Guidance for teachers – KS1 Number, Addition and Subtraction

1.7 Addition and Subtraction: Calculation Strategies within 10

These short videos are intended to provide your pupils with interactive lessons while they are learning from home. You can choose how regularly you set them for your class. Some of the learning might be consolidation and practice which aids confidence and retrieval and helps build firm foundations for moving on to future areas of mathematics. It is important that pupils experience these in the suggested order. They have been designed to be a coherent sequence of learning which builds on previous understanding and exemplify a teaching for mastery approach.

General features of a teaching for mastery approach, which can be found within these lessons:

- *Stem sentences* which promote precise mathematical vocabulary and generalisations for all pupils

- *Representations* which are carefully chosen and can be concrete, iconic, or abstract and that move between the three

- *Opportunities for deepening understanding for all pupils* - using small steps of learning enables pupils to learn together and gain deep conceptual understanding

- *Independent practice and retrieval* - you could ask the children to send you their practice activities so that you can check understanding. You could also set supplementary activities, maybe from a textbook to extend practice and develop fluency in recalling number bonds to 10.

Lesson 12: Subtracting two from odd and even numbers
This lesson now moves on from addition to two to subtraction of two, following the same progression used previously using both reduction and partitioning contexts. Using the fact that the difference between consecutive odd/even numbers is always two, we work towards the generalised statements: 'Subtracting two from an odd number gives the previous odd number.' and Subtracting two from an even number gives the previous even number.'

Lesson 13: + and – facts for the pairs 5 and 3, and 6 and 3, can be related to known facts and strategies
There are two pairs of remaining addition facts within ten (excluding zero) which have yet to be covered: five and three, and six and three. Derived-fact strategies are explored to reason about these facts.

Lesson 14: When adding or subtracting zero to a number, the number remains unchanged
Children will already have explored addition and subtraction contexts where an addend or the subtrahend is zero. Here we reinforce this group of number facts.

Lesson 15: Subtracting a number from itself gives a difference of zero
Subtraction contexts are explored that involve zero (e.g. $6 + 0 = 6$, $0 + 3 = 3$, $3 – 0 = 3$, $6 – 6 = 0$). Children are encouraged to write the equation to go with the maths story such as: '*Harry has a basket of six eggs and then he drops six eggs. He has no eggs left in his basket.*' can be recorded as $6 – 6 = 0$. Generalised statements such as: 'Adding zero to a number leaves the number unchanged.' and 'Subtracting a number from itself gives a difference of zero.' are used when working through all the relevant facts.

These lessons have been planned from the NCETM Mastery PD Materials. Please access the original materials here.

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