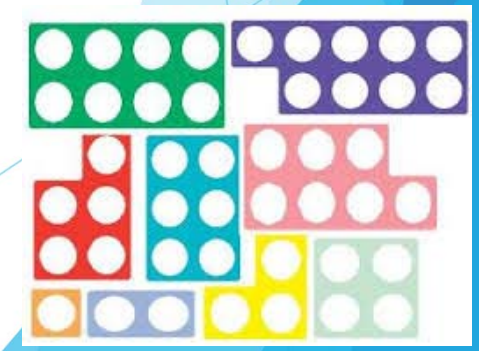
# EYFS and KS1Maths information morning

# Aims of today

- To find out about the EYFS & KS1 Maths Curriculum
- To see some of the resources we use in school to teach Maths
- To find out how maths mastery is taught here in EYFS/KS1
- To take away some ideas to support your children at home.



# Maths Mastery

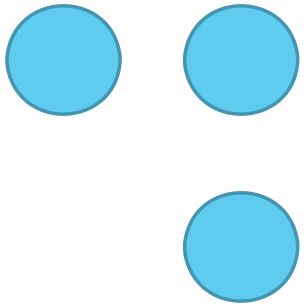
Mastering maths means pupils acquiring a deep, long-term, secure and adaptable understanding of the subject.

