

Journalling within the Maths — No Problem! Programme

What is journalling and why do we use it?

Journalling makes up one of the five main components of a maths lesson, the others are: exploration, structured discussion, reading and reflection, and practice.

There is no definitive order to a lesson and journalling can quite easily be scheduled at any time, however a good place to start is after pupils have explored the problem and you have discussed it as a class.

Journalling provides pupils with a chance to develop their communication skills by learning to articulate their ideas and explicate their mathematical thinking that surfaced during exploration.

These are great skills to nurture from a young age and some teachers will start with a class journal in Reception or Year 1 if they feel their pupils aren't quite ready for an individual one.

We want to encourage an open environment where learners feel safe to explore their new ideas and if they feel confident to make their journals completely personal, it can be a great tool for formative assessment.

For more reasons why we journal have a look at this blog post by Gemma Meharg:

<https://mathsnoproblem.com/4-reasons-why-maths-students-should-be-journalling/>

How does the Maths — No Problem! programme assist journalling?

Journalling is a completely open resource and for any lesson you could set a variety of different questions for learners to write about. For this reason we haven't written a journal for each lesson, however for inspiration, there is a maths journal idea at the end of each chapter in the **Maths — No Problem!** textbooks.

The Master section of every lesson has been designed in such a way that it can be presented to the class as someone else's journal. This way during the reading portion of the lesson they cannot only compare methods and validate their exploration, but they are also reading for style. This means they have in front of them examples for how to present ideas and information clearly for others to then read and learn from for example bar models, number bonds, tables, drawings etc.

What types of journaling are there?

Descriptive Journal

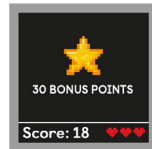
Pupils describe or explain the methods they have used or a mathematical concept.

In Year 2, Chapter 2 — Addition and Subtraction, Lesson 3 you could ask pupils to write a set of instructions for a friend so that they can solve this problem: how many points does Ravi have now?

Simple Adding

Explore

Ravi has 18 points.
He scores 30 more points in a bonus round.
How many points does Ravi have in total?



Lesson
3

Evaluative Journal

Pupils have to make judgements and justify choices.

In Year 6, Chapter 3 — Fractions, Lesson 15 you could ask pupils to journal two or three methods for finding out how much of each food Elliott puts in each portion.

Then ask them questions like: 'Why did you choose those methods?', 'How were they helpful?', 'In your opinion, which is the best method?'

Dividing a Fraction by a Whole Number

Explore

Elliott is dividing ingredients into 4 equal portions.
How much of each food item does he have in each portion?



Lesson
15

Creative Journal

Pupils are encouraged to develop their own stories around the mathematics or to create their own problem similar to the one they have seen in the lesson.

In Year 3, Chapter 2 — Addition and Subtraction, Lesson 1 ask pupils to pick a calculation from the Guided Practice and write a story for the subtraction.

Guided Practice

Subtract.

1 (a) $98 - 1 =$

(b) $98 - 7 =$

2 (a) $55 - 4 =$

(b) $55 - 14 =$

Investigative Journal

Pupils explore a problem and record their findings.

In Year 4, Chapter 1 — Numbers to 10 000, Lesson 5 pupils can record the findings of this place value investigation with added answers to the following questions:

'What did you notice?', 'Did you see any patterns?', 'What helped you in this investigation?'

Using Place Value

In Focus

How many 4-digit numbers can be formed using these four digit cards?



Lesson
5

How can I use journalling for assessment?

Ultimately, as journals are an individual's work and an insight into their understanding of the problem, they can be used to truly see if each pupil has grasped the concept and also how well they have grasped that concept. They can be used to quickly see and rectify and misconceptions that the class may be struggling with.

They can be used to see how creative the learners are. Does their journal contain original thinking? Have the learners come up with new stories or methods that weren't discussed in class.