

# Year 2 Maths workshop

Presented by Miss Uzzell

# By the end of this workshop...

- Understand what is meant by 'mastery' in mathematics.
- How is maths taught at Larkrise?
- How can your child be supported at home

# Before we begin...



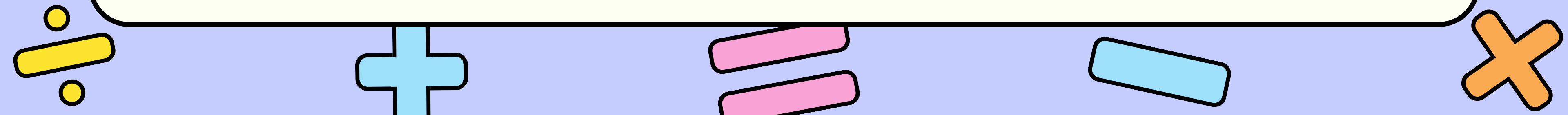
Discuss 3 positive and negative experiences of Maths you had when you were a child.



# Attitudes towards maths

While the causes of such a negative culture around maths are numerous and complex, key aspects include:

**Bad experiences of maths:** Students are often not confident in their understanding of basic concepts and they also don't see the everyday relevance or value of maths. Many have bad memories of school maths and this continues to influence how they feel about maths throughout their adult lives.





# Attitudes towards maths

**Maths anxiety:** Maths makes some people feel anxious, leading them to avoid situations where they may have to use mathematics.

**A lack of support for adults:** Many feel as though it's too late to improve and don't know where to go for support. Furthermore, numeracy often takes a back seat to literacy; it enjoys less attention and less support in adult learning and may seem less of a problem. Literacy is vitally important - but so too is numeracy..

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Understand what is  
meant by 'mastery' in  
mathematics.

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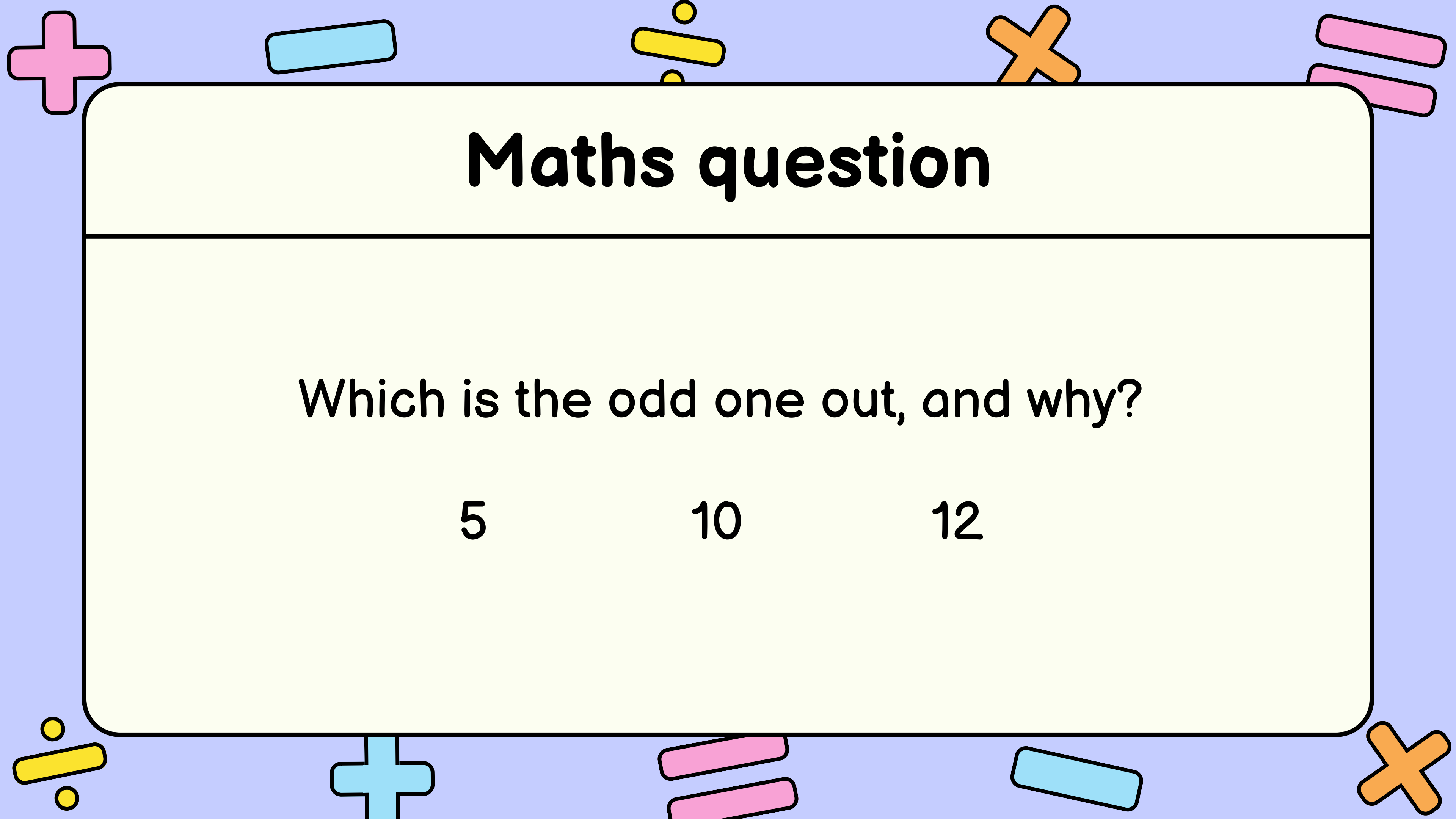
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# Maths question

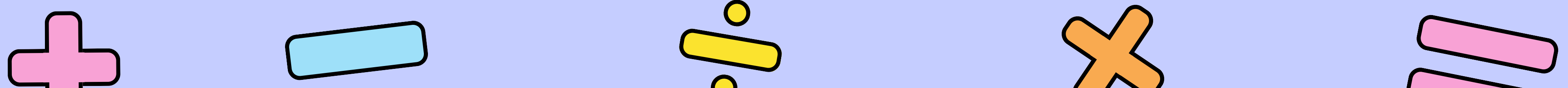
Which is the odd one out, and why?

5

10

12





# Maths question

Which is the odd one out, and why?

5

10

12

There are a few answers to this question.

1. 12 because 5 and 10 are both multiples of 5.
2. 5 because 10 and 12 are even numbers.
3. 5 because it is the only prime number.

This is mastery in mathematics.

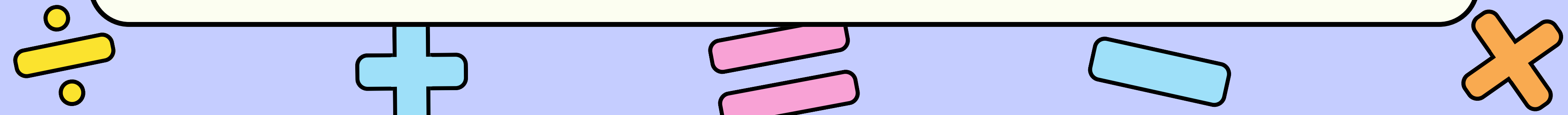






# What is meant by mastery in mathematics?

Mastering maths means pupils of all ages acquiring a deep, long-term, secure and adaptable understanding of the subject. The phrase 'teaching for mastery' describes the elements of classroom practice and school organisation that combine to give pupils the best chances of mastering maths. Achieving mastery means acquiring a solid enough understanding of the maths that's been taught to enable pupils to move on to more advanced material. (NCETM)





# What is meant by mastery in mathematics?

Mastery of a mathematical concept means a child can use their knowledge of the concept to solve unfamiliar word problems, and undertake complex reasoning, using the appropriate mathematical vocabulary.

