WELCOME TO

Reception

Maths Information Evening

Today's session

- Number
- Numerical Patterns
- ELGs
- Home Support

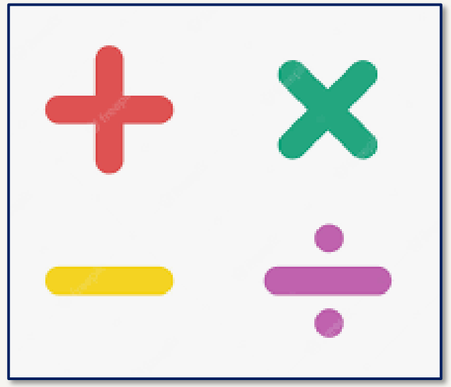
Our Culture and Ethos of Maths

*'Understanding of number is a fundamental life skill. The culture and ethos at Leasowes is about breaking the perception of **'I can't do maths'**, converting reluctant mathematicians into resilient and confident learners. We incorporate sustained levels of challenge through varied and high-quality activities with a focus on fluency, reasoning and problem solving to meet the goal of **'True Fluency'.** We instil courage and an acceptance that challenge is often a necessary step in learning.'*

*'We understand, that the children who thrive in maths, flourish because they are able to see the pattern and interconnections within the given concept. The CPA approach gives all children the opportunity to do this, ensuring that our teaching of **Maths is equitable**. We use effective resources and scaffolding; creating many concrete and pictorial opportunities before introducing the abstract. This enables the children to build a clearer understanding, connecting their knowledge and skills and therefore visualising the problem at hand when working in the abstract form.'*

'The Golden Thread'
NUMBER

A skill for LIFE!

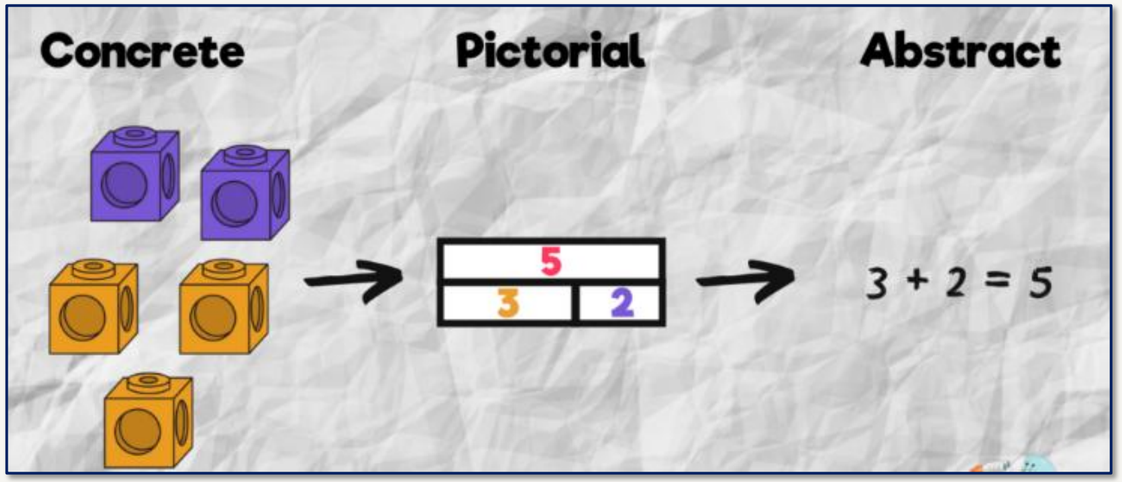


Leasowes Maths Policy

Most pupils gave maths 10/10 from an enjoyment perspective and all pupils could explain why they had given that choice. All pupils could explain what they had been learning and even the youngest pupils were able to clearly explain what a misconception is and what an error is.

Expectations are high. Technical vocabulary is used very well, and pupils rise to the challenge. Pupils clearly love their maths lessons

Staff voice was equally strong. All staff reflected positively and accurately on their lessons. They have really enjoyed this new piece of work and can see how it is making a positive difference.



Maths in the EYFS

- Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically.

