

# Adult-Led Group Activity: Messy Monster and Tidy Toby

## Resources and Preparation

- Set up an activity on the carpet or table that includes a tray, a bowl of small sorting objects, such as cubes and two soft toys (one will be Messy Monster and the other will be Tidy Toby).



## Addressing the Misconception

- Tell the children that they are going to help Tidy Toby. He likes to keep everything neat and tidy. You are going to say a number and the children will help Tidy Toby to count that many objects onto the tray.
- Say a number between one and ten and the children can count that number of objects on to the tray.
- Ask the children to watch as you make Messy Monster move all of the objects on the tray, one at a time, until they are all in a different order. Say, "Oh no! Messy Monster has moved all of Tidy Toby's objects. How many objects does he have now?"
- The children may know that there are still the same number of objects. If so, you can deepen their understanding by asking reasoning questions. For example, ask, "How do you know there are the same number of objects?" or "Why do you not need to count them again?"
- However, children may show their misunderstanding by wishing to recount the objects or by saying a different number.
- If this happens, ask the children to recount the objects, saying, "The number of objects has not changed. Let's find out why."
- Ask the children to help Tidy Toby count a different number of objects, such as five, and place these on the tray. This time, tell the children to watch carefully as Messy Monster moves the objects. Ask the children, "Is Messy Monster taking any objects away? Is he adding any more objects? What is he doing to the objects?"
- Ask the children if the number of cubes has changed. Remind the children that the number of cubes is exactly the same, they have just been moved.

## Prompts to Deepen Understanding

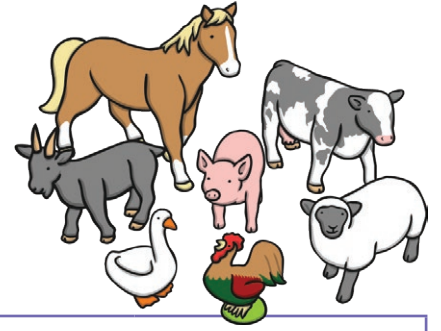
When the children are completing the activity, you may wish to ask them the following questions to extend their understanding:

- Did Messy Monster change the number of objects?
- The objects are in different places but is the number still the same?
- How do we know that the number of objects is still the same?

# Enhanced Provision

## Resources and Preparation

Set up a small world farm that has separate areas and enclosures, such as fields, barns and paddocks. Place up to ten of four to five different farm animal types, such as four cows, five pigs, seven ducks and ten horses.



## Addressing the Misconception

- As the children are playing with the small world farm, you may wish to ask them if they would like to play a game.
- Tell the children that the farmer needs to gather one type of animal so that he can count them. For example, say, "The farmer needs to count all the cows. Can you find all of the cows?"
- Remove the other animals from the farm and stand all of the cows in one area. Ask the children to count them.
- Now tell the children that the farmer needs these cows to move to a different part of the farm. Take one cow at a time and walk it to a different part of the farm. Once all of the cows are there, say to the children, "How many cows are there now?"
- The children may immediately know that the number is unchanged and you can extend their understanding with deeper questioning, such as 'How do you know the number of cows is the same? Do we need to count the cows again? Why not?'
- Children may show a misconception by wishing to count the cows again. Count the cows again with the children and say, "We have four cows. How many did we have before we moved them? Why is the number the same?"
- Move the cows back to their original field and count them once more, saying, "We had four cows in this field." Now move the cows, encouraging the children to look carefully to see if you add more cows or leave any behind. Ask, "How many cows do we have in this field?". Explain that we still have four cows. The number of cows has not changed - all of the cows are still here.
- You may wish to repeat this with a different number and type of animal.

## Prompts to Deepen Understanding

When the children are completing the activity, you may wish to ask them the following questions to extend their understanding:

- How many cows are there? How many do you have now?
- Has the number changed? Why not?
- Did we leave any behind? Did we add any?
- Do we need to count again? Why not?

## Additional Activity Ideas

If children need further practice, they could:

- Count the number of toys in a box. Close the lid and shake the box. When the box lid is opened the toys will have moved. How many toys are there now? How do you know?
- Ask the children to count out a number of pom-poms into a bowl. Now transfer the pom-poms, using chunky tweezers, into a second bowl. How many are there now? Do we need to count them again?

# Maths Home Learning Activity

To continue learning at home, cut out a slip for each child in your intervention group.

## We Have Been Learning

**To understand that the number of objects in a group does not change just because we move them.**

### Home Learning Activity

Place two pieces of paper on the floor, a short distance apart. Place up to ten cars on one of the pieces of paper, telling your child that this is the supermarket car park. Ask your child to carefully count the number of cars. Now, explain to your child that the cars need to be driven from the supermarket car park to the cinema car park. Encourage your child to move each car into the new car park. How many cars are parked in this car park? Talk about how the number is still the same. You have moved the cars and the number has stayed the same.

### How to Get Your Child Thinking

How many cars are there? Did you add any more cars? Did you leave any cars behind? Do we need to count the number of cars again? Why not? How do you know that the number of cars is the same?

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# EYFS Maths Addition Same-Day Intervention: May Think That the Total Number of Objects Changes If They Are Moved

## Addressing the Misconception

You could choose to address the misconception by carrying out an adult-led group activity.



Or, you may like to address the misconception by taking the learning into your continuous provision.



You could also send home a maths home learning activity, which provides parents/carers with an idea for a simple activity to address the misconception.



## Addition Misconception

May think that the total number of objects changes if they are moved and will recount them.

### How to Address the Misconception

- Provide plenty of opportunities for counting groups of small objects that can be moved. Encourage the children to count the objects. Then, move them and count again.
- When counting with songs, use cut-outs and props linked to the song. Throughout the song, pause and encourage the children to count to number of props. Move the props into a new arrangement and ask the children to count how many there are now.
- Count a group of objects and then move them into a new arrangement. Ask the children how many there are now. Encourage the children with reasoning questionings, such as “How do you know?”, “Do I need to count them again?”, “Why not?” and “How can you be sure?”
- How many different ways can the children find to arrange a number of objects?