## Concrete

*Count out three shells*

## Pictorial

Draw out three



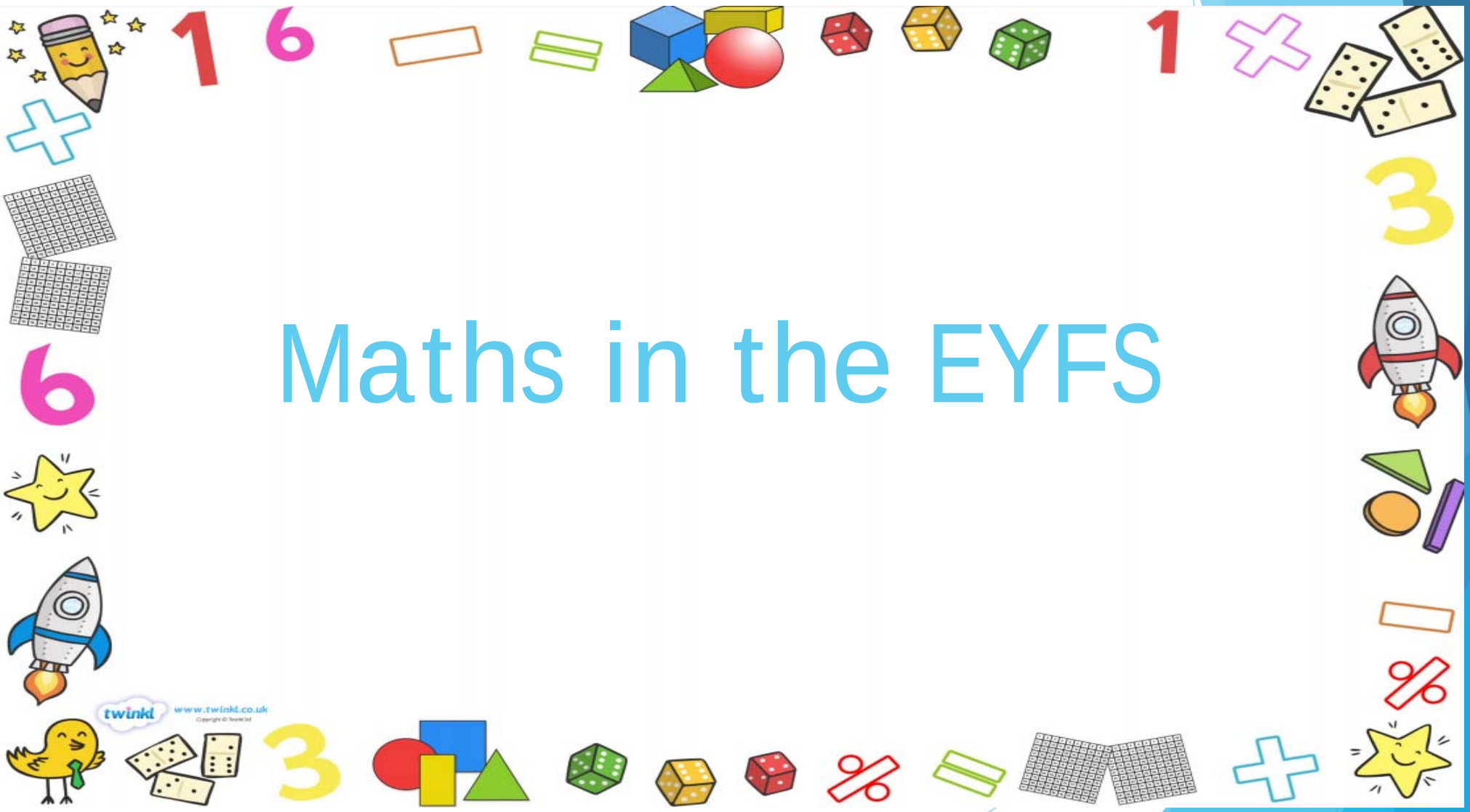
## Abstract

Find the number three/ record it

# White Rose approach

- All children are able to achieve – growth mind-set
- Small steps
- Focus on attainment, not ability
- Concrete, pictorial, abstract

# Maths in the EYFS



# Learning in Reception

## Children in Reception

- Count objects, actions and sounds.
- Subitise.
- Link the number symbol (numeral) with its cardinal number value.
- Count beyond ten.
- Compare numbers.
- Understand the 'one more than/one less than' relationship between consecutive numbers.
- Explore the composition of numbers to 10.
- Automatically recall number bonds for numbers 0–5 and some to 10.
- Select, rotate and manipulate shapes in order to develop spatial reasoning skills.
- Compose and decompose shapes so that children recognise a shape can have other shapes *within* it, just as numbers can.
- Continue, copy and create repeating patterns.
- Compare length, weight and capacity.

## Early Learning Goals

### Number

- Have a deep understanding of number to 10, including the composition of each number.
- Subitise (recognise quantities without counting) up to 5.
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

### Numerical Patterns

- Verbally count beyond 20, recognising the pattern of the counting system.
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Development matters
DfE 2021

# How is maths taught in Reception:

- Practical
- Small adult led group work
- Maths within provision- number of the week etc.
- Big focus on vocabulary and linking these to actions to support understanding- What can you see? How do you know?
- Use of concrete resources and pictorial resources introduced to support- adult led and within provision.

# What Maths might look like in Early Years...

# Learning Journey so far…

# What you can do at home…

- **Subitising- recognizing an amount without having to count it out.**
- **Counting beyond 10- focus on crossing the tens when doing this… nineteen, twenty…. 39, 40 etc.**
- Singing number songs e.g 5 little ducks, 10 green bottles etc – YouTube have lots of videos to watch and sing along to!
- Practical maths – counting items into a shopping basket, adding small quantities of coins together, sharing toy food at a teddy bear's picnic, food at meal times etc.
- Play should include opportunities for size, shape, capacity, number and simple addition and subtraction vocabulary.
- Board games – learning to recognise the numbers represented on a dice and counting to move
- Online games exploring number, shape and more! ICT maths games, White Rose 1 minute maths app
- Playing I spy whilst on walks out and about – which shapes or numbers can you see? Number plates, numbers on buses, house numbers etc. are great for this.
- Baking – support your child in reading numbers for ingredients, counting spoonfuls into a bowl, timing the baking of cakes etc.