- Maths is planned in conjunction with the EYFS requirements for mathematical development, introducing the children to the fundamentals of number and numerical patterns that they will need to know to ensure that they are prepared for the learning in KS1.

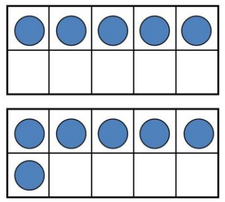
Maths in the EYFS

- Maths in Early Years is planned rigorously to meet the needs of our learners and provide them with frequent and varied opportunities to build and apply their understanding.

- Children experience mathematics daily through a whole-class teacher input, adult led learning and child led Continuous Provision (CP) activities.

- During these lessons, children explore maths following the concreate, pictorial, abstract (CPA) approach. Children use a range of concrete manipulatives to support their mathematical development such as:

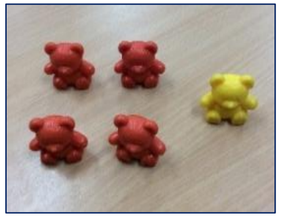
Numicon



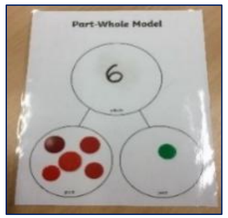
Tens Frames

Counters

Number lines



Compare Bears



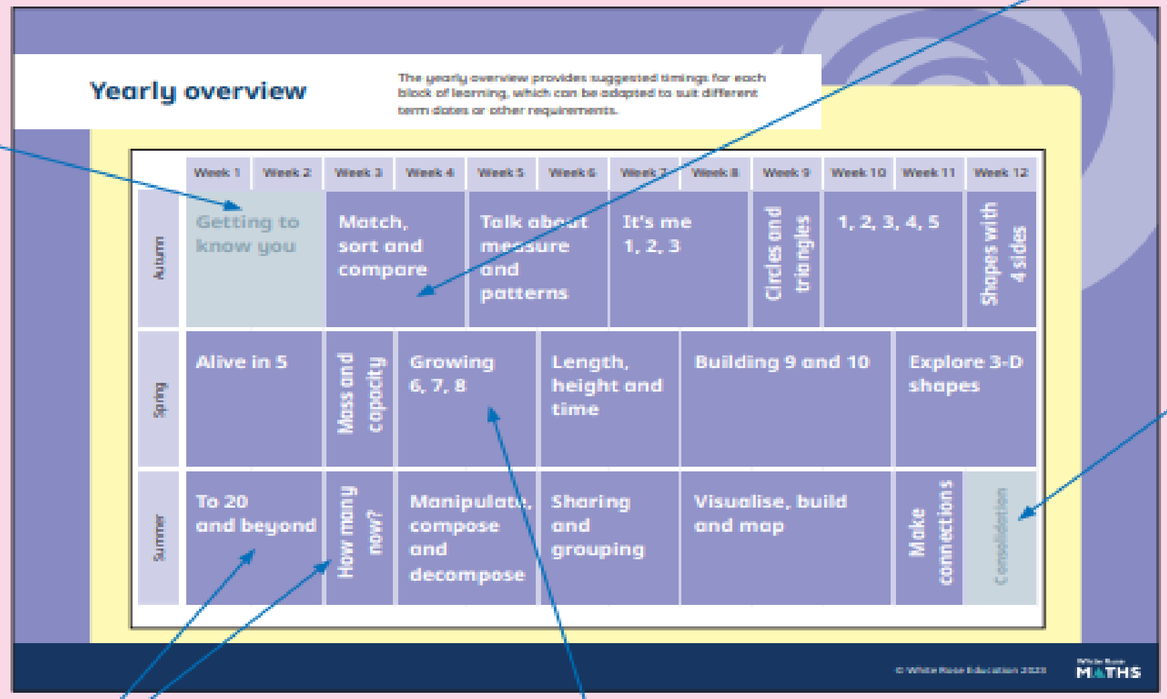
Part-part Whole

White Rose Scheme

Overview with suggested weekly timings. Block titles are clear and show progress through number and spatial reasoning.

Early blocks focus on use of provision to support key early maths and routines.

