SACRED HEART RC PRIMARY SCHOOL

KS1 Maths workshops

How do we teach maths in KS1 at Sacred Heart?

Add ones using number bonds

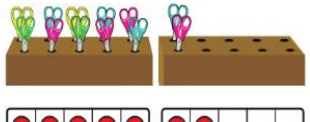
Discover

1 a) A full box holds 10 .
How many are in the boxes?
b) Rani adds 3 more .
How many are there now?

64

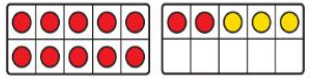
Share

a)



There are 12 in the boxes.

b)

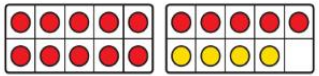


12 is 10 and 2.
12 + 3 = 15
There are 15 now.

2 + 3 = 5,
so 12 + 3 = 15.

Think together

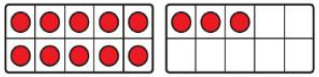
1 Solve 15 + 4



5 + 4 =
So
15 + 4 =

I will work out 5 + 4 first.

2 a) Solve 13 + 2



3 + 2 =
So
13 + 2 =

I will make 14 on two ten frames.

b) Now try 14 + 3 =

3 a) Find solutions to this problem.

1		+		=	18

b) Find solutions to this problem.

1		+		=	15

CHALLENGE

I will try to find more than three ways.

First, I will work out bonds for 8. 1 + 7 = 8. 2 + 6 = 8 ... 8 + 0 = 8.

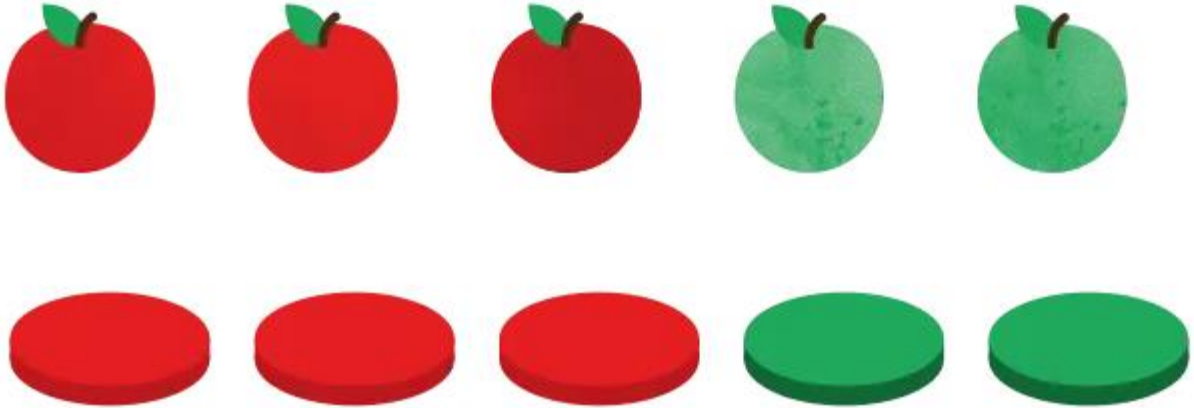
Learning times tables is essential.

Key aims of the KS1 curriculum

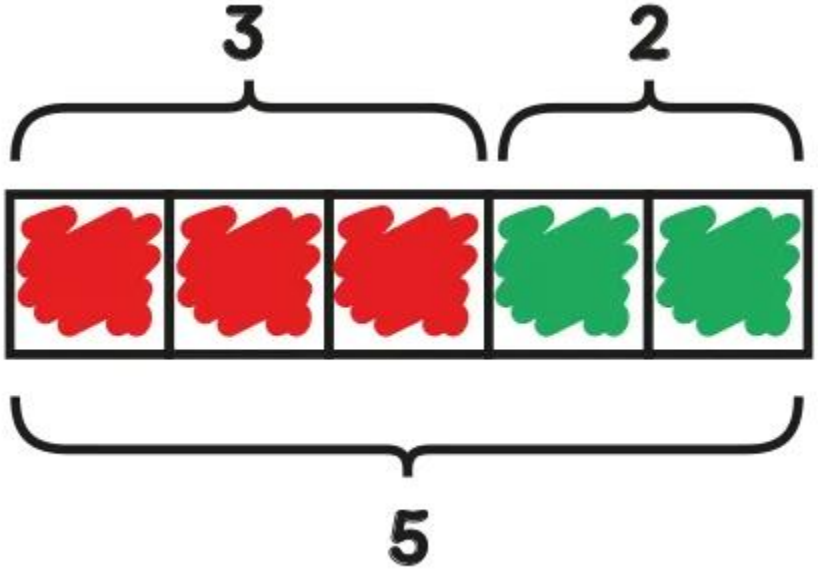
- Fluent recall of mental maths facts e.g. times tables, number bonds.
- To reason mathematically – children need to be able to explain the mathematical concepts with number sense; they must **explain** how they got the answer and why they are correct.
- Problem solving – applying their skills to real-life contexts.