# Mathematical vocabulary is so important!

*Full empty long short longer shortest more less same subtract take-away total count add plus largest smallest equal*

*2D shapes 3D shapes sides corners*

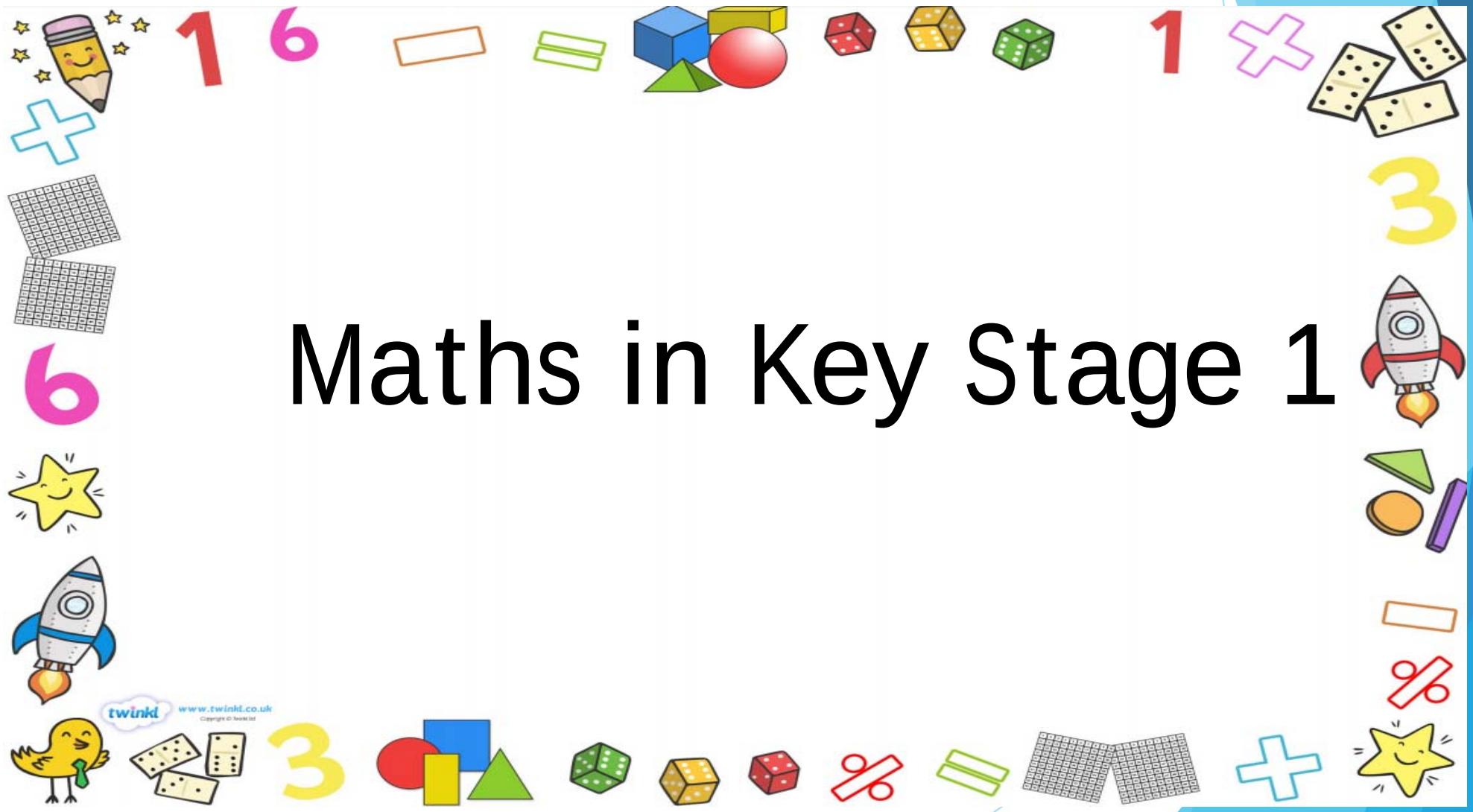
*And more…..*

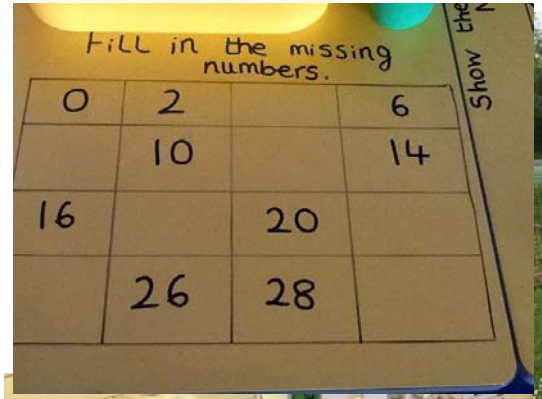
Use some of these words with your children during play.

