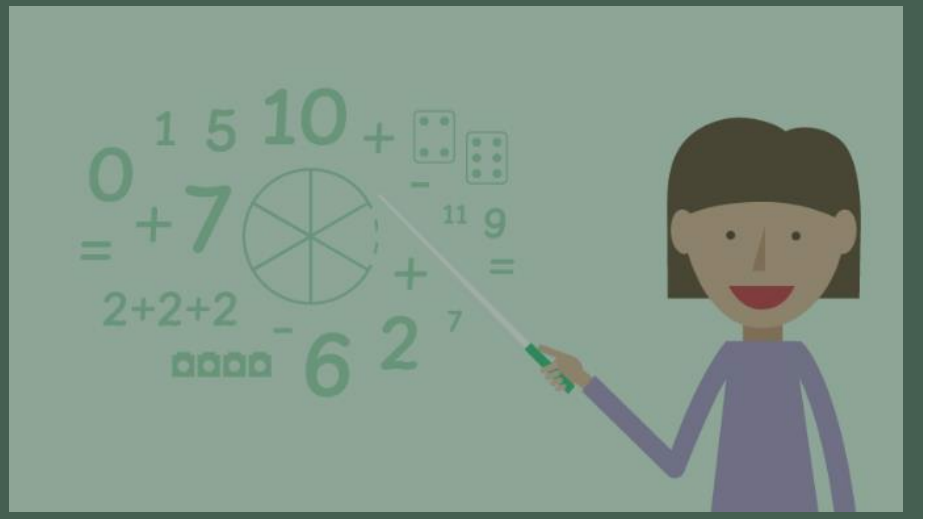
MATHEMATICS YEAR 1



Main aims of the session

- Explore how we teach place value, addition and subtraction
- Discover the *CPA approach* (Concrete, Pictorial, Abstract)
- Learn how to support your child at home



Maths at the end of Reception

Children will be able to:

- Recognise and count numbers to 20
- Understand the *value* of numbers (e.g. 5 is more than 3)
- Use everyday language about size, shape, and patterns
- Solve simple problems in practical contexts

Examples:

- Counting fruit, toys etc.
- Playing games that involve counting
- Sorting and grouping objects

By the end of Reception, children have a foundation in counting and understanding numbers to 10. In Year 1, we build on that to develop *place value* - understanding what numbers actually represent.

Year 1- Understanding numbers to 100 through Place Value

- **Autumn Term:** Focus on numbers within **20**
  - Counting, comparing, and ordering
  - Recognising teen numbers as "ten and some more"

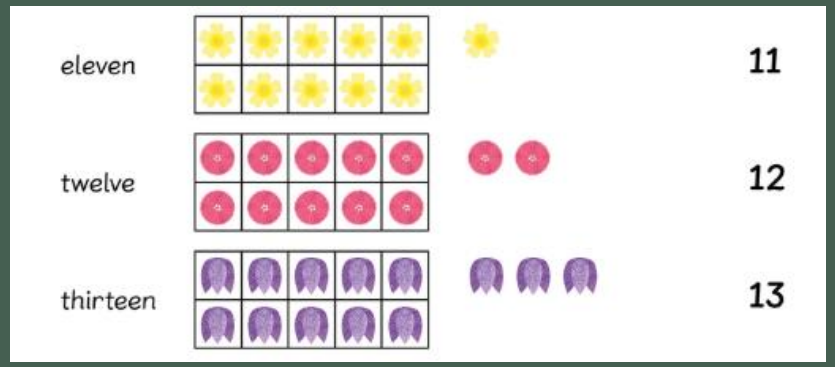
- **Spring Term:** Extend to **40**
  - Understanding tens and ones " ____ has ___ tens and ___ ones."
  - counting in 2s, 5s, 10s

- **Summer Term:** Extend to **100**
  - Reading and writing 2-digit numbers
  - Exploring patterns and sequences

