



Maths KS1 Workshop

What we use at Sacred Heart

Power Maths

Power Maths is our whole-class mastery programme designed to spark curiosity and excitement and help you nurture confidence in maths.

Number Sense

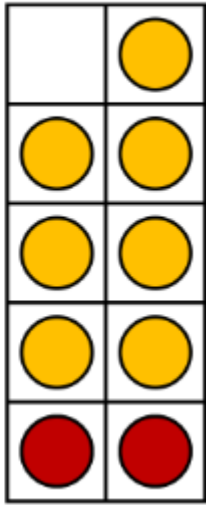
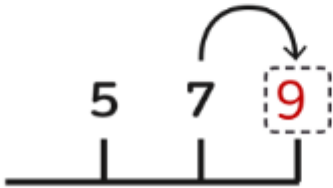
It is a structured programme ensures children develop visual models of number, a deep understanding of number and number relationships, and fluency in addition and subtraction facts.

Number Sense

We use animations, graphics and a series of exercises that help with being able to visualise and how we calculate simple mental arithmetic calculations.

$7 + 2 = 9$

next odd



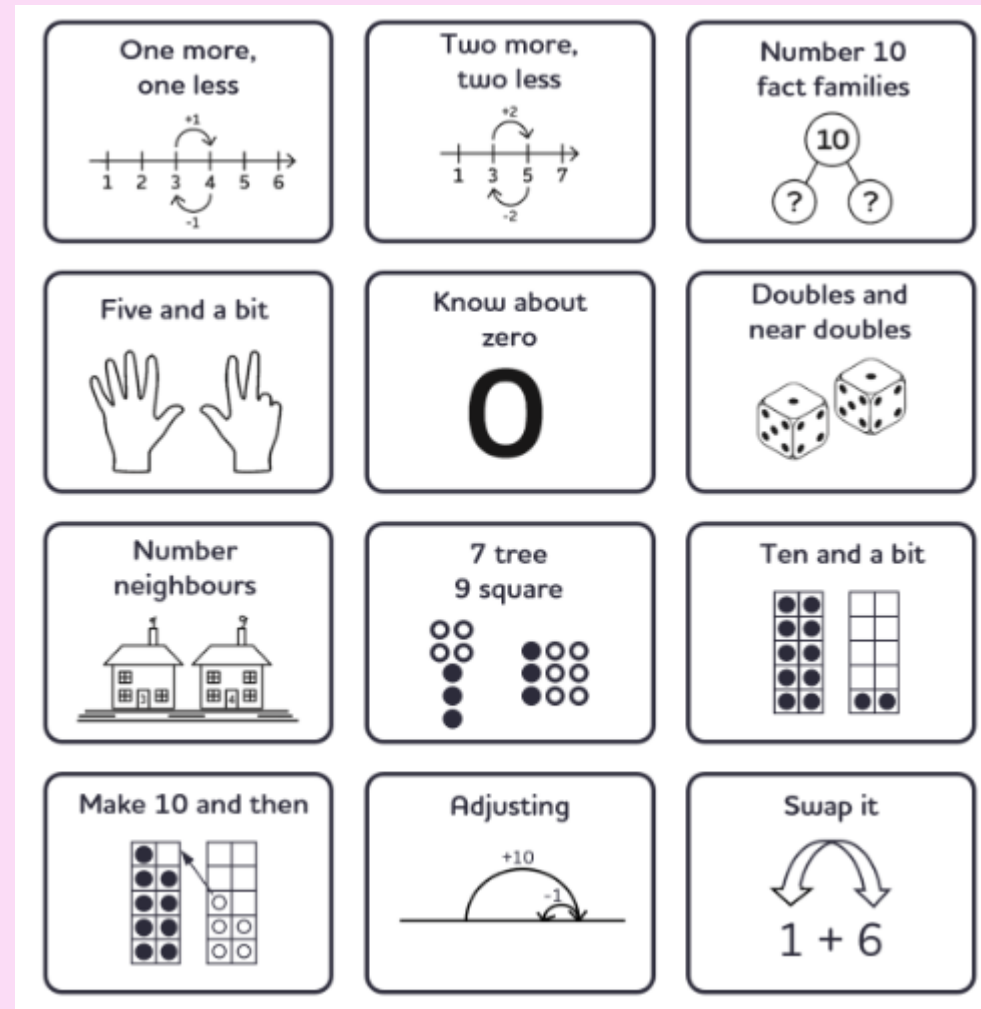
Number Sense

