



# The Croft Primary School

*Mathematics  
Workshop*



# 4 stages of activity

Our children learn maths at The Croft using and applying their Concrete, Pictorial and Abstract methods in a variety of different tasks. These include;

- *Fluency tasks*
- *Varied Fluency tasks*
- *Problem solving tasks*
- *Reasoning tasks*

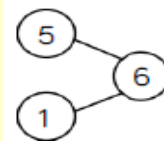


# Fluency

$$3 + 2 = 5$$

$$2 + 3 = 5$$

# Varied Fluency



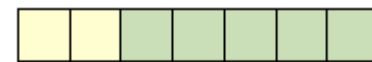
$$1 + \_ = 6$$

$$\_ + 1 = 6$$

$$\_ = \_ + 1$$

$$6 = \_ + \_$$

Use the number cards to make 4 addition sentences.



$$\_ + \_ = 7 \quad 7 = \_ + \_$$

$$\_ + \_ = 7 \quad 7 = \_ + \_$$

# Year 1 'Fact families'

## Problem solving

$$\text{circle} + \text{triangle} = 4$$

$$\text{triangle} + \text{circle} = 4$$

$$4 = \text{circle} + \text{triangle}$$

$$4 = \text{triangle} + \text{circle}$$

What could the circle and the triangle be worth?

## Reasoning

Kim has 3 number cards.



She has written two number sentences.

$$3 + 5 = 2 \quad 3 = 5 + 2$$

Explain what Kim has done wrong.

Correct her number sentences and complete the fact families.

# Fluency

$1 \times 2 = 2$

$2 \times 2 = 4$

$3 \times 2 = 6$

$4 \times 2 = 8$

$5 \times 2 = 10$

# Varied Fluency



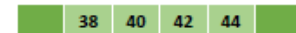
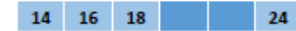
Count in 2s to calculate how many eyes there



There are  eyes in total.

$\square \times \square = \square$

Complete the number track.



There are 14 wheels, how many bikes are there?



## Year 2 'The 2 times table'

# Problem solving

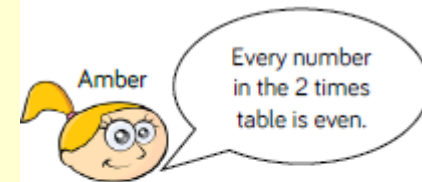
Fill in the missing boxes.

$3 \times \square = 6$

$\square \times 2 = 20$

$7 \times 2 = \square$

# Reasoning



Is Amber correct?

Explain your answer.

Thomas says that  $10 \times 2 = 22$

Is he correct?

Explain how you know.



Home



Shows



Games



Puzzles & Quizzes



Watch & Sing



Join In



Make & Colour



Radio



Topics



### Numberblocks

Sing along and learn all about numbers with the Numberblocks!

+ Add to My Shows

7313

#### On TV



Tomorrow  
09:20  
CBeebies

#### On iPlayer

Choose an episode

# Number blocks


**BBC** Sign in News Sport Weather iPlayer Sounds CBBC More

**iPlayer** Channels Categories A-Z TV Guide My Programmes


## Numberblocks

The animated adventures of friends who can always count on each other.


22 EPISODES AVAILABLE




CBeebies  
**Series 3: Once Upon a Time**  
A bedtime story all about the...




CBeebies  
**Series 3: Blockzilla**  
The monster tale of a colossal creature who really, really...




CBeebies  
**Series 3: The Numberblocks Express**  
Learn all the number bonds up...




CBeebies  
**Series 3: Fruit Salad**  
Find out how to split numbers into smaller numbers with the...




CBeebies  
**Series 3: Zero**  
Learn all about the number zero with Numberblocks Zero.



CBeebies  
**Series 3: Now We Are Six to Ten**  
Learn all about the numbers 6,...



CBeebies  
**Series 3: Numberblobs**  
Sing along to the Numberblocks counting song with the...



CBeebies  
**Series 3: Building Blocks**  
When an alien ship crashes in...

Helping your child at home

# Recall facts for addition

How many recall facts should children know in order to be able to calculate efficiently any addition?

**0+0, 0+1, 0+2, 0+3, 0+4, 0+5, 0+6, 0+7, 0+8, 0+9,**  
**1+1, 1+2, 1+3, 1+4, 1+5, 1+6, 1+7, 1+8, 1+9**  
**2+2, 2+3, 2+4, 2+5, 2+6, 2+7, 2+8, 2+9**  
**3+3, 3+4, 3+5, 3+6, 3+7, 3+8, 3+9**  
**4+4, 4+5, 4+6, 4+7, 4+8, 4+9,**  
**5+5, 5+6, 5+7, 5+8, 5+9,**  
**6+6, 6+7, 6+8, 6+9**  
**7+7, 7+8, 7+9**  
**8+8, 8+9,**  
**9+9**

**55 addition facts**



# Recall facts for subtraction

How many recall facts should children know in order to be able to calculate efficiently any subtraction?