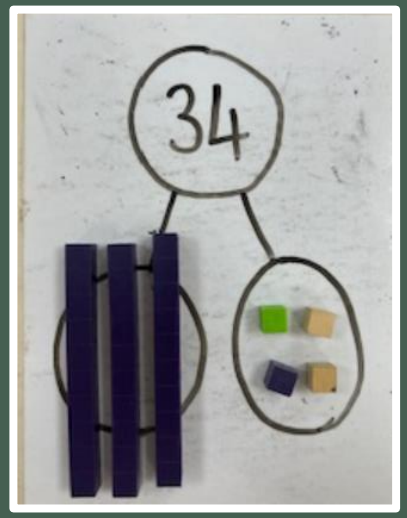
Place value is the foundation of all maths. It helps children see that 23 isn't just two and three, it's *two tens and three ones*. It is taught progressively from small numbers children know well to larger ones.

What does Place Value learning look like?

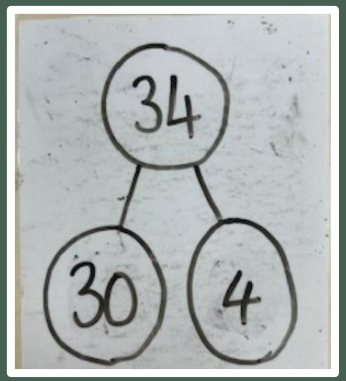
Autumn Term:
- Counting and ordering numbers to 20
- Building teen numbers using tens frames and cubes
- Understanding "one more" and "one less"



Spring Term:
- Exploring tens and ones up to 40
- Counting in 2s, 5s, and 10s
- Comparing numbers using < > =

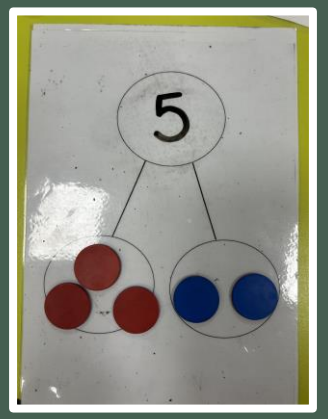


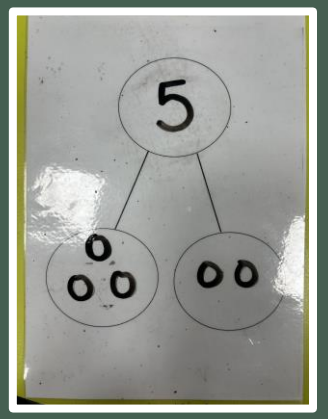
Summer Term:
- Working with numbers up to 100
- Using hundred squares to identify patterns
- Recognising how numbers are structured

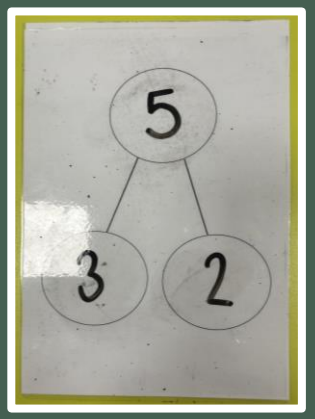


An example of Place Value using the CPA approach

- **Concrete (doing stage)**: Using cubes and counters
- **Pictorial (seeing stage)**: Using visual models (Part Part Whole) and drawings
- **Abstract (symbolic stage)**: Solving Number Bonds







Children don't just jump to abstract calculations. We have to build their understanding using physical objects and pictures first. This helps children develop a greater understanding and builds their ability to solve future problem solving.

Year 1- Addition and Subtraction

Children should be able to:

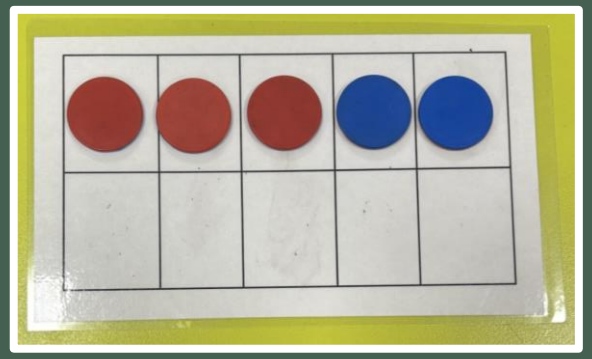
- Solve number sentences and recognise symbols
- Add and subtract numbers using a given method within 20
- Learn number bonds to 10 and some to 20

