Maths at Mitchell Brook

Parent Workshop

- Introductions
- Teaching for Mastery
- Overview of the curriculum
- Interactive session
- Maths at home
- Q&A

Introductions

The Maths Team

Vince Buffini

Assistant Headteacher

Primary Maths Specialist

Hind Mrimou

Primary Maths Specialist

Ava Murad

Reception Lead

Oak Class Teacher

Hibaq Omar

Year 5 Juniper Class Teacher

Monitor the teaching of Maths

Model high quality teaching

Support staff with planning

Lead on aspects of Maths

Train and develop all classroom staff

Teaching for Mastery

- Teach less but teach it better
- Teach slower
- Build deep understanding and firm foundation – depth is simplicity, not complexity
- Whole class teaching – to maximise teacher input

Teaching for Mastery

Children will:

- have a **secure** and **deep** understanding of mathematics
- use mathematical vocabulary
- **reason** and **explain** their mathematical thinking
- problem solve by applying **skills** and making **connections**
- become **fluent** in calculations to support their understanding.

How do we teach Maths?

Curriculum overviews

Mathematics

Home >> Key Information >> Curriculum >> Subject Information >> Mathematics

Intent

Pupils receive a high-quality mathematical education which equips them with tools that they can use in everyday life to help them understand the world. We aim to build a culture of curiosity and enjoyment around the subject, as children are challenged to become more fluent and confident in mathematics through a Teaching for Mastery approach.

Implementation: Teaching for Mastery (TfM)

The National Centre of Excellence for Teaching Mathematics (NCETM) breaks down the TfM approach into Five Big Ideas: coherence, representation and structure, fluency, mathematical thinking and variation. Teachers plan for children to experience these ideas in lessons through teacher-student and student-student interactions to develop a deep mathematical understanding.

At Mitchell Brook, teachers advance children's mathematical understanding through systematic direct teaching of appropriate learning objectives where children aim to master mathematical skills, knowledge and a quick recall of basic facts. Children are taught to be confident using a range of efficient mental and written calculation strategies for all four operations. They are encouraged to use Maths as an effective tool in a wide range of problem solving activities within school. We work to grow positive attitudes towards Maths in which all children can be successful, as they develop an ability to express themselves fluently using correct mathematical language and vocabulary.

EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6

	Unit	Unit name
Autumn 1	1	Calculating using knowledge of structures (1)
	2	Multiples of 1,000
Autumn 2	3	Numbers up to 10,000,000
	4	Draw, compose and decompose shapes
Spring 1	5	Multiplication and division
	6	Area, perimeter, position and direction
Spring 2	7	Fractions and percentages
	8	Statistics
Summer 1		KS2 tests
Summer 2	9	Ratio and proportion
	10	Calculating using knowledge of structures (2)
	11	Solving problems with two unknowns
	12	Order of operations
	13	Mean average

- Number and place value
- Addition and subtraction
- Multiplication and division
- Fractions
- Geometry
- Other

Year 6

Curriculum map

NCETM
NATIONAL CENTRE FOR EXCELLENCE IN THE TEACHING OF MATHEMATICS

June 2021

How do we teach Maths?

- Year 5 & Pre-Secondary have 5 Maths lessons per week
- 4 Arithmetic lessons
- Teachers use a range of strategies, representations and resources
- Children are encouraged to explore and discover

How do we teach Maths?

Teacher questioning and modelling

Independent task

Group discussion

Partner talk

Generalisations

Mixed attainment grouping

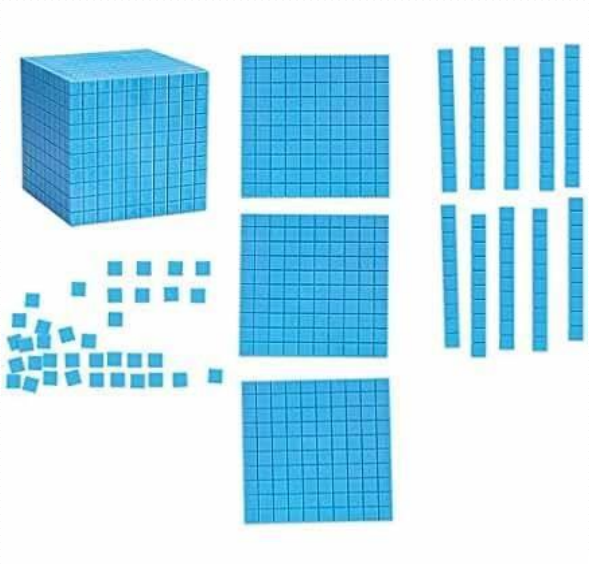
How do we teach Maths?

