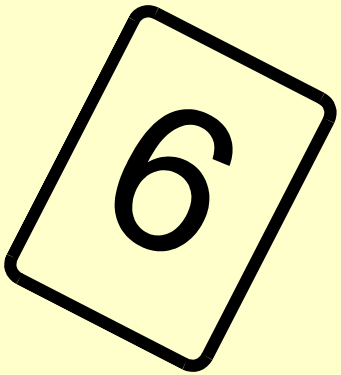
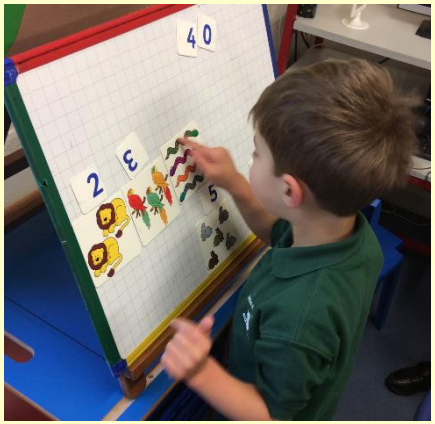
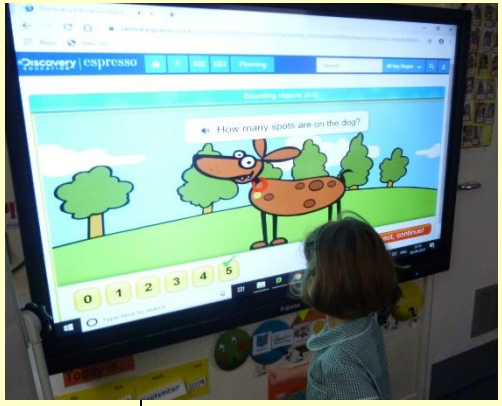
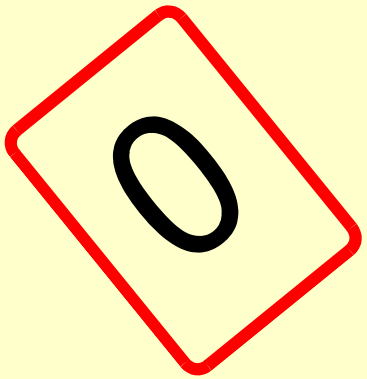
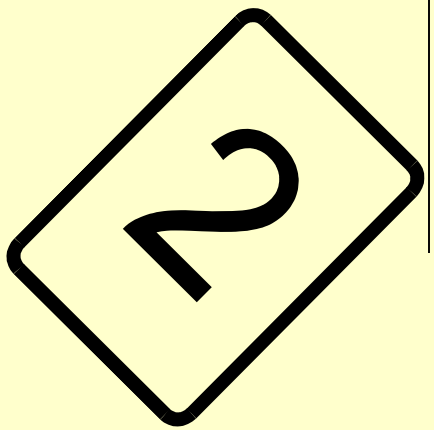


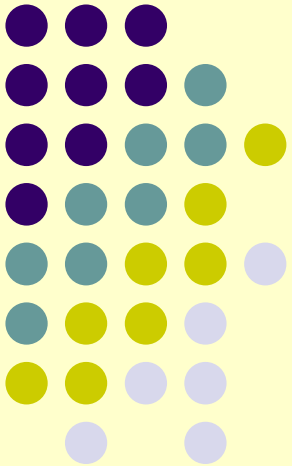




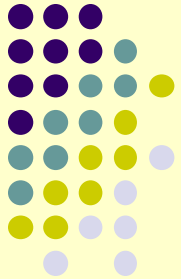
Mathematics in Reception







Marvellous Mathematicians



Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to **count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers.** By providing frequent and varied opportunities to build and apply this understanding, children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built.

In addition, it is important that the curriculum includes rich opportunities for children to develop their **spatial reasoning** skills across all areas of mathematics including **shape, space and measures**. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.

