



BROADWATER  
CHURCH OF ENGLAND  
PRIMARY SCHOOL

# Early Years Maths Meeting

What makes a good  
mathematician?





# Why is maths so important?

- Maths is everywhere
- We need to use maths in everyday life
- Maths enables children to think logically and become good problem solvers





# Therefore:

- It is vital to lay secure foundations in early mathematics
- We want children to engage with all areas of mathematics
- We must give children the tools to help them to develop a better understanding of the mathematical world in which they live





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# What makes a good mathematician?

- Number facts
- Using and applying skills and knowledge
- Reasoning
- Communicating
- Representing
- Enquiry
- Risk-taking and accepting challenges
- Vocabulary
- Problem solving
- Mental agility



# Dispositions and Attitudes



Curiosity



Questioning



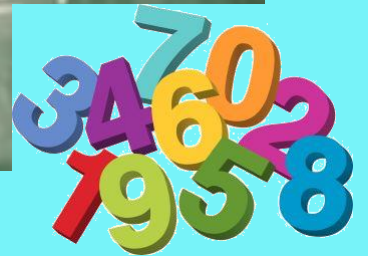
Confidence

Perseverance





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# Aims:

- To outline what children are expected to know by the end of the foundation stage
- To explain what mathematics teaching and learning looks like in Early Years at Broadwater
- To share key underpinning mathematical skills
- To inspire you to engage in fun practical maths with your child at home





# Early Learning Goal

**ELG: Number** - Children at the expected level of development will:

- 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.



# Early Learning Goal

## ELG: Numerical Patterns

- Children at the expected level of development will:
  - - 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.



# How is mathematical teaching and learning achieved in Early Years at Broadwater?

- Purposeful play and child-initiated learning
- Cross-curricular learning
- Whole-class teaching (15 – 20 mins per day)
- Small focus-group teaching
- Personalised learning





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‘I hear and I forget. I see and I remember. I do and I understand.’

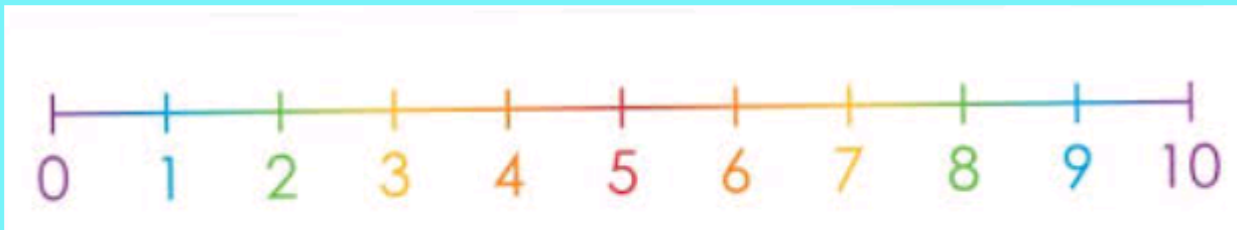
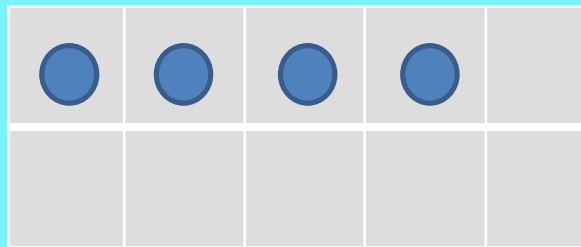
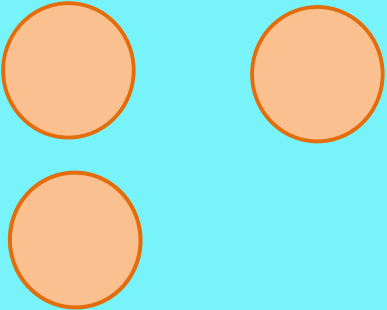


(A Chinese proverb)





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# Purposeful play and Child-initiated maths activities

- Children choose their own mathematical learning and demonstrate their understanding
- Allows children to explore different approaches and reach conclusions themselves
- It allows them to practise skills and language in a safe and personal way
- Encourages critical thinking, problem solving and perseverance





# Whole class teaching

- Teachers plan together to introduce and teach key concepts consistently across the year group
- Children work together to develop not only their mathematics abilities, but general listening, attention and speaking skills
- This allows teachers to teach and model skills, concepts and language and assess where more support may be needed.
- Knowing the children and what they know means that the learning can be differentiated in the moment, adjusted and targeted to meet individual needs.