Children are also able to model and demonstrate multiples ways of answering calculations.



# What is meant by mastery in mathematics?

Involves a development or three forms of knowledge:

- Factual – I know that
- Procedural – I know how
- Conceptual – I know why

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How is maths taught at  
Larkrise?

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# How is maths taught at Larkrise?

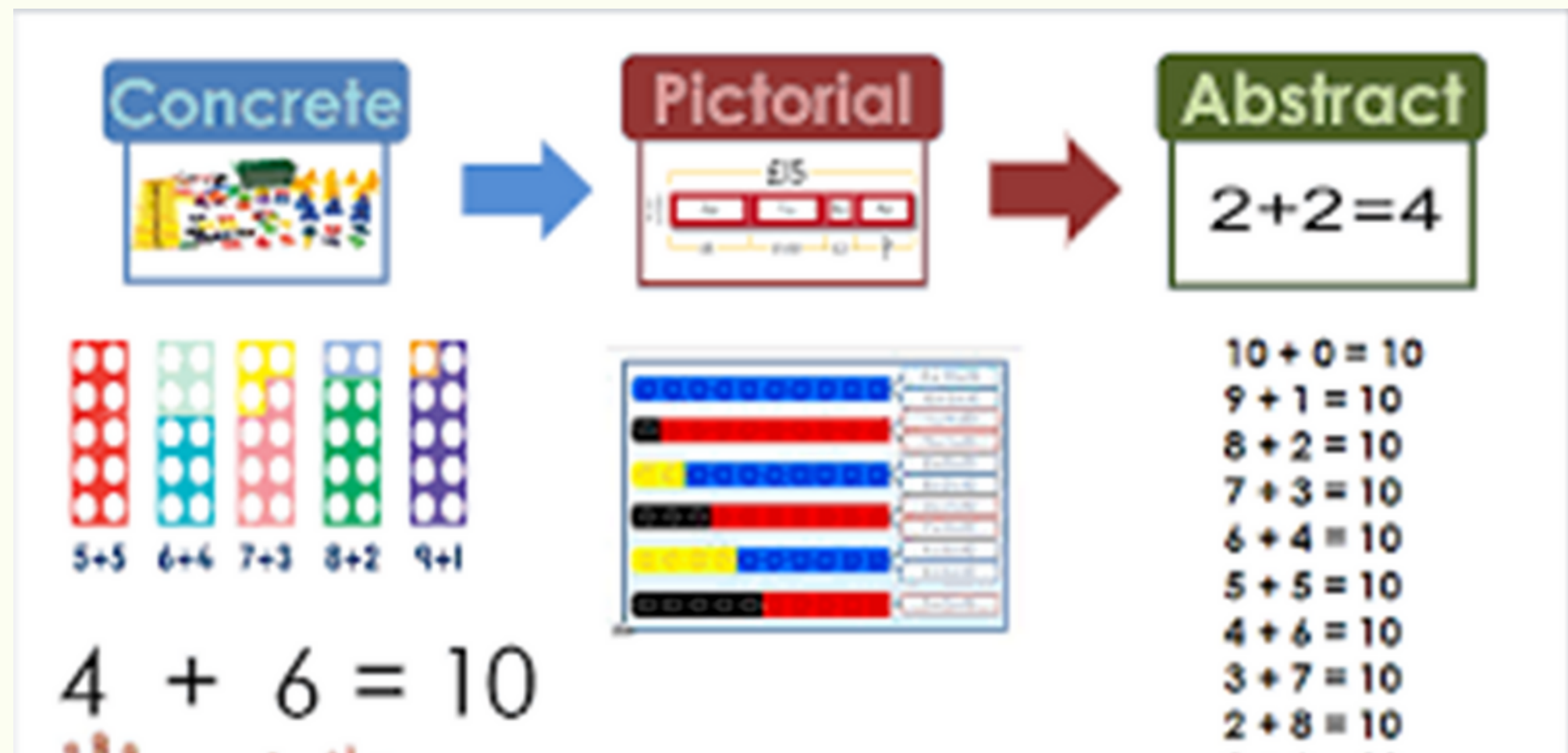
Our curriculum is based on the national curriculum and Power Maths scheme and other materials that support the delivery of the curriculum.

We are currently transitioning across to White Rose Maths for the start of the Autumn term.



# How is maths taught at Larkrise?

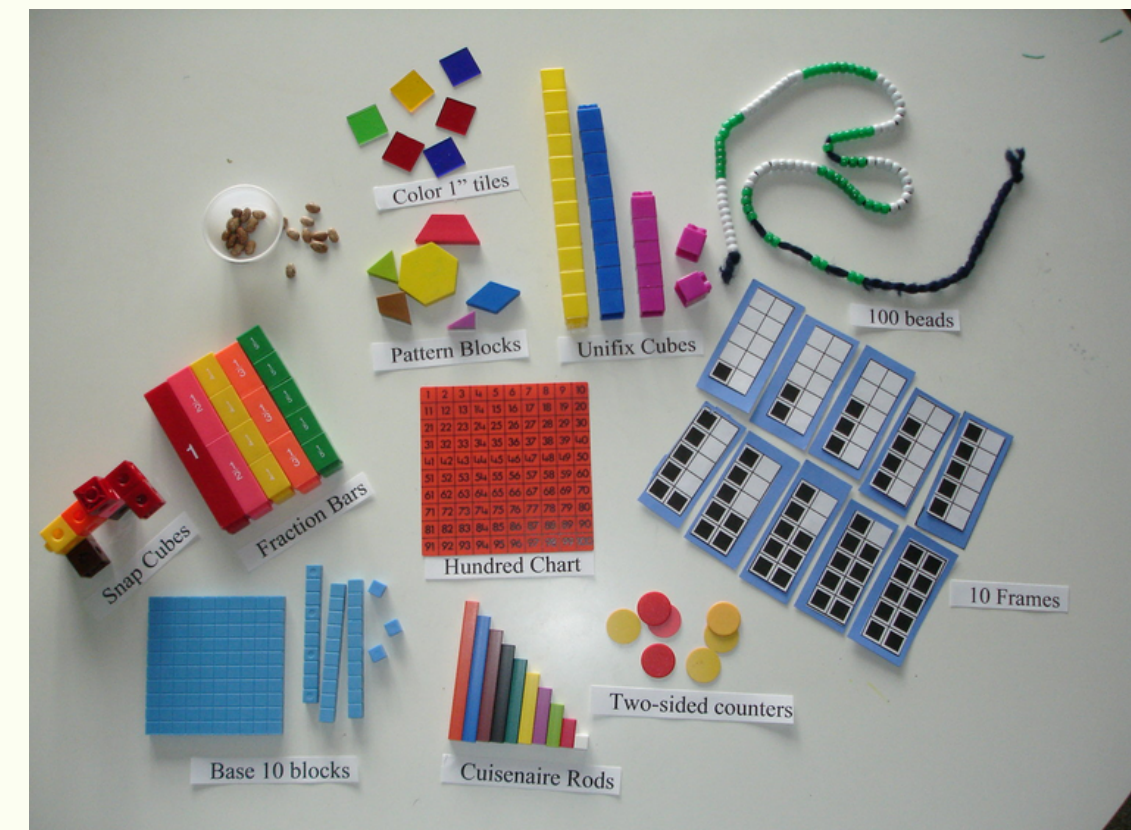
We apply a CPA approach to Maths learning which embeds the importance of using physical resources to support learning opportunities.





