NATIONAL CENTRE for EXCELLENCE in the TEACHING of MATHEMATICS

## Guidance for teachers - KS1 Multiplication 3

### 2.3 Multiplication 3: The two times table

These short videos are intended to provide your pupils with interactive lessons whilst 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 to extend practice and develop fluency in counting in steps of 2,5 and 10.

Lesson 1 - Practise counting in twos
This is the first lesson in a sequence of lessons where the children look at groups of 2, practise counting in twos and then keeping a tally so that they can see how this connects to finding a total.

Lesson 2 - Introduction to the terms factor and product
The children should already be familiar with writing multiplication expressions. The teacher models how the multiplication expression can be turned into an equation showing the product - how many objects there are altogether. In this lesson they are introduced to factor x factor = product as well as product = factor x factor, so that they can write multiplication equations and be able to say what each part of the equation represents. These terms are then used to describe the number of groups of two and the associated total.

Lesson 3 - Embedding the language of factor and product, making connections between different representations

Working through examples with a group size of two provides the children with the opportunity to practise the language of factor and product. They continue to skip count to work out the product: for example, they look at five bikes each with two wheels, write the expression $5 \times 2$ and know that 5 is a factor, 2 is a factor and then skip count to create the equation $5 \times 2=10$ because they know that there are ten wheels altogether.

## Lesson 4 - Explore $0 \times 2$

The children count backwards in twos, supported by a number line starting with, for example, three groups of two. They write the multiplication equation in each case, removing groups of two until there are zero twos. Practice is then provided for them to match equations with the correct picture.

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Lesson 5 - Record the two times table in a ratio table
In this lesson, children make connections between a ratio table, multiplication equations and a context, such as pairs of shoes. They then use this information to answer questions such as, 'If I have six pairs of shoes, how many shoes do I have altogether?'. They are encouraged to make their own ratio table, cut it up and then reassemble to deepen their understand of how it has been organised.

These lessons follow on from the last unit for KS1 Multiplication and introduce multiplication tables
These lessons have been planned from the NCETM Mastery PD Materials. Please access the original materials here.

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