The first 2 weeks are for you to get to know children, develop routines and give you the flexibility to complete baseline assessments.



Consolidation weeks allow for a degree of flexibility in the suggested block lengths or to consolidate learning based on the needs of your children.

Content is consolidated so all concepts are explicitly taught before assessment for ELG.

Subitising is taught both perceptually and conceptually through the blocks. Concepts such as doubling and 1 more / 1 less is focused on in the progression of the numbers.

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White Rose MATHS

Maths in Reception is split into three main areas.

1. Number

2. Numerical patterns

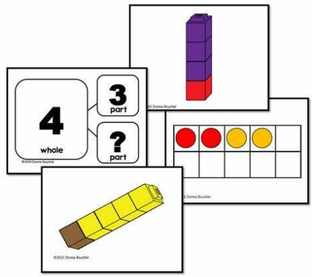
3. Spatial reasoning

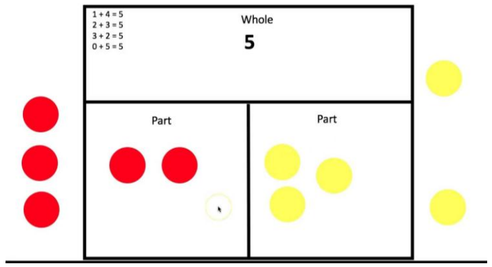
Number

- Children are introduced to the fundamental number basics needed such as counting, subitising, calculating simple addition and subtraction problems, as well as building their confidence in the accurate use of vocabulary.

"Why spend so long on numbers to 10? My child can count to 100."

- Our progressive curriculum focusses on building upon numbers steadily. This means that children can understand mathematical concepts beyond rote approaches and can select appropriate mathematical skills and knowledge to solve problems. Once children have mastered a mathematical concept, they will exhibit creativity and critical thinking in their approach to a problem or task. However, this does not mean children are not counting and discussing larger numbers in our daily routines such as lining up and counting the children.
- Developing early number sense is crucial to support children in developing a deep understanding of number that will allow them to work with more complex numbers in the future.





Number at home

How many buttons are on your shirt?

How many teddies did you put in the chest?

Put these pieces of ribbon in order from the longest to the shortest.

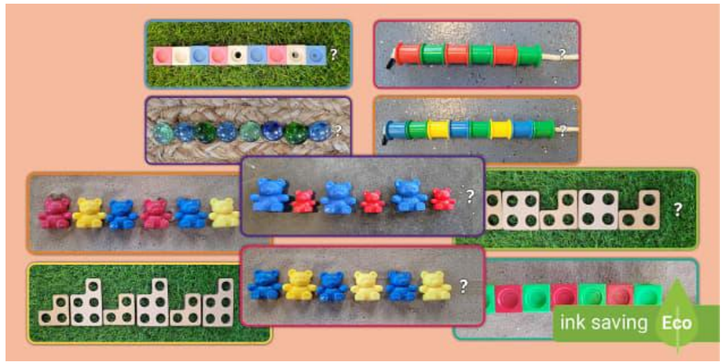
Count out the correct amount of plates on the table.

How many stairs do you walk up in your house?

Put these bowls in order from the smallest to the largest.

Numerical patterns

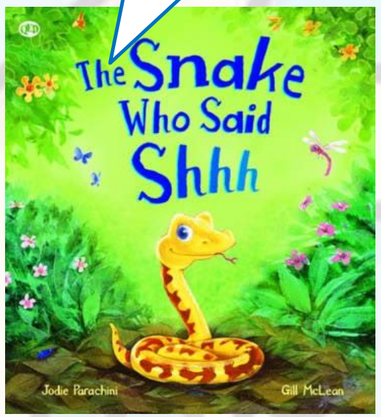
- Research shows that children's ability to see patterns forms the basis of early mathematical thinking. When you teach children to become aware of patterns, they will build up the skill of spotting patterns for themselves, they will see how patterns change and notice irregularities.
- Pattern awareness can vary significantly between children. Early patterning begins with matching one-to-one with objects, pictures or numbers. As children become more confident in making patterns and seeing connections, they will be able talk out loud about what they have noticed.
- Children will start to identify the mathematical relationships and connections around them in the home, in school and outside in nature.
- Patterns supports the foundations for recall of the counting sequence and understanding number operations. Learning about patterns and connections will help children to make their own predictions and form logical connections. It's an important foundation for later mathematical thinking and reasoning.