# How is maths taught at Larkrise?

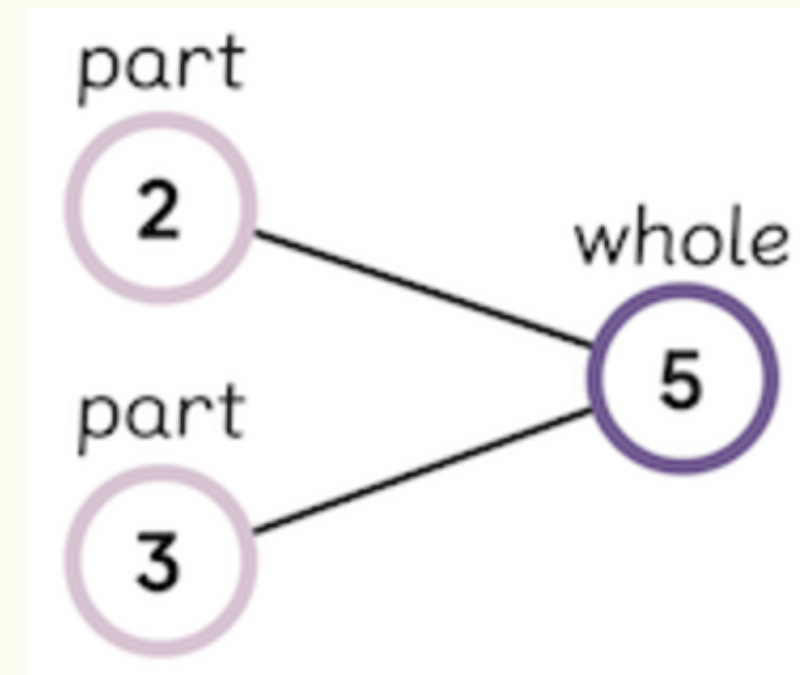
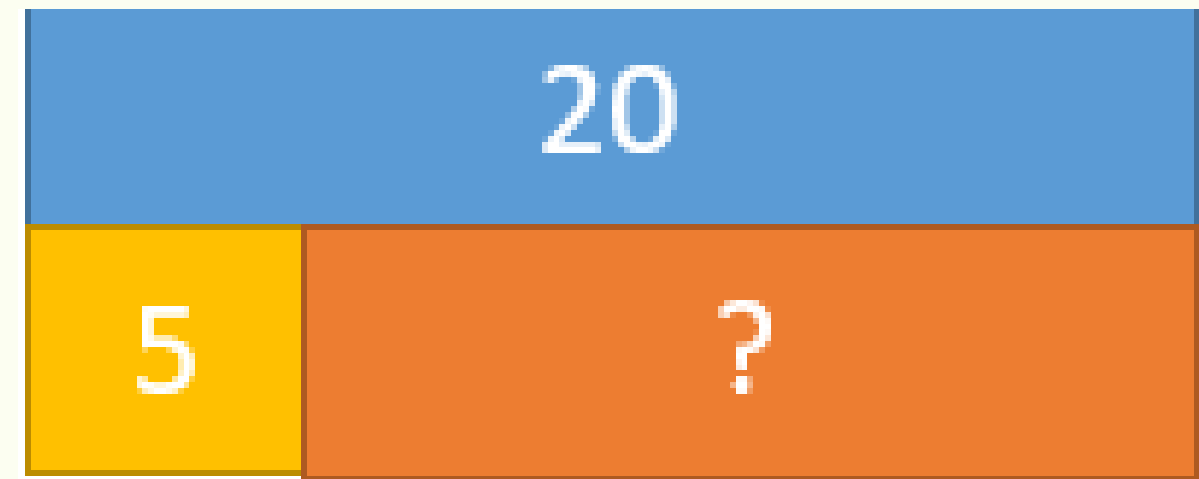
**C is for concrete.** New concepts are introduced through the use of physical objects or practical equipment. These can be physically handled, enabling children to explore different mathematical concepts. These are sometimes referred to as maths manipulatives and can include ordinary household items such as straws or dice, or specific mathematical resources such as dienes or Numicon.





# How is maths taught at Larkrise?

**P** is for pictorial. Once children are confident with a concept using concrete resources, they progress to pictorial representations. By doing this, they are no longer manipulating the physical resources, but still benefit from the visual support the resources provides.



# How is maths taught at Larkrise?

**A is for abstract.** Once children have a secure understanding of the concept through the use of concrete resources and visual images, they are then able to move on to the abstract stage. Here, children are using symbols to solve problems. To be able to access this stage effectively, children need access to the previous two stages alongside it.

