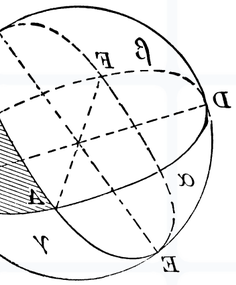
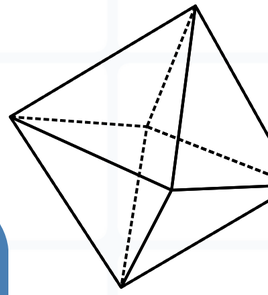
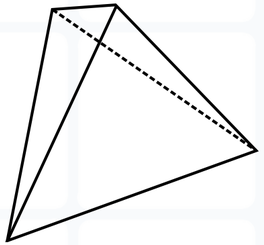
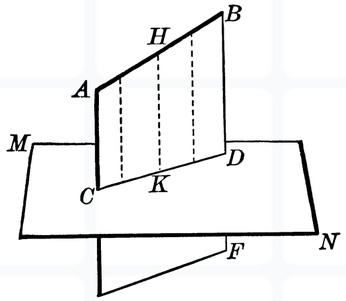




LET'S TALK MATHEMATICS

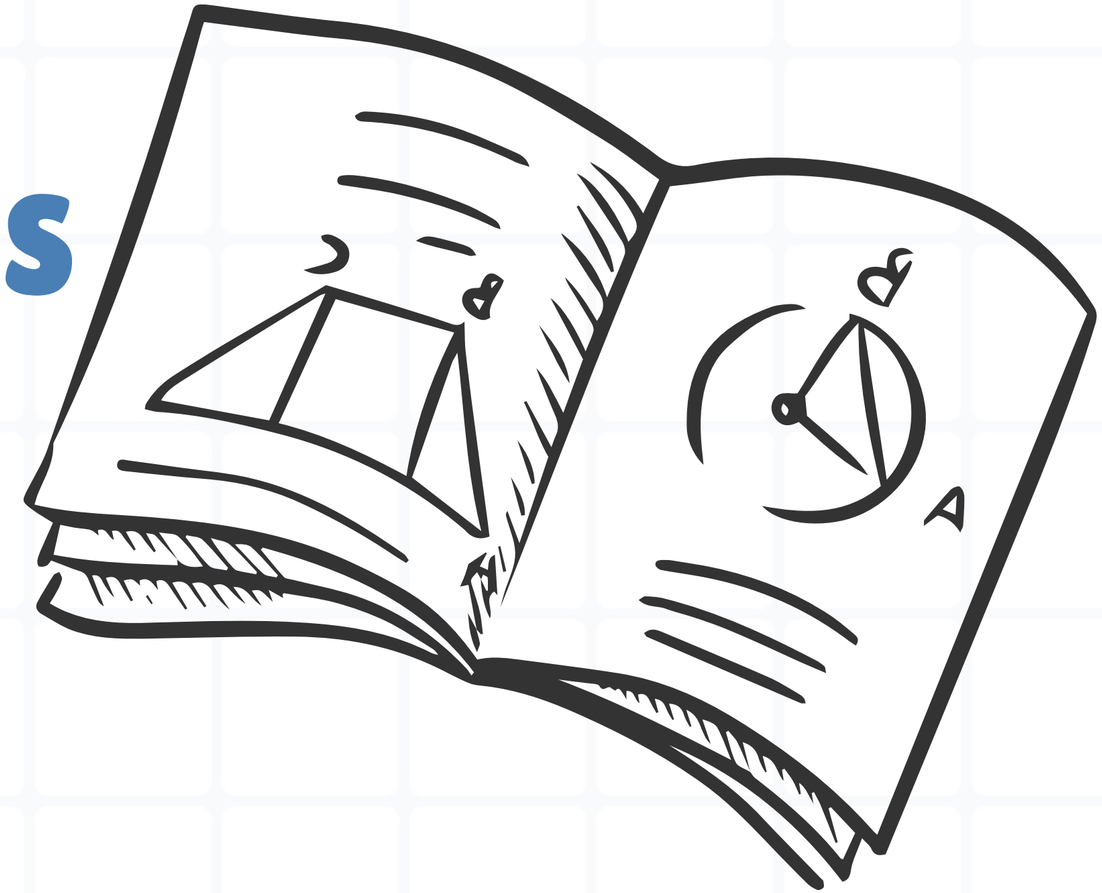




Maths Department
Hornsby House School
Spring 2024

LET'S START
WITH THE BASICS

How is my child taught maths at school?



Staff aim to:

foster a love of maths and develop the confidence to work independently and with others

