

# KSI PARENT WORKSHOP

26/4/23

Please feel free to explore the resources  
on the tables before we begin

Today's aims:

- Identify how **fluency** impacts upon achieving **mastery**.

*How can this be supported at home?*

- Explore some **resources** that are used in school.

# FLUENCY

**Fluency = how fast a person can retrieve correct maths facts to working memory from storage memory.**

- 'Number bonds to 5, 10 and 20' have previously been a big focus across early years and KSI. Children should **also** be building their number bonds **within** 5, 10 and 20

$$2 + 1 = 3$$

$$3 + 4 = 7$$

$$8 + 6 = 14$$

- We want children to build speed and confidence, without reliance on resources and fingers, using strategies to support them

*Consider: In your head now, complete  $7 + 8$   
How did you complete the calculation?  
Would this be similar or different to others?*

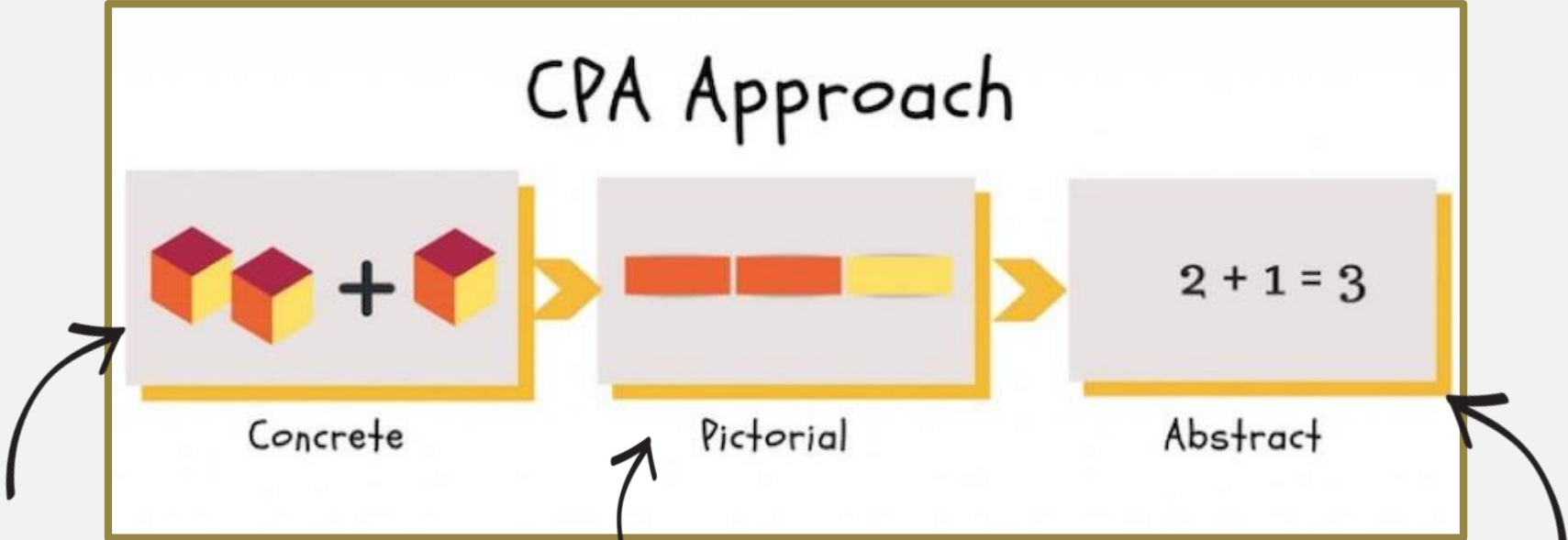
**One more, one less**

**Near doubles**

**Odds and evens**

# CPA

Concrete, pictorial, abstract



Physical resources the children can touch, move and explore

Connections built with pictures and images, in some cases created by the children

The abstract concept then becomes clearer

**This doesn't mean that physical resources are only used at the start of children's learning journey. We continue to use them up to KS2 and can be applied to challenges and new ideas.**

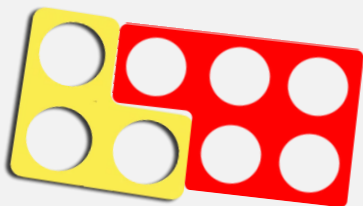
## NUMICON

- Shows relationships between numbers
- Like dots on a dice, children can recognise numbers visually
- Shows clearly, a one more, one less relationship between numbers



### Links to learning:

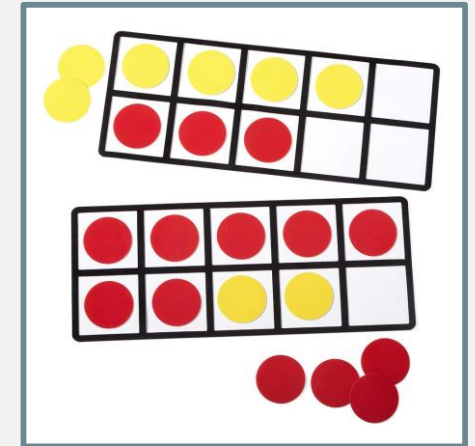
- Odd and even numbers
- One more, one less
- Number bonds (addition and subtraction)



## 10S FRAMES

*Numicon links well to...*

Allows children to add counters, draw dots to show addition, subtractions and relationships

