Maths Parent Workshop

FoxFederation

Nick Marsh – Maths lead

What we will cover today

FoxFederation

- End of Reception expectations
- How we teach maths in Reception
- How we teach maths at Fox
- Key concepts and foundational skills
- How you can support home

Where are we aiming to be by the end of the year?

FoxFederation

Children in Reception are assessed against **Early Learning Goals.** Two of these are based around maths. By the end of the year, we hope children have mastered these skills.

Emphasis is on mastery of the number system within 10 verbally and being able to reason.

Number

FoxFederation

- Have a deep understanding of numbers to 10 (including the composition of each number)
- Subitise up to 5
- Automatically recall number bonds to 5 (including subtraction)
- Recall some number bonds to 10 (including subtraction and double facts)

Numerical Pattern

FoxFederation

- Verbally count beyond 20, recognising the pattern of the counting system
- Compare quantities up to 10 in different contexts, using greater/less and more/fewer
- Explore and represent patterns within numbers to 10:
  - Odds and evens
  - Doubles
  - Grouping and sharing

Non-statutory – Shape, Space and Measure

FoxFederation

- Name basic 2D and 3D shapes and discuss simple properties
- Times of day (days of the week, morning, afternoon, evening)

- Compare based on:
  - Size
  - Weight
  - Length
  - Capacity

What is teaching for mastery?

FoxFederation

Teach less but teach it better

Go slow to go fast

Go deep to build firm foundations - depth is simplicity, not complexity, so accessible for all

Whole class teaching – to maximise teacher input with additional pre-teaching/intervention for those who need it.

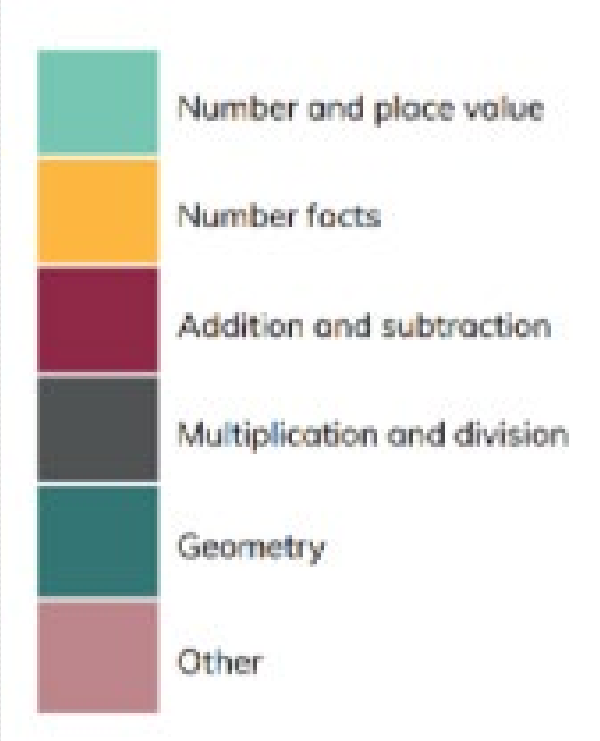
What does that look like?

FoxFederation

- I know how to do it
- It becomes automatic and I don’t need to think about it e.g. driving a car
- I’m really good at doing it
- I understand what I am doing
- I can show someone else how to do it.

Revisiting throughout our curriculum

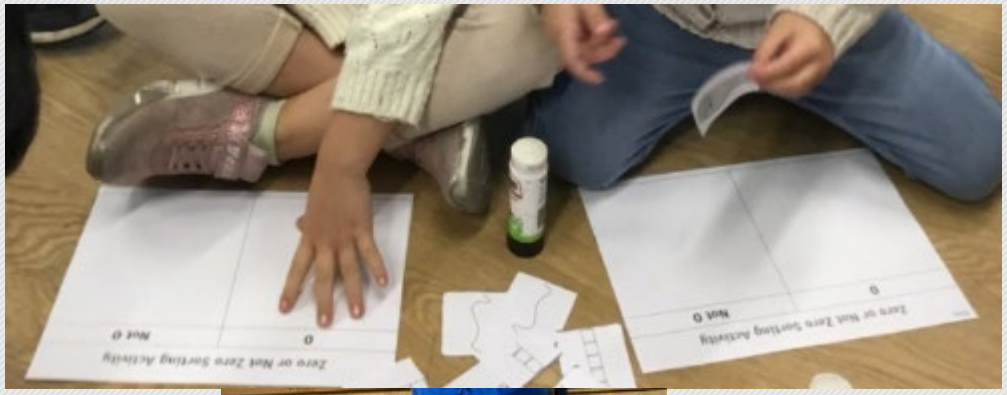
FoxFederation



	Unit	Unit Name
Autumn 1	1	Early Mathematical Experiences
	2	Pattern and Early Number
Autumn 2	3	Numbers within 6
	4	Addition and Subtraction within 6
	5	Measures
	6	Shape and Sorting
Spring 1	7	Numbers within 10
	8	Addition and Subtraction within 10
Spring 2	9	Grouping and Sharing
	10	Numbers within 15
	11	Doubling and Halving
Summer 1	12	Shape and Pattern
	13	Addition and Subtraction
Summer 2	14	Numbers within 20
	15	Money
	16	Measures

How do we teach maths?