At the core of the programme are the Addition and Subtraction Fact Grids. These essential facts are the equivalent of times tables for addition and subtraction. Just as all multiplication and division calculations use root times table facts, all future addition and subtraction calculations use these root addition and subtraction facts.

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

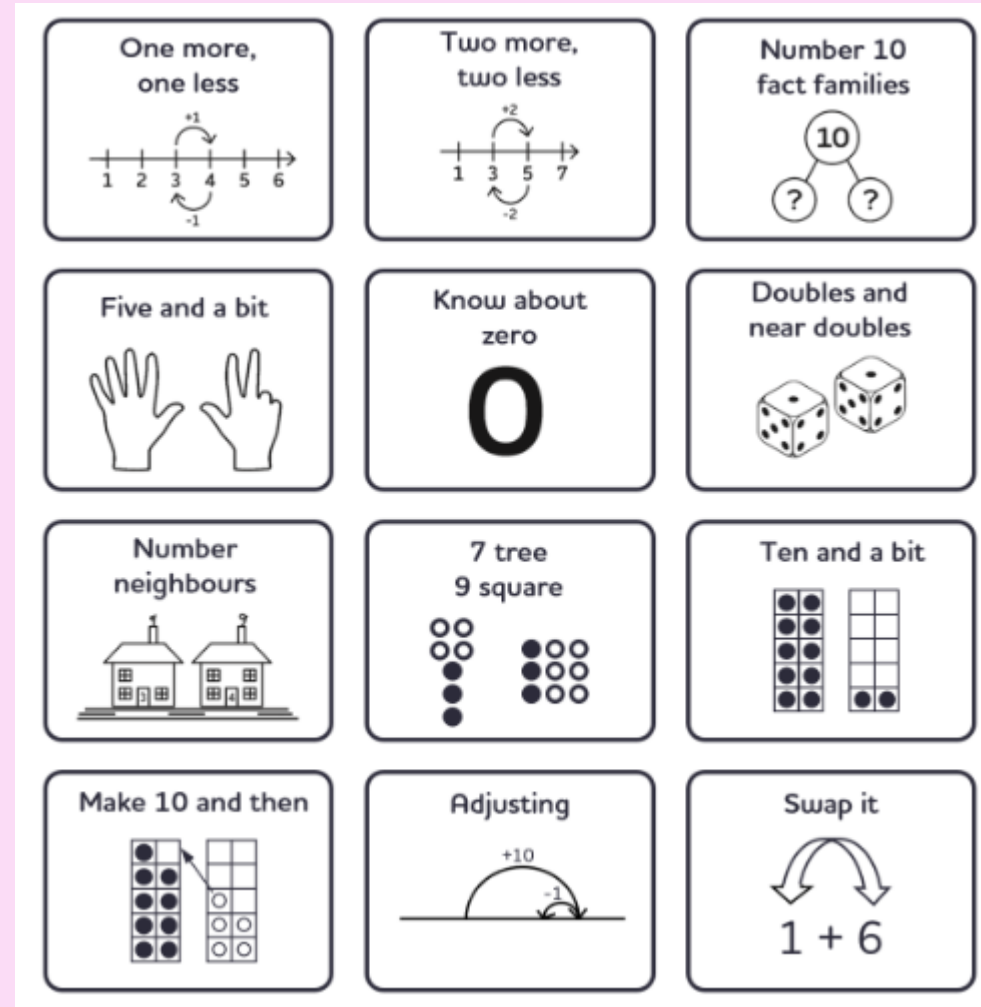
Number Sense

The core facts are taught alongside 12 calculation strategies. Learning and applying these strategies gives children a deep understanding of number and number relationships. Using these strategies children can then "use what they know to work out what they don't know". Explicit teaching of derived fact strategies is an effective route to fluency in addition and subtraction facts for all children, including lower attainers.