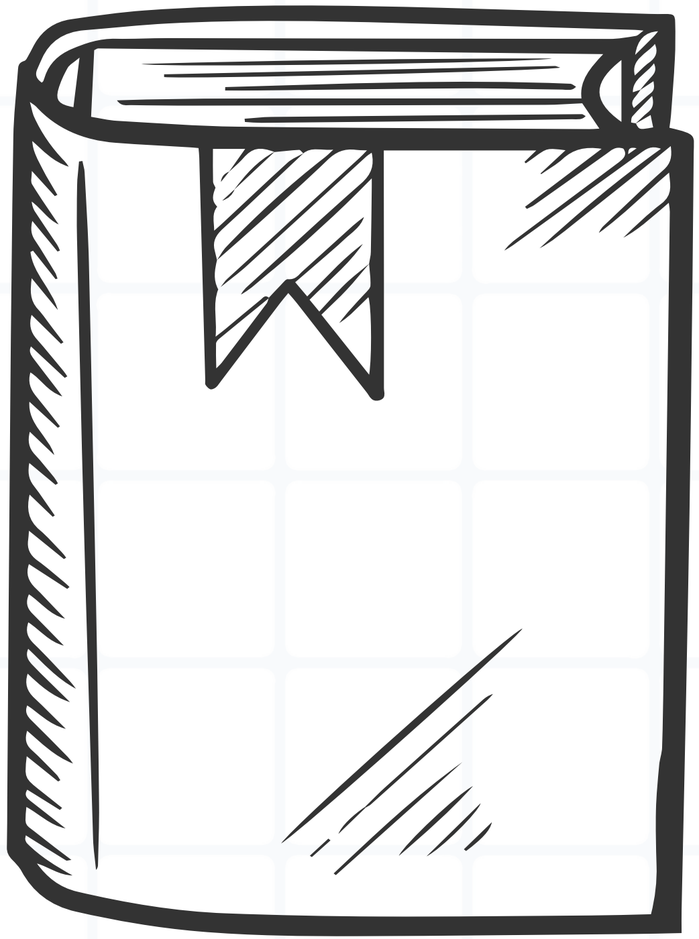
use assessment to build upon pupils' existing knowledge and understanding

use manipulatives and representations

teach strategies for solving problems

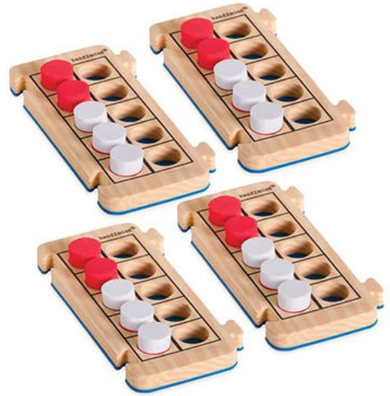
enable pupils to develop a rich network of mathematical knowledge

develop pupils' independence and motivation



WHAT SHOULD BE PRIORITISED?

This comes as no surprise but the most important foundation blocks are number bonds and times tables.