- 3 taught maths lessons per week
- NCETM Mastering Number
- Maths area in the classroom
- Introduce one number per week



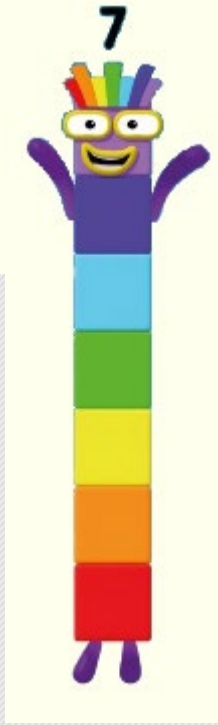
Concrete ▫ Pictorial ▫ Abstract

FoxFederation

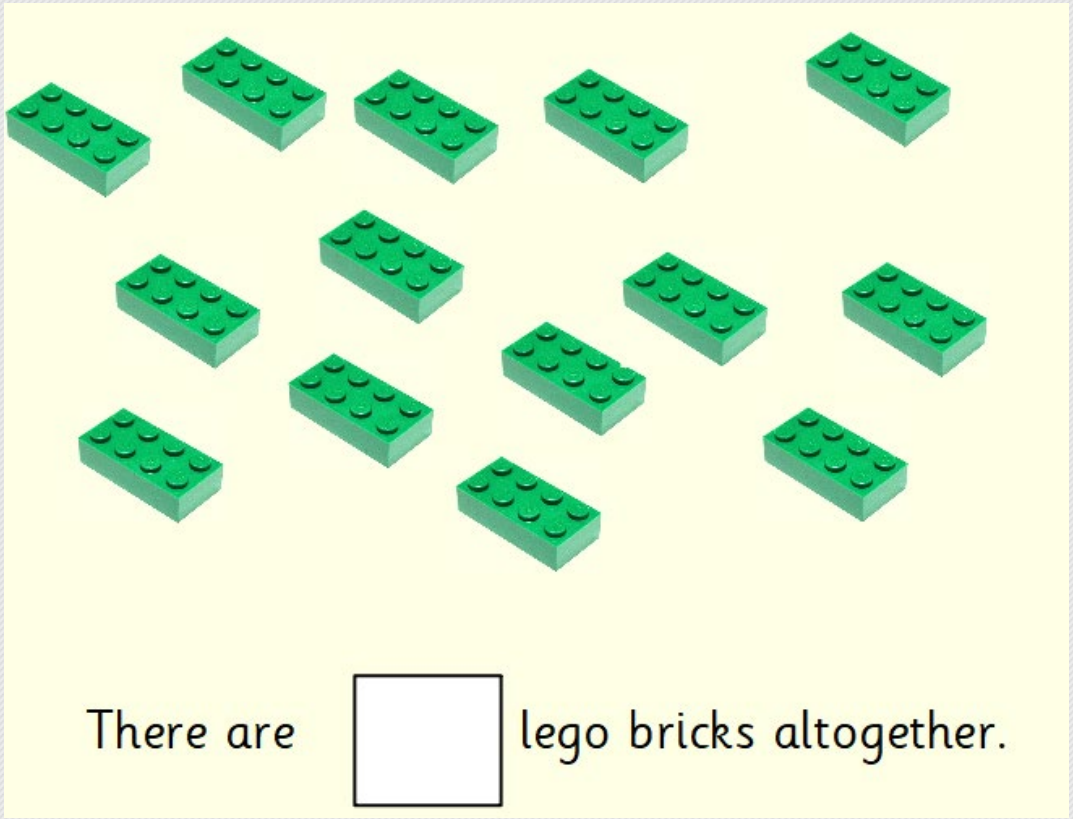
If children play with mathematical objects before they are asked to solve problems with them, they are more successful and more creative.

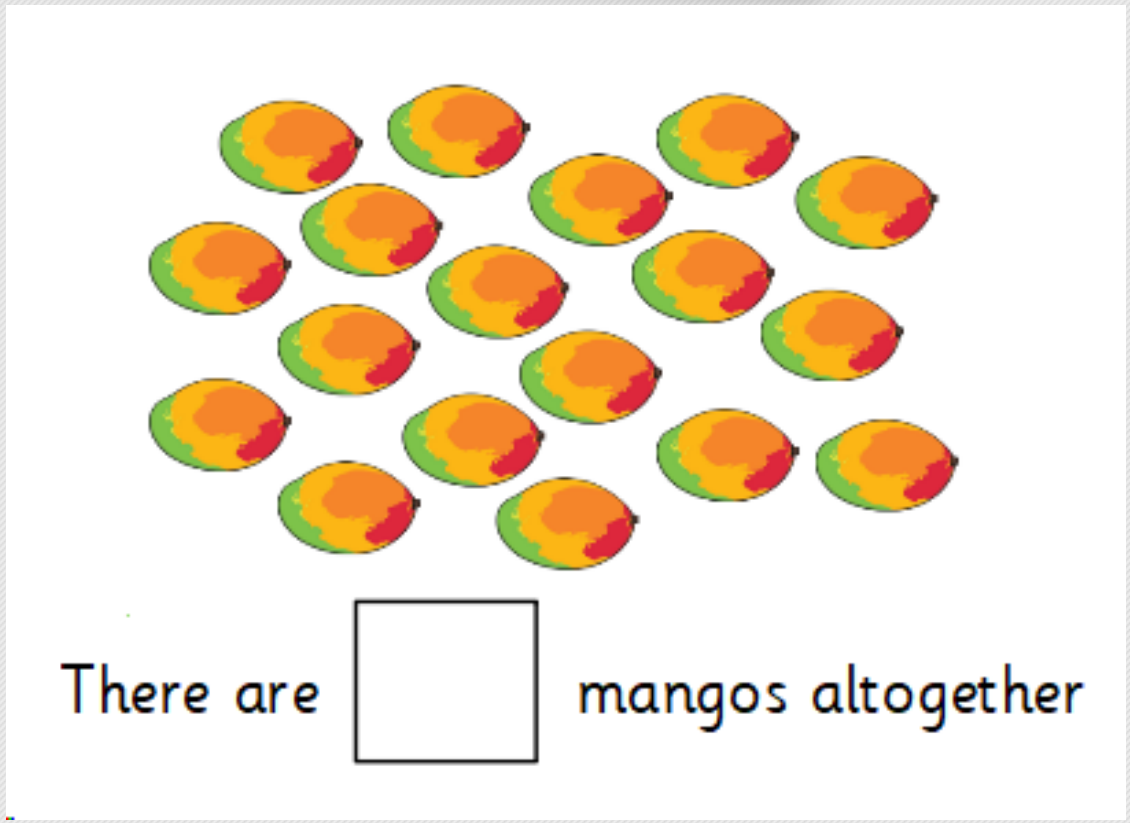
Representations – Concrete

FoxFederation



Pictorial

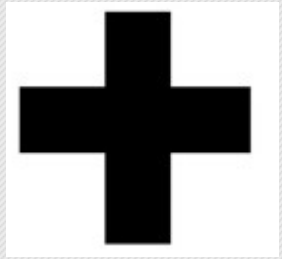

There are
lego bricks altogether.