Number Sense

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We teach these facts in a systematic way, similar to how we teach phonics

Addition Grid Facts

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

Subtraction Grid Facts

| - | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----|------|------|------|------|------|------|------|------|------|------|-------|
| 0 | 0-0 | | | | | | | | | | |
| 1 | 1-0 | 1-1 | | | | | | | | | |
| 2 | 2-0 | 2-1 | 2-2 | | | | | | | | |
| 3 | 3-0 | 3-1 | 3-2 | 3-3 | | | | | | | |
| 4 | 4-0 | 4-1 | 4-2 | 4-3 | 4-4 | | | | | | |
| 5 | 5-0 | 5-1 | 5-2 | 5-3 | 5-4 | 5-5 | | | | | |
| 6 | 6-0 | 6-1 | 6-2 | 6-3 | 6-4 | 6-5 | 6-6 | | | | |
| 7 | 7-0 | 7-1 | 7-2 | 7-3 | 7-4 | 7-5 | 7-6 | 7-7 | | | |
| 8 | 8-0 | 8-1 | 8-2 | 8-3 | 8-4 | 8-5 | 8-6 | 8-7 | 8-8 | | |
| 9 | 9-0 | 9-1 | 9-2 | 9-3 | 9-4 | 9-5 | 9-6 | 9-7 | 9-8 | 9-9 | |
| 10 | 10-0 | 10-1 | 10-2 | 10-3 | 10-4 | 10-5 | 10-6 | 10-7 | 10-8 | 10-9 | 10-10 |
| 11 | | 11-1 | 11-2 | 11-3 | 11-4 | 11-5 | 11-6 | 11-7 | 11-8 | 11-9 | 11-10 |
| 12 | | | 12-2 | 12-3 | 12-4 | 12-5 | 12-6 | 12-7 | 12-8 | 12-9 | 12-10 |
| 13 | | | | 13-3 | 13-4 | 13-5 | 13-6 | 13-7 | 13-8 | 13-9 | 13-10 |
| 14 | | | | | 14-4 | 14-5 | 14-6 | 14-7 | 14-8 | 14-9 | 14-10 |
| 15 | | | | | | 15-5 | 15-6 | 15-7 | 15-8 | 15-9 | 15-10 |
| 16 | | | | | | | 16-6 | 16-7 | 16-8 | 16-9 | 16-10 |
| 17 | | | | | | | | 17-7 | 17-8 | 17-9 | 17-10 |
| 18 | | | | | | | | | 18-8 | 18-9 | 18-10 |
| 19 | | | | | | | | | | 19-9 | 19-10 |
| 20 | | | | | | | | | | | 20-10 |

Calculation Strategies

One More, One Less

Two More, Two Less: Think Odds and Evens

Number 10 Fact Families

Five and A Bit

Know About Zero

Doubles and Near Doubles

Number Neighbours: Spot the Difference

7 Tree 9 Square

Ten and A Bit

Make 10 and Then

Adjusting

Swap It

Power Maths

We use Power Maths as our main teaching resource. This is a scheme that works alongside The White Rose Maths program, which is based on the principle of "mastery" learning. This emphasises a deep understanding of mathematical concepts. The program's goal is to help students develop a strong foundation in math and critical thinking skills.

How is this taught?

Small steps


- The program uses a "small steps" approach to learning, which involves breaking concepts down into smaller, more manageable pieces.