Numerical patterns at home

Creating and spotting patterns with numbers

What pattern can you spot on the snake in this story book?



Can you notice any patterns in this game?

What pattern do you notice on your jumper?

What patterns can you see in nature?

Can you hear any repeating words in this song?

Spatial reasoning

- Spatial reasoning is the understanding of how objects can move in a 3-dimensional world. This comes with shape, space and measure.

- Understanding the physical properties of objects allows children to picture shapes in their minds and think about how they could be manipulated. This is an important building block of mathematical thinking. It lies behind problem solving and later maths skills, including geometry.

Spatial reasoning at home

Can you find the next piece?

“sharp corner”
“pointy”
“curvy”

Can you remember the route to she shops?

What is behind your den?

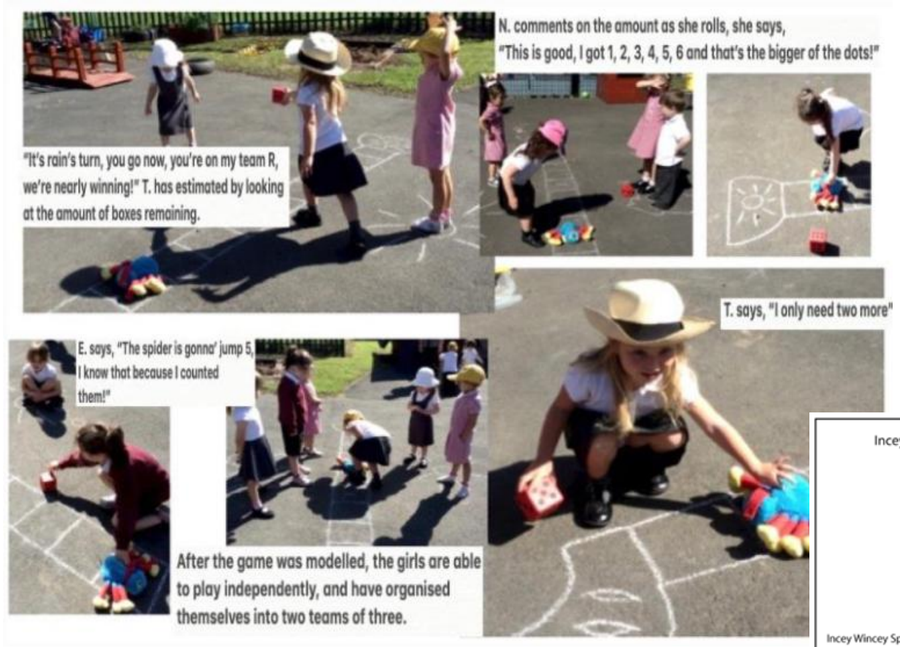
Maths in the EYFS

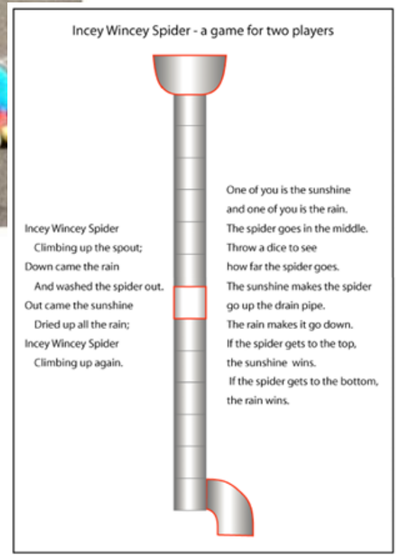
Developing children's oracy and problem solving

Developing children's **oracy and language skills** is a fundamental part of developing strong mathematicians. Children need rich mathematical language in order to:

- Explain their thinking
- Reason and justify their ideas
- Solve problems
- Work collaboratively with others

When children talk about maths, they deepen their understanding.





