

MATHEMATICAL ASSOCIATION



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Elizabeth Truss, MP
Parliamentary Under-Secretary of State for Education and Childcare
Department for Education
Sanctuary Building
Great Smith Street
London
SW1P 3BT

Dear Minister

I am writing to you as chair of the Association of Teachers of Mathematics (ATM) and the Mathematical Association (MA) Joint Primary Expert Group to express grave concern at the changes that have been made to the mathematics curriculum for learners in the Early Years. The group agrees with you that mathematics is one of the cornerstones of education and key to developing learners who have access to a wide range of life choices and can make informed decisions based on their understandings of the world. However it is extremely concerned that the changes made to the Early Years curriculum will mean that the nation's children enter primary education with an impoverished understanding of mathematics and weak foundations for progression.

Whilst there is just one new early learning goal for number, it is inappropriately over ambitious in its expectations for all young children. In the previous eight early learning goals for *problem solving*, *reasoning and numeracy*, children were expected to be familiar with numbers from one to ten in every day practical and problem solving contexts, including using numbers as labels and for counting, comparing and finding one more or less. The new early learning goal introduced in September 2012 has unrealistically raised expectations for the vast majority of five year olds to include numbers one to 20, and more abstract notions of addition and subtraction, doubling, halving and sharing. Some of these expectations were in the previous early learning goals but only for those children 'who have significant abilities or experience'. The 2011 assessment data¹ suggest that this is just 7% of children for *calculating* and 17% of children for *numbers as labels and for counting*. The group believes it is very important that young children's experience of number is not confined to numbers up to ten or to twenty, since they will meet a very wide range of number in their everyday lives. However, assessing children's fluency with the numbers eleven to twenty is best left until

¹ <http://www.education.gov.uk/rsgateway/DB/SFR/s001091/index.shtml>

children are older, as the inconsistency of the number words means secure understanding often takes longer.

Not only are these unrealistic expectations setting up Early Years practitioners and their children to fail, they are inconsistent with advice and responses given by expert groups within the consultation period and with practice in high performing jurisdictions where formal mathematics is not introduced until the age of six or seven years. Research evidence (which we are happy to provide) is clear that children need secure foundations on which to build mathematical understanding. These foundations are best developed through rich, practical and meaningful experiences which nurture conceptual understanding and the ability to recognise and generate pattern. Retaining the new early learning goal in its current form will result in many practitioners resorting to teaching our youngest children inappropriately as they attempt to train them to meet these unrealistic expectations. Research and evidence (e.g. Ofsted) show that acceleration and premature formalisation actually lowers attainment as teachers 'teach to the test' rather than to secure conceptual understanding.

It is unfortunate that the new early learning goal has been introduced whilst the national curriculum review is still underway. It is essential that there is a smooth transition in expectations from one phase of education to the next. Unrealistic expectations in one phase are likely to result in very weak foundations for learning in the next phase, and children being labelled as failures from an early stage in their learning of mathematics, undermining their self-confidence and resilience. Early Years practitioners looking for support in realising this aspirational early learning goal will find that the revised non-statutory guidance 'Development Matters'¹ is inconsistent with the new expectations. For example counting to ten and recognising numerals to five are suggested for five year olds, which is a far cry from numbers to twenty.

We suggest that it is not too late to amend the early learning goal and to ensure that guidance for practitioners is consistent with it. Members of the ATM/MA Joint Primary Expert Group would be happy to support DfE in the development of guidance for mathematics in the Early Years that is consistent with research and evidence.

Yours sincerely



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Vivien Townsend
Chair of the ATM and MA Joint Primary Expert Group

cc: ACME, JMC, Stefano Pozzi (DfE), Ofsted, Tara Whitehorn (DfE), David Laws MP, Stephen Twigg MP, Sue Pope (ATM), Adam McBride (MA).

¹ <http://www.foundationyears.org.uk/wp-content/uploads/2012/03/Development-Matters-FINAL-PRINT-AMENDED.pdf>