What do you notice?

Number Sense is when children understand what numbers mean, improving their performance of mental mathematics, and giving them the tools to look at maths in the outside world and make comparisons.

Children develop number sense gradually over time through exploring numbers, visualising them in a variety of contexts, and relating them in ways that are not limited by formal written methods.

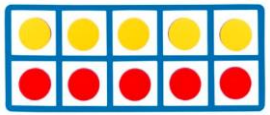
It helps children understand both how our number system works, and how numbers relate to each other. Children who develop number sense have a range of mathematical strategies at their disposal. They know when to use them and how to adapt them to meet different situations.

Children with good number sense enjoy playing with and exploring numbers and number relationships. As a result of these strategies, they can often find the most efficient solution to the problem.

Key Representations

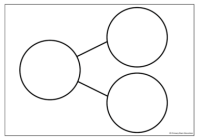
Five Frame

Ten Frame



Numicon

Part-whole model (Cherry model)



Where can I find more information?

NCETM

www.ncetm.org.uk

Nrich

www.nrich.maths.org

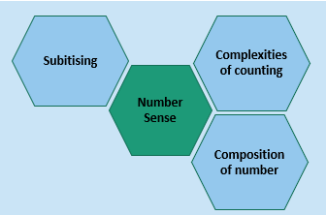
Maths no problem

www.mathsnoproblem.com

Number Sense in Reception

The importance of number sense

Number Sense



Complexities of counting

Ordinality – saying numbers in sequence

1:1 Correspondence – each object is counted once. The understanding that each object being counted represents one more. Children need to be explicitly taught how to tag each object with one number word.

Conservation – knowing that if objects are in a different order the amount stays the same.

Cardinality - The cardinal value of a number refers to the quantity of things it represents, e.g. the numerosity, 'howmanyness', or 'threeness' of three.

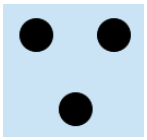
Counting things you cannot see as a set – claps, beats on a drum.

"I know there are five because I know that three and two make five."

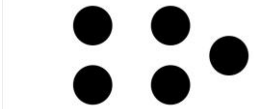
How many can you see?

Subitising –

Perceptual Subitising - instantly recognizing small groups of objects without counting (0-5).



Conceptual Subitising – being able to subitise and combine two or more sub groups.



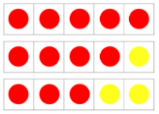
"I can see four and one more. That makes five".

I can explain my thinking to my partner.

Composition of Number

Understanding that one number can be made up from (composed from) two or more smaller numbers.

Children 'see the numbers inside' other numbers: first, that all numbers are made up of ones, and then that they can be made up of pairs of bigger numbers. For example, 5 is made of 'five ones', or of '1 and 4', or of '2 and 3'.



Understanding composition of number is fundamental to understanding the structure of part-whole relationships.

The concept of composition allows children to build fluency with number bonds.