

Lord Deramore's Primary School

Progression through Calculations Policy

This policy exemplifies a recommended progression through the four operations, beginning in Early Years Foundation Stage and carrying on to Year 6, and includes a selection of mental strategies.

By Year 3 all children should be able to use a formal written method for all operations and apply these methods to problem solving. Mental skills must be kept sharp by continuing to develop and apply them with appropriate examples.

Should children be taught one standard method for each operation?

Children should work through the school's agreed progression in order that they know and understand a compact standard method for each numerical operation by the end of Year 3. Teaching and learning will be in line with the VCP (Visual Calculation Policy) which is used progressively through school.

What about children at different stages of attainment?

Each child should be taught the programme of study or higher before moving onto the next year group. Programmes of study will be differentiated to suit the needs of all children in the class to ensure challenge and progression.

How can children's readiness for written calculations be judged?

Judgements will need to be made as to whether pupils possess sufficient of these skills to progress. Different prerequisite skills are needed for each operation. A short list of criteria for readiness for written methods of addition and subtraction would include:

- Do children know addition and subtraction facts to 20?
- Do they understand place value and can they partition numbers into hundreds, tens and units?
- Do they use and apply the commutative and associative laws of addition?
- Can they add at least three 1-digit numbers mentally?
- Can they add and subtract any pair of 2-digit numbers mentally?
- Can they explain their mental strategies orally and record them using informal jottings?

Corresponding criteria to indicate readiness to learn written methods for multiplication and division are:

- Do the children know the 2, 3, 4, 5 and 10 times tables and corresponding division facts?
- Do they know the result of multiplying by 0 or 1?
 - o Do they understand place value?
 - o Do they understand 0 as a place holder?
 - o Can they multiply 2 and 3 digits mentally by 10 and 100?

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- Can they use their knowledge of all the multiplication tables to approximate?
- Can they find products using multiples of 10?
- Do they use the commutative and associative laws of multiplication?
- Can they halve and double 2-digit numbers mentally?
- Can they use multiplication facts to derive mentally, other multiplication facts they don't know?
- Can they explain their mental strategies orally and record them using informal jottings?

Monitoring of Written Calculations

It is important that procedures are in place to ensure that all staff are aware of the progression through calculations, and that children are being taught appropriate methods for their age and ability, which are in line with the agreed policy. This may include book sampling, monitoring of plans, pupil interviews, test analyses etc.



Approved by FGB

Meeting Date 30th June 2014