

Maths at Junior House

This is an exciting year for Maths at Westfield Junior House as we begin a new approach and culture to our mathematical learning. We are using White Rose Maths to support our journey. White Rose Maths are a group of teachers and mathematicians dedicated to developing maths education for everyone. Using their philosophy and teaching resources, we are building a culture of deep understanding, confidence and competence in maths – a culture that produces strong, secure learning and real progress. We wish to break any idea of ‘I’m not very good at Maths’ and promote ‘EVERYONE CAN!’.

White Rose Maths is built on a CPA approach – Concrete, Pictorial and Abstract. All ages will be hands on using a range of manipulatives including base 10 and place value counters as they learn and build on their knowledge of mathematical concepts.

If you wish to support your child with any maths at home the best place to start would be using the free parent workbooks which can be downloaded at <https://whiterosemaths.com/parent-workbooks/>. We are also using the web-based mymaths.co.uk which is a great resource with explanations, games and tasks that you could do at home. Please see your daughter’s class teacher for their log in. Both of these resources are currently available for KS1 and KS2.

The page overleaf demonstrates some key visual techniques your daughter will be using in school. I’m sure as their confidence grows, they will be able to show you how to use them. If you require any further information or have any questions, please see your class teacher or Miss King.



Concrete - Pictorial - Abstract

We believe that all children, when introduced to a new concept, should have the opportunity to build competency by taking this approach.

Concrete – children should have the opportunity to use concrete objects and manipulatives to help them understand what they are doing.

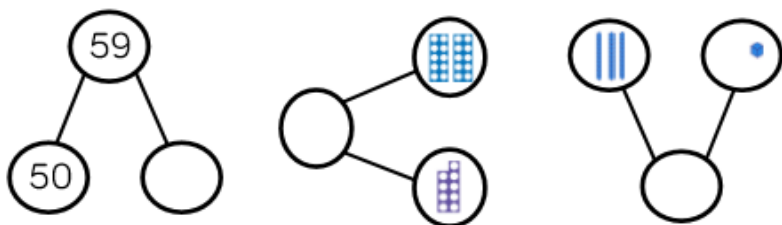
Pictorial – alongside this children should use pictorial representations. These representations can then be used to help reason and solve problems.

Abstract – both concrete and pictorial representations should support children's understanding of abstract methods.

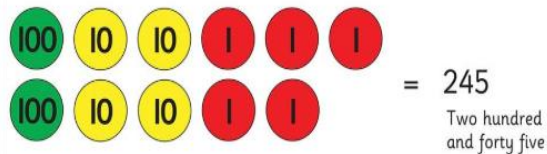
Hands on maths using manipulatives are encouraged for all year groups. These are some of the common pictorial representations your daughter will be using in class.

Part Whole Models

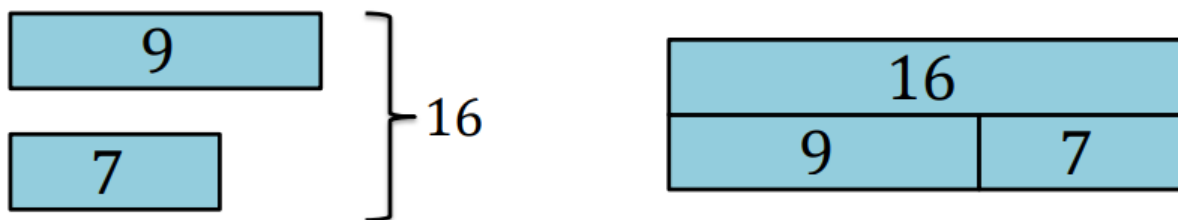
Complete the part whole models.



Place Value Counters



Bar Models (also called strip diagrams)



Progression
Example:

Peter has 5 apples and Jane has 3 apples.
How many apples do they have altogether?

| | | | |
|---|--|--|--|
| <p><u>Model - aggregation</u></p> | <p><u>Calculations</u></p> $5 + 3 = 8$ | <p><u>Model</u></p> | <p><u>Calculations</u></p> $5 + 3 = ?$ |
| <p>In this model, we are adding two parts together (aggregation).</p> | | <p>Students practise by arranging counters on a mini whiteboard.</p> | |
| <p><u>Model</u></p> | <p><u>Calculations</u></p> $5 + 3 = ?$ | <p><u>Model</u></p> | <p><u>Calculations</u></p> $5 + 3 = ?$ |
| <p>This is a 'discrete bar model', each box represents one whole.</p> | | <p>This is a 'continuous model', each rectangle represents a number.</p> | |