

Object Counting

Key Maths Vocabulary	Key Questions
Counting, number, mathematics, maths, one-to-one correspondence, patterns, repeating, repetition, teen, digit, single digit, two-digit, zero, altogether, total, set, numeral, how many?, none, zero, more, less, fewer, same, point, move, small, smallest, bigger, biggest, estimate, next, before, cardinality, subitising, conservation of number, concrete, pictorial, abstract, consecutive, ordinal, quantification, irregular arrangement, rote counting, forwards, backwards.	- How many [insert object] are there? How do you know? - How many are in this group? - Can you count these objects without moving them? How will you know you have counted them all? - Can you count actions such as jumps or hops? - Is there still the same number if I move them? How could we find out? - Which group has more? Can you tell me without counting them? - Can you give me [insert number] cars/blocks/ teddies? - Can you show me five fingers? Can you show me five in a different way? - What does [insert number] look like? How many different ways can you represent it? - Who has more/less? - What is the total number in this group? - What happens if I add one more? - What happens if I take one away? - Can you count on from five? - Can you count forwards and backwards? - Can you start counting at ten and stop at six? - Can you estimate how many there are? - Can you find that number on a number line? - Can you count along the number line? What if I hide some of the numbers?

EYFS Skills Progression: Counting

Object Counting Skills – Progressing from 0-5, 0-10, 0-20

Progression of Skills	Possible Misconceptions	Pedagogical Guidance
Use language associated with counting, such as “more”, “a lot”, “less”.	Children, particularly EAL children, can develop some confusion with opposites and forget which way to go.	Teach one word in isolation, such as “more”, until the children are very confident with this, before moving onto “less”. Use this language in practical contexts, such as snack time.
Say number names to count objects, not necessarily in the right order or at the right speed.	Children may say the number names too quickly and/or in a random sequence, such as “One, two, three, five.”	Model careful counting in a variety of situations, such as snack time, lining the children up, counting how many bikes/toys you have.
Begin to develop one-to-one correspondence and say one number name for each object.	Children may not count each object or may count some objects more than once. They may say several number names when pointing at one object.	Asking the child to insert a word between the number names, such as one car, two cars, three cars will naturally slow down their count. Model counting like this yourself, first from one to three and then further.
Move or touch objects to count them.	Children may think objects need to be counted in a certain order, for example from left to right. Or children may think that you can only start counting from number one.	Exaggerate your body gestures when modelling pointing or moving objects, to subtly draw attention to how you are counting. Use interesting pointers, such as a wand, flyswatter or a torch to increase engagement.
Can count things they can't touch or see, such as pictures on a wall or sounds.	Children may count each picture more than once.	Encourage children to be methodical – working from left to right or top to bottom. Start them with pictures that are roughly in line before moving to very random arrangements.

Progression of Skills	Possible Misconceptions	Pedagogical Guidance
Know that when objects are moved, spread out, or moved closer together that the total remains the same.	Children may think there is more of something when you spread them out and fewer when moved closer together.	Give the children lots of opportunities to count. Larger objects, smaller objects and a mixture. Put the objects into a box, spread them out, hold them in your hands, etc.
Knows that the last number they say represents the number of objects in a group.	Children may not yet have developed the concept of cardinality (that the last number they say is the number of objects in the set).	Model counting objects, emphasising the last number to be said, and then follow up with the sentence, "The last number I said was five, so there are five cars."
Give someone a specified number of objects. Count out a specified number of objects from a larger group.	This is difficult for a child who does not yet understand cardinality. They may just point to the third object and say "That one." when asked, "Show me three." or "Give me three."	Model giving the child some objects, emphasising the final number of the count, and say a sentence explaining what you have done.
Subitise small amounts of objects arranged on a regular pattern, such as a dice pattern. Subitise small amounts of objects arranged in an irregular pattern.	Children may think the adult is expecting them to count. Children may try to subitise larger quantities and thus be unsuccessful.	Explain to children it is quicker not to count if they don't need to and that they do not need to count in ones to check if they can recognise small amounts. Encourage children to subitise by asking them to grab objects. For example, ask them to, "Grab three blocks."
Make an estimate, such as choosing the group with more objects in, or choosing the group which has closest to ten objects.	Children like to be exact! They will try to count them all. They may not understand the concept of estimation.	Let the children have a look and then cover the objects. Provide them with two very different groups, such as groups of three and eight, and ask them which might have close to ten. To check, move the objects into known groups, such as dice patterns, "I can see a group of five and three more, so I think that is close to ten." Don't count them in ones to check, as this will encourage children to keep counting in ones.
Can count on when part of a set of objects is hidden.	Children may start again from one when the objects are hidden. This may be because they do not yet understand that the last number they said is the number of objects in a set. They may not be able to hold a number in their head.	Tap the hidden group and say the number for them. Say the next numbers in the count until they are able to join in.