

Petersfield Infant School

Maths Workshop Year R

Spring 2023



ncetm.org.uk

Key principles

- ▶ Children are born ready, able and eager to learn
- ▶ **EVERY** child can learn and enjoy mathematics
- ▶ The first few years of a child's life are especially important for mathematics development

Aims for children in maths for Year R

- ▶ Make good progress towards the *Early Learning Goals*
- ▶ Be confident in communicating their ideas
- ▶ Develop a positive attitude to maths and willingness to 'have a go'

Areas of maths in Year R

- ▶ **Cardinality and Counting:** A number can refer to the quantity, or 'howmanyness' of things it represents
- ▶ **Comparison:** Comparing numbers involves knowing which numbers are worth more or less than each other
- ▶ **Composition:** One number can be made up from two or more smaller numbers



Areas of maths in Year R

- ▶ **Pattern:** Looking for and finding patterns helps children notice and understand mathematical relationships
- ▶ **Shape and Space:** Understanding what happens when shapes move, or combine with other shapes
- ▶ **Measures:** Comparing different aspects such as length, weight and volume



How children learn maths in Year R

- ▶ **Quality play** is essential in early years
- ▶ In addition to mathematics throughout all areas of provision, all children experience the same shared mathematics together in **short daily focussed sessions**
- ▶ **Practical experiences** underpin mathematical learning
- ▶ Experience **multiple ways** to approach and solve problems
- ▶ Children are encouraged to approach mathematical challenges with **positivity and confidence**

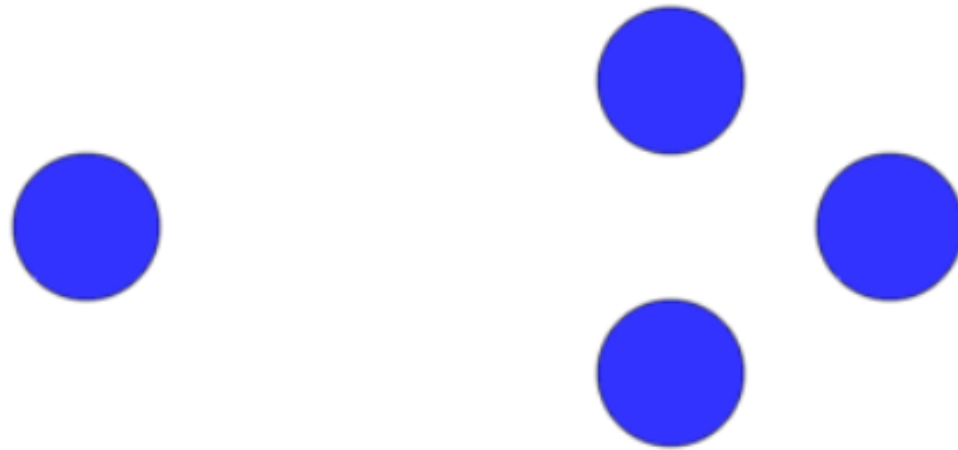
Daily focussed maths sessions

- ▶ An emphasis on deep and secure understanding, not superficial learning
- ▶ Where a child grasps a concept quickly, they are challenged to think more deeply through reasoning, making connections and noticing patterns, rather than moving onto new content from other year groups
- ▶ When a child needs it, they are given additional support to address any areas they are finding trickier

