Maths videos 1- 13 multiplication part 2

When you have watched multiplication part 1, lessons 1-17 and tried the resources to check your understanding move onto multiplication part 2 lessons 1-13 below. Work at your own pace they can take 2-3 weeks to complete.

Lesson 1 - Unequal and equal groups. In this lesson children identify equal and unequal groups. Attention is drawn to whether the way that they have been grouped leads to equal groups or unequal groups. Children are encouraged to move objects into groups and then circle items that are shown pictorially. This is to encourage the children to see the group as one 'thing'.

Lesson 2 - Practice working with equal and unequal groups. In this lesson examples are used where identical objects are grouped into equal or unequal groups. Children are encouraged to use the stem sentences: **'The groups are equal because there are the same number of __ in each group.'** or **'The groups are unequal because there are a different number of __ in each group.'** Once the children are confident working with identical objects, objects that are not identical are used so that the focus is on the group size.

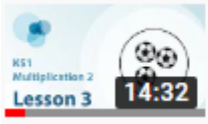
Lesson 3 - Redistributing from unequal to equal groups. Through using groups that are unequal children are asked to describe the groups using the language from the previous lesson. They are than asked to make the groups equal and are encouraged to subitise and to check the number in each group by counting. They reason that the groups are equal is because they have the same number of objects in each group, and not because they look the same.

1. Unequal and equal groups
NCETM

https://www.youtube.com/watch?v=7MmjQ_-XlIg&list=PLQqF8sn28L9y5AGykvQTeUZw_Snz68jm7&index=1

2. Practise working with equal and unequal groups
NCETM

https://www.youtube.com/watch?v=aLOTi6MB1rg&list=PLQqF8sn28L9y5AGykvQTeUZw_Snz68jm7&index=2



3. Redistributing from unequal to equal groups
NCETM

https://www.youtube.com/watch?v=CQ1LD3SwLWA&list=PLQqF8sn28L9y5AGykvQTeUZw_Snz68jm7&index=3

Lesson 4 - Consider 'equal groups' in more detail

Children describe the number of groups and the number in each group. They look at different contexts such as children on fairground rides and practise the language using the stem sentences: **'There are __ equal groups of ___.'**, **'There are __ in each group.'** and **'There are __groups of __.'** They also move objects into equal groups as well as circle groups and again practise the language focusing on connecting each number to the representation.

Lesson 5 - Practice using the sentence: **'There are __ groups of ___.'**

Using the stem sentences from the previous lesson, an opportunity is provided for the children to deepen their understanding as they describe the number of groups and the size of each group, knowing what each number represents. They compare the maths presented in different ways and have a go at completing an incomplete representation from a given description.

Lesson 6 - The use of a repeated addition expression to represent equal groups

The use of a repeated addition expression is introduced to represent the repeated groups. The children continue to describe the group and the number of groups and write the expression to match. For example: **'Three groups of five'**, they can write 5 + 5 + 5. Connections are made to the learning on money in previous lessons where the practice activity allows them to apply this new learning using coins.

Lesson 7 - See a repeated addition expression first and then make groups to match.

This lesson makes sure that the children can explain what each number represents in a repeated addition expression and they are encouraged to explain how an expression matches a representation. They should still use a sentence that describes the number of groups and the size of the group. This is more challenging as you do not write this number in the expression as it is how many times it occurs in it, for example, There are **3** groups of **4**. We can write this as 4 + 4 + 4 (the **3** is how many **4**s).

Lesson 8 - Think more deeply – does the representation match the expression?

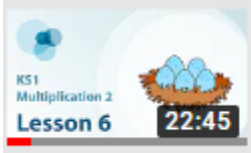
First, there is a review of the previous lesson. Examples are then used where the children must consider whether an addition expression matches a given representation. Some examples are expressions that are not repeated addition, and the children are encouraged to reason why they do not match. At the end of the lesson they are asked to create true or false questions to try on someone at home.