# Small focus group

- A practical activity linked to whole class teaching
- Either ability grouped or in mixed groups
- Allows adults to model mathematical skills and introduce concepts
- Adults can demonstrate and encourage the use of mathematical language
- Assess learning, address misconceptions and extend the learning





# Personalised Learning

- Through observation teachers identify areas where a child may need more support/ practise e.g. recognising numbers to 10
- Regular practise takes place with adult support e.g. student helper, parent helper
- Parents will be included in this process and it might be suggested that a child could practise these skills at home.
- Assessment takes place regularly.

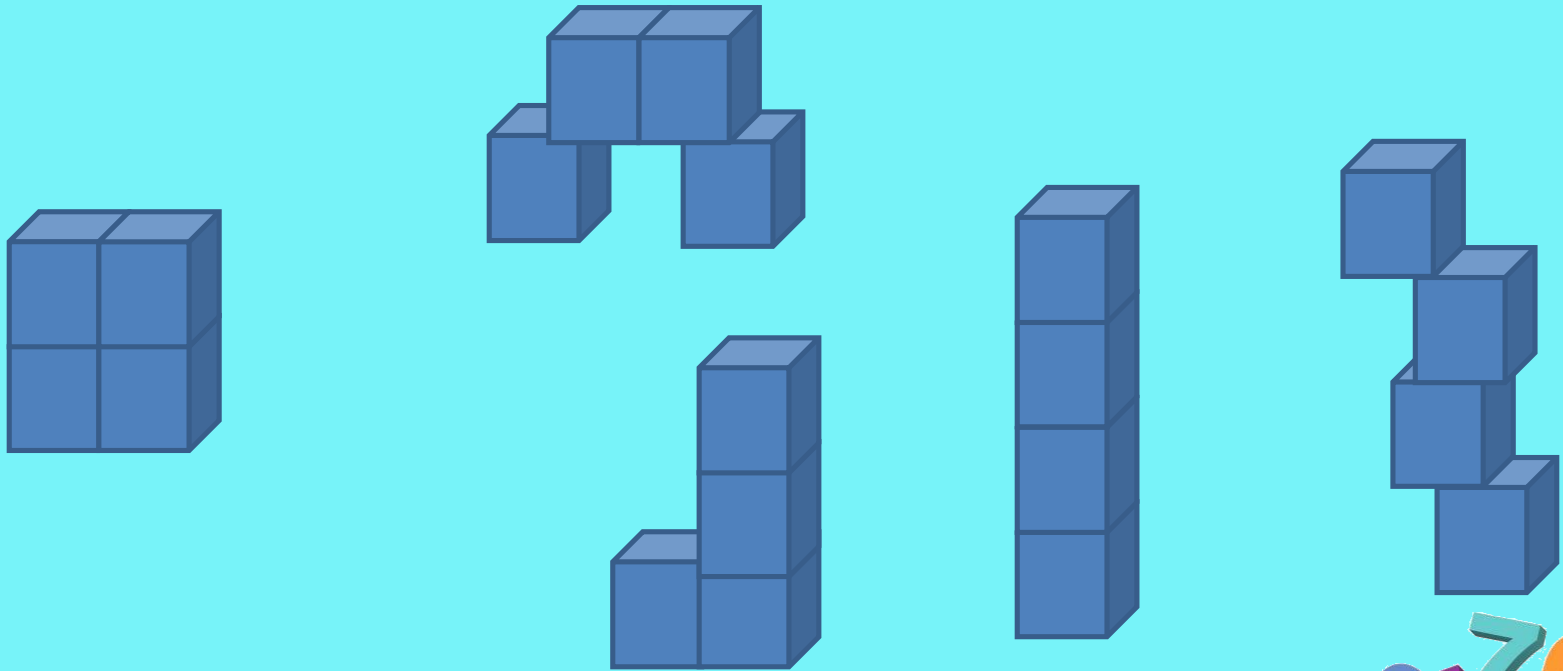