Concrete *Pictorial* *Abstract*

If children play with mathematical objects purposefully before learning new concepts or problem solving, they are more successful and creative.

How do we teach Maths?

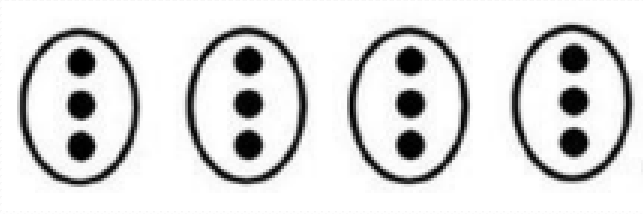
Concrete



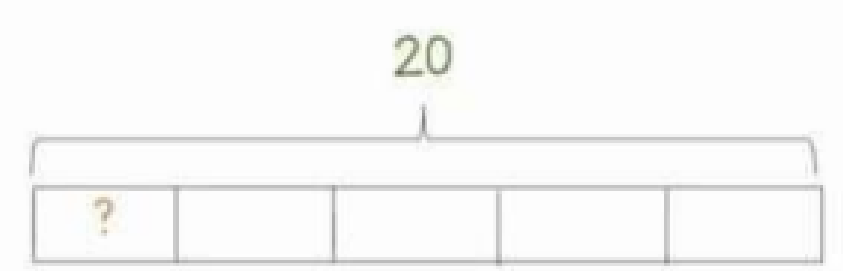
How do we teach Maths?

Pictorial

12 ÷ 4 = 3

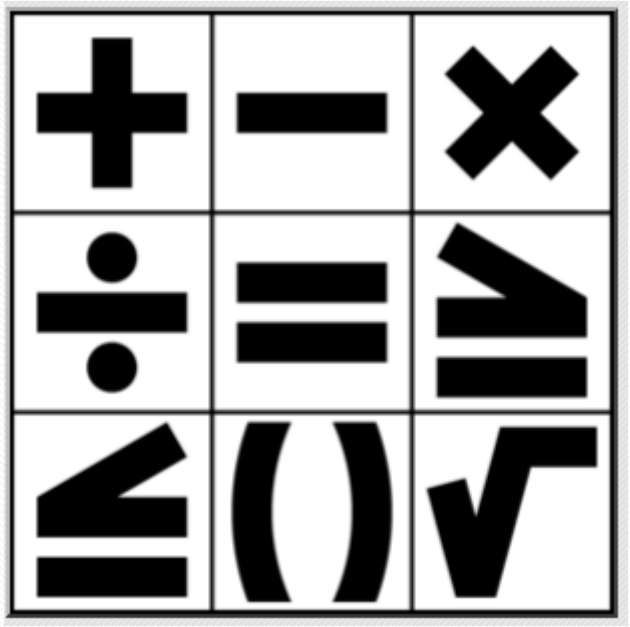


20 ÷ 5 = ?

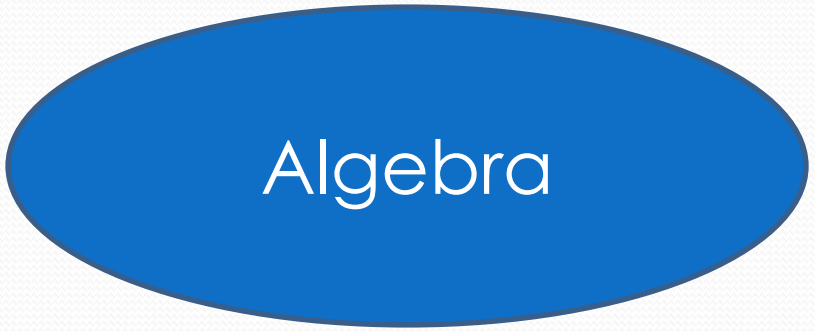


How do we teach Maths?

Abstract



LQ: Can I solve missing number problems using algebra?