There are
mangos altogether

Abstract

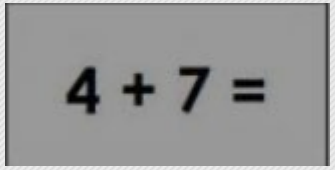
FoxFederation

1	2	3	4	5



1+1+1= 3

10-7= 3



Key foundational skills

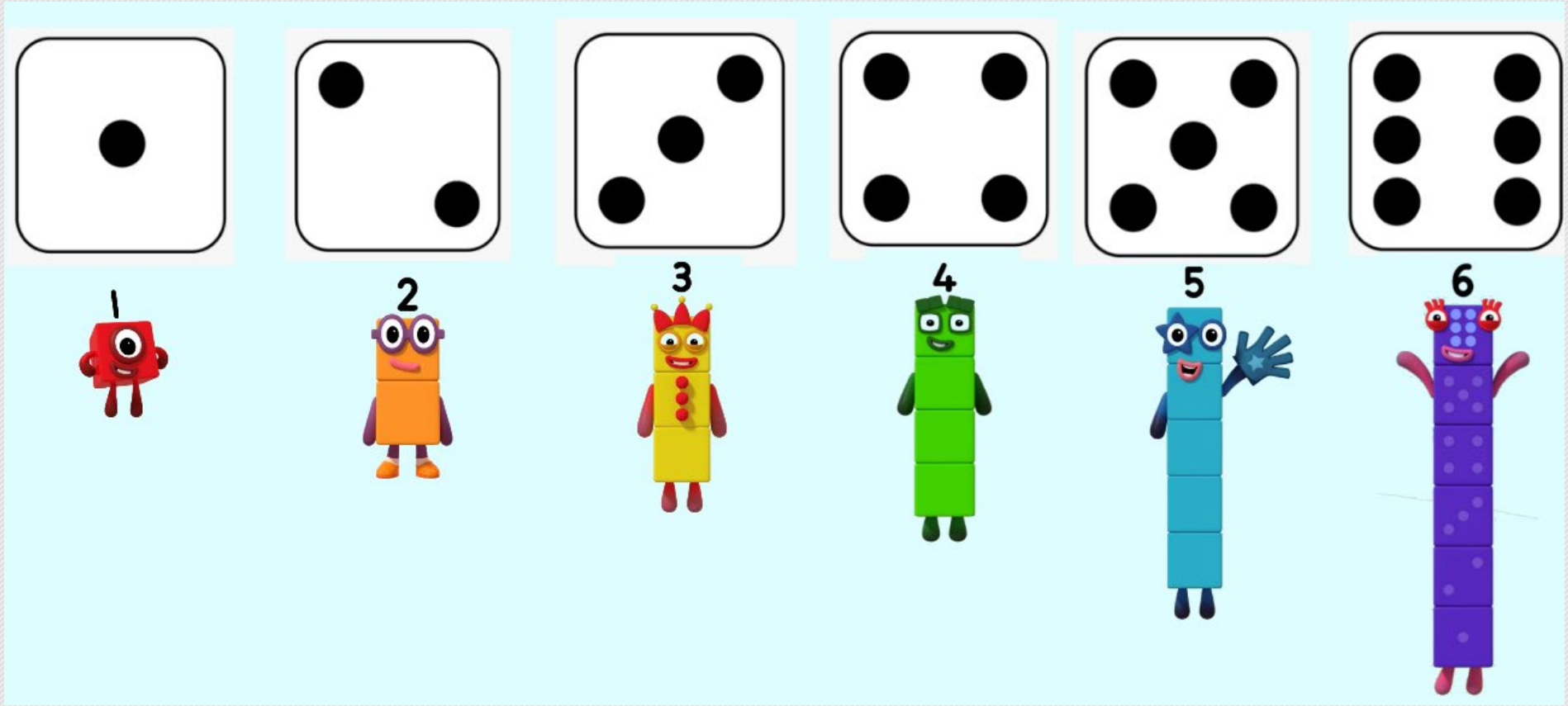
FoxFederation

- Subitising
- Cardinality, ordinality and counting
- Composition
- Comparison

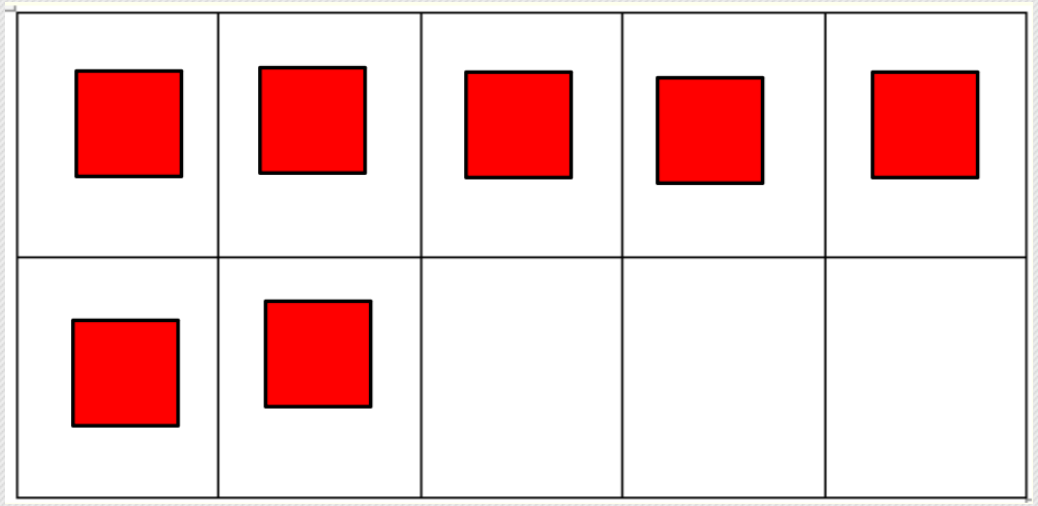
Subitising

How many?
More/fewer/equal to
Altogether

Same/different