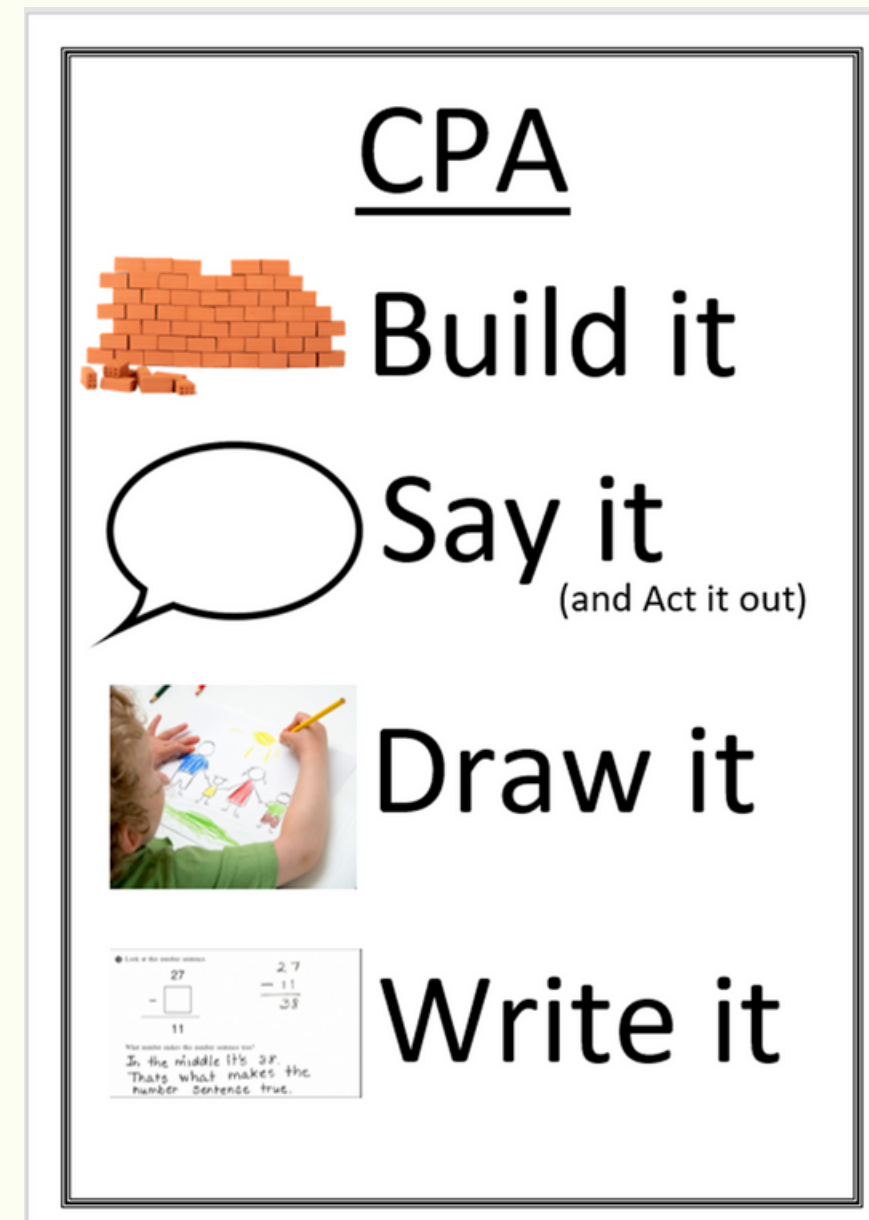
$$3 + 2 = 5$$

Abstract

# How is maths taught at Larkrise?

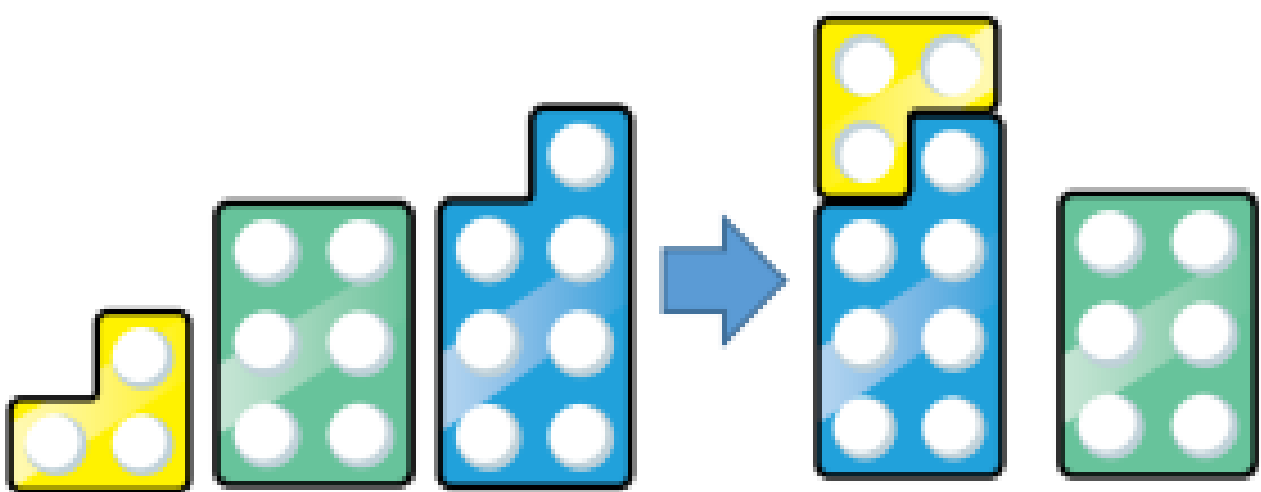
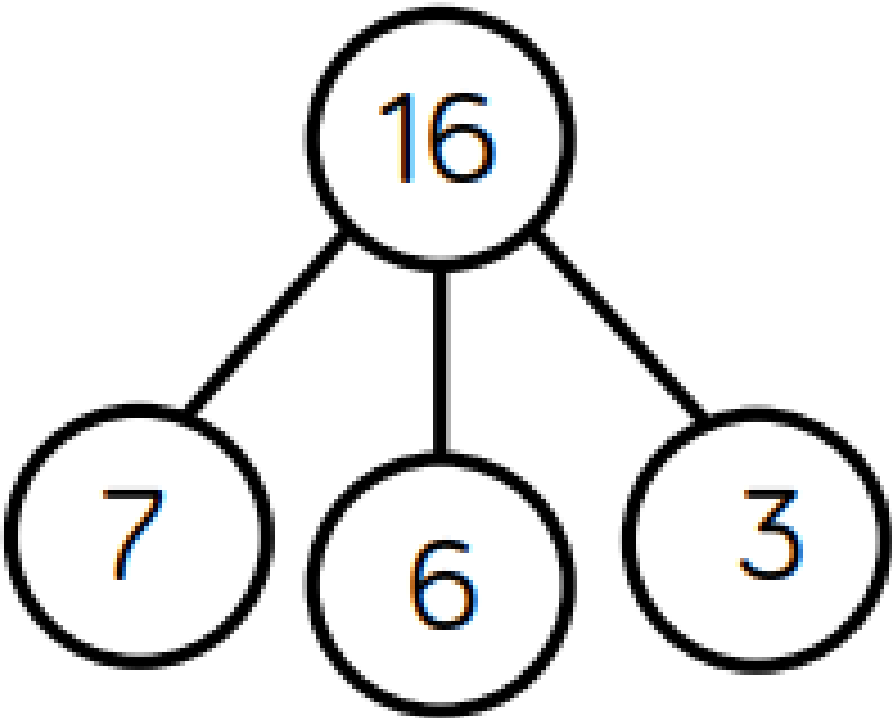
All classrooms have this poster in them to promote the CPA approach to teaching maths.

Language used with the children includes:  
build me this calculation, draw it for me, show me how you would write this as a calculation.

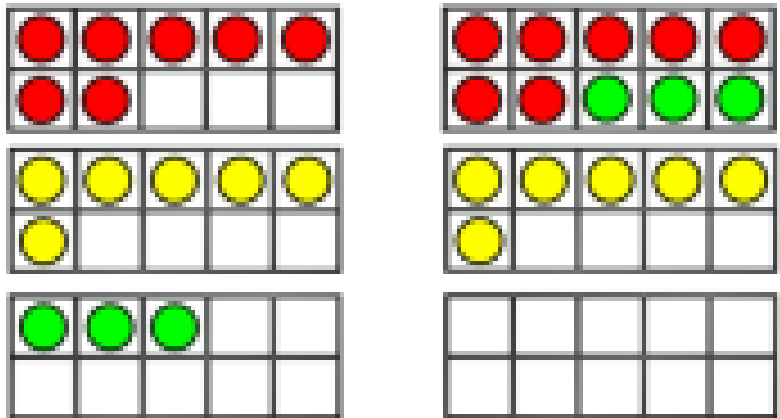


Skill: Add three 1-digit numbers

Year: 2

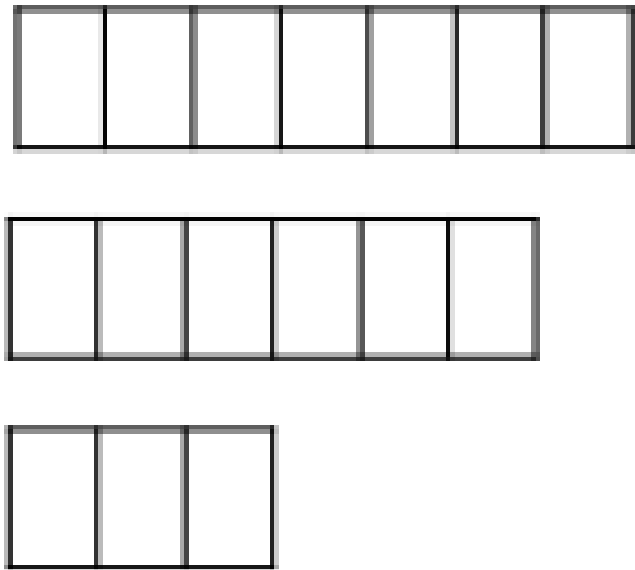


$$7 + 6 + 3 = 16$$



$$7 + 6 + 3 = 16$$

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16

When adding three 1-digit numbers, children should be encouraged to look for number bonds to 10 or doubles to add the numbers more efficiently.