# Children learn best when…

- Maths is practical
- Maths is fun
- Maths is used as part of their own play or a game.
- Maths is purposeful.

# Maths in Key Stage 1




Fill in the missing numbers.
0 2 6
10 14
16 20
26 28


How long is the string? Go on... start measuring!
21 cubes long


Can you find all the number bonds to 10?
Write the sums here!

# The Maths Curriculum (2014)

Children should:

- Become **fluent** in the fundamentals of mathematics, through varied and frequent practice over time, so that pupils develop understanding and the ability to recall and apply knowledge rapidly and accurately.

- **Reason mathematically** by following a line of enquiry. Justify or prove using mathematical language.

- **Solve problems** by applying their mathematical knowledge, breaking down problems into a series of simpler steps and persevering to seek solutions.

# Year 1 objectives

In the first year of key stage 1, there are seven fundamental areas of study included in the maths curriculum. These are:

- Number - Number and Place Value
- Number - Addition and Subtraction
- Number - Multiplication and Division
- Number - Fractions
- Measurement
- Geometry - Properties of Shape
- Geometry - Position and Direction

Each of these topics plays a key role in expanding children's maths knowledge and developing their confidence in working with numbers.

# Year 2 continued

There are eight main topic areas of study, which pupils will learn about in year 2, which are:

- Number - Number and Place Value
- Number - Addition and Subtraction
- **Number - Multiplication and Division**
- **Number - Fractions**
- **Measurement**
- **Geometry - Properties of Shape**
- **Geometry - Position and Direction**
- **Statistics**

You'll notice that Statistics is introduced to the curriculum for the first time, while all the other topic areas are the same as the year before.

# Year 2 objectives

In year 2, children will continue to expand their maths knowledge and build upon what they've learned in the previous year.

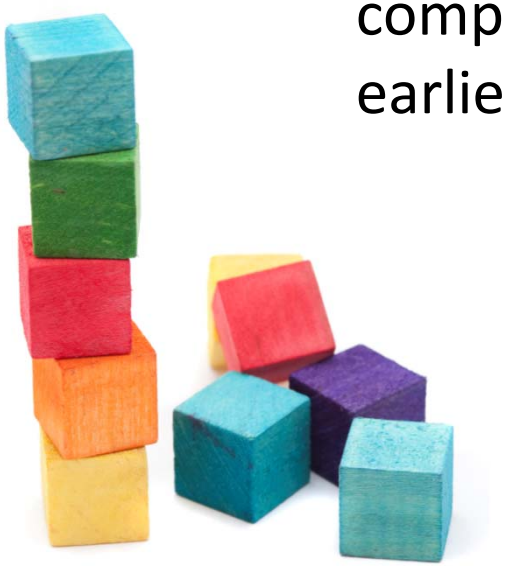
In year 2, children will develop key maths skills and expand their knowledge of important concepts, including calculations, times tables, geometry and more. Mastering these maths concepts will support children in becoming educated citizens and developing key life skills.

