



School A: Maths No Problem Books in Year 1

45 minutes daily maths lessons.

Initially whole class interactive session including anchor task and guided practice, followed by independent learning.

Pupils review their own learning in their Maths journals regularly. Journaling is when pupils create a visual or written reflection on their learning.

Pupils are now used to the structure so movement from the carpet to the table and vice versa has developed.

Initial challenges	Our solutions
Fitting everything into a 45 minute lesson	Break some lessons into two parts with the same focus. Each with a pictorial focus Eg Practical focus in lesson 1 with the same outcome then record thinking in the second session.
Sometimes we find learning jumps too quickly	Adjust to meet the children's needs
Pupils working at different rates through the materials so not all pupils get to 'prove their learning' in their journals (journals identify 'deep learning')	For a few children use of the journals has evolved over the year. This has been scaffolded for lower ability pupils.
Completing the journals. Developing independence for own thinking and reasoning	Scaffold the concept of journal writing for those who need it. Models to be stuck in journals. Pictorial representations to explain and develop understanding and explanations.

Structure of lessons? (including class inputs, independent learning)

Each table has a basket where the journals are stored.

Pupils are becoming used to getting out their journals once they have completed their learning which they then use to explain their thinking independently.

Strategies that work for our 'more able' pupils

- Independent journal work where pupils explain their understanding.
- Prove it!!
- Is there another way?

Strategies that work for our pupils who sometimes struggle

- Time to use practical equipment to match the pictorial / abstract models
- Time to rehearse and talk verbally
- Having the foundations of working on numbers to 10 in depth at the beginning of the unit

Use of additional adults

- Hot marking and instant verbal feedback
- Working with a focus group of pupils

SCHOOL B: Maths No Problem Books in Year 1

Lesson structure:

First 30 minutes: Talking partners, ping pong, mixed ability

Teacher led

- In-focus task
- Let's explore
- Guided practice

Next 30 minutes: Children's own work

Pupil work

- Independent practice
- Journal (not every lesson in Year 1)

Initial challenges	Our solutions
Initially some lessons in the book needed to take more than one lesson (Y1 also needed help with reading)	Initially flexibility with planning – training children how to use resources / workbooks
Reading initially in Year 1	Modelled phonics

Strategies that work for our 'more able' pupils

- Find another way
- Write a story / note for the teacher / absent friend
- Quick 6 activities:
Create a word problem to match today's learning.
Write an explanation of your preferred method with words and pictures.
Write an explanation of a method which you did not choose.
Develop a new method for solving the problem.
Show a physical model of the problem.
Show a visual model of the problem
- Depth 5
Do you agree? (true/false, etc)
Explicit use of misconceptions and mistakes
Probing questions (show me, convince me, what's the same, what's different?, etc)
The missing digit/number (empty box)
Here's the answer, create the question

Strategies that work for our pupils who sometimes struggle

- Using concrete resources alongside workbooks / journals
- Pre-teaching
- Same day intervention

Teaching assistants' role: Includes Pre-teaching, Assessment / immediate feedback, Organisation

SCHOOL C: Maths No Problem Books in Year 1

Using textbooks in Maths learning in our schools

Initial challenges	Our solutions
Books are large for our tables and small hands!	We use the online resources as whole class shared examples. Pages of textbook projected.
Too wordy for pupils	Read through the text with the pupils Use a slide to cover up part of the text
Pitch of lesson – not all pupils accessing certain lessons	Repeat / adapt lessons
Recording learning in journals	Observing examples from other schools. We now journal once or twice a week.
Assessment: Lack of	Build a profile Ongoing: There is only teacher assessment Pictures – Photographic evidence

Structure of lessons? (including class inputs, independent learning)

We use Maths No Problem and follow their structure of whole class interactive session including anchor task and guided practice, followed by independent learning.

We find that the end of topic journal sometimes doesn't always directly reflect learning throughout the unit. For example after learning place value, counting along a number line and jumping on ones and twos the learning journal required pupils to make a number pattern with numbers in the late 20s and 30s which was challenging

Timings?

We find that some lessons are longer than others. Some lessons also need supplementing to meet the children's needs. There is not always enough time for journal and workbook work in a lesson.

How do we meet the needs of all learners in whole class teaching?

Strategies that work for our 'more able' pupils

Can you give me another example?

Can you create another (similar) problem?

Can you teach a friend?