Mathematics

In Reception, the Mathematics curriculum is split into two areas:

- Number
- Numerical Pattern

Number

Early Learning Goal

- **Have a deep understanding of number to 10, including the composition of each number**

1:1 correspondence and reciting numbers. Initially through counting games, rhymes, songs and stories. Investigating parts and of a whole number

- **Subitise (recognise quantities without counting) up to 5**

Represented in linear, paired, die, and random arrangements of dots or objects.

- **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 Pattern

Early Learning Goal

- **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.**

Shape, Space and Measure

As part of the steps towards the Numerical Pattern Early Learning Goal, the children also learn about and develop their Shape, Space and Measure skills.

- 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 in, just as numbers can.
- Continue, copy and create repeating patterns.
- Compare length, weight and capacity

Active Learning
Mathematics in the Reception Class

Maths in a Reception Class will probably be very different to your first experiences of learning about numbers!

We have a very hands-on approach, where children learn effectively through active learning.

There is lots of practical work, and as a result there can be very little recording.

Self-Initiated Maths in Reception

In Reception a large part of the children's experience as Mathematicians comes through their independent learning and play.

A Typical Maths Lesson in Reception

Warm Up Activity:

Counting with actions, number recognition, recapping of previous learning etc.

Main Teaching: Teacher will introduce a skill or concept.

Focus Activity (during Green Mouse Time):

Teacher working with a small group of children consolidating and extending skills introduced in main teaching part of the lesson. This often takes place after a week of focusing on a new skill.

Demonstration lesson

- **Week 23 Session 3**
- **Explain accompanying Teacher Focus activity**

Mastering Number

Reception

Term 3

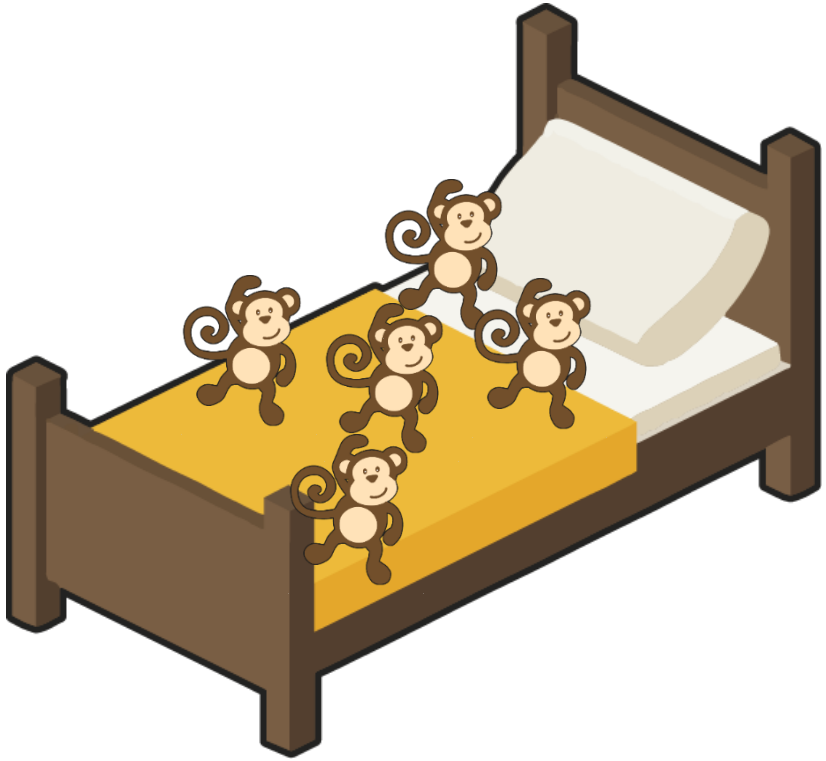
Week 23

Focus: Composition

NCETM

NATIONAL CENTRE FOR EXCELLENCE IN THE TEACHING OF MATHEMATICS

Session 3



Let's sing our rhyme again!

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What do you notice?