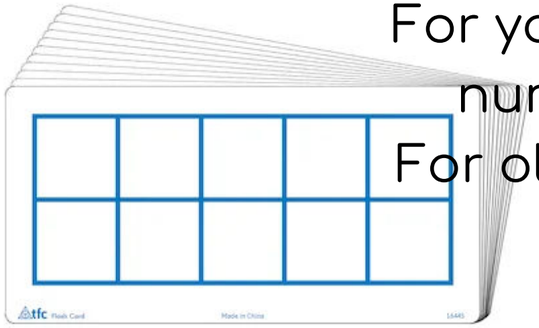


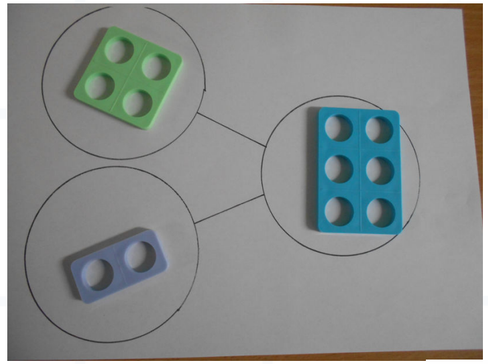
<u>Number bonds are fundamental to developing number sense</u> and mathematical fluency.

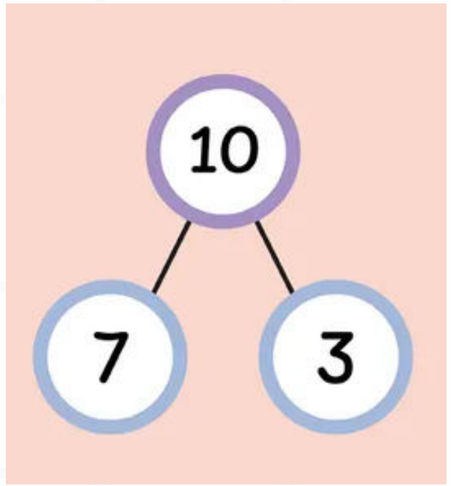
Number bonds or number pairs are pairs of numbers that add together to make a given number. For example, 7 and 3, or 1 and 9 are number bonds to 10, whereas 26 and 74, or 42 and 58 are number bonds to 100.

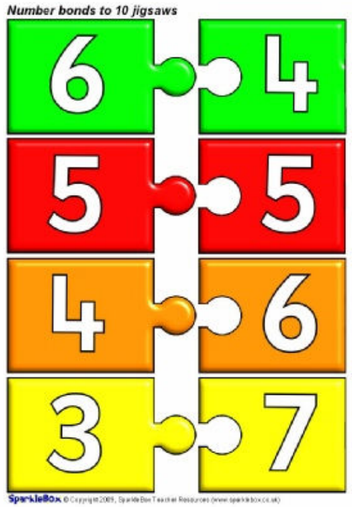
Using two different coloured counters, buttons or types of pasta, use the ten frame to explore number bonds to 10. For example, 10 is the same as 6 red buttons and 4 blue buttons. Children should see that 6 and 4 is 10 because the ten frame will be full.

Number pairs activities can be adapted for all ages and levels.
For younger children, number pairs can be looked at for any given number, for example, the number 5 can be 2 and 3, or 4 and 1.
For older children, look at greater numbers, or decimal or fraction pairs to 1.









How to support children with number bonds (to 10, 20, 50, 100).

Concrete step

Children start out by counting familiar real-world objects that they can interact with. They then use counters to represent the real-world objects. By putting six counters into two groups, children learn the different ways that six can be made.

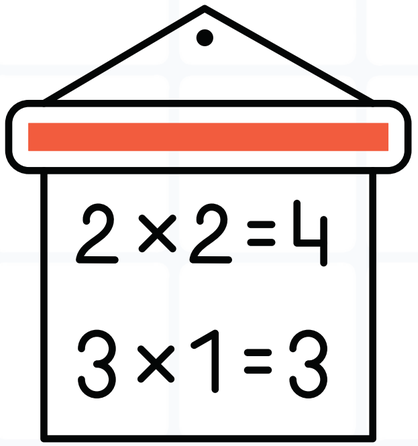
Pictorial step

Now that they understand the concept with hands-on objects and experience, children progress to writing number bonds in workbooks or on whiteboards.

