

Welcome!

Maths Workshop

Tuesday 12th November 2019



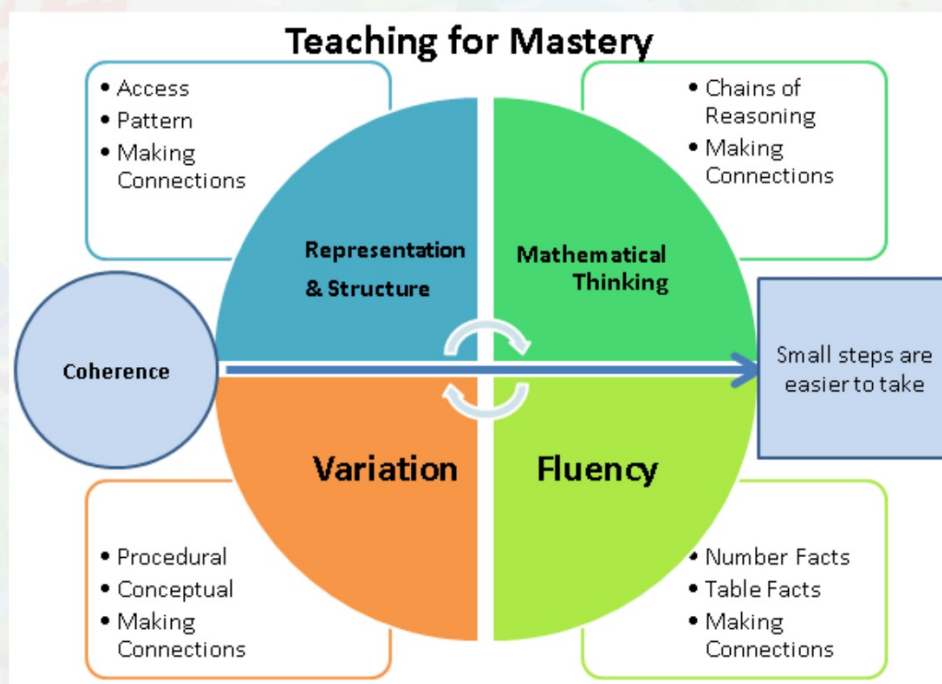


Maths is everywhere!

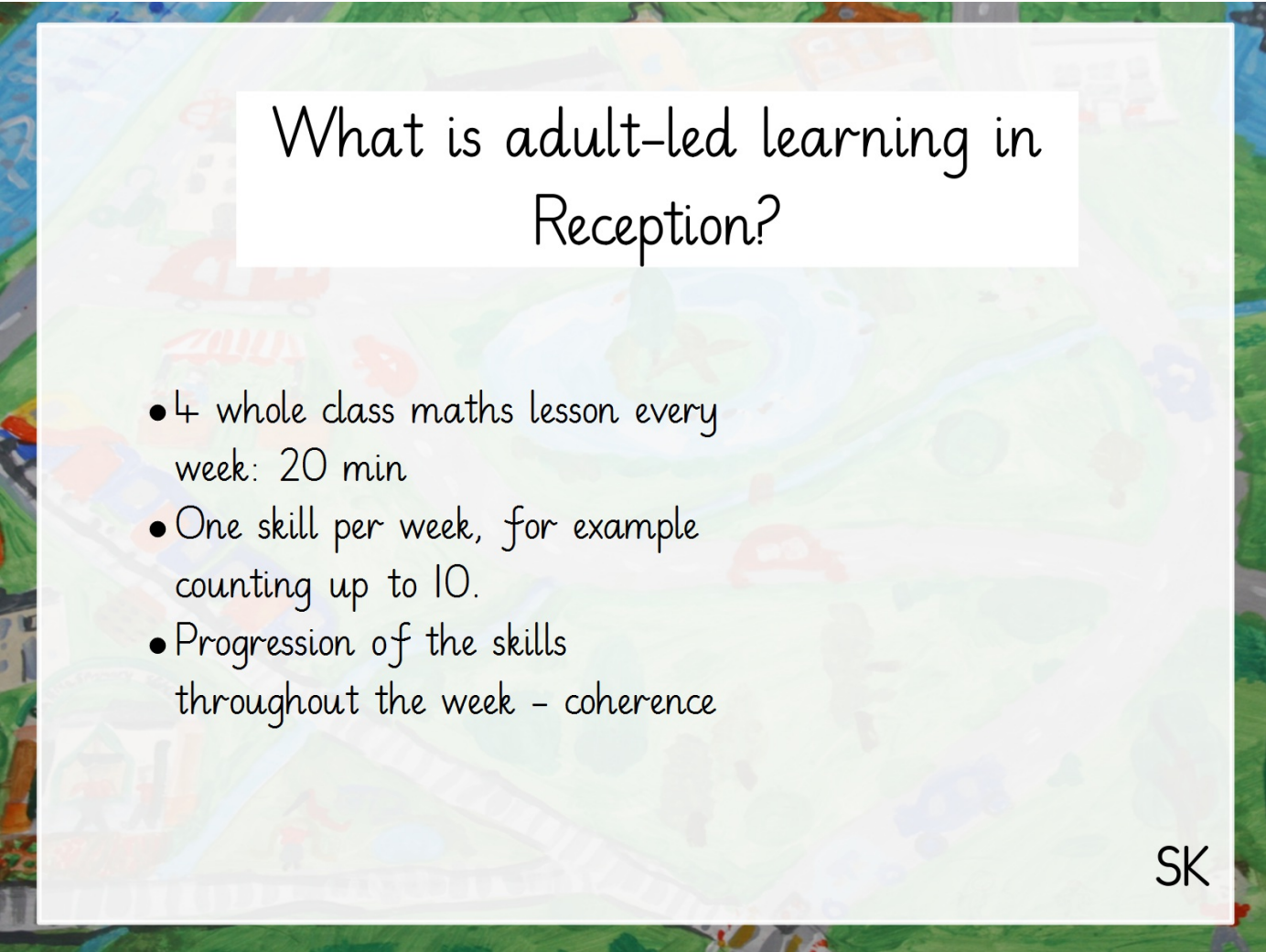
- We have lots of opportunities for maths in free-flow learning too. Some of these are available to the children throughout the year, such as constructing with the wooden blocks and learning about volume and capacity through water play.
- Some activities are changed weekly to support our maths learning that week.

