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 9 Subtracting one gives one less
This lesson starts with some counting backwards using a number line for support. This is to enable children to connect the previous number in a count to subtracting one from a number. The teacher then uses a similar approach to connect to adding one from a previous lesson. Different contexts are used such as 'First there were eight doughnuts. Then one was eaten. Now there are seven doughnuts', working towards a generalised statement '**Subtracting one gives one less**'.

Lesson 10 Consecutive numbers have a difference of one
In this teaching point, children explore subtraction facts which have a difference of one (e.g. 8 – 7). Structurally they are a little different to those covered in the previous lesson in that they can't be solved by finding 'one more' or 'one less'. The aim is for children to be able to recognise the relationship between the minuend and subtrahend and realise that the difference must be one because the numbers are next to each other.

Lesson 11 Adding two to odd and even numbers
The sequence of steps is exactly the same as that used when adding one – but in this lesson we are adding two. Through skip counting *'Two, four, six…'*, knowledge of saying the even number names in the right order is established, then *'One, three, five…'* to establish the order of the odd numbers. This is then used to work out two more. Children, who silently count to work out what 'two more' is, are then supported to move beyond this as a strategy so that they can identify two more without counting. Aggregation and augmentation structures are used working toward a generalised statement **'Adding two to an odd number gives the next odd number; adding two to an even number gives the next even number'**.

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