Subitising



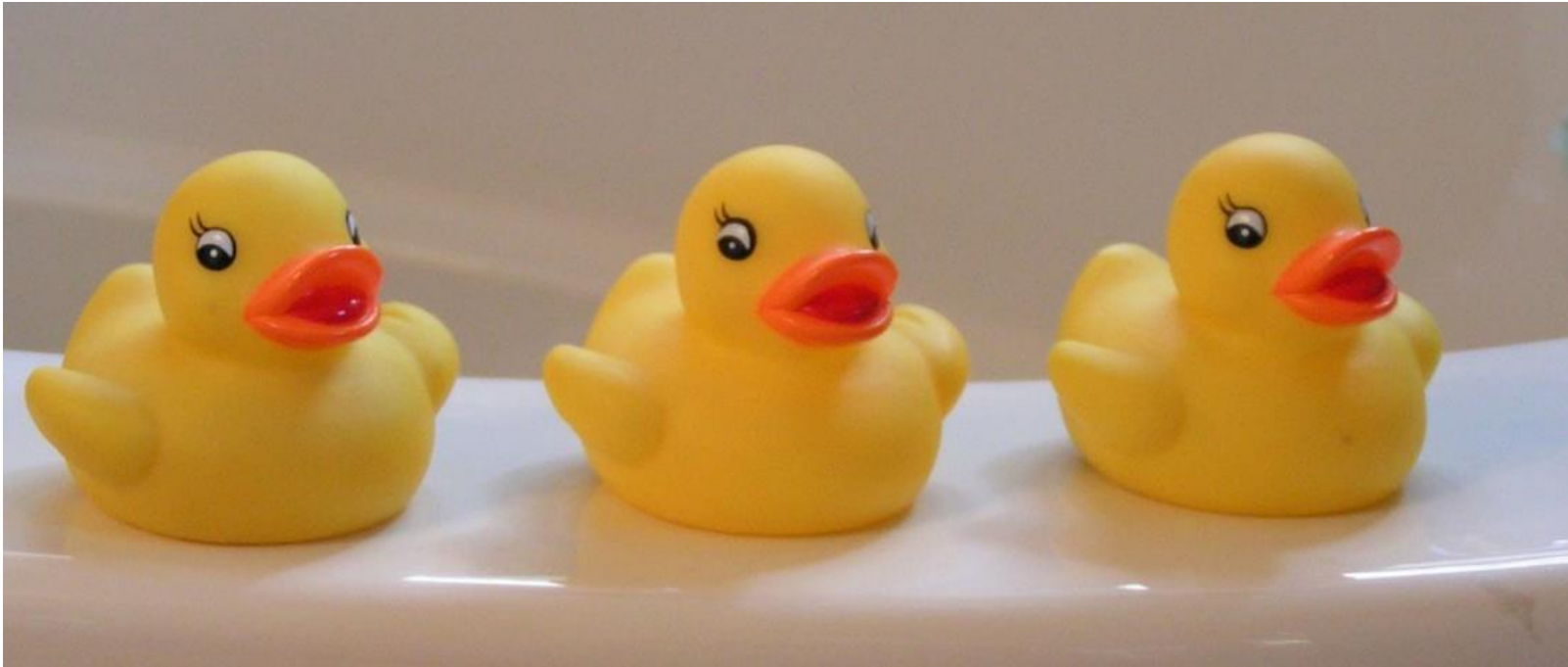
Subitising



Subitising



Subitising



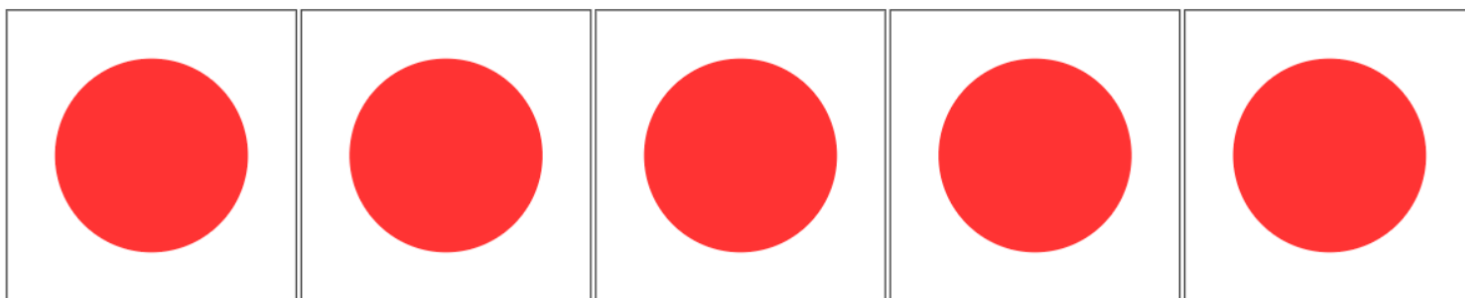
“I can see three ducks!”