Maths Mastery approach

The five big ideas...



RB

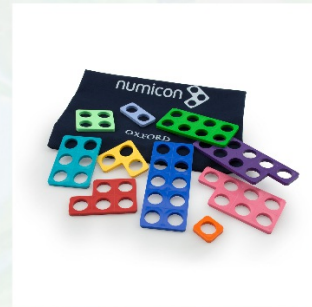
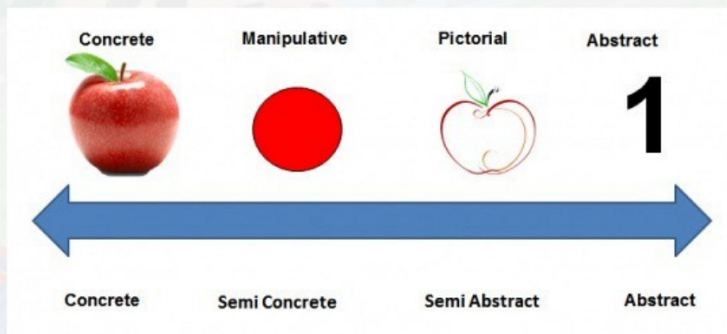


What is adult-led learning in Reception?

- 4 whole class maths lesson every week: 20 min
- One skill per week, for example counting up to 10.
- Progression of the skills throughout the week - coherence

SK

Concrete



It is essential that children first work with concrete objects to see what is happening and develop a deep understanding

Pictorial

We then move onto a pictorial example...