4. Consider the nature of 'equal groups' in more detail
NCETM

https://www.youtube.com/watch?v=9MvlS_aRacM&list=PLQqF8sn28L9y5AGykvQTeUZw_Snz68jm7&index=4

5. Practice using the sentence: 'There are __ groups of ___.'
NCETM

https://www.youtube.com/watch?v=Jmjtkc5DpU4&list=PLQqF8sn28L9y5AGykvQTeUZw_Snz68jm7&index=5



6. The use of a repeated addition expression to represent equal groups
NCETM

https://www.youtube.com/watch?v=k_tfKEIE85A&list=PLQqF8sn28L9y5AGykvQTeUZw_Snz68jm7&index=7&t=1s

7. See a repeated addition expression first and then make groups to match
NCETM

https://www.youtube.com/watch?v=rcWllWlCfb0&list=PLQqF8sn28L9y5AGykvQTeUZw_Snz68jm7&index=8&t=6s

8. Think more deeply – does the representation match the expression?

NCETM

https://www.youtube.com/watch?v=9I1EK5Lu_DQ&list=PLQqF8sn28L9y5AGykvQTeUZw_Snz68jm7&index=8

Lesson 9 - Introduction to the multiplication symbol

Repeated groups, that are equal, are used where they can be represented by a repeated addition expression. Alongside this expression the associated multiplication expression is introduced for example 4 + 4 + 4 as 4 x 3, said as four groups of three and four threes. At this stage, we have decided to show the first factor as the number of groups.

Lesson 10 - Matching repeated addition expressions to multiplication expressions

Snails and Numberblocks characters support children to see how a repeated addition expression can also be expressed as a multiplication expression. This deepens their understanding of how both expressions can be used to represent the same thing. At the end of this lesson, they are encouraged to make a matching activity that will be used again in a later lesson.

Lesson 11 - Matching multiplication expressions to images and contexts

Bongo the puppet explains how he has matched expressions from the previous lesson. This lesson then asks the children to use objects to represent multiplication expressions focusing on how many groups there are and how many are in each group. Children also look at a pictorial representation and insert missing numbers into a multiplication expression using this information.

Lesson 12 - Further reasoning about multiplication expressions

With a focus on what each number represents in a multiplication expression, children are encouraged to agree or disagree about whether a sentence matches a representation. For example, three Numberblock Four characters appear, and the children must agree or disagree whether there are three fours and then consider how this might be written as a multiplication expression.

Teaching of Mathematics

Lesson 13 - Multiplication contexts involving zero and one.

This is the last lesson in this sequence of lessons. Numberblock Zero appears to support the children to understand how, for example, 0 + 0 + 0 + 0 can be written as 4 x 0. This is a difficult point for many children, but connections are made to previous representations to support them with understanding that the group size can be zero. Attention is also draw to where a group size can be one.

9. Introduction to the multiplication symbol

NCETM

https://www.youtube.com/watch?v=DmekUT4_Lkc&list=PLQqF8sn28L9y5AGykvQTeUZw_Snz68jm7&index=9

10. Matching repeated addition expressions to multiplication expressions

NCETM

https://www.youtube.com/watch?v=h00dnOBMWyw&list=PLQqF8sn28L9y5AGykvQTeUZw_Snz68jm7&index=10

11. Matching multiplication expressions to images and contexts

NCETM

https://www.youtube.com/watch?v=oH6E-EJYqxM&list=PLQqF8sn28L9y5AGykvQTeUZw_Snz68jm7&index=11

12. Further reasoning about multiplication expressions

NCETM

https://www.youtube.com/watch?v=JG5D7sOVk5U&list=PLQqF8sn28L9y5AGykvQTeUZw_Snz68jm7&index=12

13. Multiplication contexts involving zero and one

NCETM

https://www.youtube.com/watch?v=HcRhEHVVxFU&list=PLQqF8sn28L9y5AGykvQTeUZw_Snz68jm7&index=13