10-0, 10-1, 10-2, 10-3, 10-4, 10-5, 10-6, 10-7, 10-8, 10-9, 10-10,  
9-0, 9-1, 9-2, 9-3, 9-4, 9-5, 9-6, 9-7, 9-8, 9-9,  
8-0, 8-1, 8-2, 8-3, 8-4, 8-5, 8-6, 8-7, 8-8,  
7-0, 7-1, 7-2, 7-3, 7-4, 7-5, 7-6, 7-7,  
6-0, 6-1, 6-2, 6-3, 6-4, 6-5, 6-6,  
5-0, 5-1, 5-2, 5-3, 5-4, 5-5  
4-0, 4-1, 4-2, 4-3, 4-4,  
3-0, 3-1, 3-2, 3-3,  
2-0, 2-1, 2-2,  
1-0, 1-1

**and**

18-9,  
17-9, 17-8,  
16-9, 16-8, 16-7,  
15-9, 15-8, 15-7, 15-5,  
14-9, 14-8, 14-7, 14-6, 14-5,  
13-9, 13-8, 13-7, 13-6, 13-5, 13-4  
12-9, 12-8, 12-7, 12-6, 12-5, 12-4, 12-3,  
11-9, 11-8, 11-7, 11-6, 11-5, 11-4, 11-3, 11-2,  
101 subtraction facts.

# Times tables

Year Group:	Times table introduced:
1	Counting in 2's 5's and 10's
2	2 5 10
3	3 4 8
4	6 9 11 7
5	All tables are used and applied
6	All tables are used and applied

<https://www.bbc.co.uk/cbeebies/grownups/help-your-child-with-maths>

Reception and KS1

# Top tips for parents

- Be positive about maths (even if you found maths hard at school!)
- Point out the maths in everyday life. Include your child in activities involving numbers and measuring, such as shopping, cooking and travelling.
- Praise your child for effort rather than for being "clever". This shows them that by working hard they can always improve.

# Web sites

- <https://mathsframe.co.uk/en/resources/category/22/most-popular> Mathsframe
- <http://mathszone.co.uk/> Maths zone
- <https://www.topmarks.co.uk/maths-games/hit-the-button> hit the button
- <https://www.bbc.com/bitesize/subjects/zjxhfg8> bbc
- <https://www.educationquizzes.com/ks1/maths/> education quizzes
- <https://www.theschoolrun.com/ks1/key-stage-1-maths> school run
- <https://www.topmarks.co.uk/maths-games/5-7-years/counting> top marks

## Number and Place Value

- Look for numbers in the environment. Talk about the value of digits in numbers and how they make a number bigger or smaller.
- Estimation. For example ask them to think about how they can estimate how many bricks are in a box, how many smarties and in a tube or sweets in a jar
- Addition, subtraction, multiplication and division
- Share real life examples of these calculations with you children e.g. we each need 3 sweets each, how many do we need altogether?

## Fractions

- Dividing cakes, chocolate bars and pizzas into enough pieces for your family. Talk about larger fractions, smaller fractions and adding or subtracting pieces to make one whole.

## Shape

- Encourage your child to spot shapes whenever you go out. As well as identifying 2D and 3D shapes, they should be able to spot lines of symmetry. Play games such as battle ships with coordinates
- Look for patterns and symmetry when out and about.

## Measurement

- Get your child to help with the washing up! This is an ideal way to help them learn about the capacity of different containers.
- Cooking is great way of helping children practise how to measure in grams and kilograms. It also gives them a chance to learn how to accurately read scales and measure out capacities in litres and centilitres.
- Following recipes will also make them familiar with measurements work together to find out the quantities needed, ask your child to weigh the ingredients, discuss how you'd halve or double the recipe and discuss the ratio of ingredients.
- Talk about the weather forecast: is today's temperature higher or lower than yesterday's? What do the numbers mean?

## Money

- Receiving (and spending!) pocket money can make children very keen learners in this area!

Use any shopping trips, or a fantasy shopping spree at home, to encourage your child to be able to:

- ? Recognise all the coins
- ? Find totals and calculate change that should be given
- At the shops. When buying a couple of items, ask them to work out how much they will cost together
- Going shopping: talk about the cost of items and how the cost changes if you buy two items instead of one. Let your child count out the coins when paying and discuss the change you get back. Use coins to explore addition, subtraction, multiplication and division.
- Use pocket money as an opportunity to talk about maths - are they saving for anything? How much do they need to save each week to buy it?
- Work out offers in supermarkets together. Ask them to work out which are the best deals.
- Talk to them about getting a bank account. Look together at what's on offer for young people opening their first account and see which is the best deal.

## Position and direction

- When travelling somewhere familiar, ask your child to give you directions and timings, then test their directions out. If they get something wrong, ask them to think of the best way to get back to where you want to go.
- Describe movements including right angles, forward, backward up and down linking with measures.

## Time

- Telling the time is an area that many children struggle with, so giving them plenty of opportunities to practise can be very beneficial. Make sure that there are both traditional and digital clocks around the house for your child to practise reading the time to the nearest minute.
- Use timers e.g. can you clean your teeth for two minutes
- Convert between different units of time e.g. If we need to leave in one hour, how many minutes do we have next?
- Use timetables and TV guides to practise using discussion time and developing their understanding of time
- Use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight
- Use calendars and diaries know the number of seconds in a minute and the number of days in each month, year and leap year
- Encourage your child to read the time (the hour)
- Planning an outing: discuss how long it takes to get to the park, and so work out what time you need to leave the house. Encourage your child to work out the best solution based on the time and distances. Discuss what shapes you see when you get there.

## Games

- Children's number skills can be supported in all sorts of fun ways at home. Board games are a great way of making them familiar with the number system and addition and subtraction. Children can really enjoy inventing their own.
- Play with cards. Take 2 cards and add the numbers together, the player with the highest number wins. Try it with subtraction, multiplication, and division too.
- Play board games like Connect 4, Jenga, Monopoly, Scrabble or Dominos.
- Ask your child to design their own board game and dice. Play the game together and talk about the mathematical thinking, reasoning, or problem solving the game used