Abstract step

With the concrete and pictorial steps done and dusted, children progress to representing abstract problems using mathematical notation (for example, 3 + 2 = 5).

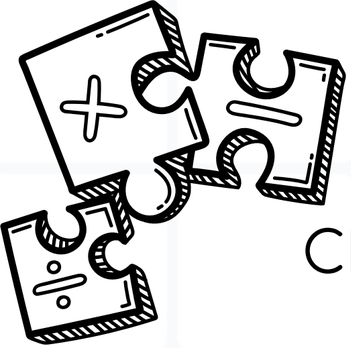
TIMES TABLES



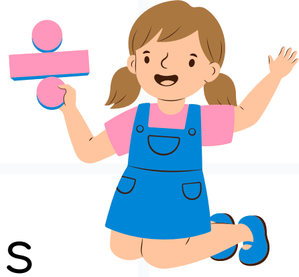
Fluency

Quick mental maths

Fewer mistakes



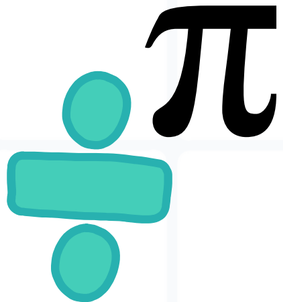
TIMES TABLES



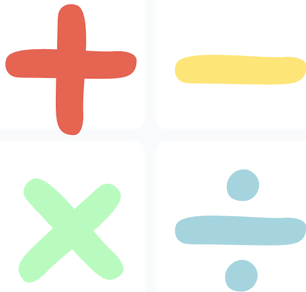
Children need to learn their times tables in primary school. There is no way of getting away from it.

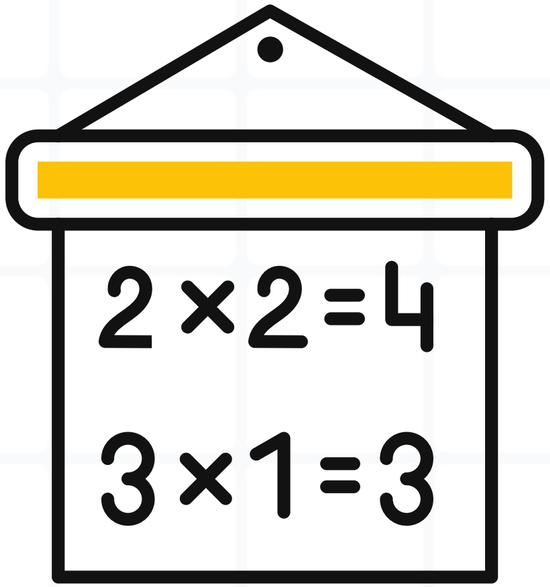
They are essential when learning many new maths skills and concepts from the national curriculum, such as fractions, decimals, factors, etc.

Not knowing your times tables puts additional strain on your working memory when tackling such new concepts in maths. This will hinder the longterm transition of the new facts to the long term memory.



The simple truth is that if you don't know your times tables by secondary school, then you're starting at a disadvantage.





HOW I CAN HELP MY CHILD WITH X TABLES

01. Stick to one times table at a time to minimise confusion

02. Be consistent! Practise daily (5-10 minutes)

03. Quiz them regularly, but not incessantly

04. Reward their efforts

FUN WAYS TO PRACTISE X TABLES

What's a great way to get information stuck in someone's head? Yep, that's right! Catchy music! We recommend checking out videos made by Youtuber, Mr.DeMaio, an American elementary school teacher who uses clever parodies of pop songs to teach kids their times tables.

FUN WAYS TO PRACTISE X TABLES

Technology used effectively!

