

IMPACT Maths Programme



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The IMPACT Maths programme is a resource developed by the Professional Development Service for Teachers (PDST) primary numeracy team to assist teachers in the implementation of the Primary School Mathematics Curriculum (PSMC). To date, three teacher handbooks have been designed to assist in teaching of the following strands/ strand units:

- Shape and Space (Infants to 6th class)
- Fractions (1st to 6th class)
- Place Value (1st to 6th class)
- Percentages and Decimals (1st to 6th class).

The programme is in the development stage and it is intended to extend these resources to the other strands of the PSMC over the coming years. Currently, the PDST are developing a similar resource to assist in the teaching of the Measures strand. These resources formed the basis of the numeracy link teacher training over the last two years.

PURPOSE

The purpose of the handbooks is to provide additional guidance in teaching and learning. The resources attempt to illuminate an instructional framework for enhancing mathematical thinking. This instructional framework advocates methods of eliciting, supporting, and extending higher-order mathematics skills such as reasoning; communicating and expressing; integrating and connecting; and applying and problem solving. Although these resources highlight certain strands and strand units, this instructional framework can be used for all strands and strand units of the PSMC.

The resources focus on an approach to mathematics that encourages pupils to communicate and share their mathematical thinking. It also emphasises the practical exploration of mathematical tasks, moving from the concrete to the pictorial to the abstract. Teachers adopt a more facilitative role with less teacher-dominated discussion where correct-

ness resides in the mathematical discussion rather than with the teacher as the sole validator of mathematical knowledge. The teacher encourages this approach by eliciting, supporting, and extending mathematical thinking.



TEACHERS' REACTIONS

Teachers who have used these resources have overwhelmingly reported a positive impact on their mathematics lessons. Furthermore, teachers have indicated that they would like more of these types of resources to assist them in teaching mathematics. Some teacher comments include:

'I now know where to start with concrete materials, particularly for the senior classes.'

'I am less dependent on the textbook and more confident in my role as a facilitator of learning.'

'The teacher's voice was very clear in supporting me to elicit ideas from the pupils. The resources are invaluable for planning.'

'My children really enjoy learning maths this way.'

'Please design more!'

Teachers have also reported finding the handbooks easy to use. In particular, they have reported that the differentiated levels, the progression from the concrete to the pictorial to the abstract, and the extension activities makes differentiation easier to manage in mathematics classes. They also report that the teacher language sections are particularly useful. Furthermore, teachers have commended the use of hyperlinked IT resources in the handbooks.

AVAILABILITY

The three teacher handbooks that are currently available for the IMPACT Maths programme can be downloaded free from the PDST website at www.pdst.ie/numeracy. Alternatively, the teacher handbooks can be purchased at cost price from www.pdst.ie/publications.

Any queries not answered by the PDST website can be addressed by email to info@pdst.ie.