This supports children in their understanding of commutativity.

Manipulatives that highlight number bonds to 10 are effective when adding three 1-digit numbers.

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# Have a go...

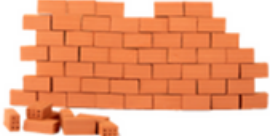
I am going to model how to show the calculation  $5+6=$  using equipment.


Using some of the equipment, show me how you would build  $5+6=$ .


I am going to model how to show the calculation  $5+6=$  using a picture.

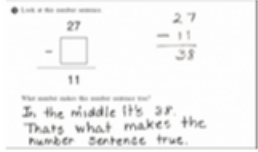
Now on the paper show me a way you could draw this.

CPA

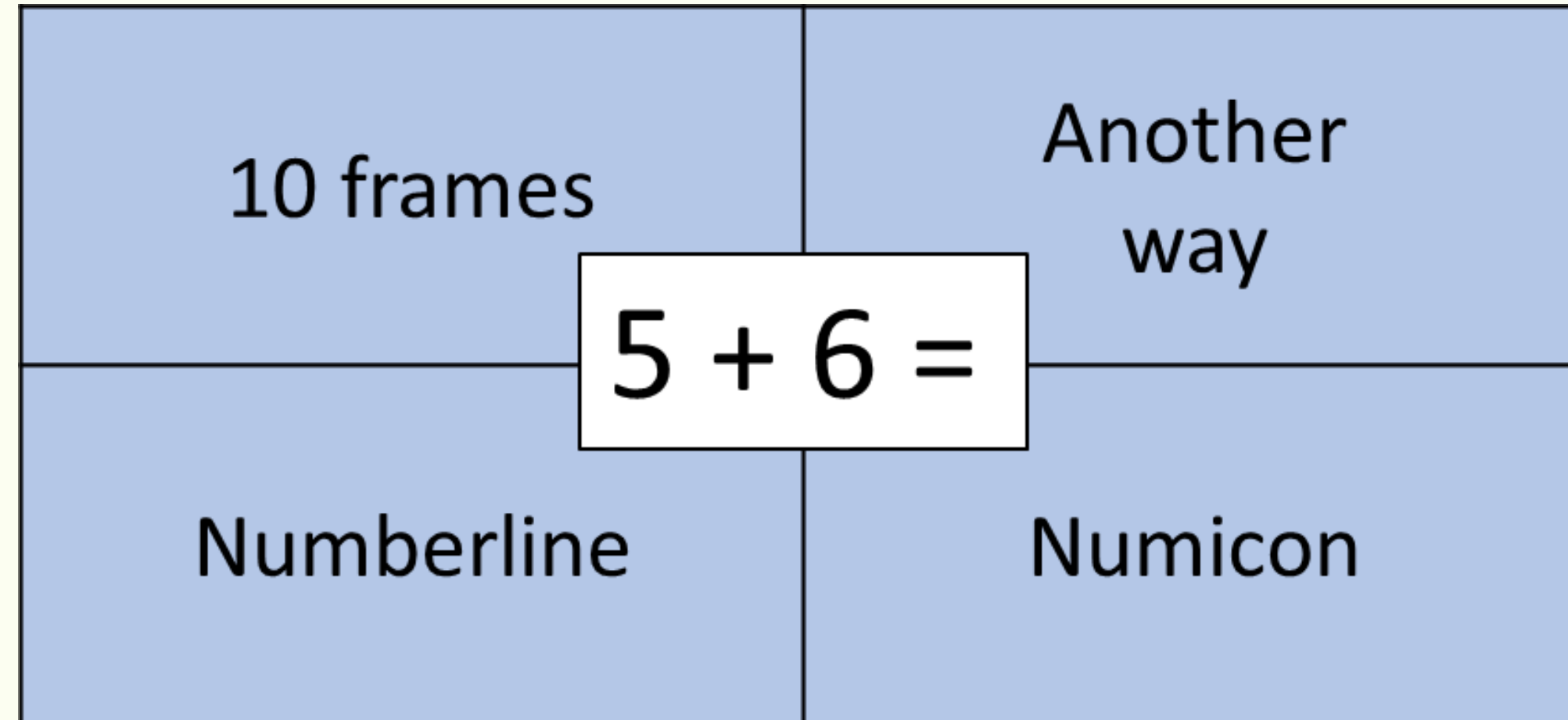
 Build it

 Say it  
(and Act it out)

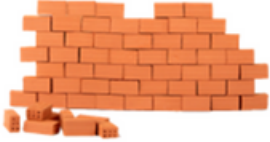
 Draw it


 Write it


# Mastery is about...

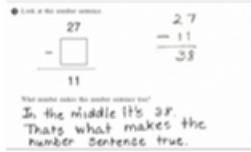


CPA

 Build it

 Say it  
(and Act it out)

 Draw it

 Write it





# Our calculations policies

Our calculations policies outline how we teach the children using the CPA approach. These are available to access on our school website.

<https://www.larkrise.essex.sch.uk/policies-and-guidance/>

Maths Policy- Calculations policy KS1

Maths Policy- Calculations policy Lower KS2

Maths Policy- Calculations policy Upper KS2





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How can you child be  
supported at home?

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# How can your child be supported at home?

Finding resources can be difficult but you can use everyday items.

Counters



or you could use.....

Smarties



3D shapes



or you could use.....

groceries



# How can your child be supported at home?

Finding resources can be difficult but you can use everyday items.

Counting Bears



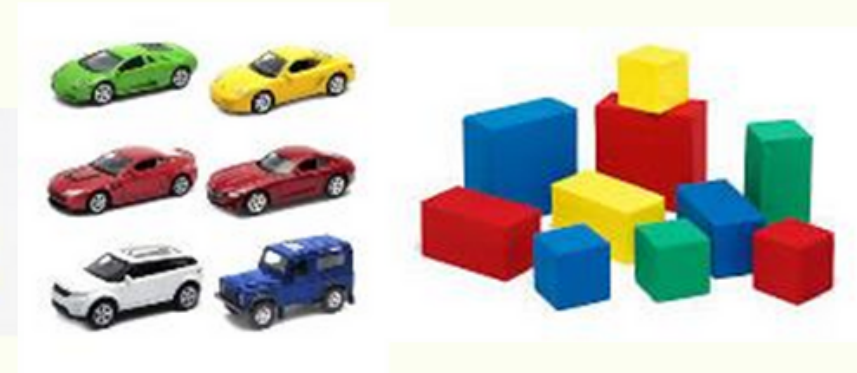
or you could use.....

anything you have a lot of!

Pasta for counting



Cards for number recognition and counting



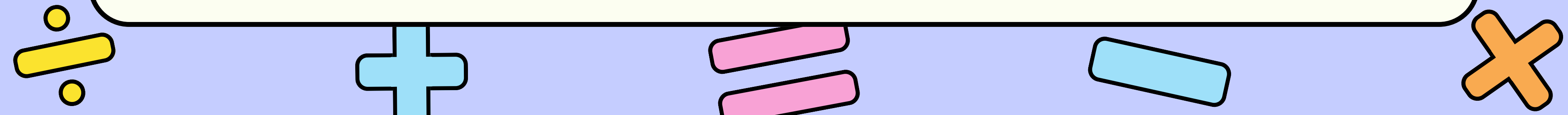
Toys to put in size order







# How can your child be supported at home?

- \*Practise spotting and recognising numbers in the environment. Add/multiply/subtract/divide door numbers, numbers on car registration plates, road signs and at the shop.
  - \*Flicking through the TV guide? Ask your child to calculate the length of their favourite programmes. How long is it until the next programme?
  - \*Use food packaging to discuss 2D and 3D shapes. What are the properties of these shapes e.g. how many faces, sides, vertices? Flatten the packaging out to find the net of the 3D shape too.
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# How can your child be supported at home?

