

## Early Years Maths

### Key mathematical skills and concepts

Children should learn the following concepts and skills whilst using mathematical apparatus/objects represent and communicate their thinking, at the same time beginning to use maths specific language. An early understanding of these concepts and skills will support the transition from counting to calculating.

#### Ordinality

This skill relates to ordering numbers or indicating number position, i.e. first, second, third.

1. Cut out numbers to order or peg numbers on a washing line. Remove numbers – can they find a missing number or remove numbers in a pattern, for e.g. 2, 4, 6, 8 – what is the pattern?



#### Cardinality

Understanding the value of different numbers or the number of objects in a set.

2. How many ways can you make, for example, 3? Look at around your and environment for different ways of making a given number.



#### Instant recognition – Subitising

Early calculation skills can be developed through instantly recognising a number of objects without counting. Playing board games with a dice is a great way to develop this skill. Experts have suggested that you can only subitise up to 6 and beyond this we are calculating.

3. Try finger painting different patterns of dots and match to the numeral.



## Equality

Understanding that two quantities represent the same value or one is greater than/less than/same as, i.e. comparing two numbers, quantities, or measurements.

4. Fill two shopping bags with different quantities of any objects (toys, food, coins) – which one is heavier/greater than or has the most/least or same as? Count the number objects – how could the quantities in each bag be made fair?



## Concept of Zero

What is zero? what isn't it?

Understanding that zero represents no 'ones' or no units – this impacts on place value.

Zero is a number – it is the nothing-ness of nothing!

5. Shuffle box game use an old cereal box or similar and draw a line down the middle. Place 5/10/20 coins, counters, paperclips etc. and shuffle the objects to one side – how many is on this side? And the other side? How many altogether? What if all fall on one side? What is 5 and nothing/zero?

## Conversation of number

This is the concept that a number of objects remains the same, no matter where are they placed (the shuffle box can be used for this concept too).

6. Divide a piece of paper into 4 and put 5/10 objects in different boxes (or use a farm set or dolls house with figures), move the objects around, how many now? Continue to move them around - does this change the number?



## One to one correspondence

This relates to physically touching and counting each object with accuracy, ensuring they have not missed a number or object out.

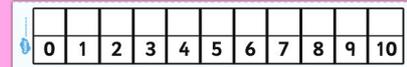
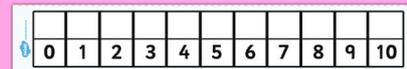
7. Ask your child to set the table with mats, cutlery, plates, cups, napkins etc. for a given number of people.



## Counting on and back from any number

This is an early skill to help the understanding of calculation. Think of a number 1-20 and continue counting on from that number or back from that number. Look for numbers in the environment, for example, door or bus numbers as a stimulus.

8. Chalk hop scotch or number track on the ground and jump on a number – can they jump and count on or back from this number?



[www.primarysupportteam.co.uk](http://www.primarysupportteam.co.uk) - Numbers & Patterns document and Nrich planning tool

[www.nrich.maths.org/early-years](http://www.nrich.maths.org/early-years)