SK

Abstract

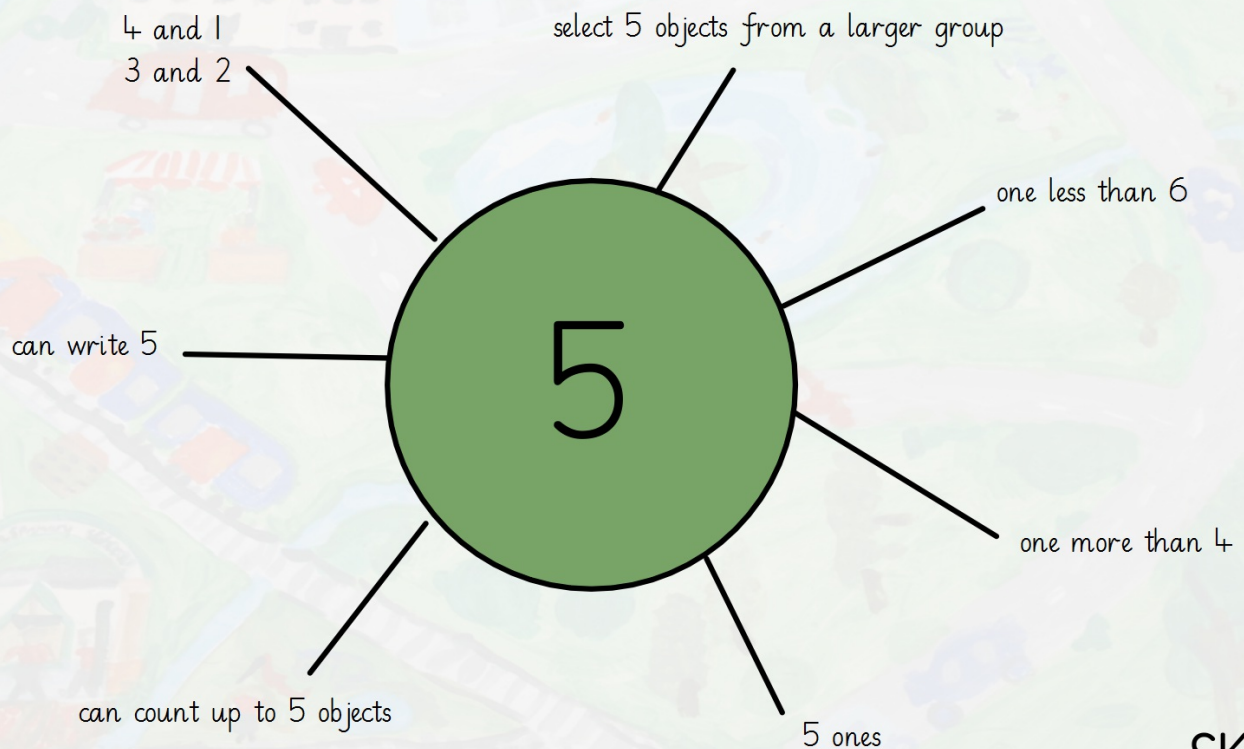


$$\begin{array}{c} 2 \\ \bullet\bullet \end{array} + \begin{array}{c} 3 \\ \bullet\bullet\bullet \end{array} = \begin{array}{c} 5 \\ \bullet\bullet\bullet\bullet \end{array}$$

SK

Deep knowledge

Variation



SK

Fluency

- Quick and efficient recall of facts and procedures is important in order for learners' to keep track of sub problems, think strategically and solve problems.
- We want children to recognise relationships, make connections and make appropriate choices from a whole toolkit of methods, strategies and approaches.

$$5 + 2 = 7$$



Mathematical thinking

- Mathematical thinking is central to deep and sustainable learning of mathematics.
- Ideas need to be thought about, reasoned with and discussed.
- Mathematical thinking involves looking for patterns to understand structure, looking for relationships/connecting ideas and reasoning logically, explaining and proving.

Speaking frames

What is greater, 3 or 5?



___ is greater than ___

RB

What skills do the children need to know by the end of YR?

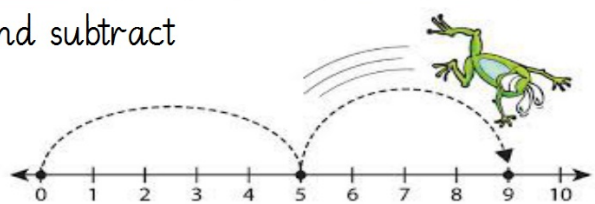
By the end of their Reception Year children should be able to **count reliably** with numbers from 1-20, place them in **order** and say which number is **one more** or **less** than a given number. Using quantities and objects, they **add** and **subtract** two single-digit numbers and count on or back to find the answer. They solve problems including **doubling**, **halving** and **sharing**.

Reliably in many different contexts!

SK

Key skills for counting

- Recognising small numbers of objects without counting them (subitising)
- Making a reasonable estimate of numbers of objects without counting
- Understanding that if a group of counted objects are rearranged, the total stays the same
- Comparing the size of quantities
- Recognising that if objects are added or removed, the number of objects changes
- Counting on or back to add and subtract