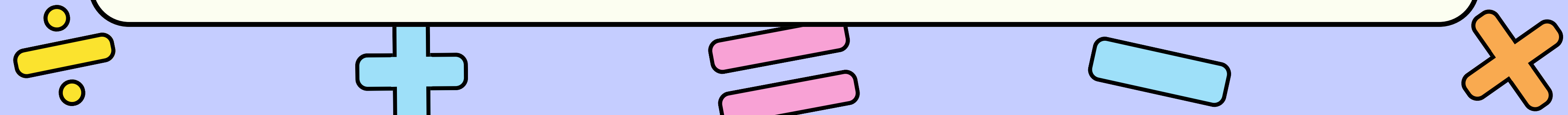
**\*\*Measuring up for new furniture?** Want to make sure the Christmas tree will fit in your living room? These are really good opportunities to encourage your child to see the value of careful measuring skills in everyday life.

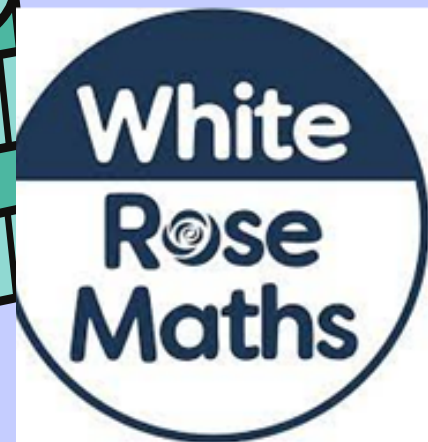
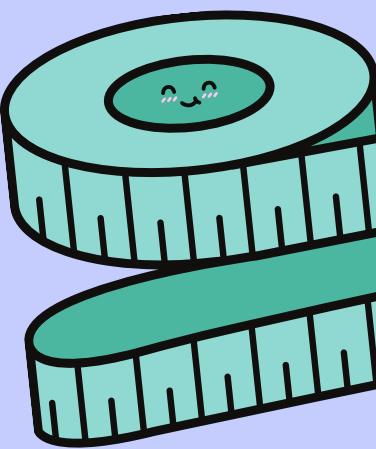
**\*Practise telling the time with your child.** Can they read both the digital and analogue clock? Can they readily convert between the two and use the 24 hour clock? Can they also recognise Roman Numeral representations of the time too?

**\*Board Games supply endless opportunities for Maths –** Snakes and Ladders, Monopoly, Bingo, Connect Four, Battle Ships etc



# Useful maths websites

- CBeebies have lots of fun and interactive games and activities to help get our younger children excited about Maths
  - I See Maths – a useful site with a plethora of ideas for fun games that all the family
  - Primary Games Arena - It is a free website that encourages children to play online maths games linked to their home learning. It breaks the games down into concepts which is really helpful.
  - Hit the Button – children love this game as it helps to increase confidence through practising times tables and number bonds.
  - Maths Zone – this site is jam-packed with fun ways to learn more about maths.
  - BBC Bitesize – lots of information alongside short videos help to make the learning enjoyable and accessible for all children.
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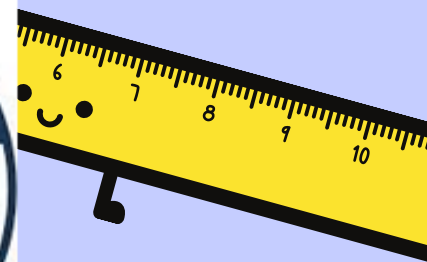


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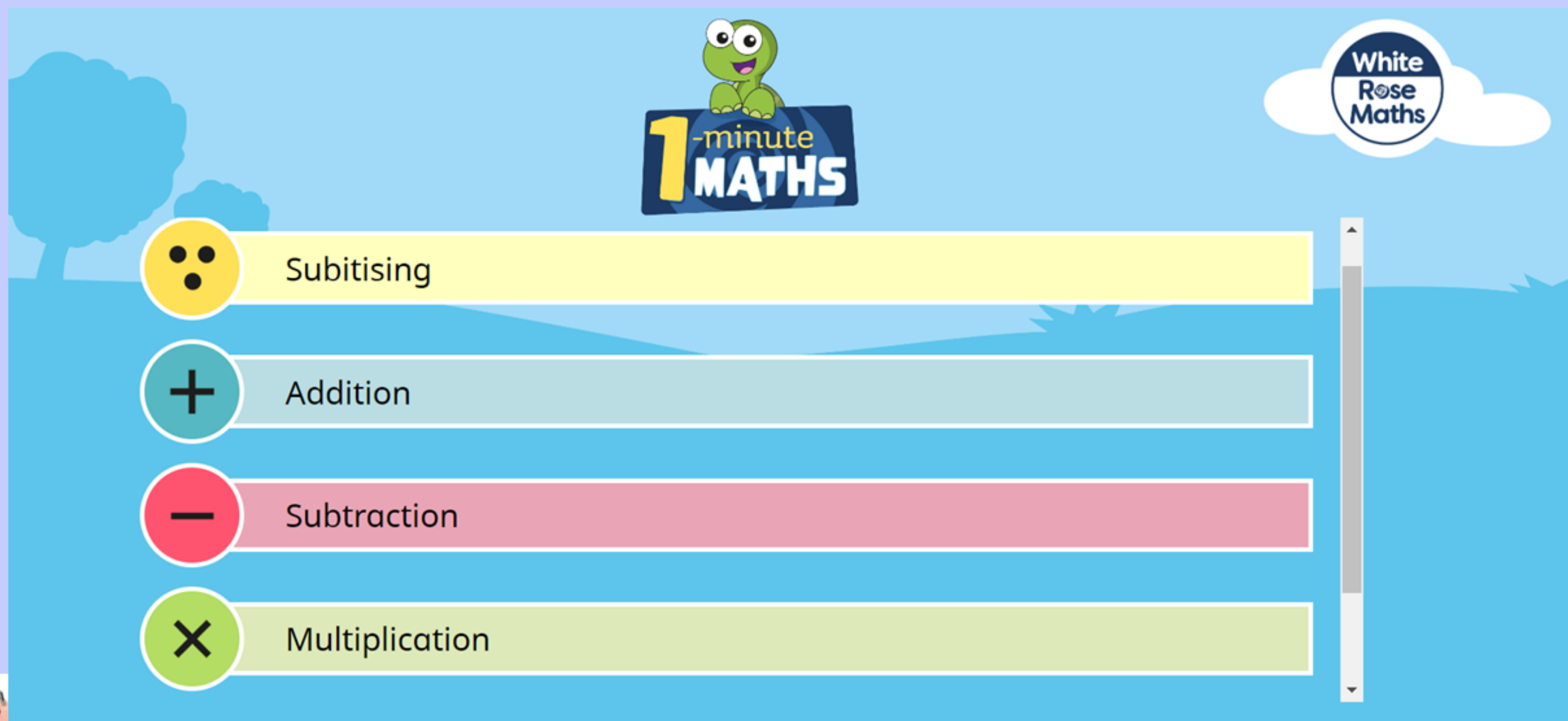
# Math workshop