TT Rock Stars is an interactive platform where children can have fun learning their times tables en route to becoming rock legends! They can ‘challenge’ other children, have ‘battles’ with other classes/schools or even challenge their teachers for extra playtime!

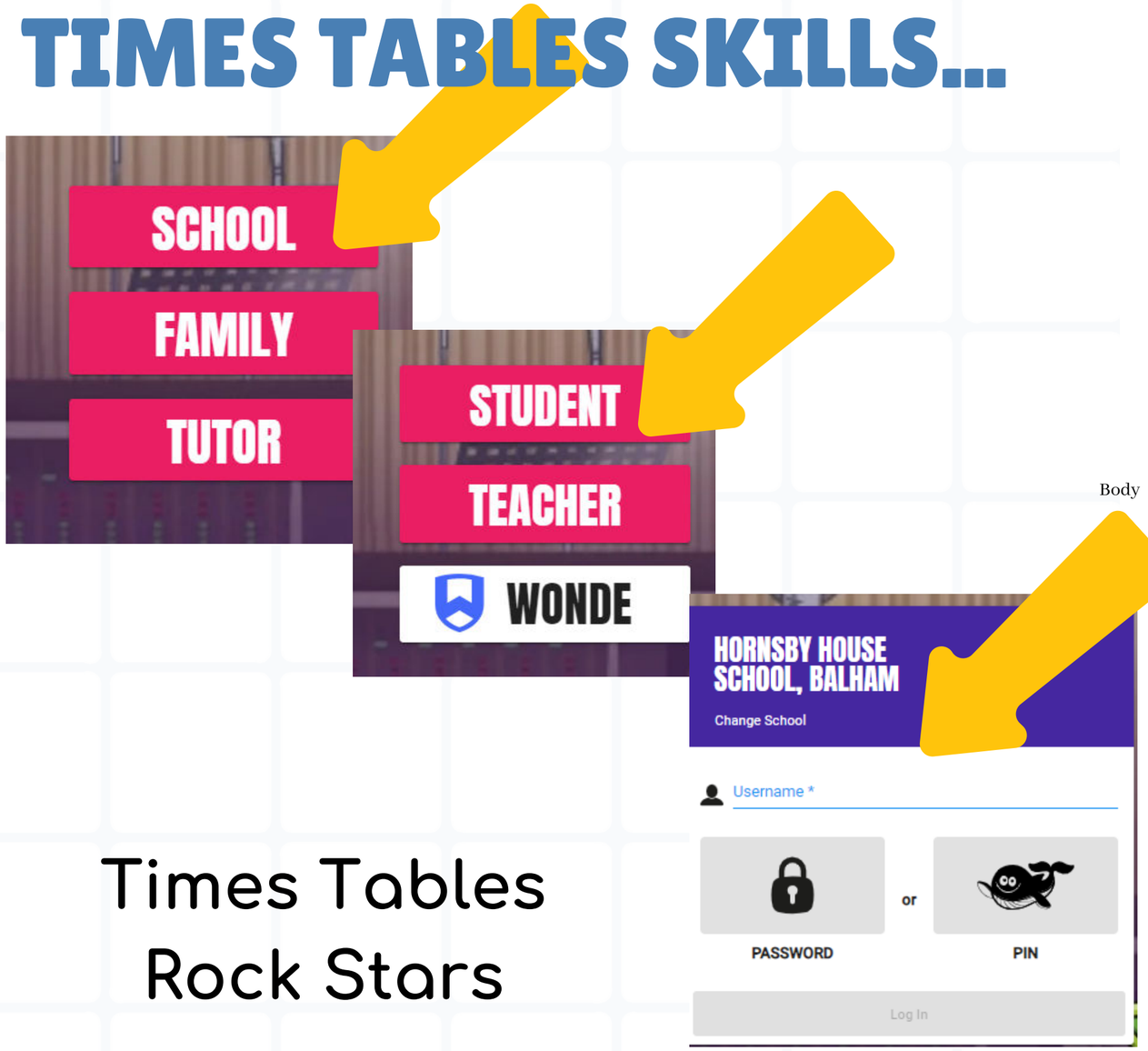
Staff are also getting quite competitive...