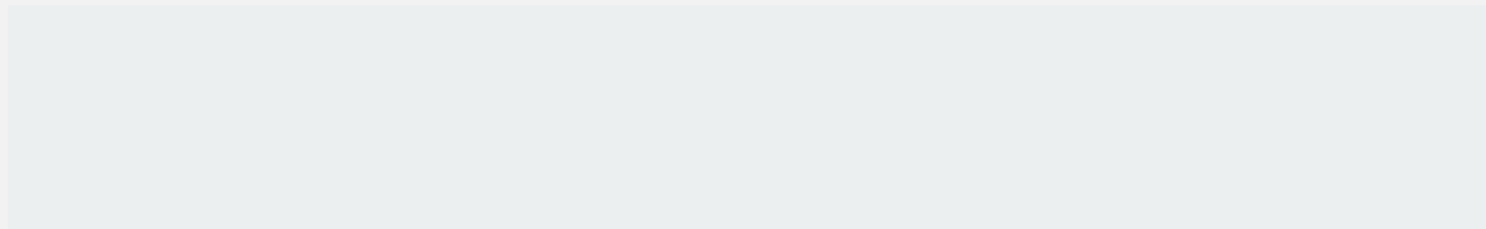
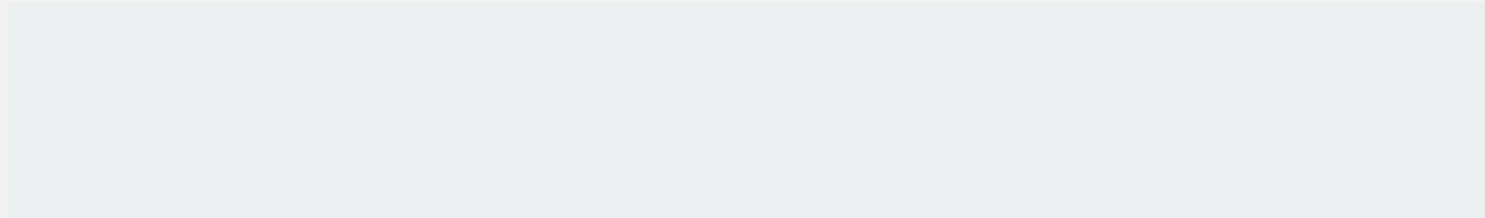


*Notice how, when full, the grids look similar to that of numicon*

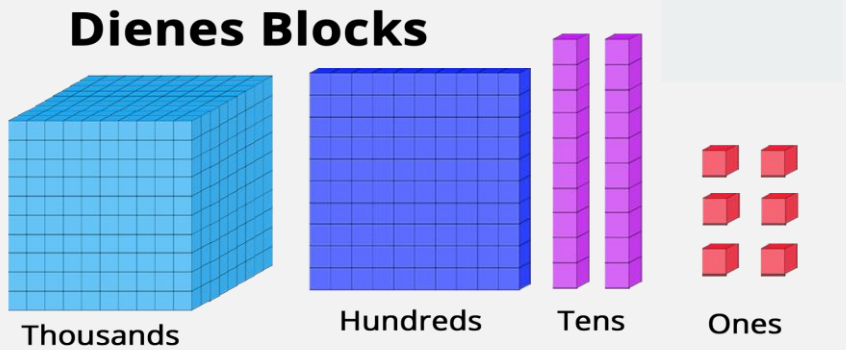
Children continuously expand their knowledge of numbers and what 'makes them'



*Can you show 5?*



# DIENES – BASE 10



- Crucial in children building their place value knowledge
- Early concepts that 10 is made up of ten 1s. 100 is made up of one hundred 1s and ten 10s.




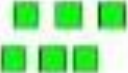
$34 = 20 + 14$

34 + 22 becomes easier when we can **partition** our number into 10s and 1s

KS2 progression





$3.4 \times 10 = 34$

$34 \times 1000 = 34,000$

tens	ones
	
	

$$43 + 25$$

May also be shown with place value counters as fluency with tens and ones grows

<i>Tens</i>	<i>Ones</i>
	
	

$$33 + 22$$

# TOP TIPS FOR AT HOME

- Anything can be used as a concrete resource: Lego bricks, pasta shells, pencils!
- Little and often is more effective, including with homework!

- Find ways to progress their fluency in day to day tasks:

Pairing socks or laying cutlery at the table whilst counting in 2s.

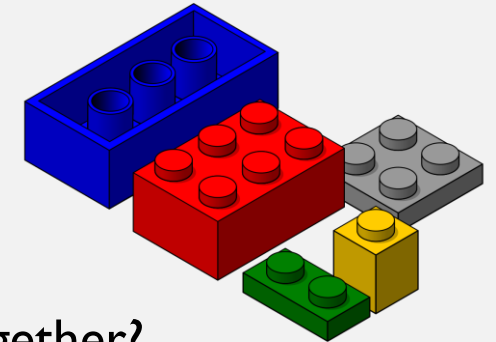
How many do you have? How many do I have? How many do we have all together?

How many grapes are there? You've eaten 5, how many are left?

Count in 10s, 5s, 2s using coins

Look at numbers on playing cards, dominos, dice!

Numbers are everywhere – help the children discover that!





**AND MOST IMPORTANTLY,**

**BE AN AMBASSADOR FOR MATHS!**

**We want children to enjoy maths** and feel, with some hard work, they can all progress and achieve!

*This may go against what you experienced at school but the adults around have an important influence*

If children hear 'I can't do maths' from parents, teachers, friends they begin to believe it isn't important. People become less embarrassed about maths skills as it is acceptable to be 'rubbish at maths'.

Top tips:

- Remove all negative ideas of maths from discussions or 'Someone else can help with your maths homework because I'm rubbish'
- Everything in the National curriculum is available online. Struggling with an idea or some homework? – google it, or better yet, ask a teacher!
- Recognise that there is more than one way of doing calculations – *You may have learned one method, but children are actively encouraged to seek out alternative methods in school and choose one which works for them, no matter how long winded.*
- Be an actor! – Get excited about maths and your child will get excited too.

