**Opportunities in the New Curriculum**

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I was one of the people who was involved in the new mathematics curriculum and the purpose of this article is to show some of the ways in which it addresses what the government has tried to do. The thinking is that our curriculum should be like those of higher performing countries. However a curriculum on its own cannot make a difference - teachers need guidance, support, time and PD. A major change is that the ways in which the previous curriculum was interpreted in practice may have led to a wide spread of achievement, so the system of 'levelling' that went with the curriculum have had to change. The aim is for *all* children to be prepared with a strong enough foundation of knowledge to make further progress in secondary school, and that is why 'levels' have gone so that schools have to rethink how they are going to map progress towards common goals.

It is easy to panic about the difficulties of changing to a new curriculum, maybe worrying about the formal arithmetic requirements, and not notice some other important threads. I am hoping that many primary mathematics specialists, such as those of you who have done MaST courses, will recognise that these other threads can truly make a difference to mathematical learning. There are some aspects of it that could help you get there:

*Teaching and learning number and fractions*

You are free to teach in whatever way works best for all pupils. Just because some of the goals are written formal algorithms does not mean that you need to teach in a formal way. The curriculum team assumed that teachers would use structured concrete materials such as Cuisenaire rods, Numicon, MultiLink, base 10 apparatus, rulers, counters, as well as teddy bears, water and sand throughout the learning of mathematics all the way up to year six and beyond. Similarly we assumed that teachers would use calculators for explorations and investigations of numbers - even though they are banned in tests.

*Pre-algebra*

Algebra was always available for some primary school mathematics pupils, but now is required for everyone. This needs some thought, because (in my view) introducing it in year six is too early if it is introduced formally, but too late if it is introduced informally. I have written more about this on the NRich website (http://nrich.maths.org/10906). This is really about understanding arithmetic and number relations. Very young children can understand some algebraic ideas is they are related to quantities so there needs to be conversations in school about how to develop algebraic thinking across years.

*Fractions and division*

The subplot about fractions and division in the curriculum is that pupils need lots of concrete work with materials and talk, before formal treatment. There is some helpful nonstatutory guidance in the curriculum about this, and if you read it carefully you might be able to see a progression which connects number, measurement, fractions of quantities, and division of quantities leading up to ratio in year six.

*Problem-solving*

The government wants children to become mathematical problem solvers - and so do most teachers! The curriculum is worded as if pupils learn concepts and methods and then solve word problems, but this is only a small part of the story of becoming a problem solver. On MaST courses you will have learnt about teaching mathematics through posing interesting problems for pupils to solve, so that they need and learn new concepts as useful and powerful ideas. It is possible (I would say essential) to teach that way with the new curriculum, and you may notice that ratio is introduced through solving problems with quantities, so pupils need to be flexible, creative and persistent problem solvers in order to be ready for that.

All these ideas develop throughout school, so you have a wonderful reason for working with colleagues across stages and years to ensure coherent development for all pupils. I wish you all good fortune with this endeavour.