Cardinality, ordinality and counting

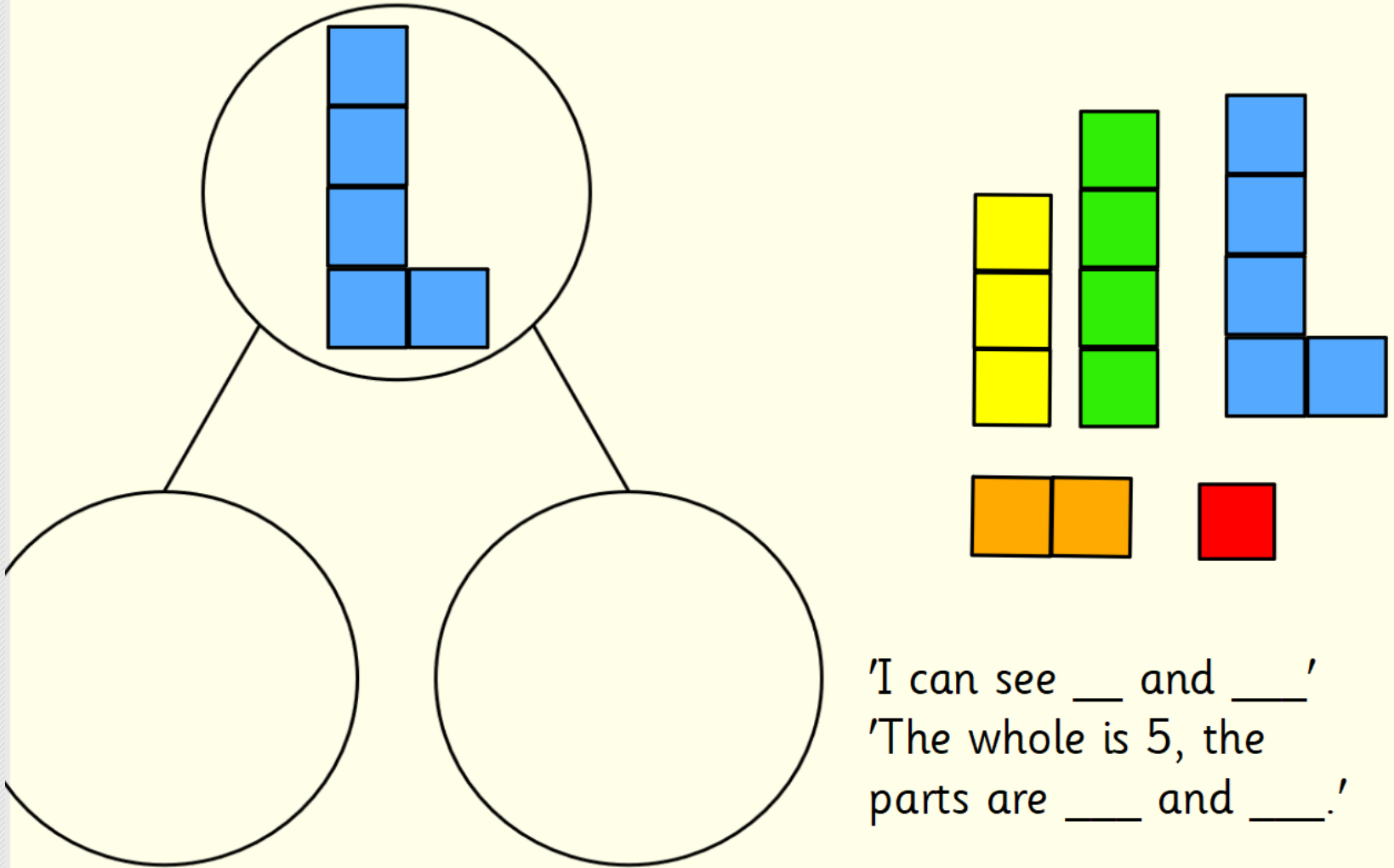


- Knowing the final number is the number of the total
- Counting in order, counting on, counting backwards
- 1:1 correspondence with objects
- Recognising numerals

Composition

FoxFederation

What numberblocks can you see inside number 5?



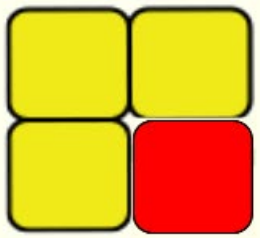
'I can see __ and ___'
'The whole is 5, the parts are ___ and ___.'