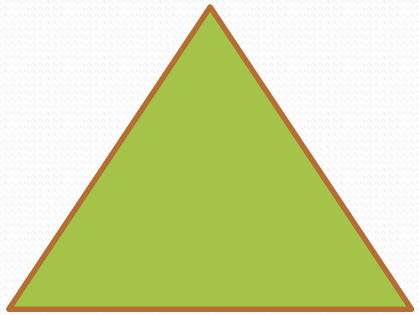


Algebra uses letters (like *a*, *x* or *n*) or other symbols in place of values. Algebra can be used a tool to find missing values.

$$2 + \boxed{a} = 5$$

$$a = 3$$

x



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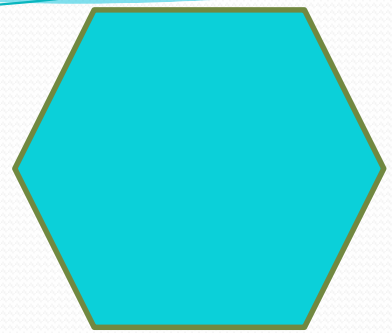


What does this equation really mean?

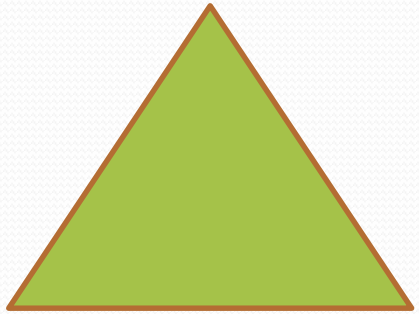
What do you know about the value of the hexagon?

How can this equation be written as an algebraic equation?

What possible values could we have for each of the shapes? Write some examples on your whiteboards.

Talk Task

X



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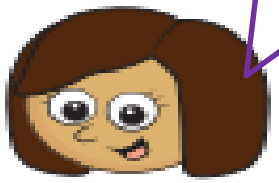
I think the square and triangle are smaller numbers than the hexagon.

Annie

I think the hexagon could be a smaller number than the square and the triangle.

Mo

I think they could all have the same value as each other.



Kim

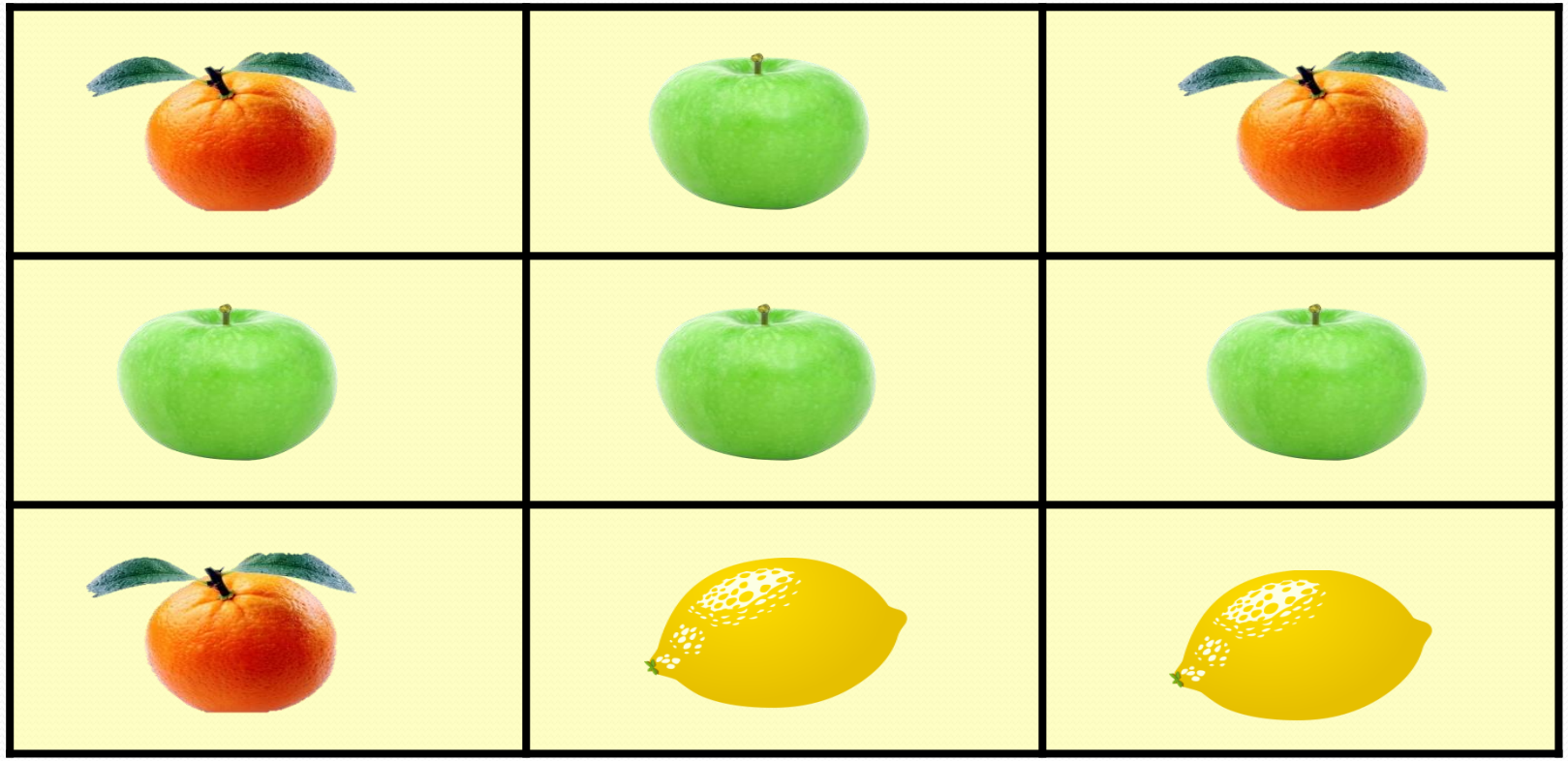
Do you agree or disagree with the children's statements? Can you use **mathematical vocabulary** in your answer? Can you think of any examples to support your explanation?