True Fluency

True fluency is understanding the different areas of maths (fluency, reasoning and problem solving) and explaining how you can answer questions.

Maths in the EYFS

- Misconceptions and errors are skilfully planned into lessons to provide children with a safe space to explore mathematical mishaps and model how to think correctly to be successful at maths.

- Retrieval opportunities are carefully planned for children to further embed prior learning, equipping them with the knowledge and skills to solve mathematical problems.

5 Counting Principles

1. **The one-to-one principle.**
   This involves children assigning one number name to each object that is being counted. Children need to ensure that they count each object only once, ensuring they have counted every object.

2. **The stable-order principle.**
   Children understand that, when counting, the numbers have to be said in a certain order.

3. **The cardinal principle.**
   Children understand that the number name assigned to the final object in a group is the total number of objects in that group.

5 Counting Principles

4. The abstraction principle.

This involves children understanding that anything can be counted, including things that cannot be touched, such as sounds and movements e.g. jumps.

5. The order-irrelevance principle

This involves children understanding that the order in which we count a group of objects is irrelevant. There will still be the same number.

Maths
Early Learning Goals

Number

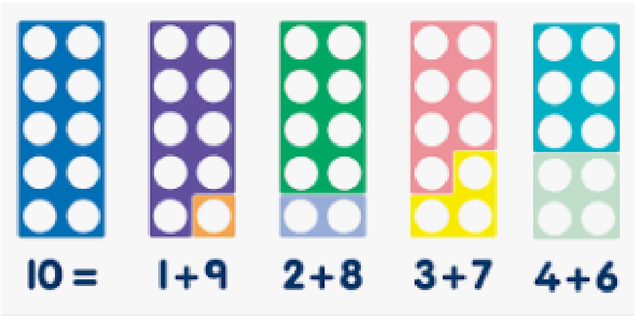
- Have a deep understanding of number to 10, including the composition of each number.
- Subitise (recognise quantities without counting) up to 5.
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10,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

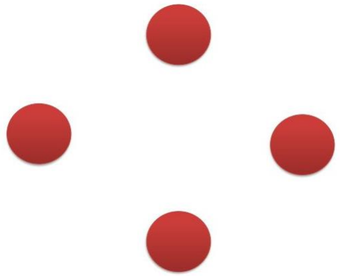
Number Bonds

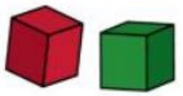
- Number bonds are a huge part of the ELGs.
- Over the year, through subitising, the children will develop their knowledge of number bonds to 5 and then to 10.
- The idea is that children should be able to recall all number bonds to 10 by the end of Reception.
- This involves children knowing that 10 can be made up of 1+9, 2+8, 3+7, 4+6, 5+5, 6+4, 7+3, 8+2, 9+1, 10+0.
- Numicon can help children to see these parts.

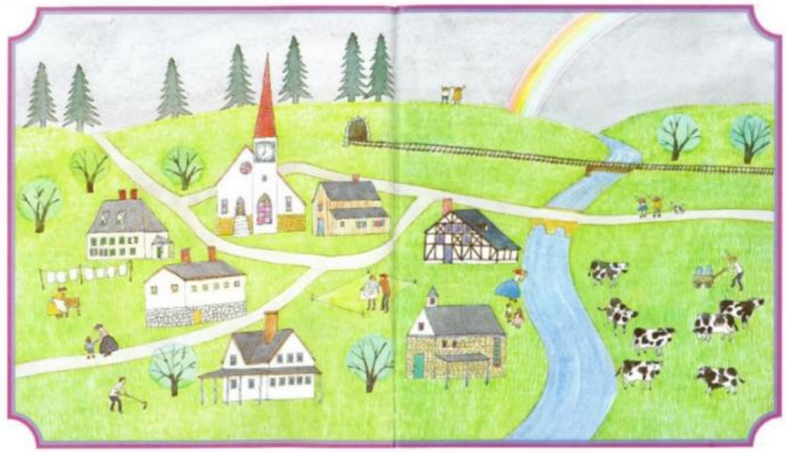


Subitising

- It is the ability to quickly recognise how many objects are in a group without actually counting.
- Children will learn to subitise spots, pictorial objects, and objects within the environment.