Subitising

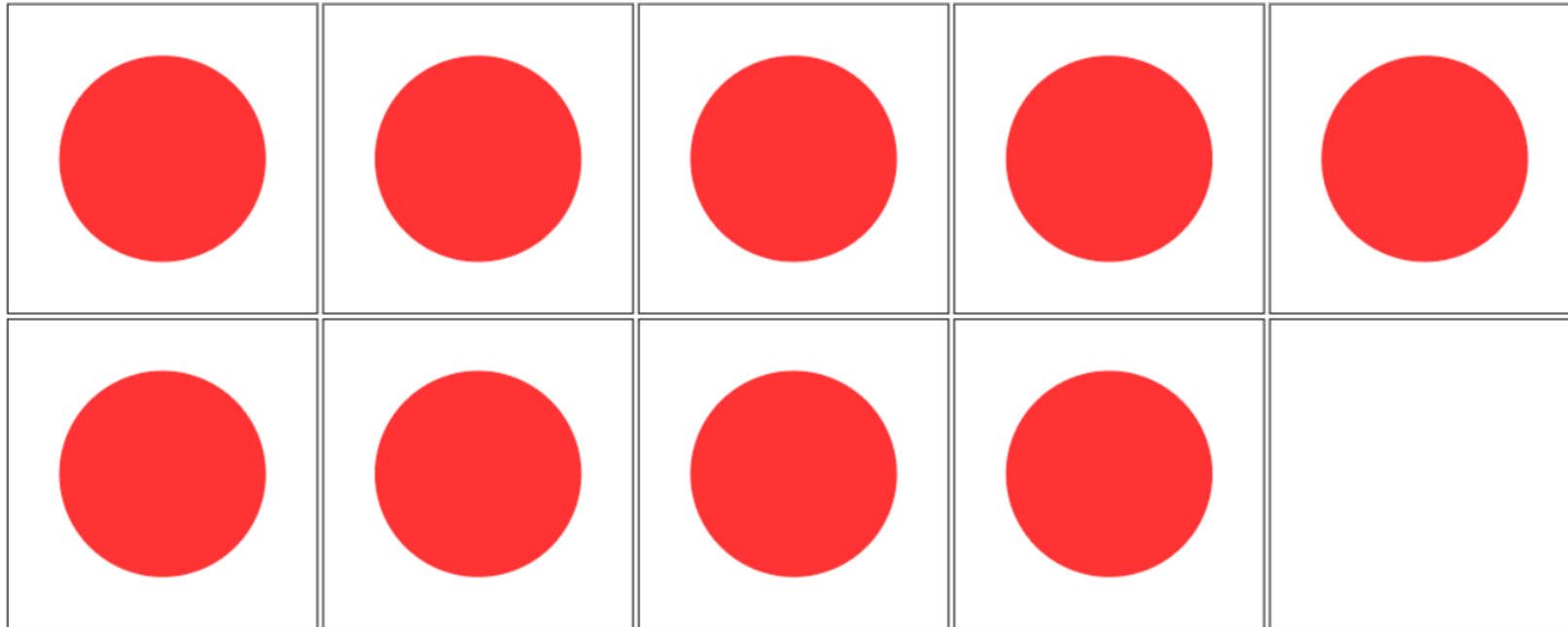


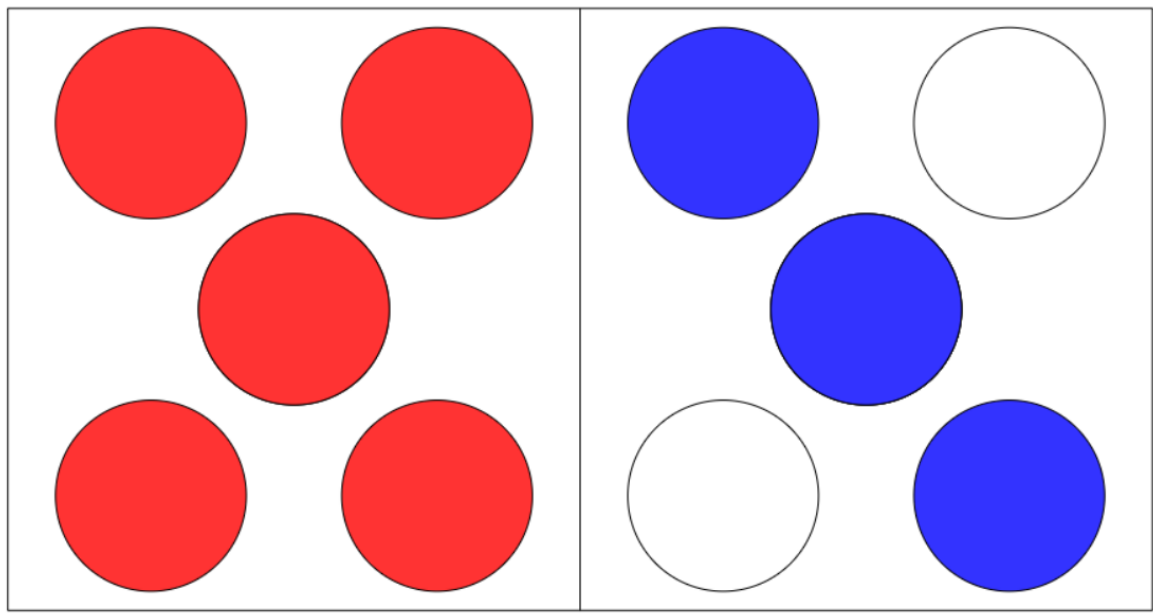
“I can see four ducks...because I can see one duck and three baby ducks and I know that makes four!”











Daily focussed maths sessions



Sessions start from a point at which ALL children can engage with the mathematics



Use of images and video clips in presentations to provoke discussion



Opportunities to discuss what the children notice and think

How can you help?