Concrete is the "doing" stage. During this stage, children use concrete objects to model problems. With the CPA framework, every abstract concept is first introduced using physical, interactive concrete materials.
For example, if a problem involves adding pieces of fruit, children can first handle actual fruit. From there, they can progress to handling abstract counters or cubes which represent the fruit.

Pictorial is the "seeing" stage. Here, visual representations of concrete objects are used to model problems. This stage encourages children to make a mental connection between the physical object they just handled and the abstract pictures, diagrams or models that represent the objects from the problem.



Abstract is the "symbolic" stage, where children use abstract symbols to model problems. The abstract stage involves the teacher introducing abstract concepts (for example, mathematical symbols). Children are introduced to the concept at a symbolic level, using only numbers, notation, and mathematical symbols (for example, +, −, x, /) to indicate addition, multiplication or division.



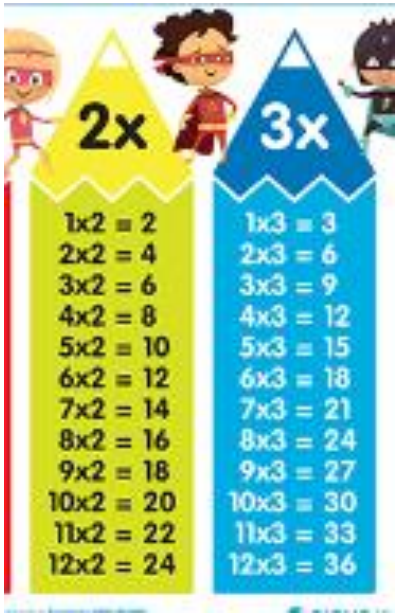
$3 + 2 = \boxed{5}$

Fluent recall of facts

These enable children to build maths fluency and are essential to aid children's maths.

What do the children need to know:

- Relational facts
- Number bonds to 10 and 20
- Times tables (x2, x3, x5, x10)



Addition in KS1

Year 1

Concrete resources

Adding two sets (part whole models)

Counting on

Use number bonds and number facts

Number lines

Ten frames

Year 2

Concrete resources

Progress to mental strategies (using number bonds, doubles, times tables).

Use number bonds and number facts

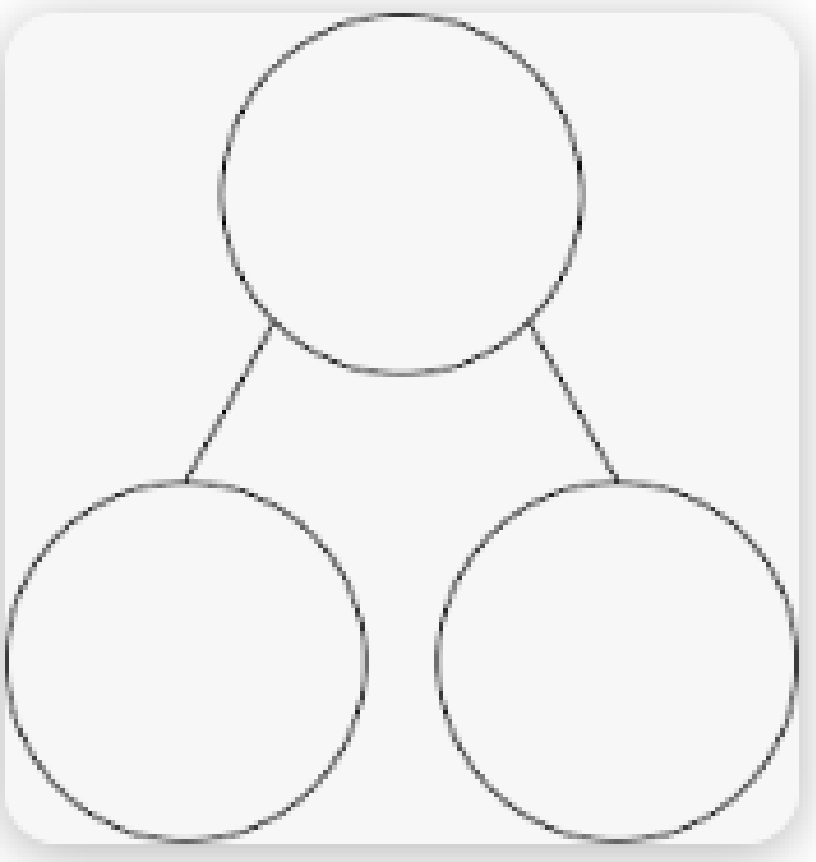
Number lines and 100 squares

Ten frames

Partitioning numbers

Written methods

Let’s do some maths together!



We’re going to partition some numbers.

This skill enables children to learn how to manipulate and break up numbers. This helps with addition and subtraction.

Addition and subtraction

Children learn the importance of the = sign and the ways that this can be represented.

23 + 17 = 40

40 = 23 + 17

40 - 17 = 23

17 = 40 - 23

23 + 17 = 10 + 20

11 + 29 = 50 - 10

Using a ten frame and concrete resources

Tens	Ones
EXCHANGE	EXCHANGE

31 + 13 =

24 + 18 =

This method precedes the formal written column method.

29 - 15 =

42 - 15 =