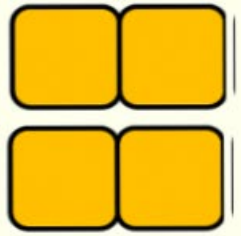
Add
Plus
Addition
Minus
Subtract
Take away
Subtraction

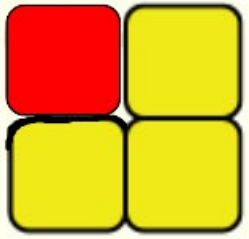
Part part whole
Equation
Is equal to

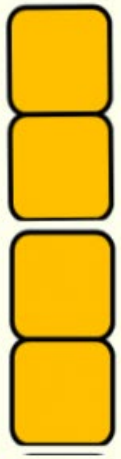
Composition

FoxFederation





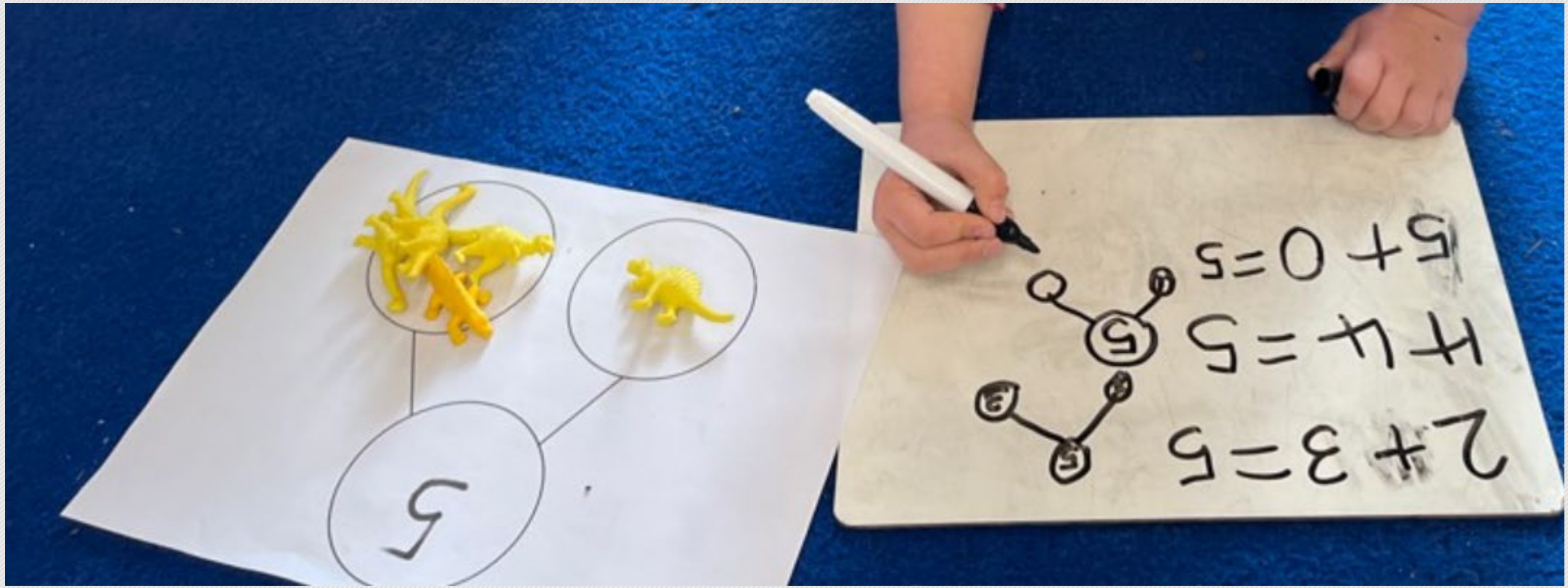




FoxFederation

Concrete, pictorial and abstract coming together

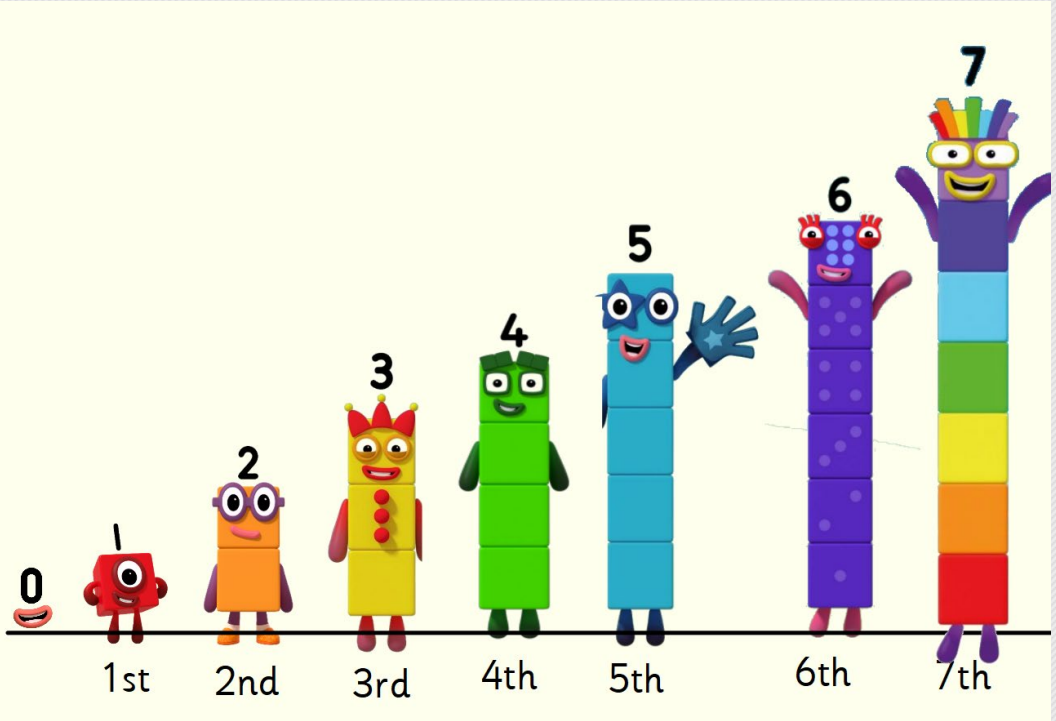
FoxFederation



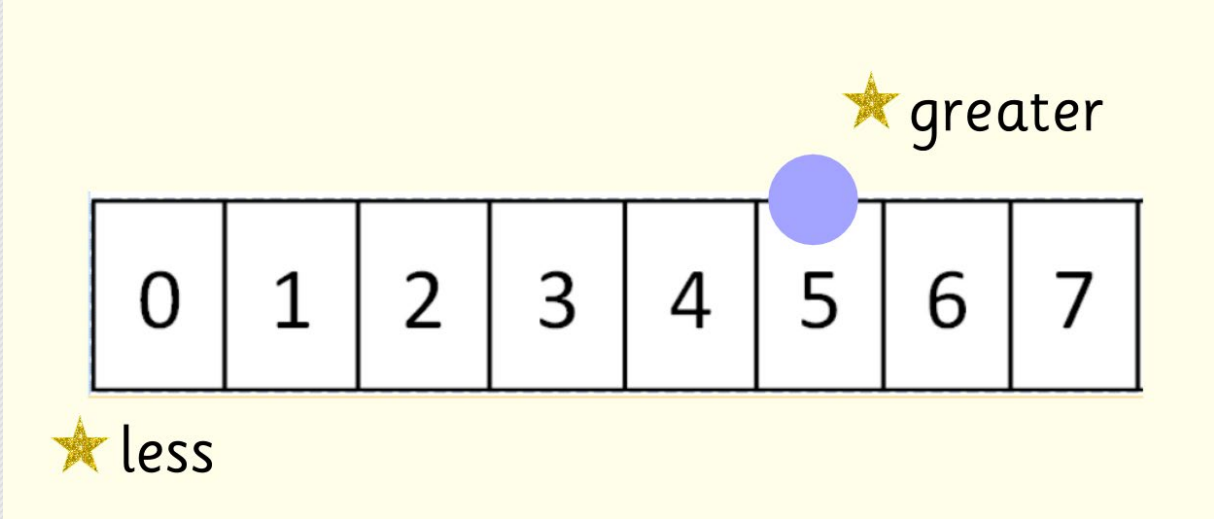
Comparison

FoxFederation

- More and fewer



- Greater and less