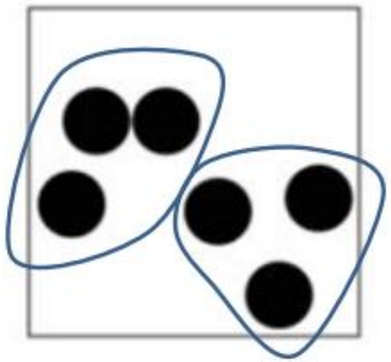




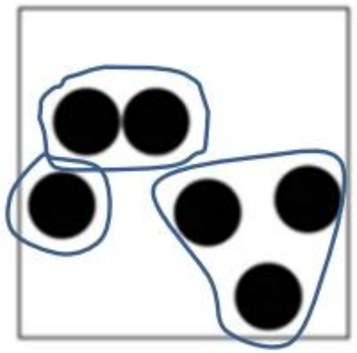
Subitising and Composition

- Subitising helps children to understand the composition of numbers.
- Children will learn that numbers are composed of smaller numbers.
- Numbers can be made of 2 parts.
- Numbers can be made of more than 2 parts.
- Numbers can be made of equal parts.
- Numbers can be made of unequal parts.

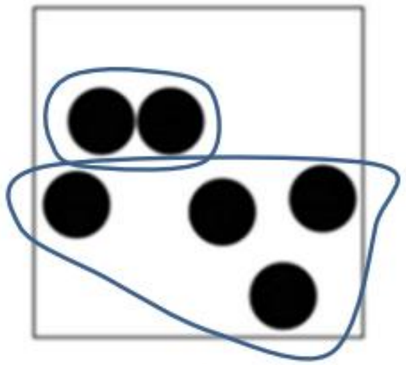
EXPLORING THE COMPOSITION OF 6



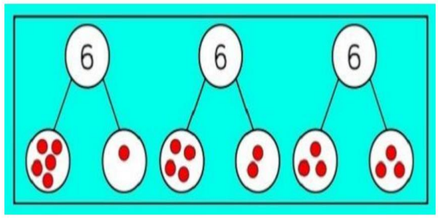
3 and 3



1 and 2 and 3

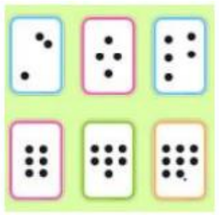


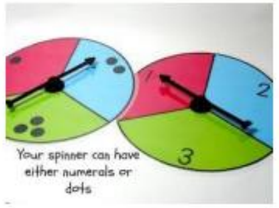
2 and 4

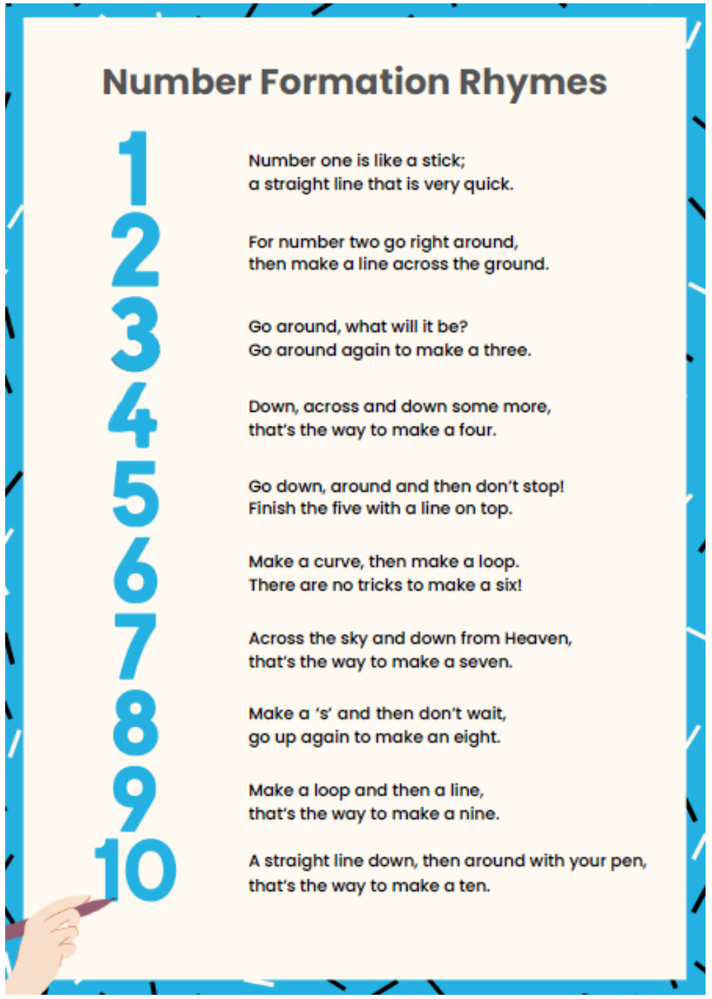


How else can I help my child at home?

- Number pairs
- Quick flashcards
- Bingo
- Number treasure hunt
- Find a number the same as mine, more than or less than mine
- Dice and spinner games
- Domino games
- Number formation rhymes
- [Numberblocks:](#) Sing along and learn all about numbers with the Numberblocks!