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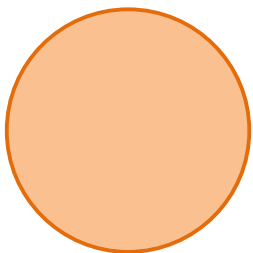
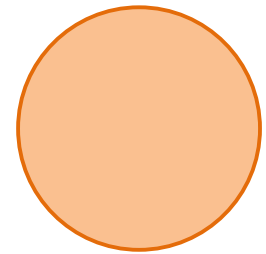
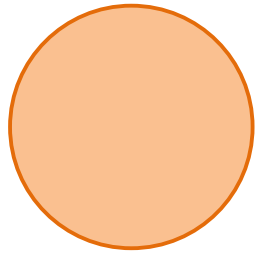
# Subitising and Number conservation/composition

Visual recognition of quantity of items (without counting one by one) and part-part-whole relationships

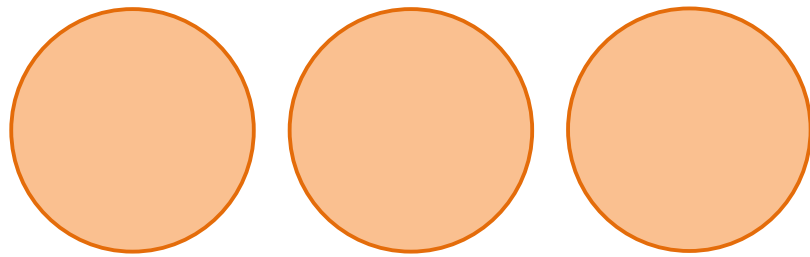


# Conservation of number

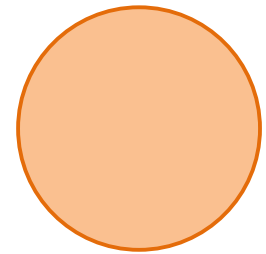
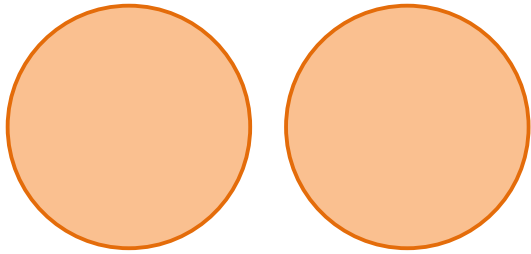




show dots



show dots



show dots



# Counting includes...

- Daily verbal Rote count (from any given number) forwards and backwards
- Correctly accurately 1:1
- Cardinality Last number counted represents how many are in the set.
- Strategies - in a line, Numicon pattern
- Counting on
- -teen and -ty pronunciation