Developing number sense

FoxFederation

Nina - you can halve it because it's an even number.

Juan - double 4 is 8.

Alaia - half of 4 is equal to 2.

Ryota 2 + 1 + 1 = 4

What do we know about 4?

Julia - He has two hands and two legs which is 4.

Jowan - The number is 4.

Lara - 4 is even.

Aidan - 1 + 1 + 1 + 1 is 4.

Vera - 2 + 2 = 4

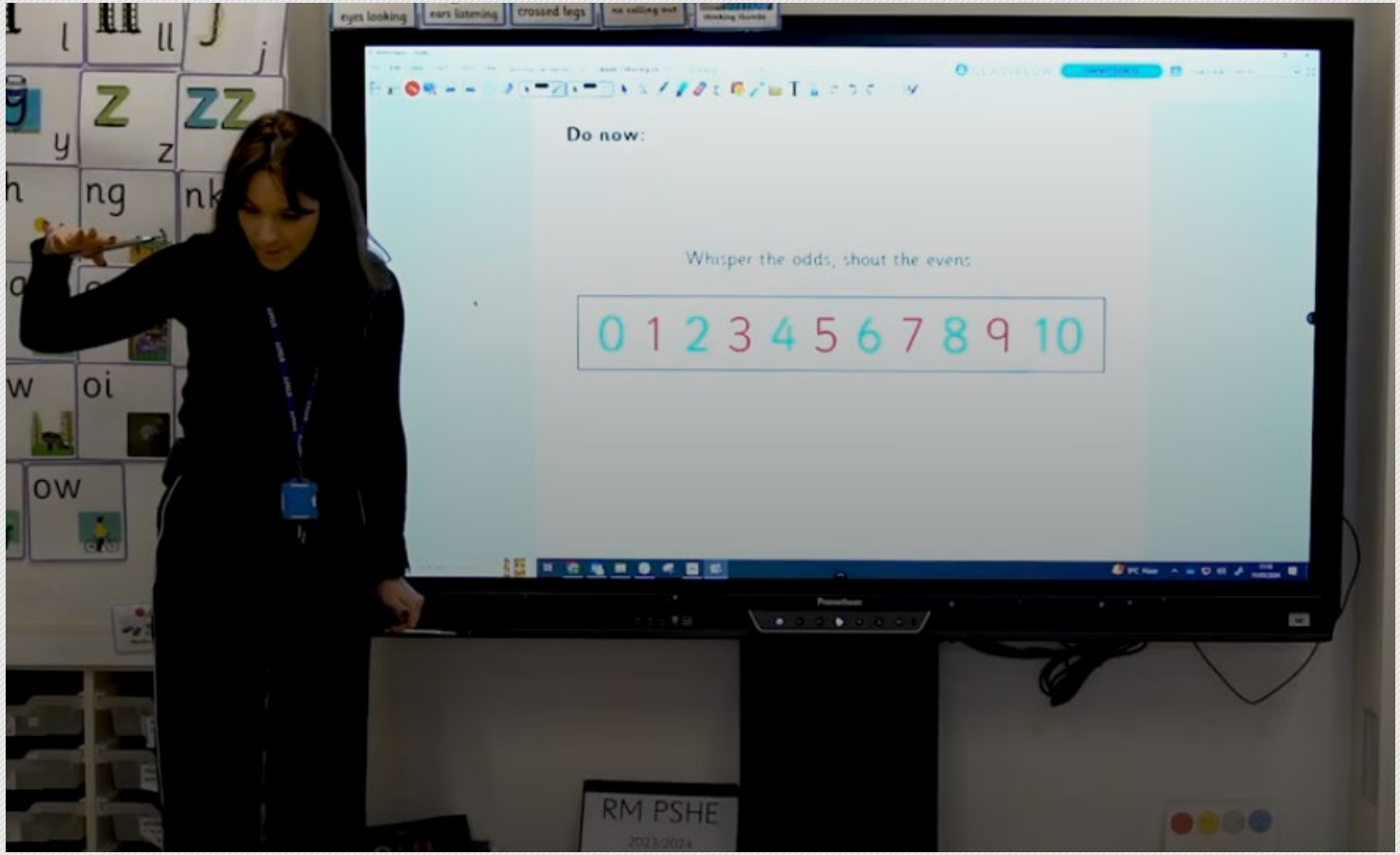
Ethan - 16 - 12 = 4

Ioanna - 4 + 0 = 4

Pablo - one fewer than 5 is 4

How we teach maths

FoxFederation



How can you support at home?