# Teaching principals

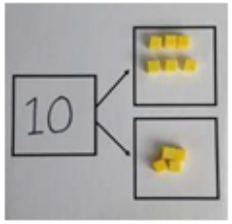
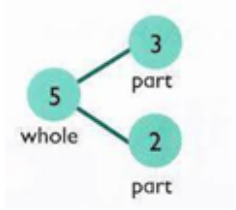
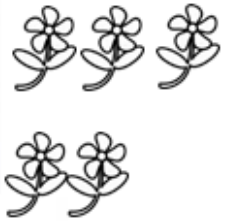
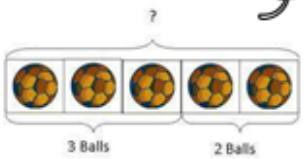
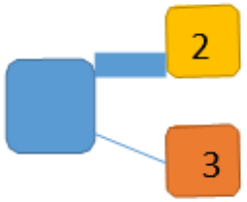
- **White Rose**
- **Whole class teaching** – all children learning the same skills
- **Support and challenge** through intervention, scaffolding and questioning
- Children not only learn **how** to use different methods but also **why** that method would be efficient
- **Variation** promotes deeper learning
- **Precise language- this is shared with parents on class dojo the Friday before to support pre teaching**
- **Practice** develops fluency
- Sufficient time is spent on key concepts to **embed learning**
- **Reasoning** and **problem solving** consolidates learning

## ***Depth*** not acceleration…

In the past children and progress was measured in terms
of levels, which encouraged undue pace. Children were accelerated onto more complex concepts before really mastering earlier ones.



Our current curriculum encourages a study of fewer skills in greater depth – mastery.

| Objective | Concrete | Pictorial | Abstract |
|---|---|---|---|
| Number bonds of 5, 6, 7, 8, 9 and 10 |     Use cubes to add two numbers together as a group or in a bar.  |       Use pictures to add two numbers together as a group. | 2 + 3 = 5<br>3 + 2 = 5<br>5 = 3 + 2<br>5 = 2 + 3   Use the part-part-whole diagram as shown above to move into the abstract. |

# Year One
# Count in Multiples of 2

## Fluency

Continue the pattern

2, 4, 6, 8 ……..

14, 16, 18…..

22,20,18…

## Reasoning

True or False

I start at 2 and count in twos. I will say the number 9.

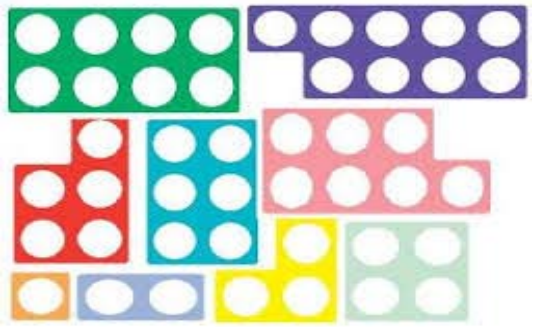
## Problem Solving

There are 2 flowers in each pot. How many flowers are there in 10 pots?

# Number bonds to 10

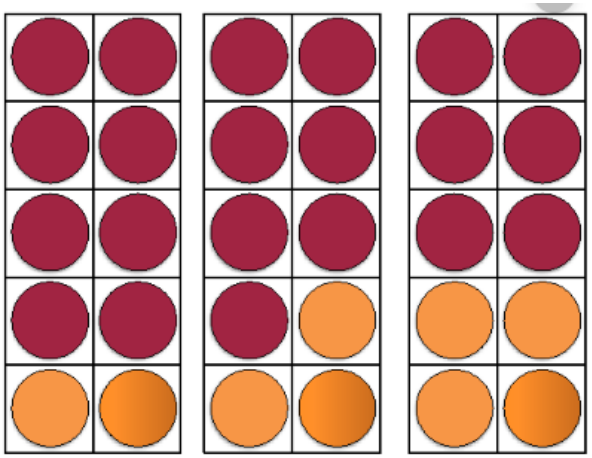
## Concrete

Use the Numicon to show how you can make number bonds to 10.



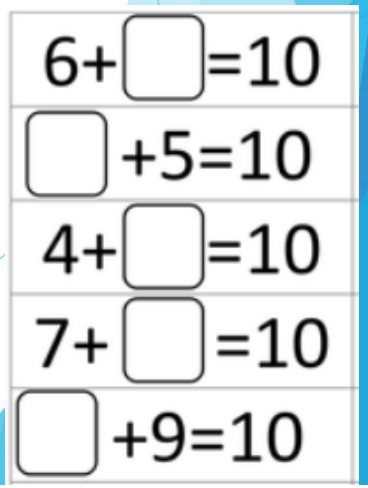
## Pictorial

Draw dots on a tens frame to represent number bonds to 10.

