Year 1 Family Maths Workshop

October 2021

Aims

- To explore the basic foundations of number sense and what this means in Year 1.

- To provide ideas and resources for supporting your child in developing their number sense.

- To give an opportunity for using these foundations in practise with your child.

Background

- The Mathematics curriculum has three main aims. For children to become **fluent**, to be able to **reason mathematically** and to **solve problems.**

- In order to do this, children need firm foundations in their understanding of number if they are to be able to apply their knowledge flexibly.

- They need to be secure using concrete resources before they move on to more representational or abstract methods.

What is number sense?

Sood and Jitendra (2007) say:

'Number sense developed gradually over time as a result of exploring numbers, visualising them in a variety of contexts, and relating them in ways that are not limited by traditional algorithms.' (p. 146)

We need to give learners opportunities to make sense of, and reason about, number.

Learners need:

- to be given reasons to communicate their ideas about arithmetic.

- to develop fluent recall of key facts and be able to apply them to novel contexts.

- to have easy access to a range of appropriate and useful representations.

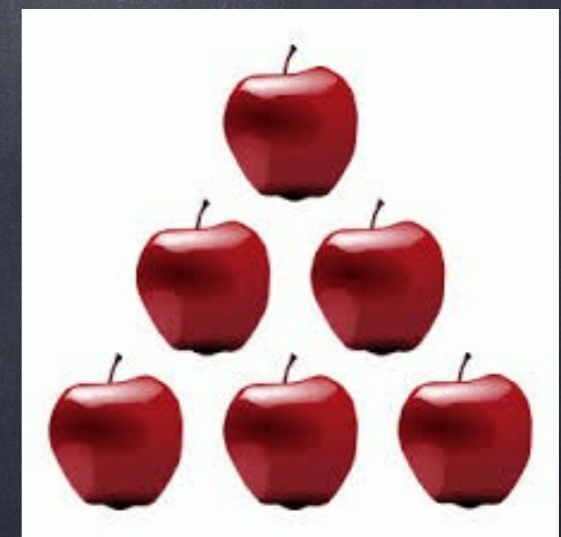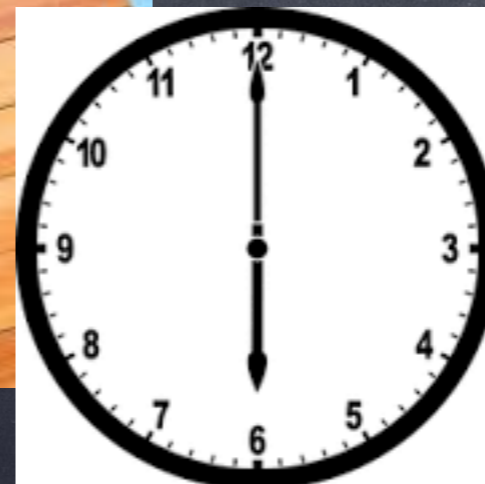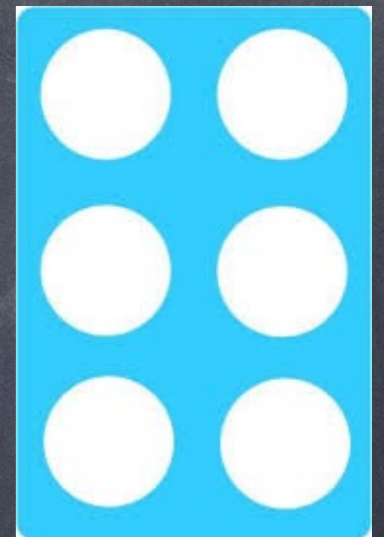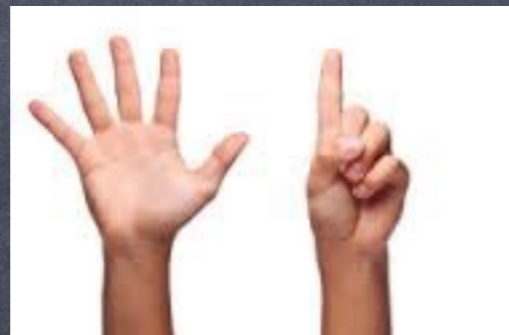- to be able to apply ideas to new concepts and to solving problems.
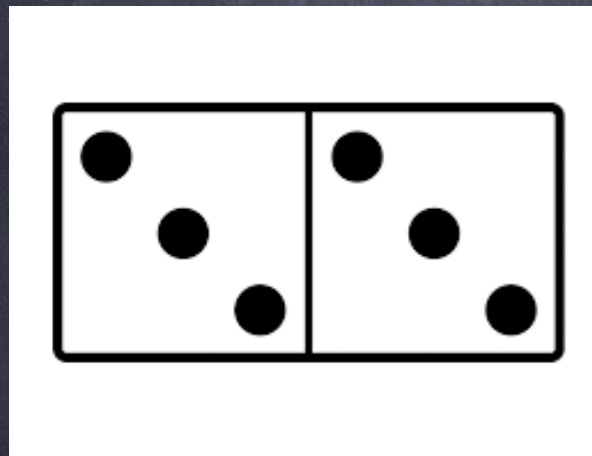
Key teaching strategies