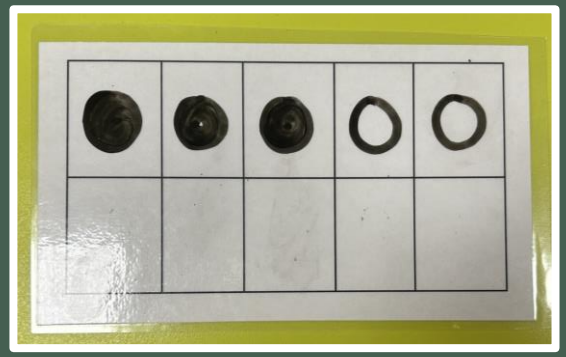
Children start with stories and practical maths.
"You have 5 sweets and get 3 more" before using written sums. This helps children understand what's actually happening.

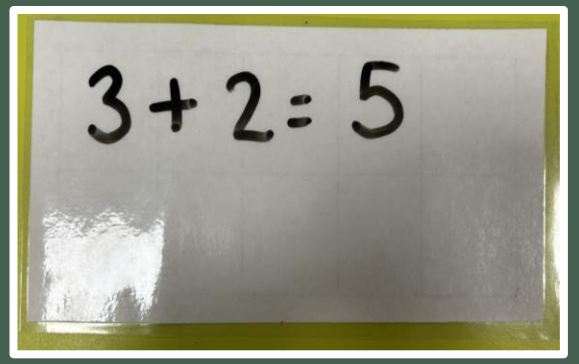
An example of using the CPA approach

Children need to make sense of number stories and understand what addition really means.

- **Concrete**: Using cubes, counters or real life objects to add/ subtract
- **Pictorial**: Using number lines, tens frames or drawings
- **Abstract**: Write and solve addition and subtraction equations







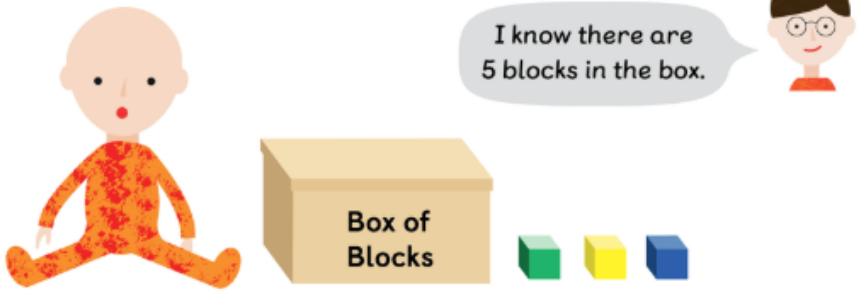
Children are allowed to go between the stages when necessary especially when they begin to build on their problem solving and reasoning skills.

Add by Counting On

Lesson 2

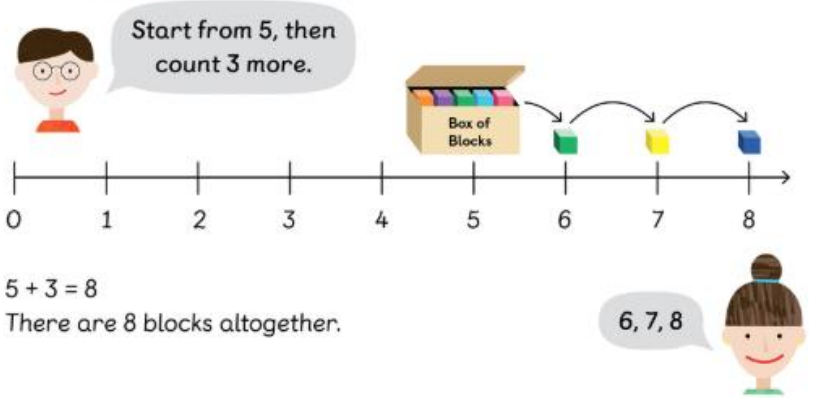
Explore

How many blocks are there altogether?