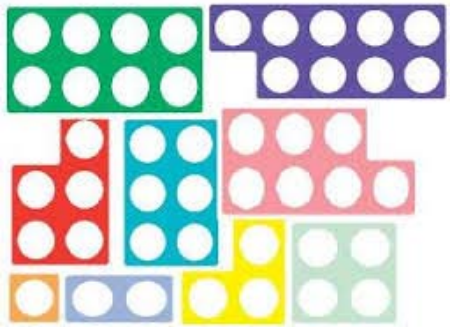


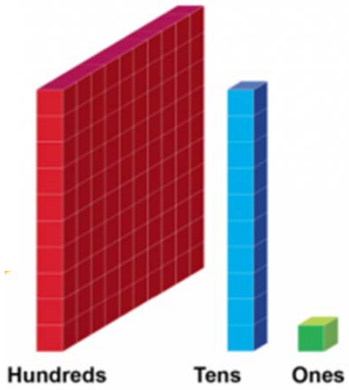
## Abstract

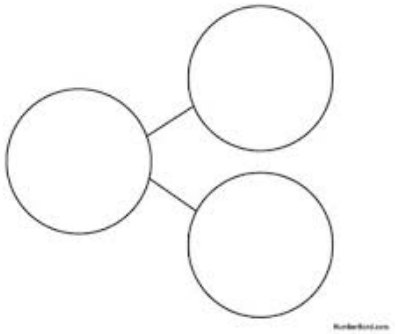
Write number bonds to 10 in a logical order.

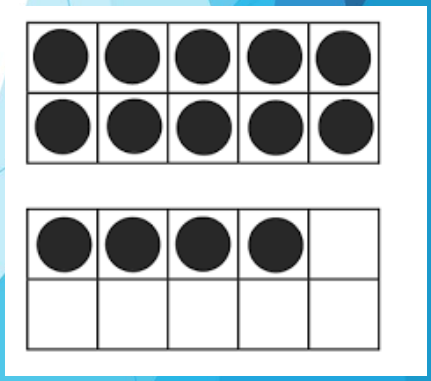


# Resources

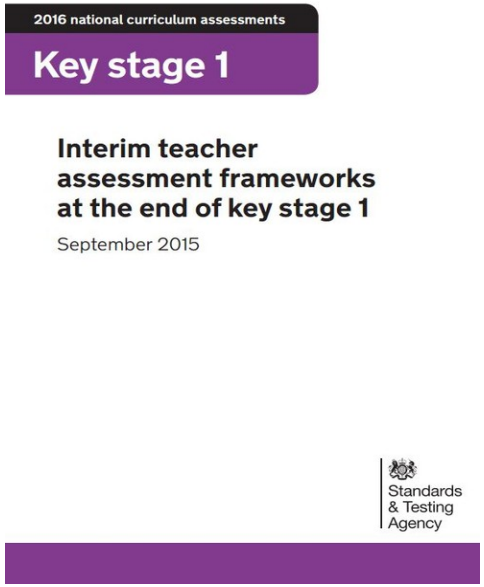






# There have been changes to End of Key Stage One Assessments & Year 2 SATs




# Ways to support at home:

- Making maths practical and giving it a real life context. (E.g. Counting out pocket money, spotting numbers in real life, baking, using different shaped containers in the bath to explore capacity etc.) Keeping it fun!
- Talking about the vocabulary shared by your child's class teacher each week by looking at the Class Dojo posts
- Playing board games and online games
- Watch Numberblocks together https://www.bbc.co.uk/iplayer/episodes/b08bzfnh/numberblocks
- White Rose 1 minute maths app https://whiteroseeducation.com/1-minute-maths or ICT maths games online https://ictgames.com/mobilePage/index.html
- https://www.puttenhamschool.co.uk/maths/ more information on our website.

Thank you for coming today!

Any questions?