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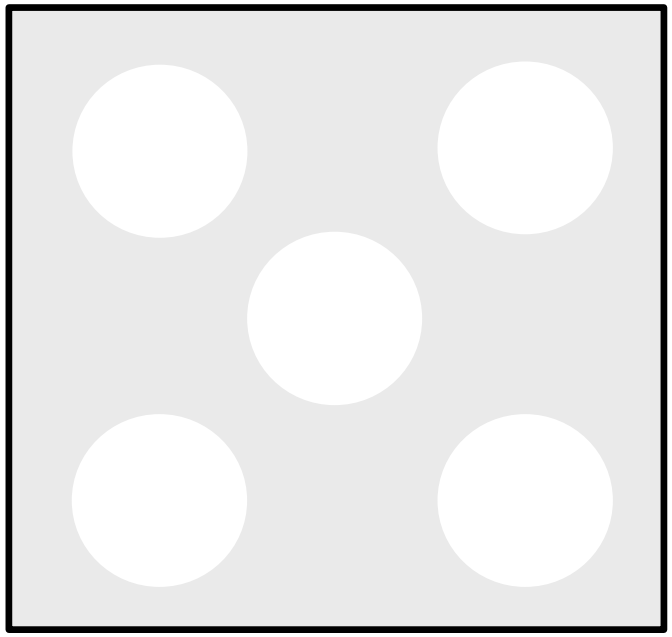

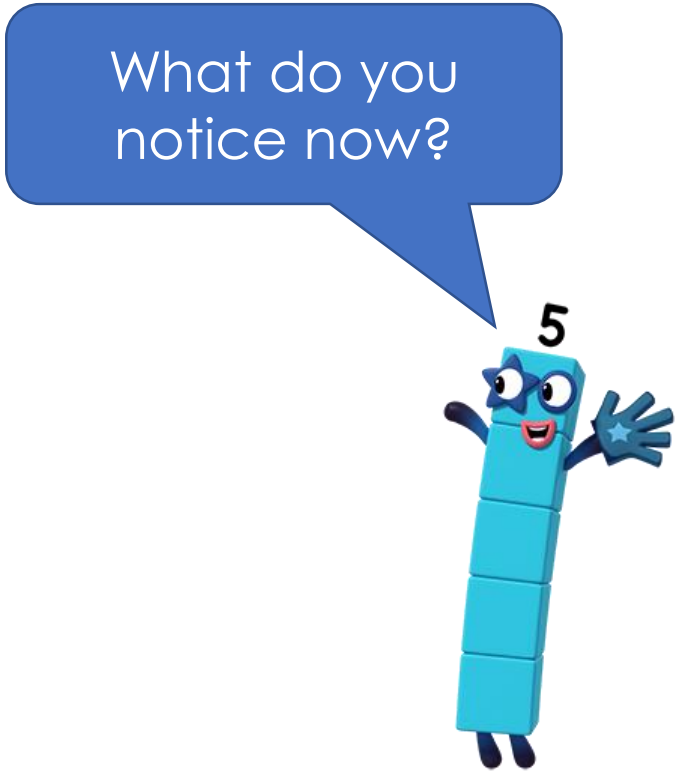

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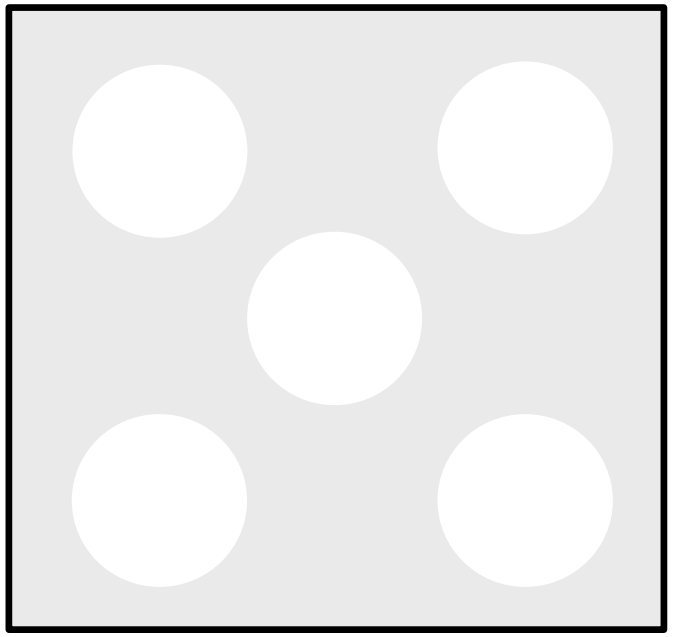

How can we use our die frame to show this pattern?