Master

1 $5 + 3 =$ ☐



$5 + 3 = 8$

There are 8 blocks altogether.

Activity Time

Partner work

You will need: 2 sets of 0–5 cards; a number line 0 1 2 3 4 5 6 7 8 9 10

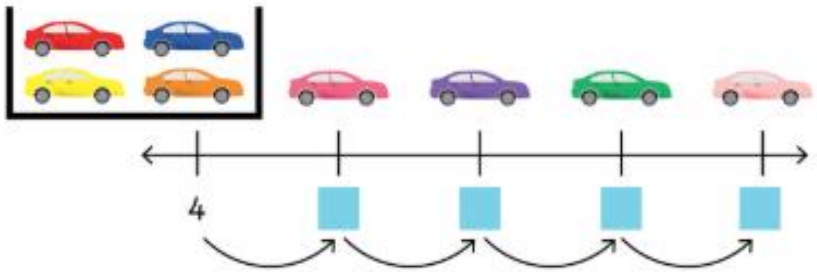
1. Place 0 5 face down.
2. Turn over one card each.
3. Add by counting on using the number line.
4. Repeat the activity.



Guided Practice

Count on to find the total number of objects.

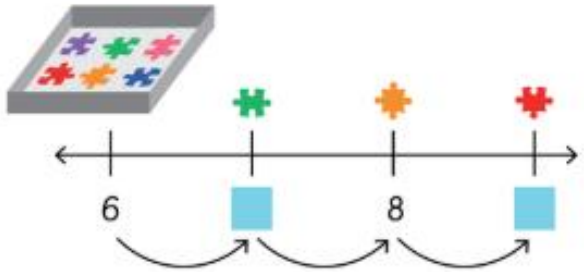
1



4 + 4 = ☐

There are ☐ cars in total.

2



6 + ☐ = ☐

There are ☐ puzzle pieces altogether.

Worksheet 2

Add by Counting On

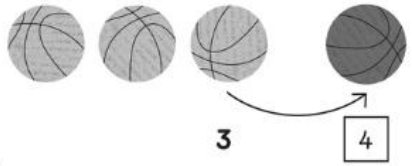
 is adding by counting on.

Can you help Amira by filling in the blanks?

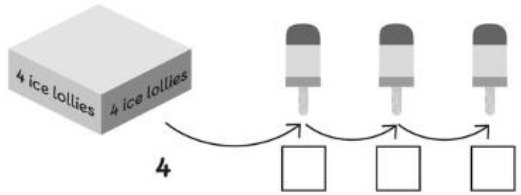
1 For example:

3 + 1 = 4

There are 4 basketballs in total.



(a)



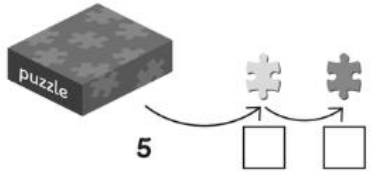
4 + 3 = ☐

There are ☐ ice lollies altogether.

(b) There are 5 puzzle pieces in the box.

5 + ☐ = ☐

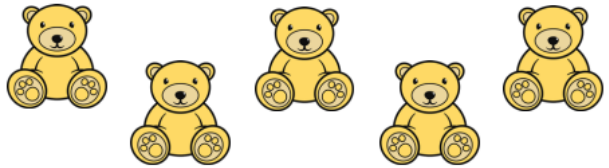
There are ☐ puzzle pieces in all.



Examples of problem solving and reasoning

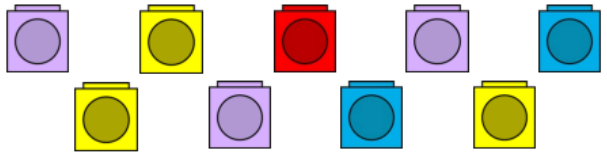


There are 6 bears.



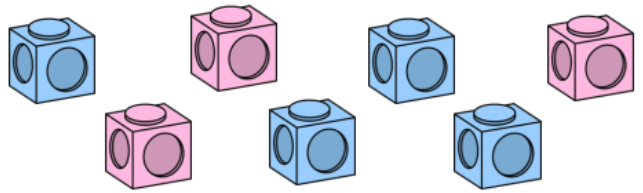
Is Che correct? _____
How do you know?

