

Maths in Reception

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3	4	5
6	7	8
9	10	

Mastery: We follow the Mastering Number programme, which aims to ensure **all** children secure firm foundations in the development of good number sense. This document lists the skills we cover in Reception...



Cardinality:

When children understand the cardinality of numbers, they know what the numbers mean in terms of knowing how many things they refer to. Counting is one way of establishing how many things are in a group, because the last number you say tells you how many there are. Children enjoy learning the sequence of counting numbers long before they understand the cardinal values of the numbers. Subitising is another way of recognising how many there are, without counting.

Key skills within cardinality are:

Saying number words in sequence, saying one number for each object when counting, knowing the last number counted gives the total so far, recognising small quantities without needing to count (subitising), matching numeral to quantity, conservation of number (knowing that the number does not change if things have been rearranged - as long as none are added or taken away.)

To help your child at home you can incorporate counting into your daily routine (e.g. counting steps, encouraging your child to count out objects in play e.g. I need 5 more bricks for my tower. Can you pass me 5 bricks? **Really placing emphasis on the last number telling us how many there are.**)

Modelling good counting skills for your child will also help them.

Comparison:

Comparing numbers involves knowing which numbers are worth more or less than each other. This depends both on understanding cardinal values of numbers and also knowing that the later counting numbers are worth more (because the next number is always one more).

Key skills are:

Understanding more than/ less than, identifying groups with the same number of things, comparing numbers and reasoning, knowing the 'one more/ less than' relationship between counting numbers.

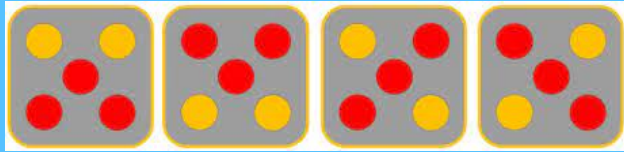
To help develop these skills at home you could give your child:

- collections to sort and compare, which include objects which are identical, and which include objects of different kinds or sizes
- collections with a large number of things, and collections with a small number of things
- ensuring that when providing groups to compare, there are some that have an equal amount
- asking children to convert two unequal groups into two that have the same number, e.g. 'There are 6 apples in one bag and 2 in another bag; can we make the bags equal for the two hungry horses?'
- explain unfair sharing - 'This one has more because it has 5 and that one only has 3'
- compare numbers that are far apart, near to, and next to each other.
- labelling groups with the correct numeral. Do children spot the error if a group is mislabelled? For example, 'The label on the pot says 4 and we have 5 - what do we need to do?' A child may say, 'We need to take one out because we have one too many.'
- ensuring children focus on the numerosity of the group by having items in the collection of different kinds and sizes
- making predictions about what the outcome will be in stories, rhymes and songs if one is added to, or if one is taken away.



Composition:

Knowing numbers are made up of two or more other smaller numbers involves 'part-whole' understanding. Learning to 'see' a whole number and its parts at the same time is a key development in children's number understanding. Partitioning numbers into other numbers and putting them back together again underpins understanding of addition and subtraction as inverse operations.



Key skills include: Understanding part-whole (identifying smaller numbers within a number), inverse operations, partitioning numbers into different pairs of numbers, numbers can be partitioned into more more than two numbers and number bonds (knowing which pairs make a given number.)

Opportunities for developing these skills include:

- encouraging making arrangements with (e.g.) ten. Ensure the children talk about the different arrangements they can see within the whole.
- exploring songs; for example, 'Five Currant Buns' - show that the whole is still five, but some are in the shop and some have been taken away; check throughout that there are still five currant buns
- playing skittles and looking at how many are standing. How many have fallen over? How many are there altogether?
- making a number with two different kinds of things. For example, make a fruit skewer with five pieces of fruit, using bowls of bananas/strawberries to choose from; then ask the children to describe how they have made theirs. They should compare it with a partner's: 'What is the same about your skewers? What is different?'
- Spill the Beans: using double-sided counters or beans, where one side is coloured, throw the collection and note how many of each type can be seen and how many altogether
- role play, e.g. in a toy shop, ten toys need arranging onto the three shelves. How will you organise them?
- playing hiding games with a number of objects in a box, under a cloth, in a tent, in a cave, etc.