- Concrete pictorial abstract (CPA) approach
- The program uses concrete objects and pictorial representations to help students understand abstract concepts.


Unit 1: Numbers to 10, Lesson 2

Count objects to 10

Discover



Food shop

1 a) Count the .

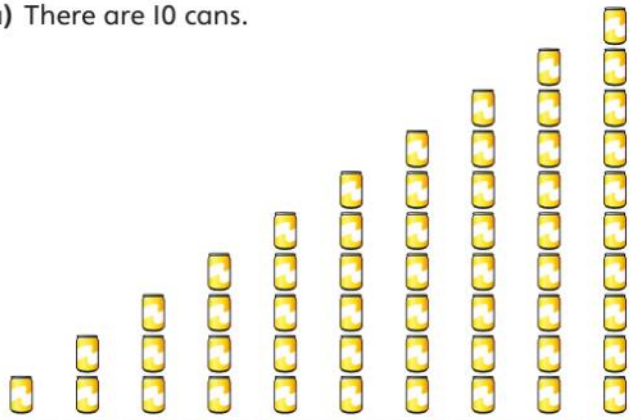
b) Write your answer in two ways.

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Unit 1: Numbers to 10, Lesson 2

Share


a) There are 10 cans.



| | | | | | | | | | |
|-----|-----|-------|------|------|-----|-------|-------|------|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| one | two | three | four | five | six | seven | eight | nine | ten |

b) The number is **10**.
The word is **ten**.

I traced the number and the word with my finger.



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How Do We Extend Our Able Children?

Depth over acceleration

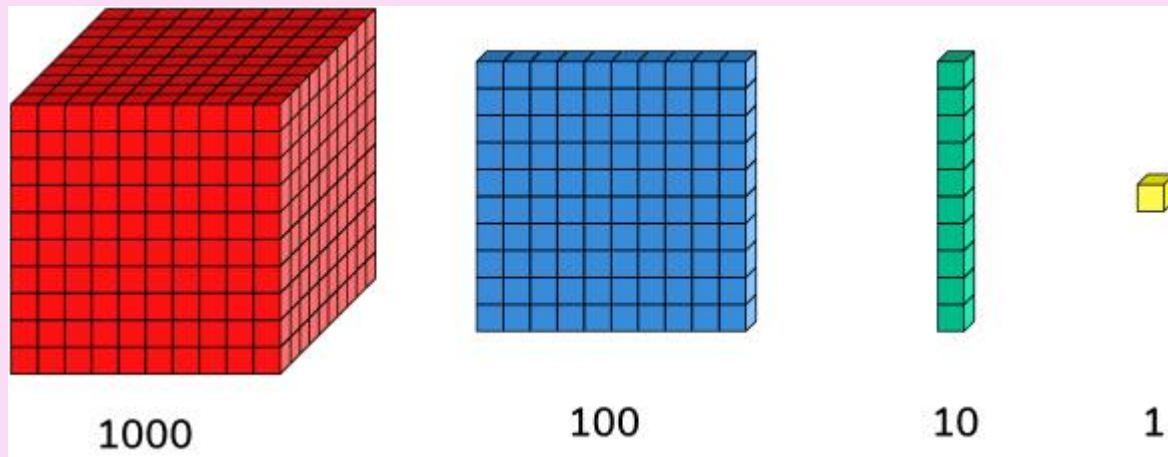
The program focuses on ensuring that students fully understand key concepts before moving on to new ones.

This can be through:

- Problem Solving
- Showing a different method
- Finding all possible solutions

Using Equipment

Children would use concrete apparatus to help them initially. We focus the use of Place Value Counters and Base Ten Blocks (Diennes).



*Let's Look At How We Use The
Equipment.*



What Can You Do At Home To Help?

- Count objects

How many apples can we put in our shopping basket this week?

How many steps do we need to climb?

- Count in 2s, 5s and 10s

- Know the days of the week and the order they occur.

- Know the months of the year and begin to know how many days are in each.