

Journal Writing for Mathematics

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Journal Writing has been popular in many countries – Canada, USA, Australia etc. for over fifteen years – where cross-curricular approaches to teaching are the norm.

In Ireland the idea of using Journal Writing in mathematics teaching is growing slowly, and those who have adopted this approach find it very effective, especially in breaking that “cycle of impulsiveness” so common in primary school maths classes. The children are encouraged to explain / become more aware of their thinking processes as they learn a new concept or tackle problems. They learn to reflect better and not “jump in” with an answer.

What Exactly is Journal Writing?

Journal Writing means incorporating writing as an integral part of the maths class. It can be used daily, weekly, for homework, after an interesting / difficult problem has been solved, after a topic has been completed depending on the teacher’s preference.. In Journal Writing the children write about the experience they had in maths class on a particular day. They describe what they learned. Was it difficult? Do they understand it? Can they explain it back to the teacher? Or what section do they not understand? In this way Journal Writing enables the children to gather, organise and clarify their thoughts.

Some examples of Journal Writing.

Four scans of examples of pupils’ Journal Writing attached.

Feedback from the Teacher.

Feedback is important in Journal Writing. As the children progress there is more to and fro with the comments. Ideally the teacher gives feedback, child responds, teacher responds to that response. The children enjoy the comments and respond very well when asked for diagrams to help with their explanations. Journal Writing helps the child’s cognition and is an added tool for the teacher in discovering what made the lessons difficult or easy for the pupil. Did the graphics on the computer help? Did the cutting out of the fraction shapes help? In this way the teacher can use Journal Writing as an assessment tool.

It is important to remember that using journals does not mean changing curriculum content but rather incorporating writing strategies into the existing maths programme. The maths curriculum encourages this approach. “Encouraging children to use self-assessment techniques can enhance their enjoyment of the subject and **make them more active participants in their learning**. This can be achieved by asking them to look at how they arrived at a solution and verbalising how they can use this information in the future”. (p 19 Teacher Guidelines – Mathematics Curriculum 1999).

How to Get Started

Have a “special” copy for maths Journal Writing

Give feedback (comments such as “I like the diagram very much”, “you grasped that idea very well”, “I know you understand by the way you explained it” etc.

Use it as a treat – “If we have a good maths class today we’ll do Journal Writing later on”, type of approach.

Some Ways to Get Started

- The difference between a square and a rectangle is ...
- How would you describe an acute angle?
- How did the computer program help your understanding?
- What are tangrams? Write as much as you know about them
- Write all you know about the area of a triangle
- Describe a litre, kilogramme, metre.
- Explain what horizontal lines are
- Write an explanation about the differences between area and perimeter
- When would you use long division?

Note: In the Guidelines for Teachers of Junior Certificate students (maths) the following is stated

.... One possible intervention in this regard is Mathematics Journal Writing. Practising teachers who use Journal Writing regularly with their classes comment favourably on the honesty of student feedback and how it contributes to improving their mathematical understanding.....
(p 83: On Communicating Mathematics).

Today in our maths class Mrs Gavin had a bottle of medicine their was 30 ml in it we gave Clea some on thuesday and friday and then their was 20 ml left. And then Mrs Gavin wanted to buy some in a shop. She gave some to a little boy and then asked us if there is 30 ml in a bottle and gave him 5 ml a day how many days would it last for and here is it as a sum and the answer was six.

$$\begin{array}{r}
 30 \\
 - 5 \\
 \hline
 25 \\
 - 5 \\
 \hline
 20 \\
 - 5 \\
 \hline
 15 \\
 - 5 \\
 \hline
 10 \\
 - 5 \\
 \hline
 5 \\
 - 5 \\
 \hline
 0
 \end{array}$$

Monday
 Tuesday
 Wednesday
 Thursday
 Friday
 Saturday

Very well explained,
 Lorna. Good girl