FoxFederation

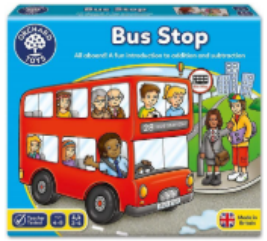
Supporting maths at home

Useful online resources:

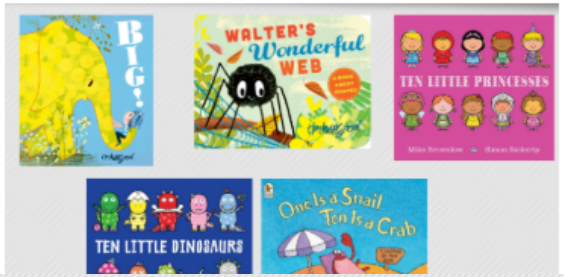
- Numberblocks - BBC iPlayer (refer to Tapestry to see our learning focus for the week)
- Numberblocks song link Numbers 1-10: https://www.youtube.com/watch?v=Wbh1vOwI2Yo
- Numberblocks number formation: https://www.youtube.com/watch?v=8ii202RoEd8
- Nursery Rhymes - Counting Songs: https://www.bbc.co.uk/teach/school-radio/nursery-rhymes-counting-songs/zn67kmn

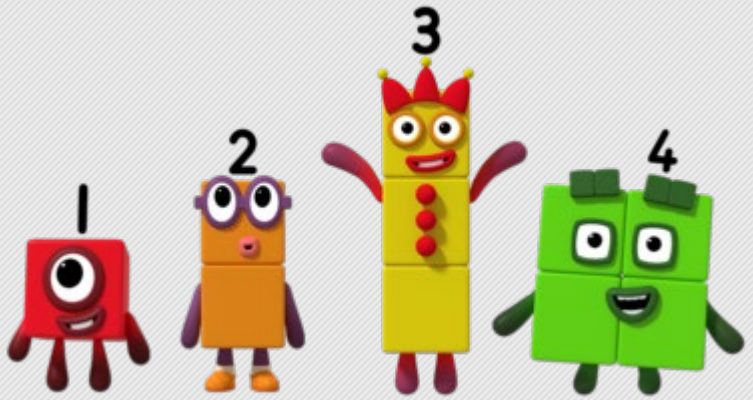
Suggested games and resources:

- Orchard learning games
- Numberblocks resources (available from Learning Resources - https://www.learningresources.co.uk/)
- Any boardgame game including numbers or counting - snakes and ladders, hungry hippos, Ravensburger children's board games



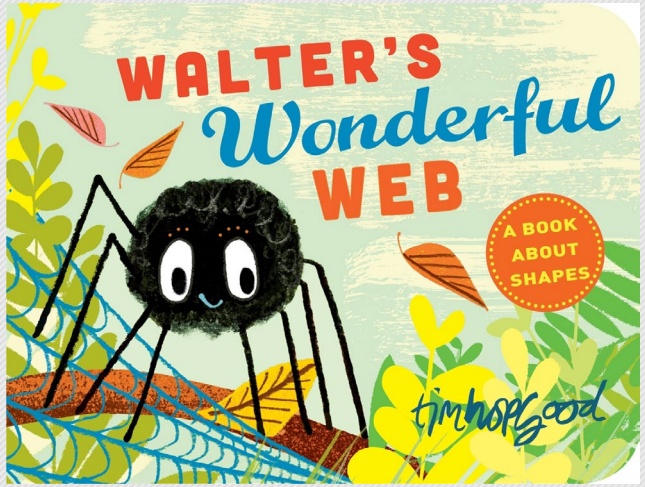
Maths based books:

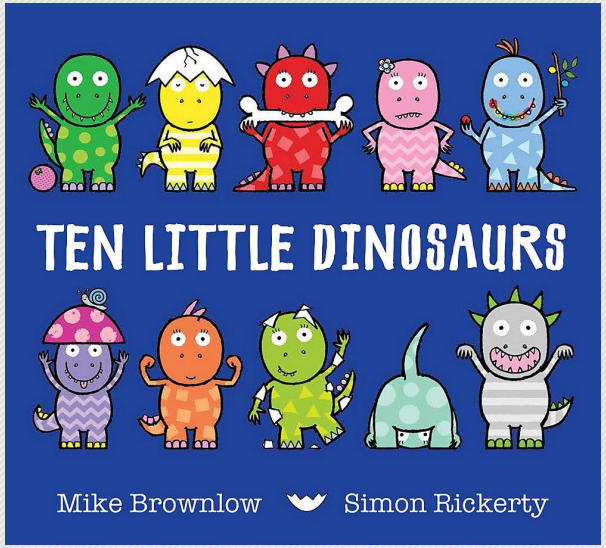


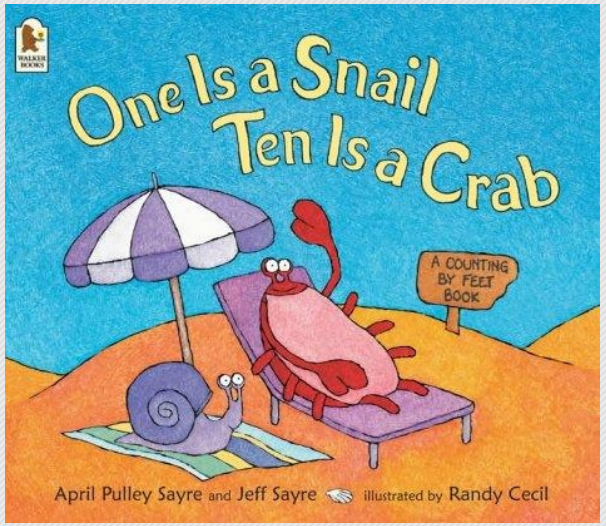


Picture books

FoxFederation







How can you support maths at home?

