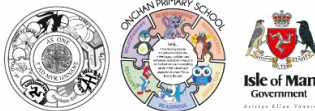




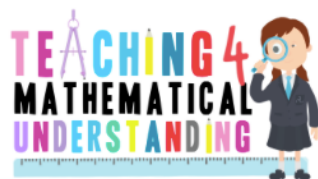
"Learning is a journey, to be taken together, one step at a time"



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Teaching for Mathematical Understanding at Onchan School

- Teaching for Mathematical Understanding (TMU) is a Maths Mastery approach developed by the Department of Education, Sport and Culture
- The overall goal of TMU is for all our pupils to be 'Creative, Confident and Enthusiastic Mathematicians'
- Challenge is provided through an increase in depth, rather than acceleration of content
- Children are able to confidently use concrete and pictorial methods to explain their thinking



What is Maths Mastery?

Maths Mastery is the process of children gaining a deeper, long-term, secure understanding of the subject. Children are given the opportunity to deepen their understanding of a mathematical concept through a variety of activities including reasoning and problem solving. The approach derives from Shanghai that is renowned for its fantastic results in Maths and is an approach that has been successfully running in the UK for many years.

The biggest change for Maths in school is that children will spend far longer on fewer key mathematical concepts but in greater depth. Children will be given the opportunity to gain greater understanding and Master each concept. The four areas that children will be assessed against are:

Concept – the actual doing of a skill (such as adding two numbers together)

Fluency – pupils should learn to recall and apply mathematical knowledge accurately and appropriately

Reasoning – pupils should learn to become systematic thinkers and articulate their thinking in a clear, succinct and logical manner

Problem Solving – pupils should learn by applying their mathematics to a variety of routine and non routine problems with increasing sophistication

When discussing where children are working at in Maths, the following vocabulary will be used:

Developing (below national expectation) – children are beginning to understand the skill but are still requiring support

Expected – (working at expected national expectation) – children are where they should be

Greater Depth – (working above national expectation) – children have mastered the skill and have a greater understanding



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How will this look in a lesson?

Maths lessons in school will look slightly different than they have in previous years, in particular in KS1 where the lessons will be more structured and taught with a whole-class approach. The same topic is focused on until the class has mastered the concept, skill or procedure being taught and children move on altogether rather than different groups working at different levels. Children who have not met the expected level of understanding will have immediate intervention, Rapid Intervention, in class and, if needed, extra time on Maths later in the day. For those children that have mastered the skill, concept or procedure, they will be presented with challenging problem solving activities, rather than accelerating through the curriculum. A child may understand how to use a method but to demonstrate their deeper understanding they need to explain why it works and apply that learning in new problems.

Through using concrete resources such as place value counters, dienes and cubes, children will be able to model problems, bringing them to life and understand the process behind abstract concepts. This method is called the CPA approach and more information around this can be found on the Internet.

At the beginning of every Maths lesson, children will have 5-10 minutes of Rapid Recall time. This time will be spent on counting skills, times tables, number bonds and addition and subtraction facts. In every lesson, children will also have a Digging Deeper challenge if they finish their learning in time. This language will be universal in school being used by children in FS to Year 6.

How can I help at home?

- Talk positively about Maths at home. Children are influenced by those around them -if they hear people talk about disliking Maths, 'I wasn't good at Maths' or Maths in a negative way this will influence and help them develop a negative attitude towards the subject
- Take a look at the methods that are being used – instead of telling your children how you used to do it, ask them to show them the methods they are using in school. More information will be available from teachers during the year
- Maths is all around you especially when shopping, cooking and out and about. Encourage your children to help measure in the kitchen or help plan an event
- Answering questions on worksheets is not going to help your child achieve greater depth, ask your child's teacher for some advice on what you can do at home to help
- The teaching of Maths has changed significantly to improve both understanding and application – we will add more to our school website over the coming months