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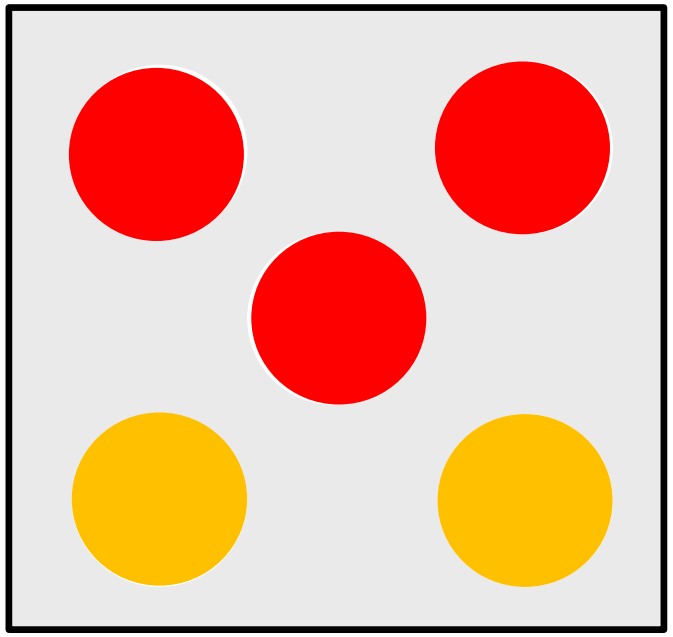

Is this the only way?

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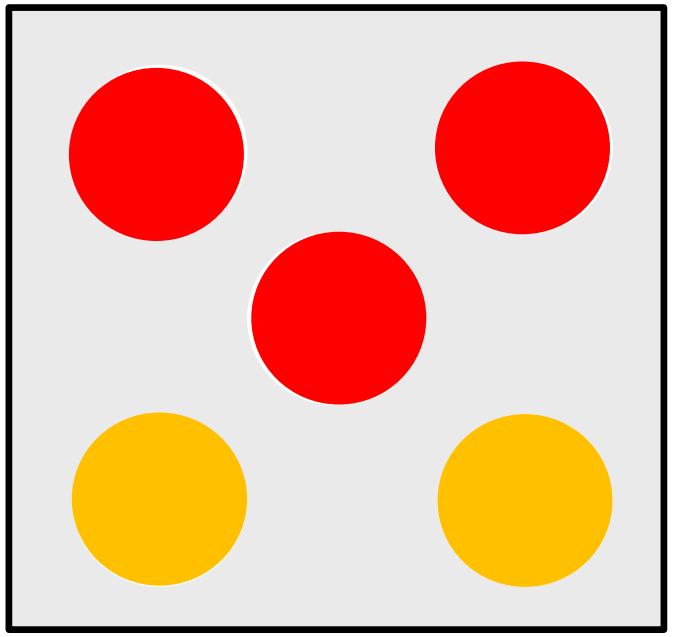

Can you find another way to show the same finger pattern?