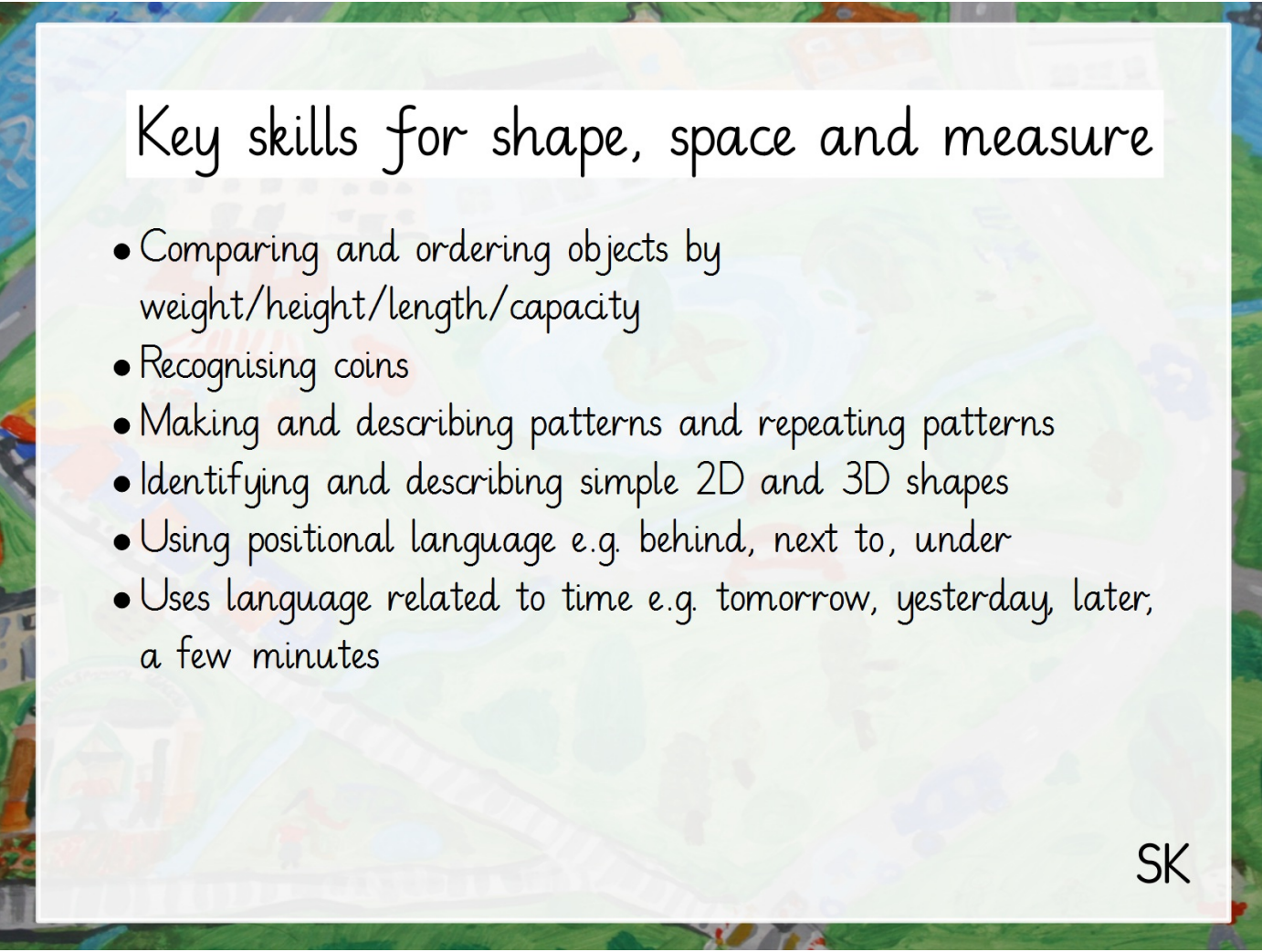
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Shape, space and measure

By the end of their Reception Year children should use everyday language to talk about **size**, **weight**, **capacity**, **position**, **distance**, **time** and **money** to compare quantities and objects and to solve problems. They recognise, describe and create **patterns**. They explore characteristics of objects and **shapes** and use mathematical language to describe them.



RB



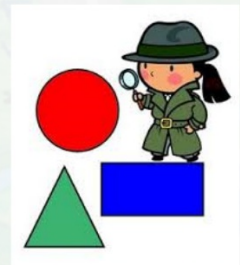
Key skills for shape, space and measure

- Comparing and ordering objects by weight/height/length/capacity
- Recognising coins
- Making and describing patterns and repeating patterns
- Identifying and describing simple 2D and 3D shapes
- Using positional language e.g. behind, next to, under
- Uses language related to time e.g. tomorrow, yesterday, later, a few minutes

Ideas for home

Maths is everywhere!

- number splat
- counting the stairs at home as you walk up them
- shape hunt
- adding all the knives and forks together
- measure the family using non standard measurements
- spotting bus numbers and door numbers
- cooking - looking at measurements
- using a timer to clean teeth
- when playing in the bath - taking toys out putting them back in
- board games
- dominoes



SK



Positive messages about maths

- Make maths fun!
- Praise given for effort and willingness to have a go