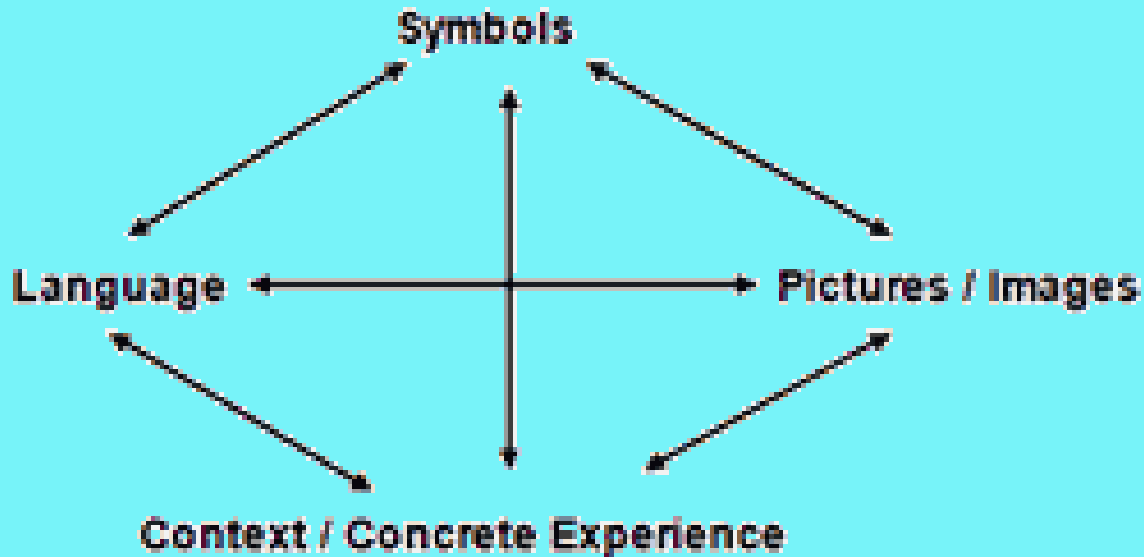


# Place Value

6

The connective model of  
learning mathematics

Six

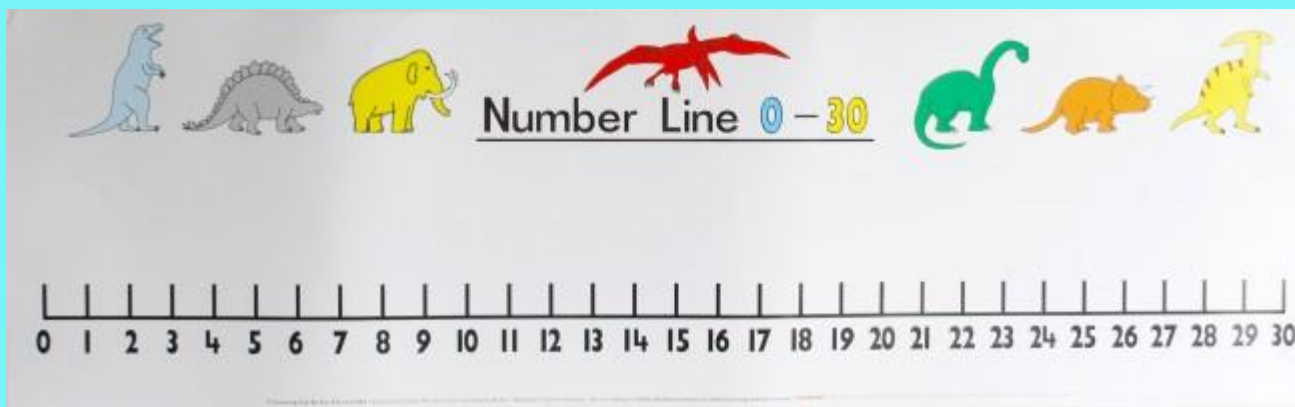
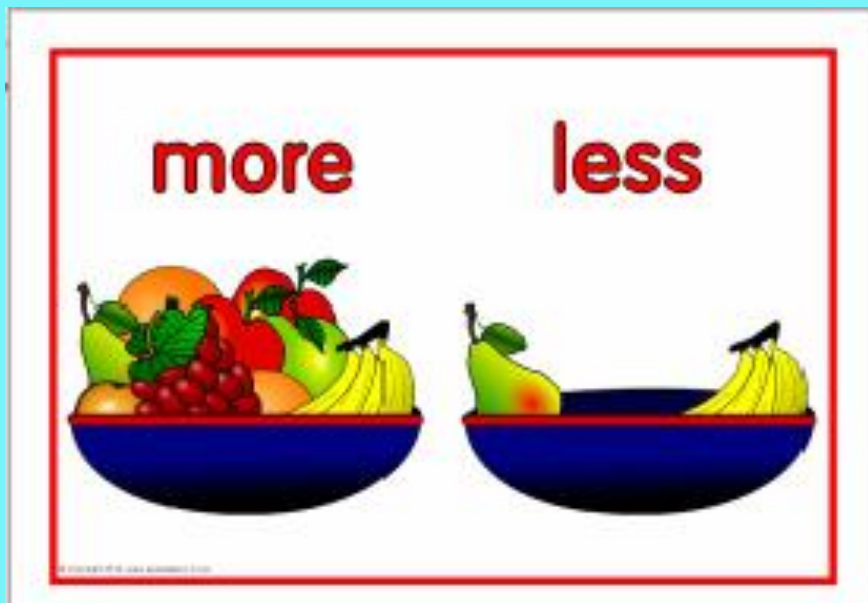