Tick (✓) true or false for each statement.



	True	False
There are 3 yellow.		
There are 4 purple.		
There are 3 blue.		
There is 1 red.		

Use the cubes to complete the calculations.



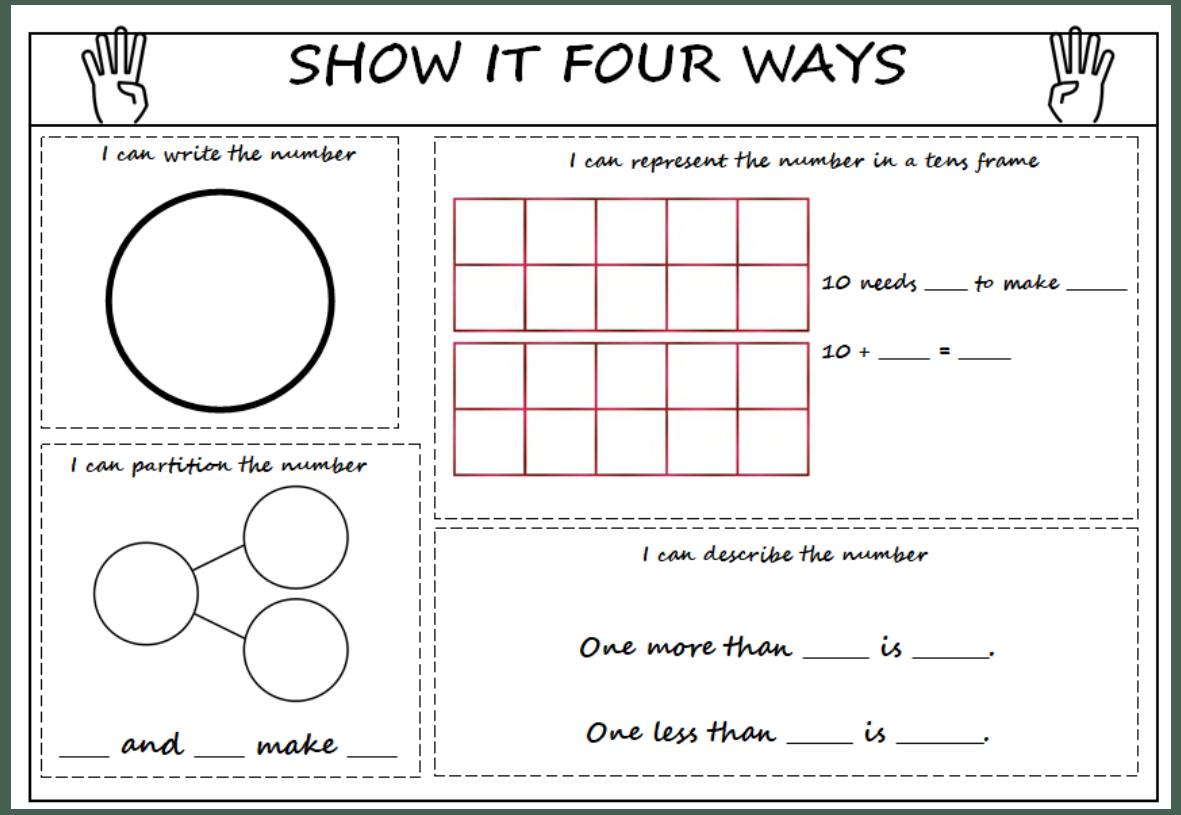
□ + □ = □

□ + □ = □

Can you explain your answer?
Can you prove it?
True or False?

Helping at home

- Talk about numbers in real life (money, clocks, cooking)
- Count everyday items (stairs, fruit, toys)
- Play simple maths games (snakes and ladders, dominoes)
- Encourage reasoning: "How do you know?"
- Practice number bonds in playful ways




ANY QUESTIONS?

Bring in the children!



QR codes are around the hall for feedback!