

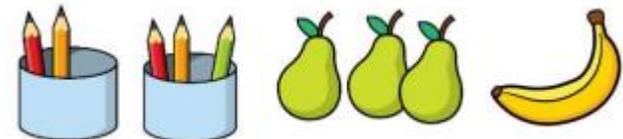


SUBJECT LEADERS

Look out for the ...

little mathematicians

in the Early Years at Rood End



EYFS Educational Programme s must involve activities and experiences for children, as set out under each of the areas of learning

MATHEMATICS - 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** - such as using manipulatives, including small pebbles and **tens frames** for organising counting - 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.

The environment is planned so that maths can happen everywhere!

At Rood End we recognise that mathematics needs to make sense to the pupils and so our learning spaces are resourced for this to happen with the adults facilitating learning through the modelling of mathematical language in throughout the day.

Outdoor play helps us to use and apply our maths beyond the classroom . We carry and build with objects that are different shapes and sizes so that children can use rich mathematical vocabulary in meaningful contexts.

Look at the opportunities for developing mathematical understanding using concrete resources as you walk around our setting.

At Rood End we:

Ensure that our timetable and experiences allows for explicit maths teaching as well as enables children to understand that maths is part of everyday life.

Mathematical thinking is encouraged when doing our register, our daily calendar and when we talk about what *we notice* in everyday things.

Mathematical vocabulary for number and shape, space and measures is used and encouraged throughout the day as we play and learn. We talk about the thin paintbrushes, the long string; the pattern on a zebra and the fitting together of jigsaw pieces as we play so that children are immersed in maths 'first hand'. They have time to 'have a go' explore ideas and solve problems in a safe, supportive learning space that is rich and repetitive in mathematical opportunity.

Tidying up is even a maths activity as we sort the toys into the correct trays and boxes!

We believe there's a maths opportunity everywhere just waiting to be held in your hands!.

Our 'discrete' maths sessions are taught daily and we are guided by the mastering number NCTEM scheme. Our maths sessions are always practical and allow pupils to build on and develop their understanding through 'concrete' application. White Rose is used to support nursery and understanding of Shape, Space & Measures.

Number Rhymes and singing are used to support mathematical understanding and helps to introduce mathematical concepts. Our songs are used frequently and with visual representations..

Numberblocks and manipulatives.

Numberblocks are a fun and accessible way of supporting learning in number and feature in our early learning environments.

Pupils have a rich items, objects and loose parts to play with so that every day they can hold maths in their hands.

Nursery & Reception Checkpoints from *Development Matters*

Checkpoint

Specific Area *Mathematics*

| | |
|--|---|
| <p>Nursery (3-4 years) Baseline</p> | <p>Can say when they have lots or more than someone else. Can complete a simple insert jigsaw. Says some numerals. Interested in sorting objects (colour, type or size). Describes an object by its size, shape or colour.</p> |
| <p>Nursery (3-4) Autumn 2 Checkpoint</p> | <p>Make comparisons between objects relating to size, length, weight and capacity. Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. Combine shapes to make new ones – an arch, a bigger triangle etc. Recognise groups with 1, 2 or 3 objects in them. (not numerals) arrangements</p> |
| <p>Nursery (3-4) Spring 2 Checkpoint</p> | <p>Extend and create ABAB patterns – stick, leaf, stick, leaf. Notice and correct an error in a simple repeating pattern. Begin to describe a sequence of events, real or fictional, using words such as ‘first’, ‘then.’ Recognise groups with 1, 2, 3 and 4 objects with increasing fluency Shows finger numbers up to 3</p> |
| <p>End of Nursery (3-4) Checkpoint AND/OR Reception baseline</p> | <p>Develop fast recognition of up to 3 objects, without having to count them individually (‘subitising’). Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5. Know that the last number reached when counting a small set of objects tells you how many there are in total (‘cardinal principle’). Show ‘finger numbers’ up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals. (represents/ draws 3 people in family/ draws 2 eyes and 2 legs, draws 3 bowls for the bears, draws 3 little frogs) Solve real world mathematical problems with numbers up to 5. Compare quantities using language: ‘more than’, ‘fewer than’. Talk about and explore 2D using informal and mathematical language: ‘sides’, ‘corners’, ‘straight’, ‘flat’, ‘round’. Understand position through words alone Discuss routes and locations, using words like ‘in front of’ and ‘behind’ – linked to wellcomm expectations Talk about and identify the patterns around them</p> |
| <p>Autumn 2 Checkpoint</p> | <p>See NCTEM Scheme Reception Year Count objects, actions and sounds. Subitise 1 - 3 Link the number symbol (numeral) with its cardinal number value. Beyond 5 Understand the ‘one more than/one less than’ relationship between consecutive numbers. Compare length, weight and capacity</p> |
| <p>Spring 2 Checkpoint</p> | <p>See NCTEM scheme Reception Year 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. Subitise. 1 - 5 Count beyond ten. Compare 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 to develop spatial reasoning skills.</p> |

**ELG –
End of Reception**

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.

Look at how Maths is being developed during purposeful, planned play at Rood

Does it fit here?

How can we fit things together?

Saying numbers as we play.

Counting natural objects

One leaf..

Make comparisons

Heavy / too big / too long

Longest / biggest/ shorter

Under, in, on, above...