Challenge

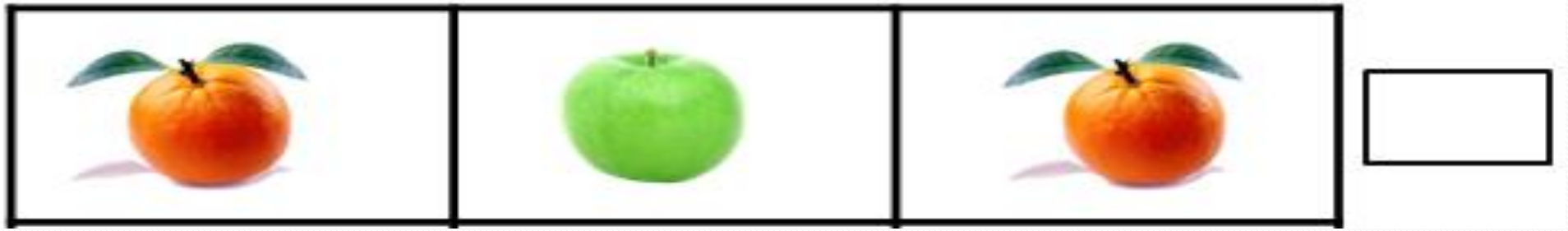
= 2

= 14

= 3



How could we represent some of these equations algebraically? What letters could you use for each fruit?