- ▶ Portray confidence, enjoyment and positivity in sharing mathematics with children
- ▶ Avoid promoting negative attitudes such as:
“I can’t do maths” or “I never liked maths at school”
- ▶ See and explore mathematical opportunities everywhere
- ▶ Model a ‘can-do’ attitude towards problem solving and encourage resilience when challenges occur

Spatial reasoning



<https://earlymaths.org/wp-content/uploads/2022/01/SRToolkitposter4to5.pdf>



Numberblocks

Sing along and learn all about numbers with the Numberblocks!

On **iPlayer**

Choose an episode

Maths Leader: Sam	R.E. PSHE
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At Petersfield Infant School we follow a 'teaching for mastery' approach, which is used by the leading schools in the world. Our school is part of a nationwide program run by the NCETM (National Centre for the Excellence of Teaching in Mathematics).	Video Tutorials E-Safety Eco-School	the leading nated by g of mathematics.
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The mastery approach sets high expectations for every child and ensures that all children develop a positive and confident attitude to mathematics. The learning journey follows the Early Years Foundation Stage (EYFS) and the National Curriculum and is broken down into small, logical steps at a pace that allows the whole class to master each aspect fully before moving on to the next. The teacher provides regular opportunities for children to engage in deep mathematical thinking, including for those who have grasped a concept more rapidly, while ensuring that children's misconceptions can be addressed early.

Petersfield Infant School Mathematics Calculation Guide

Children begin to record in the context of play or practical activities and problems.

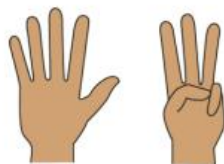
Children continue to explore mathematics practically while also developing more formal recording and representation.

Addition

Year R

Children begin to relate addition to combining two groups of objects. Activities include:

- Counting with numbers from one to 20, placing them in order and saying which number is one more or one less than a given number
- Use stories, games and songs to begin using language for addition
- Begin to record in the context of play and practical activities
- Solve simple word problems using their fingers



- Use the language of one more when adding one to group
- Count forwards along a number line



Year 1

Mental Fluency

Children will develop fluency in the following addition facts:

- Count to 100 in 1s, beginning with 0 or 1, or from any given number
- Add two 1-digit numbers, spotting doubles or pairs to 10
- Add ten to any 1-digit number
- Represent and use number bonds within 10

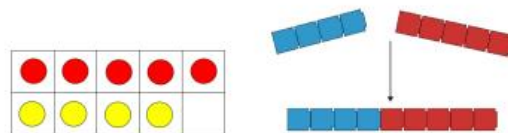
Calculation

Children are taught to:

- Understand and represent numbers to 100 as tens and ones



- Use objects to count and combine numbers, using the language of 'parts' and 'whole'. E.g. "Four is a part, five is a part, nine is the whole".

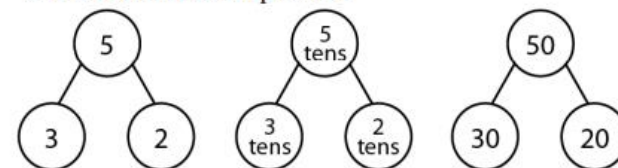


Year 2

Mental Fluency

Children will develop fluency in the following addition facts:

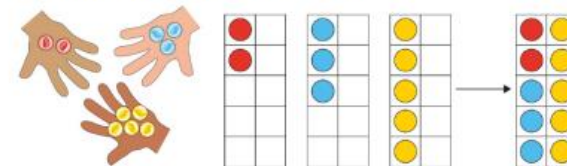
- Count on in steps of 2, 3, and 5 from 0, and in tens from any number, to and across 100
- Recall and use all addition facts to 20 fluently, and derive and use related facts up to 100



Calculation

Children will develop their use of the representations from Year 1, while being taught to:

- Add two or three 1-digit numbers




- Add a 1-digit number to any 2-digit number using number facts, including bridging multiples of 10

- Count on in 10s and 1s



Building 'Number Sense'

Children need to have plenty of experience and opportunities to explore number to help them to develop 'number sense'. This is the ability to be able to see and manipulate numbers in different ways. The following activities and games can be used at home to support your child.

- Throwing numbers: Tell your child a number – can they quickly hold up that many fingers? You could also play this game by rolling a dice.
- Bunny ears: Similar to 'throwing numbers', but child holds up their fingers on their head like 'bunny ears' – e.g. 7 could be made with 3 fingers on one hand and 4 on the other. Can they do the same number in a different way? How many ways can they find?
- Board games played with dice, like snakes and ladders.
- Roll a dice – can you do an action that number of times? E.g. hop on one leg or clap.
- Arrange objects such as counters in patterns like those found on a dice . Can you arrange the same number in a different way? Ask 'what's the same; what's different?'.