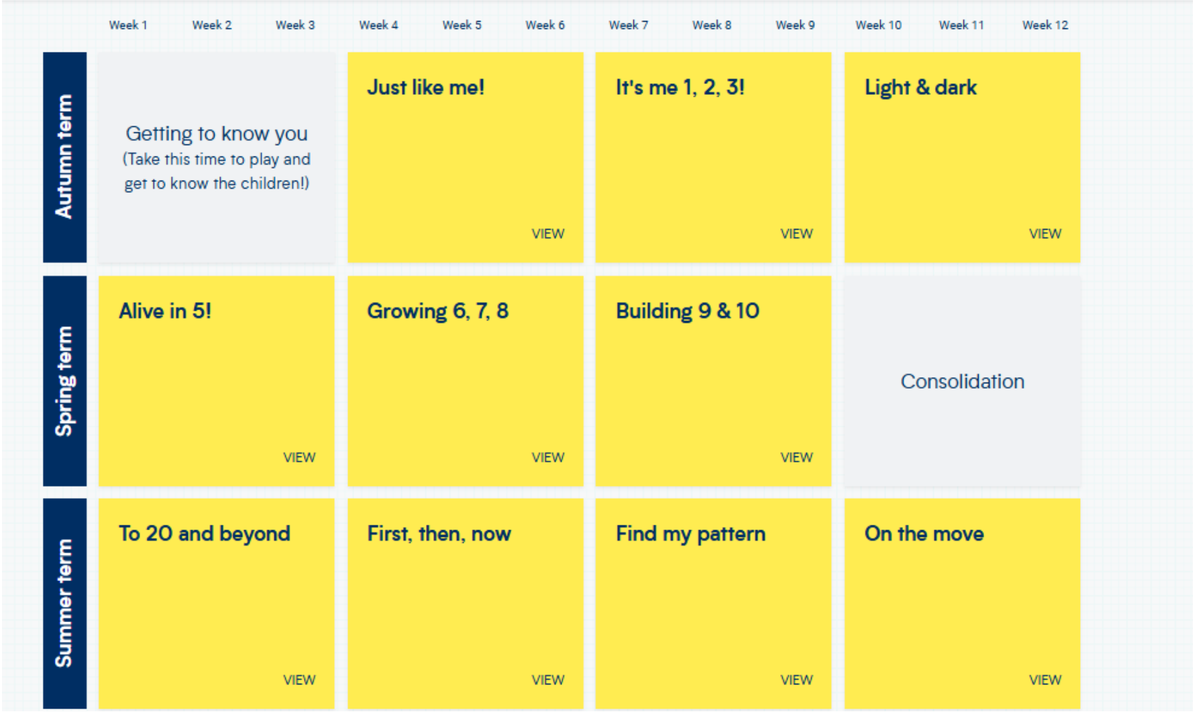






Home Support & Maths Resources

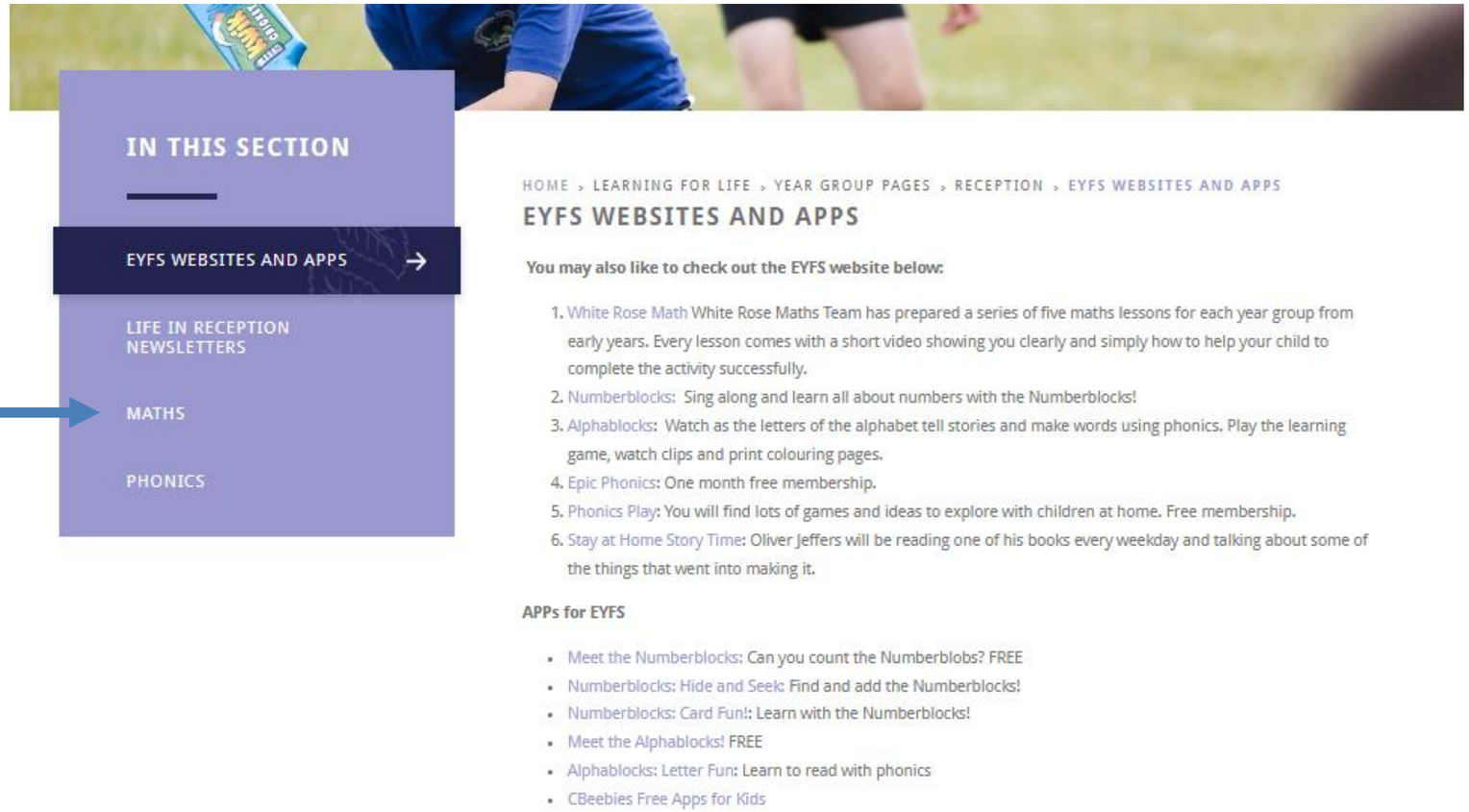
- White Rose Maths Team has prepared a series of maths lessons for each year group from early years. Every lesson comes with a short video showing you clearly and simply how to help your child to complete the activity successfully.



https://whiteroseeducation.com/parent-pupil-resources/maths/home-learning

Maths information – Website

All Maths resources and todays PowerPoint can be downloaded via our school website.



Thank you for your support.