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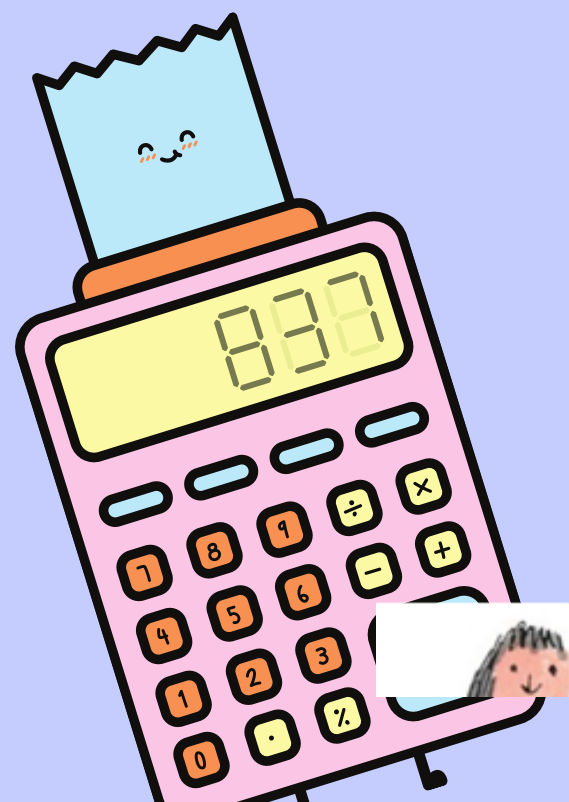


One way to support your children is by using



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# White Rose 1 minute maths

We are excited to share a new, exciting app suitable for children in EYFS and Key Stage One to help them develop their mental arithmetic skills. White Rose Maths is used by many schools to support the planning and activities in class, and now they have developed 1 Minute Maths for children to use in school and at home.

The app can be downloaded through the Apple Store, Google Play or Amazon Kindle app stores and is currently free of charge.

Once in the app, children can select from subitising (recognising amounts without needing to count them), adding, subtracting and multiplying.

Within each section, children can select practice activities that they have been learning in class and use the quick-fire questions to help improve their recall of key number facts.



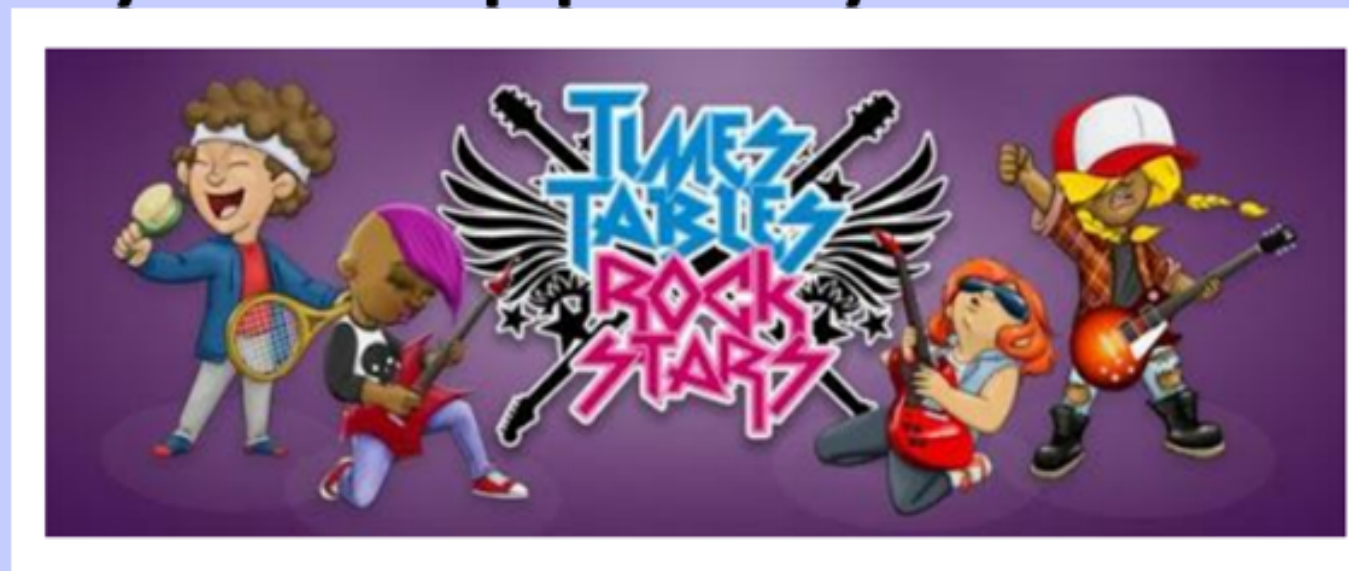
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# Math Workshop

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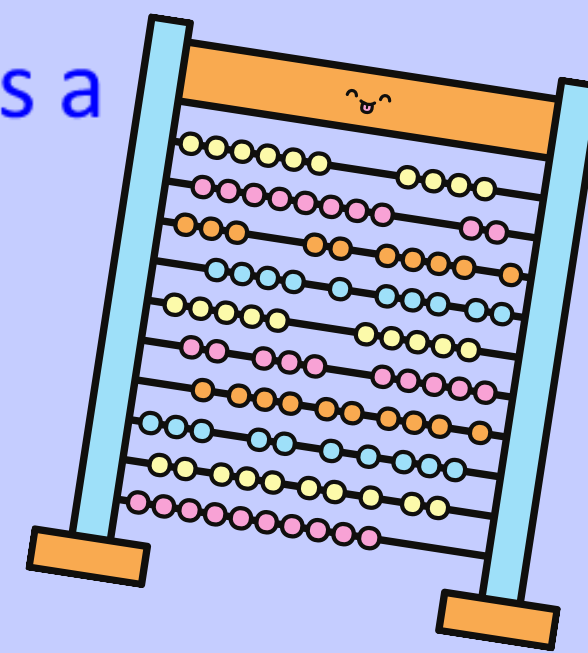
Another way to support your children is by using



When it comes to times tables, speed AND accuracy are important — the more facts your child remembers, the easier it is for them to do harder calculations. Times Table Rock Stars is a fun and challenging programme designed to help students master the times tables. World Famous musicians need to practice and so do children with their tables!

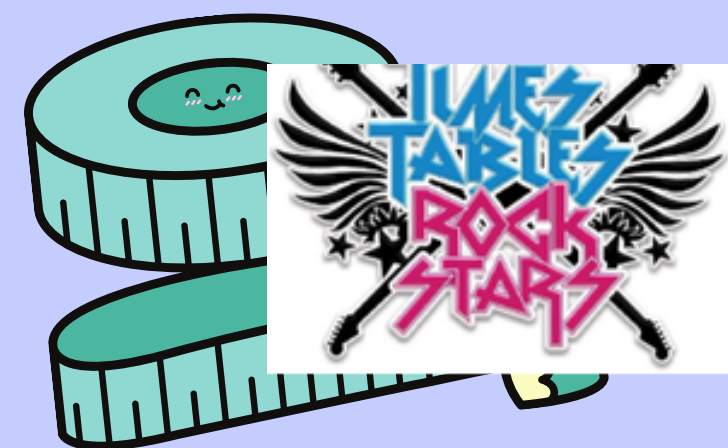
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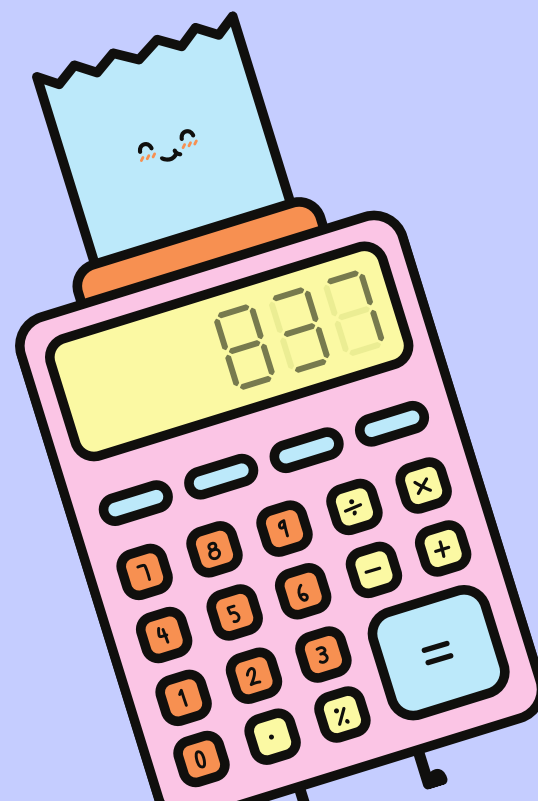
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# Times Tables Rockstars