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# More and less - Comparing

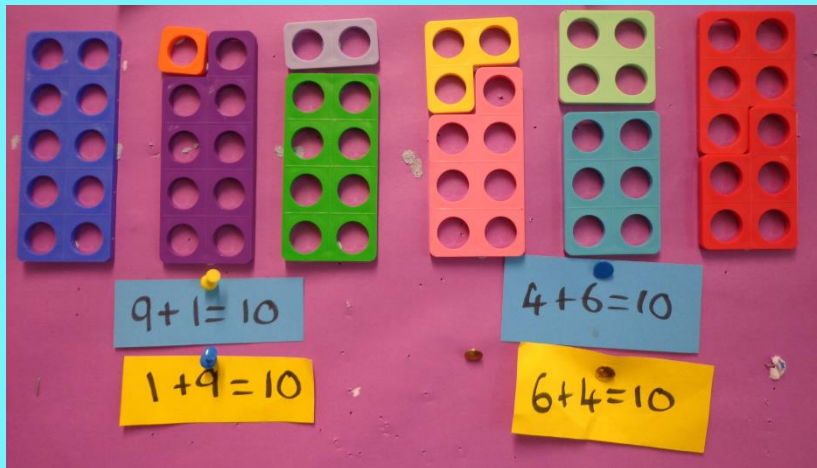
Comparison of quantities by identifying more and less