$$o + a + o = 18$$

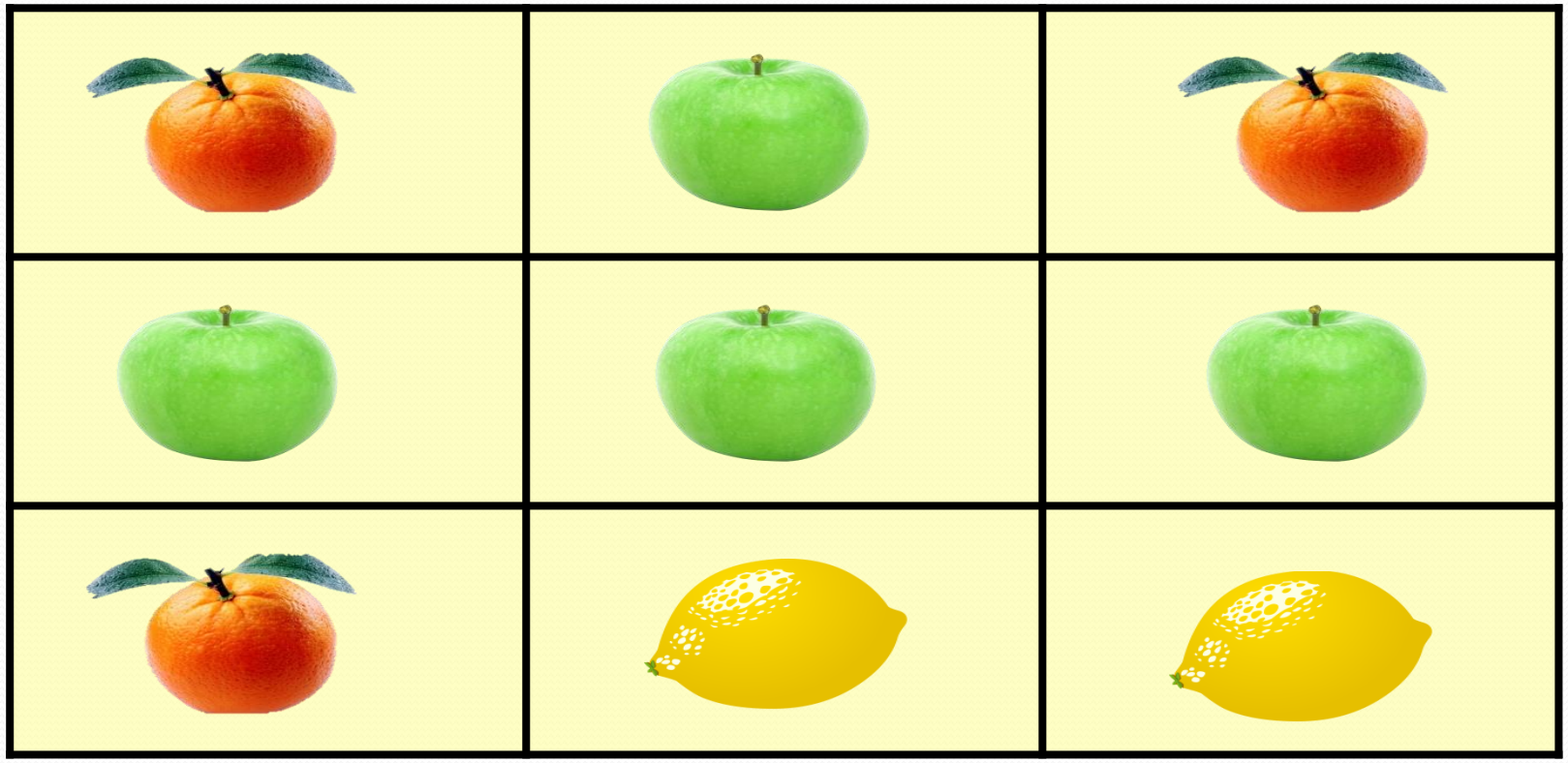
$$2o + a = 18$$

Challenge

= 2

= 14

= 3



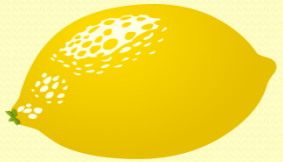
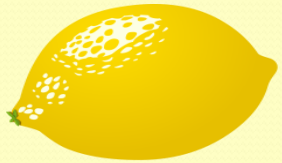
Choose a different row or a column and write an algebraic expression for it.

Final challenge – use your understanding of algebra to complete the table below.
Can you represent these calculations algebraically?

=

=

=

			32
			54
			
			38

Can you create your **own** problem? You must check that the solution is possible with all the information that has been given.

SATs

KS2 Maths SATs papers analysis by @_MissieBee

Percentage of questions by content domain

Learning by Questions

Content domain	2017	2018	2019	2022	2023	2024
Number & PV	9	10	9	9	10	9
Calculations	22	29	30	38	33	41
FDP	14	14	24	25	25	26
Ratio & prop.	9	6	8	6	6	5
Algebra	9	9	6	3	7	3
Measurement	14	13	9	7	7	7
Shapes	9	10	7	6	6	6
Pos. & direction	3	4	3	2	2	2
Statistics	11	6	4	3	4	2