FUN WAYS TO PRACTISE X TABLES

Draw a Waldorf multiplication flower

One for the creative kids! Children start this activity by drawing the centre of the flower, in which they write a number between 2 and 12. They then draw 12 petals around the centre, with each petal containing the numbers 1 through 12. The last step is to draw another set of 12 petals which contain the centre number multiplied by each petal in the inner circle.

TIME TO POLISH OFF TIMES TABLES SKILLS...

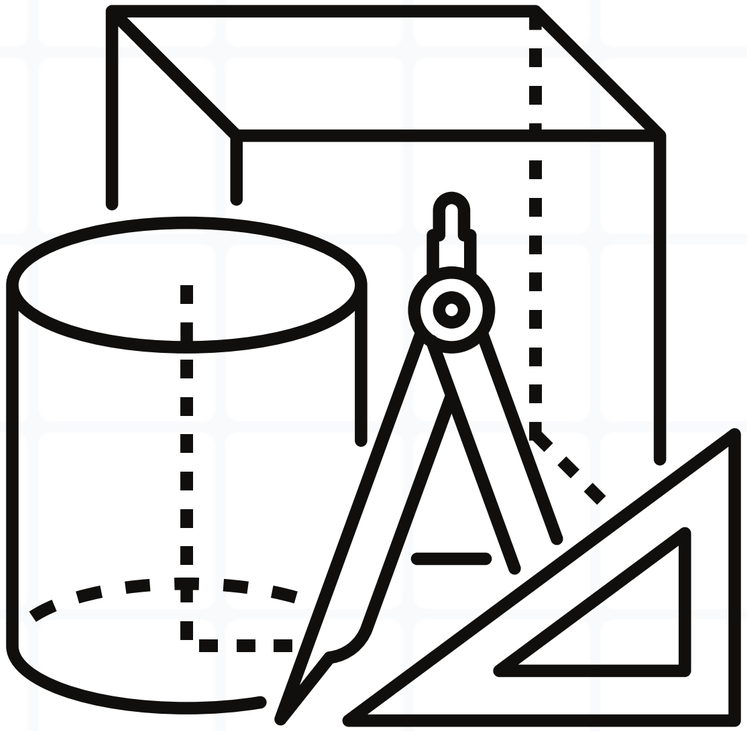


Times Tables Rock Stars

Body

Dummy 3 Du. Demo Class dummy3 rkd	Dummy 3a Du. Demo Class dummy3a tst	Dummy 3b Du. Demo Class dummy3b zpn
Dummy 3c Du. Demo Class dummy3c fbb	Dummy 4 Du. Demo Class dummy4 brr	Dummy 4a Du. Demo Class dummy4a wtw
Dummy 4b Du. Demo Class dummy4b mzc	Dummy 4c Du. Demo Class dummy4c wvs	Dummy5 Du. Demo Class dummy5 kvt
Dummy5a Du. Demo Class dummy5a chb	Dummy5b Du. Demo Class dummy5b kmd	Dummy5c Du. Demo Class dummy5c wdg
Dummy6 Du. Demo Class dummy6 yrr	Dummy6a Du. Demo Class dummy6a xvt	Dummy6b Du. Demo Class dummy6b xxz
Dummy6c Du. Demo Class dummy6c vtc		

AREAS THAT CHILDREN FIND TRICKY



- Telling time
- Converting units of measure
- Fractions
- PS&R

WAYS TO SUPPORT WITH TIME:

Add a hook to the hour hand

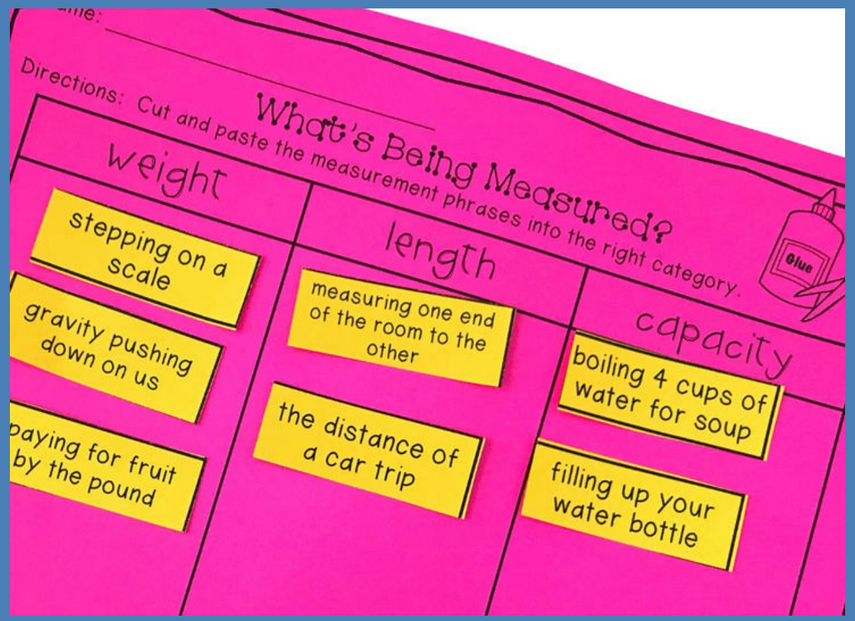
Turn your clock into a flower

Clock hats

Make a paper clock

WAYS TO SUPPORT WITH MEASURE:

Do a measurement sort



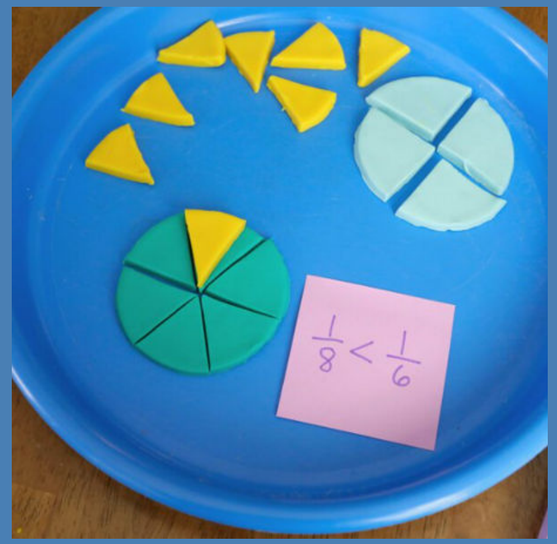
Cooking, baking activities

Provide a recipe in specific units. Then, give child measuring tools in another unit.

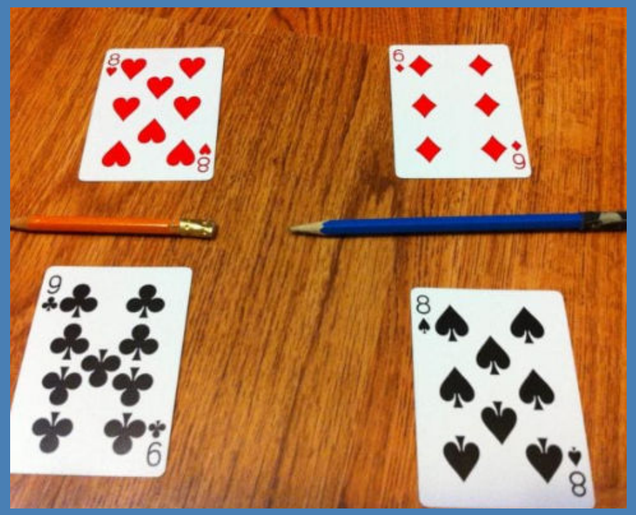
Play with scales

WAYS TO SUPPORT WITH FRACTIONS:

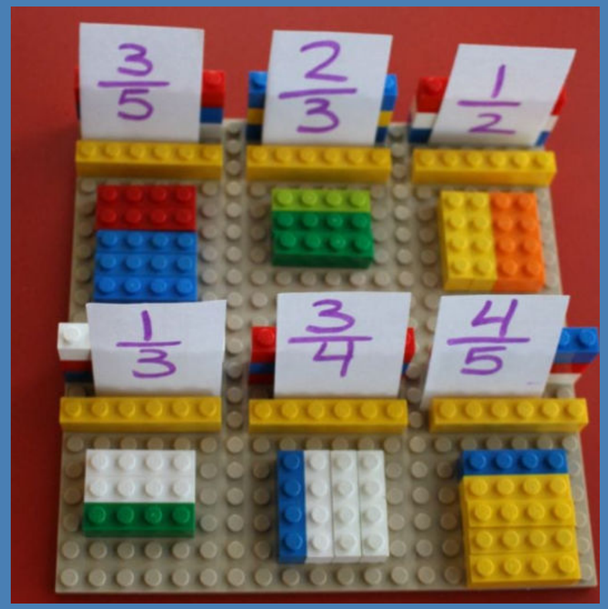
Build fractions with play dough



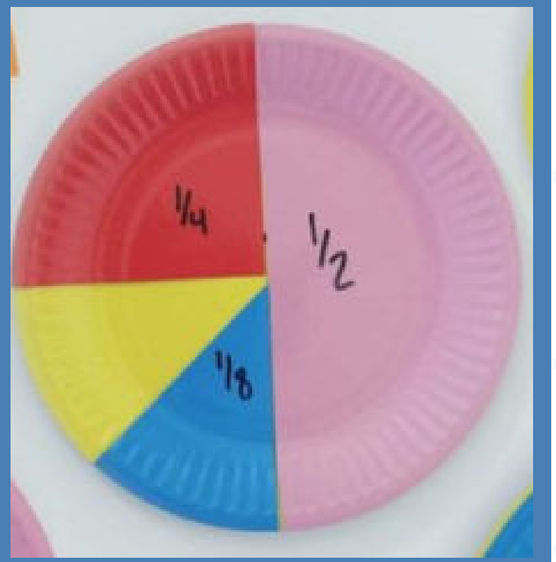
Fraction Wars



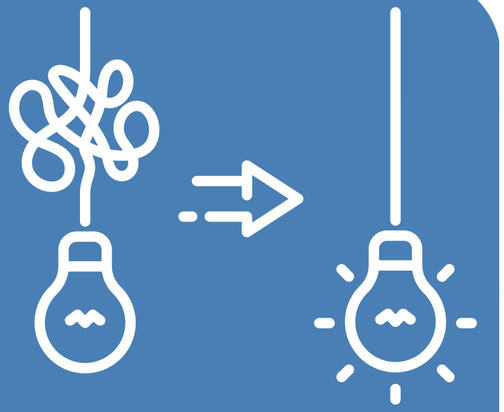
LEGO fraction games



Paper plate / Pizza fractions



PROBLEM SOLVING AND REASONING:



- Creativity
- Critical Thinking
- The Use of Logic
- Competence in Making Choices
- Knowledgeable in the Art of Conversation
- Strategic Plan for Creative Problem-Solving

WAYS TO SUPPORT WITH PS&R:

NRICH website

UNIVERSITY OF CAMBRIDGE

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Teachers | Students | Parents | Problem-solving Schools | About NRICH

Primary Parents

Maths at home

Here are some of our favourite activities for working on at home with your child

For two

These activities have been adapted, so that they are perfect for a child to work on alongside an adult

Live problems and recent solutions

Here are our problems inviting solutions, together with our most recently published children's solutions

Bookcase maths

Reading the books in this collection with your child, may spark interesting mathematical conversations