Can you show me using a different method?

Strategies that work for our pupils who sometimes struggle

Reinforcing through concrete examples

Lots of modelling

Use of additional adults?

We need a lot of adults to guide learning.

SCHOOL D: Maths Inspire Books in Year 1

How are our lessons organised?

Timings?

- Daily lesson for an hour
- Maths meetings three times weekly for 15 minutes
- Increased cross-curricular opportunities to apply and reinforce knowledge (School priority)

Structure of lessons?

- Whole class input including the use of real images, books, pictures of concrete manipulatives
- Independent work: This could be in paired or small groups
- Review as the lesson goes on.
- Pupils share findings at the end

Initial challenges	Our solutions
Reading is a barrier for some to access the maths	Use an adult to support or adapt through giving a different format
Finding the 'gaps' / 'errors' and finding time to address the errors	Timetabling of maths meetings Having key skills groups
Need large class visuals (Not part of Inspire books)	Use photographs and the visualiser throughout the lesson

How do we meet the needs of all learners in whole class teaching?

Strategies that work for our 'more able' pupils

- Extend through 'depth'

Strategies that work for our pupils who sometimes struggle

- Working similar / differing abilities of pupils together

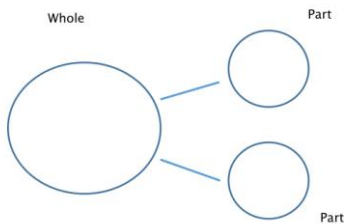
Use of additional adults?

- To extend / support
- 'Float'
- Not always with the less able
- Participate throughout and aid teaching

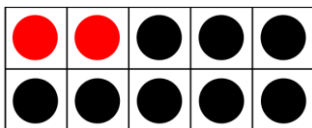
Key models and images to support maths learning in Year 1 when using Maths Textbooks

Key models / images

Part part whole model



Tens frames and double-sided counters



Base ten materials (we develop this from using multilink in sticks of ten initially)



Why we choose to use this model / image

Visual model

Concrete resources can be placed within the model

Also easy for the children to draw / represent

How do the pupils interact / use this model / image

Guided learning

Increasingly independent use – Pupils drawing their own models

Pupils discovering inverse relationships

Exploring possibilities (and structures) within all numbers (not just 10)

How do we interact / use this model / image

Modelling – drawing children's attention to relationships and the structure of numbers

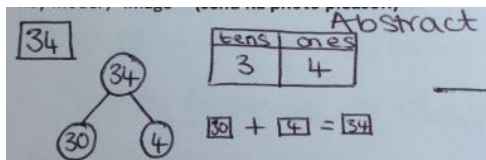
The model becomes a tool for calculation

The **difference** the use of this model / image makes in terms of understanding and maths learning

The inverse operation is evident and the relationship understood

Key models / images

Part part whole models



Place value charts

1	2	3	4
10	20	30	40
100	200	300	400

Concrete: Children make numbers using tens and ones initially

Pictorial: Draw numbers

Why we choose to use this model / image

To secure understanding of what each digit represents.

Children to develop understanding of groups of 10 using the place value chart and then partition into tens and ones.

This abstract model supported using tens and ones apparatus

How do the pupils interact / use this model image

Four models per A4 page laminated for each child

Children create numbers using tens and ones and then record on the model.

Particularly useful for numbers with 0 tens!

How do we interact / use this model / image

Give the number to the pupils and support practical methods. (developing conceptual variation)

Used to support explanations of structure of numbers in full sentences using pictorial / abstract / concrete models

The **difference** the use of this model / image makes in terms of understanding and maths learning

Understanding 'lots of tens' place value chart and the relationships between tens and ones.

Understanding the values of the digits. Eg '4' in 34.

Key models / images

Real-life arrays as concrete resources.

Seed trays cut up into 10s and 2s. Butterbeans and jelly beans.

Why we choose to use this model / image

To make learning relevant and link with our 'potting shed' topic

How do the pupils interact / use this model /image

Pupils enjoy using concrete apparatus.

Pupils who were confident enjoyed using the tens to make larger numbers

Novelty value!

How do we interact / use this model /image

The trays can be lined up easily to show and represent groups

Children can half fill them to show units in different arrangements.

The **difference** the use of this model / image makes in terms of understanding and maths learning

The resources are easily accessible. They can be cut into other sizes as well such as 5s and 3s too. They are cheap to buy.