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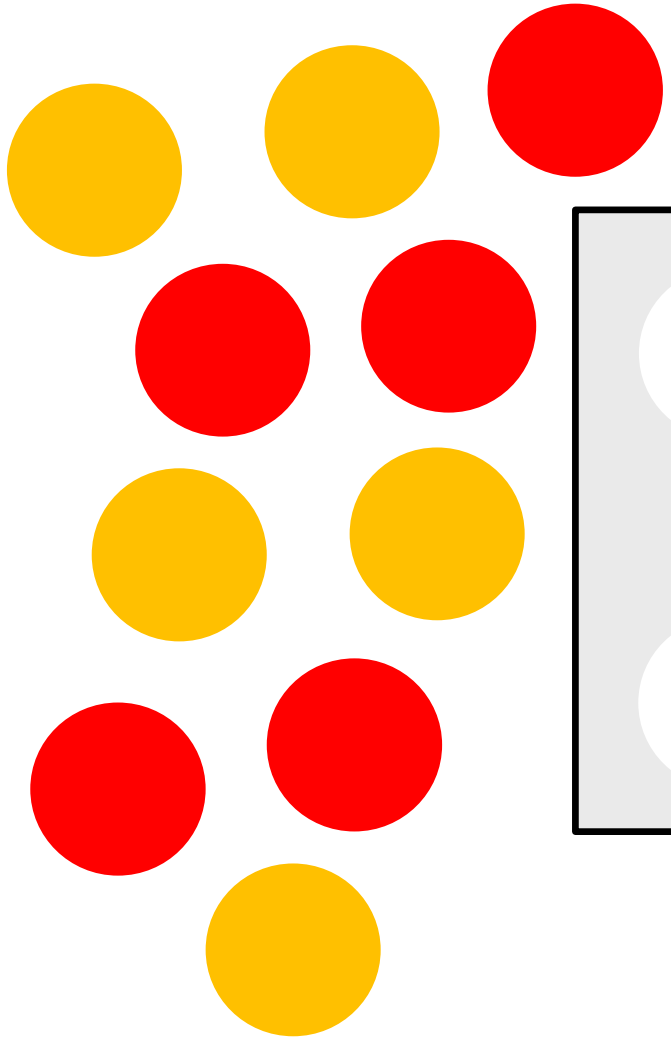
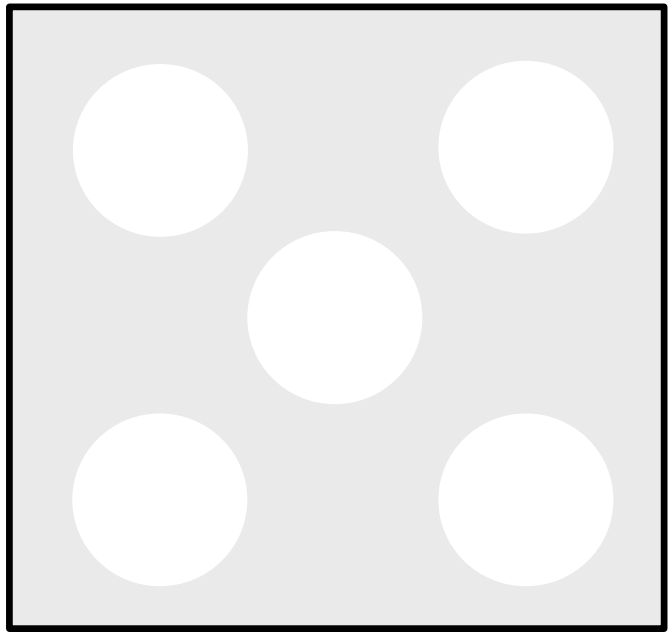


Can you say what you have made?



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How can you help your child at home?

Here are just a few ways in which you do this:

- It is worth having a set of number cards; these can be home made;
- Help your child to learn to recognise all the numerals from 0 to 10. Point out numbers you see in everyday activities, such as numbers on packets or prices, car number plates, house or bus numbers;
- Introduce zero, (0) as a way of describing nothing or none;
- Play mathematical games such as, snakes and ladders, dominoes, skittles, and other games that depend on numbers, counting, calculating and scoring

How can you help your child at home?

- Capitalise on hobbies – most children have hobbies that can be linked to maths activities, including football, cars, trains, etc. They will love making collections of things of interest to them;
- Be creative – encourage your child to spot shapes and patterns in the environment or at home;
- Talk about the time – seasons, day and night, morning, afternoon, evening, days, months, years. Discussing main times of the day, e.g. lunchtime, bedtime, etc;
- Cooking is great! Involve your child in cooking activities; encouraging them to use the vocabulary of heavy/heavier/light/lighter for weight and full/half-full/empty for capacity;