of a group can be changed by taking items away. The first, then, now structure can again be used to create mathematical stories in meaningful contexts.

Encourage the children to count out all of the items at the start, take away the required amount practically, and recount to see how many left.

Continue to encourage the children to represent the number stories using 10 frames, number tracks and their fingers.

Other Resources

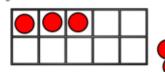
Mouse Count - Ellen Stoll Walsh Kippers Toybox - Mick Inkpen Incey Wincey Spider game Nrich

Prompts for Learning

Use first, then now to tell simple maths stories to practise taking away in familiar contexts.



First there were 5 people on the bus. Then 2 people got off the bus. Now there are 3 people on the bus.





Provide plenty of opportunities for children to practise counting back. (See I count, you count game from previous step) Once the children can confidently count back, you can also play Last Man Standing. Count around the circle: 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0 The person who says 0 sits down and the count continues around the circle, starting again from 10. Who will be left standing?

Counting choirs is a game to practice counting on and back from different starting points. Divide the children into 2 groups. The first group counts on in ones. The second group counts back in ones. You 'conduct' the choir by pointing at each group in turn.

E.g. 1, 2, 3, 4, 5, 6

5, 4, 3, 4, 5, 6, 7, 8, 9, 8, 7, 6, 5, 4

Reception - Multiplication and Division - Numerical Patterns



Doubling

Guidance

The children will learn that double means 'twice as many'. They should be given opportunities to build doubles using real objects and mathematical equipment. Building numbers using the pair-wise patterns on 10 frames helps the children to see the doubles. Mirrors are also a fun way for children to 'double' the quantities they build.

Encourage children to say the doubles as they build them, e.g. Double 2 is 4

Provide examples of doubles and non-doubles for the children to sort and explain why.



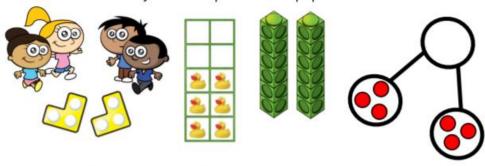


Other Resources

Double Trouble - Nrich
This is the Story of Alison Hubble by Allan Ahlberg
BBC Numberblocks Series 2
Episode 9 - Double Trouble

Prompts for Learning

Allow the children to explore different ways to build doubles using real objects and practical equipment.



Provide sets of dominoes and ask the children to find the doubles. Show the children how to play dominoes and look at the doubles they make as they play.

Play Doubles

The children take turns to roll

2 dice and score a point each time they roll a double. The first to reach 3 points wins the game.

Ask the children to sit opposite each other. One child sets out a quantity of small items such as pebbles or cubes. Their partner doubles it by making the same quantity. They can also hold up fingers and their partner matches them to make a double.









Reception - Multiplication and Division - Numerical Patterns



Halving and Sharing

Guidance

The children will halve quantities by sharing items into 2 equal groups. The children will probably already have some experience of sharing and will be quick to point out when groups are not shared fairly. This distinction between fair and unfair sharing can be used to emphasise the idea of half as being one of 2 equal parts.

Once children can confidently halve small quantities, they can explore sharing between 3 or 4 people. They will notice that sometimes there are items left over and may come up with their own suggestions for how to resolve this.

Other Resources

The Doorbell Rang - Pat Hutchins Bean Thirteen - Matthew McElligott Maths Story Time - Nrich

Prompts for Learning

Show the children a bowl of strawberries. Explain that you are going to share them into 2 equal groups so there will be half for you and half for your friend. Put a handful straight onto each plate without counting – make sure that one plate has much more strawberries than the other. Ask the children if that is fair. Prompt them to show you how to share the strawberries fairly.





With groups of children organise relay races. Start by putting the children into 2 obviously unequal teams so that it takes much longer for one team to finish than the other.

Ask the children why the smaller team keeps winning. Is that fair? Ask the children to create 2 equal teams so the races are fair.





Provide opportunities for the children to share into equal groups. For example, at snack time they could share bowls of grapes fairly between 3 or 4 children.

They could share out the cards or dominoes before playing a game. Prompt the children to notice that sometimes they can make equal groups and sometimes they have items left over.