- 1 Type [play.ttrockstars.com](https://play.ttrockstars.com) into your browser's address bar.
- 2 Click Login! > School > Student
- 3 Enter the School Name.  

- 4 Enter your child's username and password.  


# Times Tables Rockstars

## Rock Status

It's helpful to understand that the quicker your child can answer a times tables question, the higher their Rock Status. Use this list as a guide to help your child work out their Rock Status:

- ≤ 1 sec/question = Rock God
- ≤ 2 secs/question = Rock Legend
- ≤ 3 secs/question = Rock Star
- ≤ 4 sec question = Headliner
- ≤ 5 secs/ question = Support Act
- ≤ 6 secs/ question = Breakthrough Artist
- ≤ 7 secs/ question = Unsigned Act
- ≤ 8 secs/ question = Gigger
- ≤ 9 secs/ question = Busker
- ≤ 10 secs/ question = Garage Rocker
- > 10 secs/ question = Wannabe





# Times Tables Rockstars

## Single Player

**Garage** - the questions will only come from the times tables the teacher has set for the week. As pupils start to answer questions, TT Rock Stars works out which facts they take longer on and will give them more of these questions to answer. The Garage is best for getting quicker at a few facts. Players get 10 coins per question.

**Studio** - the questions in the Studio can be anything from  $2 \times 2$  up to  $12 \times 12$ .

TT Rock Stars calculates each the mean speed from their last 10 games in the Studio and translates into a Rock Status:

Under 1 second per question to become a Rock God

Under 2 seconds per question to become a Rock Legend

Under 3 seconds per question to become a Rock Star

Over 3 seconds is a Busker

They earn 1 coin per question and the Studio is the place for them to set their best time across all the tables.



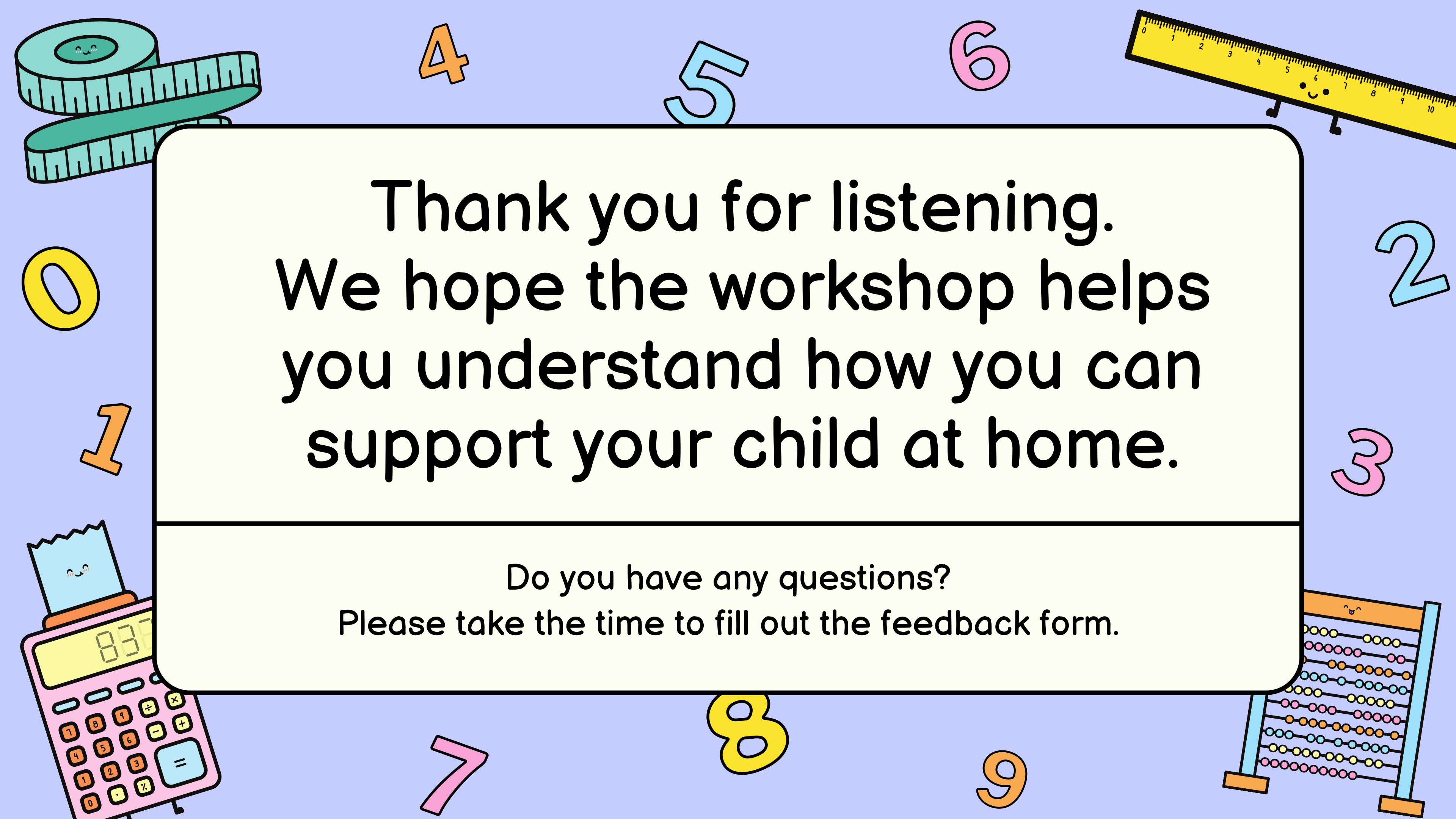
# Times Tables Rockstars

## Multiplayer

**Rock Arena** - The Arena allows players to compete against all other members of their Band (their Bandmates would need to join the same game in order to compete together). A new Arena game starts every 15 seconds and once the clock starts they race to answer more questions than the others. In the Arena, questions will only come from the times tables the teacher has set for the week, similar to the Garage. They earn 1 coin per correct answer.





The background is a light purple color. It is decorated with various math-related items: a green measuring tape in the top left, a yellow ruler in the top right, a pink calculator in the bottom left, and a blue abacus in the bottom right. Scattered around the central text box are the numbers 0 through 9 in different colors and sizes. The central text box is white with a black border and contains two paragraphs of text.

Thank you for listening.  
We hope the workshop helps  
you understand how you can  
support your child at home.

Do you have any questions?  
Please take the time to fill out the feedback form.