1. Work with concrete materials and familiar ideas

Key teaching strategies

2. Compose and recompose different arrangements and representations of number

Key teaching strategies

3. Discuss and share their discoveries and solutions

Developing mental strategies (not always needing to count on from 1) means children need to reflect on and share their strategies:

- verbalising the strategy bring the strategy to a conscious level and allows the person to learn about their own thinking.
- it provides other children with the opportunity to pick up new strategies.
- the adult can assess the type of thinking being used and adjust the type of arrangement, level of difficulty or pace of learning accordingly.

Key teaching strategies

4. Investigate the realistic uses of number in their everyday world
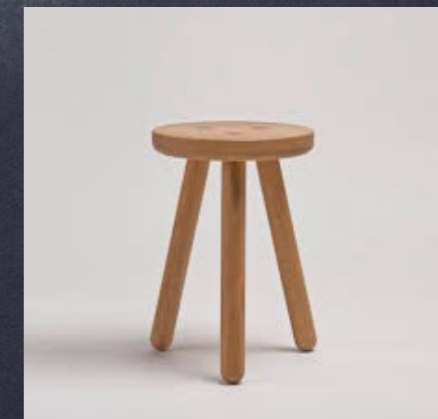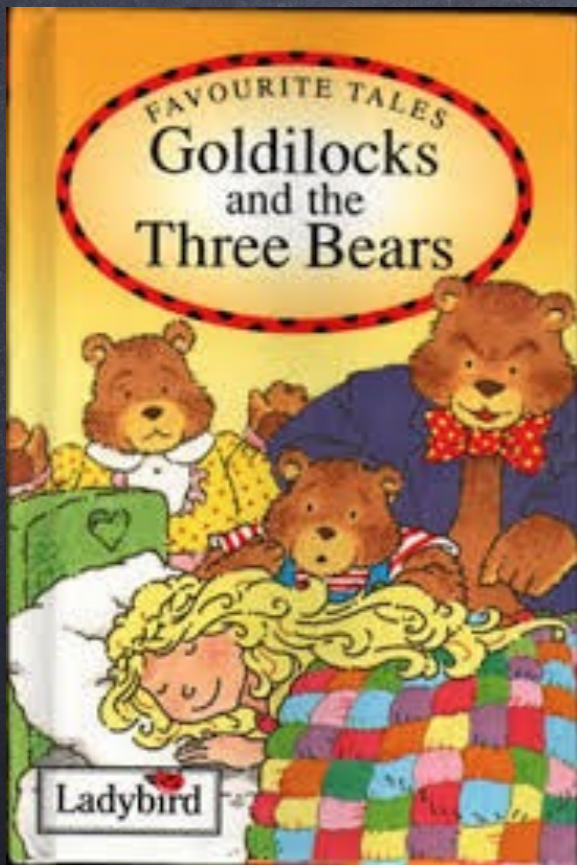
Progression

'a sense of ten'

ordering

position

comparison

amount

writing own stories

leads to calculation

iconic representation

symbolic representation

fractions

place value

measures

multiplication

mental calculations

division

Your Turn...

- Your child has a 'matching numbers' game to play with you.
- It helps grasp the 'fiveness of five', for example, and offers different representations of numbers for your child to interpret.
- Cut out the cards, spread them out facing downwards.
- Decide who is going to go first. Player 1 turns over 2 cards and sees what is the same or different about the representations presented.
- If the representation is the same that player keeps those 2 cards but they must explain the 'sameness'. Model and support explanations as necessary, e.g. don't accept, "I just know" !!!
- At the end of the game make the sets of the different numbers.
- Next take 2 blank cards for each number and encourage your child to find 2 new ways of representing each number but 1 way must be with using a numicon shape.
- Play the game again with the 6 new cards added in.
- Encourage rich discussion, excitement and learning together.
- Extension: Choose a new digit card and find 3 ways to represent it using the resources provided. Have fun!