SATs

Calculations	Fractions, decimals and percentages
Column addition and subtraction (with whole numbers and decimals) Short multiplication and division (with whole numbers and decimals) Long multiplication Times tables	FDP equivalence Converting from fractions to decimals Eg. 1/10 = 0.1 1/5 = 0.2 3/5 = 0.6 Adding and subtracting fractions Multiplying fractions by whole numbers
Using these skills in a range of problem solving questions	

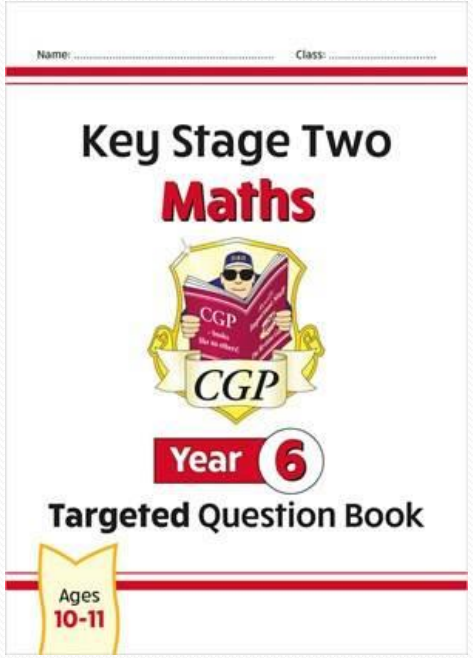
How can you help at home?

Practise makes perfect!

Use this intuitive platform to practise multiplication and division facts.

To be practised **daily**.

Year 4 Multiplication Tables Check (MTC).

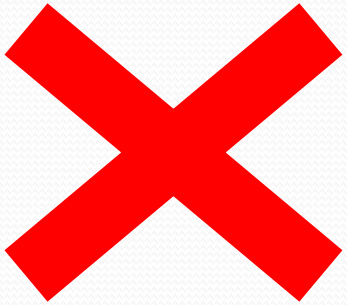


Whole School

To practise what has already been taught

How can you help at home?

- Support them through practicing aspects that must be memorised eg. TTRS/ Maths Shed
- Practising skills eg. formal column methods
- Use online platforms to develop number facts
- Encourage children to use mathematical vocabulary when explaining ideas to you
- Find 'the Maths' in everyday activities and make connections



- Teach your child new methods or concepts
- Challenge children by teaching them skills needed for older year groups
- Be negative about your experience of Maths

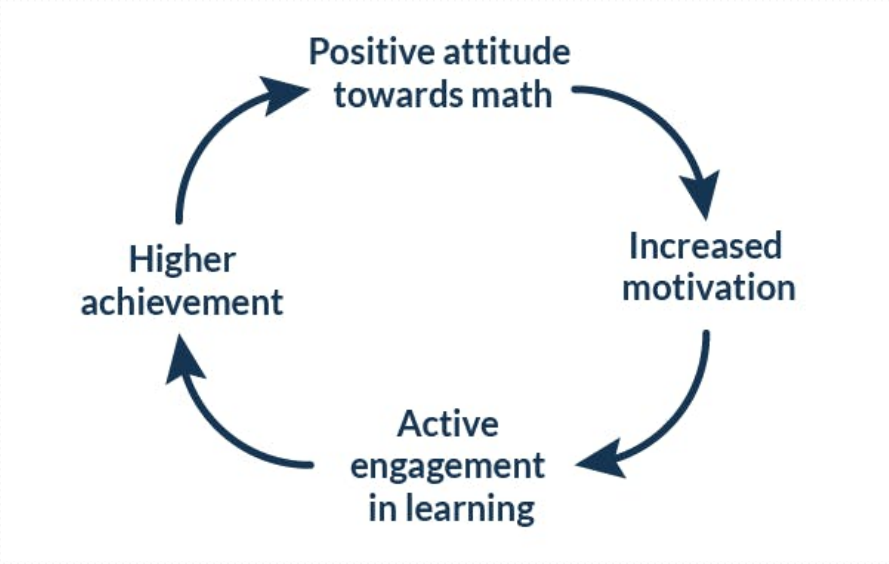
How can you help at home?

You may find yourself from time to time saying '*I was never good at Maths*.' Children will pick up and mirror this energy.

'**It's fine to make mistakes, we all do**'

'**It's ok that you find this tricky, let's look through it together**.'

Positivity can go a long way to improving their attitude towards Maths!



Questions & Answers