Number recognition and counting:

- Number recognition on shoes, clothes, clocks, TV remote, oven etc.
- Looking at books and page numbers
- How many knives and forks do we need for everyone?

Calculating:

- Laying the table - 'What if one more person came to dinner? How many chairs would we need?' 'How many knives and forks and glasses do we have altogether?'
- There are 4 biscuits - you and ___ can share them equally/halve them - how many will you get each?
- Play games which include numbers (snap, memory games like pairs, boardgame etc.) - useful for number bonds, doubles, number, subitising using a dice, 1:1 correspondence, quantity matching to numeral etc.
- Shoe sizes - whole family's shoe size adding the numbers together, ordering based on the number etc.
- Monthly calendar - how many days are left in this month? How many days are left until ___'s birthday?

Shape, Space and Measure:

- Talk about the size of objects and compare - big/bigger/biggest, small/smaller/smallest, long/longer/longest, short/shorter/shortest, heavy/heavier/heaviest, light/lighter/lightest etc.
- Create patterns using blocks, construction materials, hanging out clothes, food items, socks etc.
- Introduce to weight through cooking and baking, mainly focusing on heavy and light.
- Talk about positioning of objects - under, over, on top of, below, next to, opposite to, behind, left to, right to etc.
- Discuss daily routines and significant events
- Have a monthly calendar to cross off days, discuss today's date.
- Look for shapes in the home

FoxFederation

How can you support maths in the environment (walking home, in the park and in the shops?

Number recognition and counting:

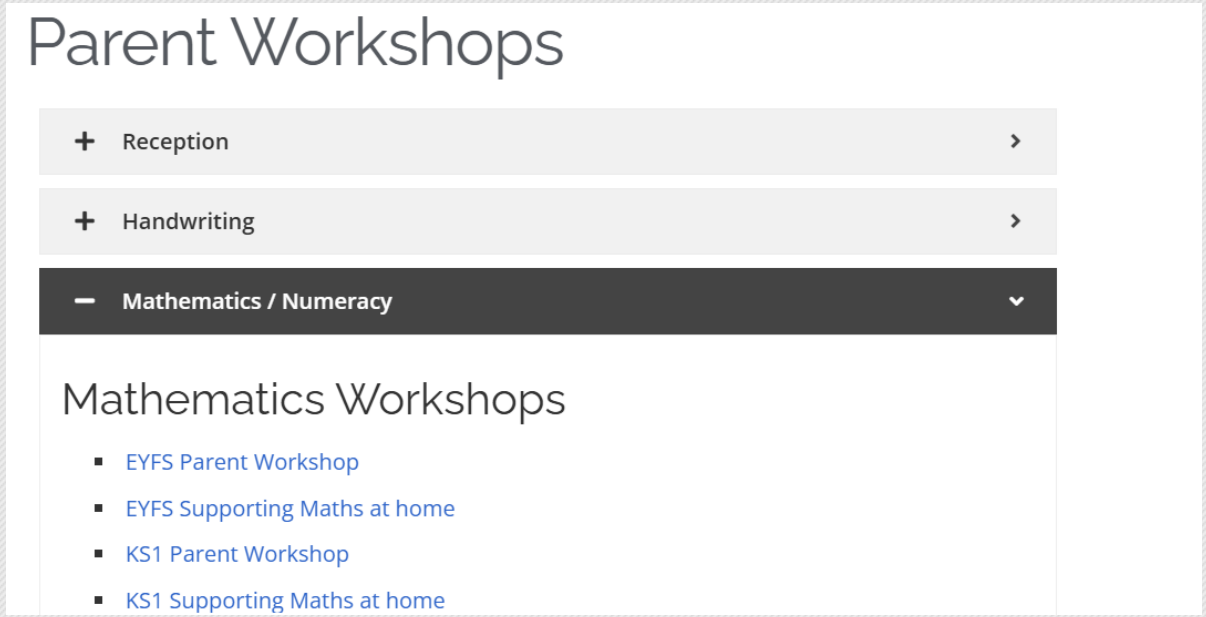
- Looking for numbers in the environment (house numbers, bus numbers, registration plates, clocks etc.)
- Count anything and everything!
    - How many red cars will we see? How many buses will pass us? How many steps until we get to the end of the road? Etc.
    - How many dogs will we see on our walk?
    - Make it into a competition "I predict we'll see 6 dogs."
    - How many bounces of the ball will you be able to do?
    - Time children running to the swing, up a hill, down the road and show the timer and compare in seconds. Can you do it faster or slower?

Calculating:

- So we saw 2 red cars and 3 blue cars. How many cars did we see altogether? Should we check on our fingers?
- I saw one bus, how many more buses do I need to see to get to 4 buses?
- There are three cars parked there. How many will be left if two drive away?
- "I predicted 6 dogs. We've seen 4 how many more dogs do we need to see?"
- *Choose a context which interests your child* - flowers at the park, vehicles, items in a shop, animals.
- In shops, ensuring we have one object for each member of the family.

Shape space and measure:

- What patterns can you see on the houses, pavements, leaves in the park? Etc.
- Talk about 2D and 3D shapes and identify them in the environment.
- Discuss durations of journeys (our walk to school is 8 minutes, which is a short walk).
- If using money, show your child money and different coins and their value when paying for things.
- Which is the tallest, shortest, thinnest, widest tree?
- Can you describe our journey to the park, shop, museum, school?
- Can you follow my directions in the park? Go to the top of the climbing frame, turn to go under a tunnel etc.

FoxFederation

https://www.fox.rbkc.sch.uk/parent-workshops/