

## **Mastery in maths: Teaching out and not up**

### **By Katherine Hart**

I first came across the term 'mastery' during the summer of 2015 whilst preparing for the start of a new school year. My initial thoughts were that this would be the next passing trend in education, a new scheme of work to consider purchasing, another series of staff meetings to lead, or simply another buzz word. However, through research, discussion with colleagues and trialling this approach whilst teaching my year 6 class, I quickly reached the conclusion that mastery could and should change the way that Maths is taught.

The biggest challenge I faced was in changing my mind set. I needed to move away from differentiating learning 3 ways (HA, MA and LA) and planning the inevitable extension task for children who completed their set task and move towards enabling all children to work through the same curriculum at broadly the same pace. 'This isn't possible', 'Children will be at all different stages', 'My higher ability pupils will be bored' were some of my initial thoughts but then a colleague suggested I view the mastery approach as teaching each objective 'out and not up'. I was clear that I needed to encourage children to deepen their understanding through real life application, conceptual understanding and by providing opportunities to disprove rules they have generated as well as holding discussions with peers of all abilities. Instead of moving children onto harder learning, which often consisted of larger numbers, enable the children to fully understand what and why they are learning a particular skill for themselves, allowing the teacher to fill gaps in learning of other pupils when they arise and not avoiding these gaps by providing easier learning; allowing the gaps to widen.

In my day to day practice, I provide children with a 'core task', the aim being that all children will achieve this learning as a result of whole class input. We discuss the step before this task which may consist of using a practical resource, using jottings to support calculations or a diagram to support visual learners and, at times, simpler questions which require the same method to be used. Previously labelled lower ability pupils relish the opportunity to complete the same work as their peers, higher ability pupils enjoy the challenge of 'proving' their learning, applying the skill or creating an explanation for the learning journeys on display in the classroom to demonstrate mastery. They have also realised that learning is not about being finished first.

From a class teacher perspective, I am able to constantly assess pupils understanding and identify those children who are simply 'maths robots': able to complete a task but unable to tell me why or how. I can work with a range of children on a daily basis to fill gaps in their learning and the most powerful element as a class teacher was realising that I had previously underestimated the children's awareness of their capabilities. Children are able to say 'I am going to go back to the learning step before as I need a little more support before completing the core task'

I believe that Mastery enables all pupils to become independent, competent mathematicians.