# Number Bonds

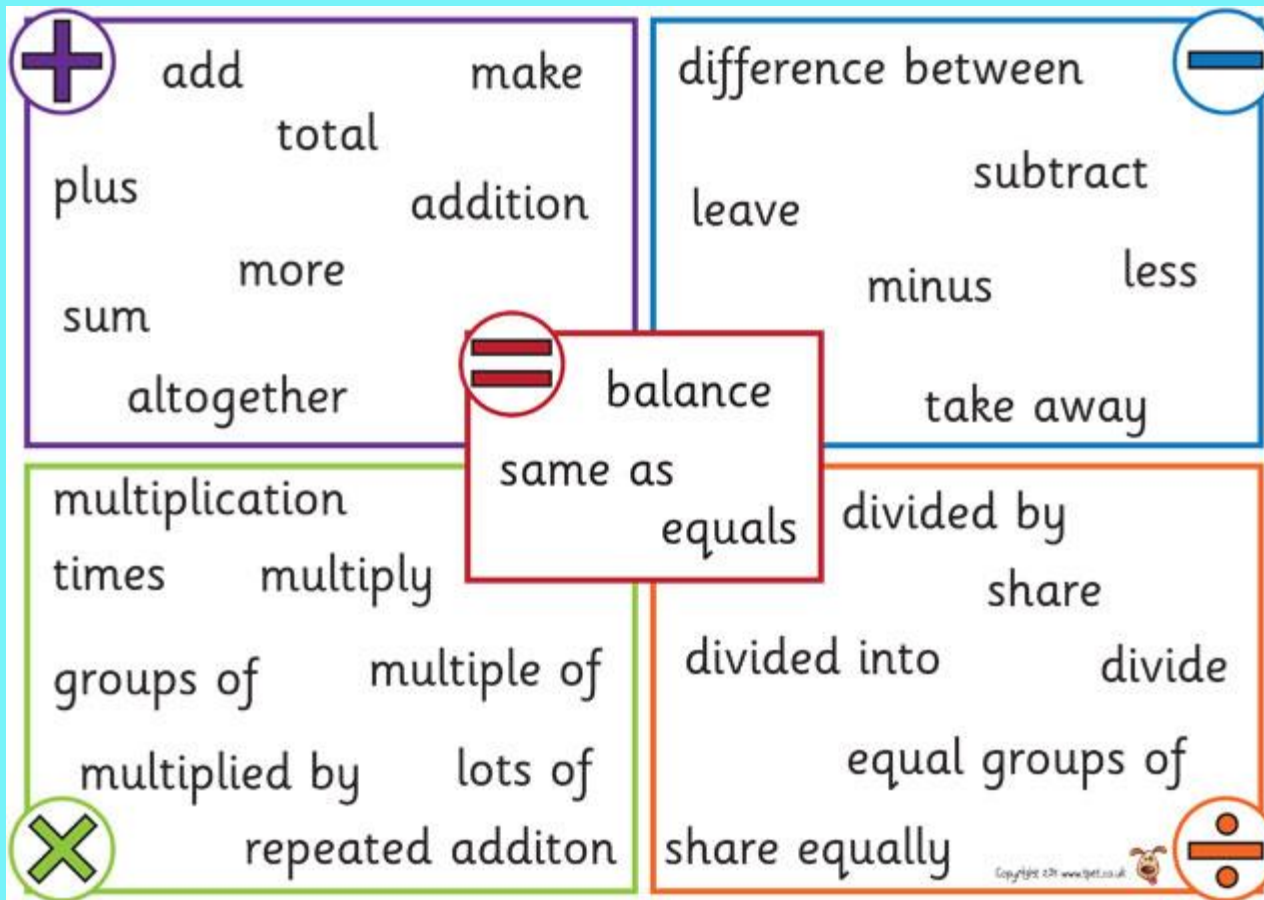
- What are number bonds?
- Use the resources on your table to demonstrate this





# Mathematical Language

- Always use the correct terminology





# Solve this problem

A chicken lays brown and white eggs.  
How many different ways could the  
farmer put the eggs into an egg box?





# Share ideas: how can you make maths fun at home?

- Numbers in our environment – on doors, car registration plates, telephone numbers and price tickets. Why not encourage your child to look out for numbers around them and try to help them identify which numbers are which?
- Count anything and everything!
- Sorting cutlery and then put it away!
- Sorting beads/buttons/counters by colour, shape, size
- Using mathematical language when looking at books, e.g. how many people can you see in the picture?



# Measure, shape, spatial awareness and patterns

- Playing with sand and water with a variety of different sized containers (e.g. in the bath)
- Helping you weigh ingredients when cooking
- Handling money, e.g. sorting coins by colour, value, put in order of value
- Learning positional language through hearing it used as often as possible – ‘Can you put the cups **IN** the cupboard?’ and by their relative position
- Learning number rhymes and finger games
- Playing games which involve counting e.g. snakes and ladders
- Comparing length – ‘Which is longest?’ ‘Who is tallest?’ etc. e.g. shoe size, hair, clothing, toys





# Website links

[www.ictgames.co.uk](http://www.ictgames.co.uk)

[www.crickweb.co.uk](http://www.crickweb.co.uk)

[www.topmarks.co.uk](http://www.topmarks.co.uk)

[www.nrich.maths.org](http://www.nrich.maths.org)

<http://www.primaryinteractive.co.uk/maths.htm>

[www.cbeebies.co.uk](http://www.cbeebies.co.uk) - use the search icon 'maths'

<http://www.maths-games.org/>





# Last thought...

*We want our children to change their thinking from 'I can't do this' to 'I can't do this yet'. We want them to be learners with a 'can do' attitude. This attitude will help our children to feel comfortable when they get stuck and need to persevere in their learning.*

