Caldecote Primary School
Happy, Healihy, High-Achieving

## Welcome to Our Maths Workshop

## 8:50-9:30-An introduction with Maths Lead <br> 9:30-10:00 - See maths in action

| Digits Left: 1, 2, 3, 6, 8, 9. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | + | 7 | + |  | $=14$ |
| + |  | + |  | $\times$ |  |
|  | $\div$ |  | $\times$ |  | $=36$ |
| $\times$ |  | - |  | - |  |
| 5 | $\times$ | 4 | $\times$ |  | $=60$ |
| $=41$ |  | $=5$ |  | $=51$ |  |



The large rectangle above is divided into a series of smaller quadrilaterals and triangles. Each of the shapes is a fractional part of the large rectangle.

Can you untangle what fractional part is represented by each of the ten numbered shapes?




a) |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |
|  |  |  |  |

b)

## 



Pupils will make connections between the concrete and pictorial representations.

cherry diagram


## $4+3=7$

e) $3 \times 240$


$$
\text { f) } 7 \times 131
$$




## Calculation Strategies Year R-Year 6

This document should be read in conjunction with the Caldecote Maths Curriculum

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Teaching for Mastery


- Everyone can learn and enjoy maths
- Seek and make connections e.g. 6+4, 6+5
- Links to prior learning
- Carefully sequenced steps to build secure understanding
- Revisit previous learning


## 'People are naturally curious, but we are not naturally good thinkers; unless the cognitive conditions are right, we will avoid thinking.'

Willingham, D.T. (2009) Why Don't Students Like School?

$$
\begin{aligned}
& \text { Set A } \\
& 120-90 \\
& 235-180 \\
& 502-367 \\
& 122-92 \\
& 119-89 \\
& 237-182
\end{aligned}
$$

Set B
120-90
122-92
119-89
235-180
237-182
502-367

Taken from Mike Askew, Transforming Primary Mathematics, Chapter 6

## Exposing and using structure

$$
\begin{array}{r}
8-5=3 \\
9-6=3 \\
10-7=3
\end{array}
$$

Subtraction:


- These calculation all have a difference of 3 . Can you explain why?
- Application of understanding this structure can be very powerful. "I can build on and apply my understanding."

$$
14.3-3.8=14.5-4=10.5
$$

## A级

1．推算。
（1）

（2）

（3）

（4）


$$
\begin{aligned}
& 7+2= 18-\square=8 \\
& 17+2= 18-\square=10 \\
& 7+12= 18-\square=12 \\
& 18-\square=14 \\
& 17+12= 18-\square=16
\end{aligned}
$$

Connecting through inverse and place value

$$
\begin{array}{rr}
30 \times 4=120 & 12 \div 4
\end{array}=30
$$

Connecting with procedural variation
$12=4 \times 3$
$13=4 \times 3+1$
$14=4 \times 3+2$
$30 \times 4=120$
$31 \times 4=$ ?

Connecting with inequality
$3 \times 4<4 \times 4$
$3 \times 4>3 \times 3$
$3 \times 4=4+4+4$

## Number Sense

－Calculate this $18 \times 5$
－Find as many different methods as possible
－Can you draw a model for each method？
－Can you categorise your methods？
Jo Boaler
Stanford
University
What is number sense？

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## Number Sense


https://www.youtube.com/watch? v=XhuY7IIzT3g


## Mastery

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NCETM
NATIONAL CENTREFor EXCELLENCE


## Helping at Home

- Support your child with being able to manipulate numbers and recognise connections
- Number bonds
- Times tables
- Use the class overview to find out what your child is learning in maths for each half-term
- Calculation strategies - check the website


## Helping at Home

## Mathletics

(a) A 3P Learning Product

Sign in Mathletics


