

# Year 3 Unit 9 (Autumn term) Support Session 1

## Multiplication

### Objectives

Understand multiplication as an array.

Use the  $\times$  and  $=$  sign to record multiplication sentences.

### Vocabulary

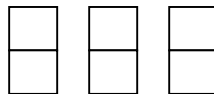
multiplied by  
multiply  
groups of  
array

### Resources

Interlocking cubes  
Whiteboards

### Oral and mental starter

Show the group 3 towers of 2 cubes. Push them next to each other to form a 2 by 3 block.



Say:  $2 + 2 + 2 = 6$ . All together say 2 multiplied by 3 equals 6.

Ensure that the children see the relationship between  $2 + 2 + 2$  and  $2 \times 3$ .

Write the multiplication sentence:  $2 \times 3 = 6$ . Repeat with other numbers of towers of two cubes.

Repeat using towers of 5. Gradually ask the children to write the multiplication sentences on whiteboards.

### Main activity

Give the children 15 cubes each and ask them to make 5 towers.

Q. How big is each tower?

Q. How would we write this as a multiplication sentence?

Ask the children to push their towers together to make an array with 5 rows of 3 cubes. Say 'we have got 5 in each row and we have multiplied that by 3', that gives us 15 altogether.

Write  $5 + 5 + 5 = 15$  and then  $5 \times 3 = 15$ .

Remind the children that we can start with the columns. Together, count 3 in each column and establish that there are 5 of them, again altogether making 15.

Write  $3 + 3 + 3 + 3 + 3 = 15$  and then  $3 \times 5 = 15$ .

Give children 12 cubes to build an array and write the two multiplication sentences that go with that array.

Ask them to describe their arrays to the rest of the group.

Q. Can we make a different array using 12 cubes?

Give the children four more cubes and ask them to make a different array, and write the corresponding multiplication sentences.

Q. Can we make a different array?

### Plenary

Write the following list of multiplication sentences and next to each quickly sketch an array.

$2 \times 4 = 8$ ;

$5 \times 2 = 10$ ;

$10 \times 4 = 40$ ;

$7 \times 2 = 14$ .



Invite children to write the 'partner' multiplication sentence for each array.

## Year 3 Unit 9 (Autumn term) Support Session 2

### Multiplication

#### Objectives

Count in 2s, 5s and 10s.

Understand multiplication as repeated addition.

Use the  $\times$  and  $=$  sign.

#### Vocabulary

count

lots of

repeated addition

lots of groups of

multiplied by

#### Resources

Digit cards 2, 5 and 10

1-6 dice

Dry-wipe number lines to 100.

#### Oral and mental starter

Count together in 2s, then 5s, then 10s as you draw the hops on a number line.

Encourage children to hold fingers up as they count, one finger for each hop.

Ask the group to count to 12 hops of 2 and then stop, using their fingers as a tally of how many 2s they have counted.

Repeat for 4 hops of 10, 8 hops of 5.

#### Main activity

Q. How many hops of 2 did it take to get to 10? 14? 8?

Rephrase and write on the board 5 hops of 2 to get to 10 so

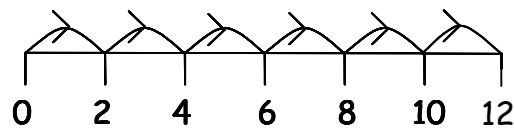
$$2 + 2 + 2 + 2 + 2 = 10; 2 \times 5 = 10.$$

Invite the children to draw hops of 5 on their number lines to show how many hops it takes to get to 20. Record 4 hops of 5 to get to 20 and then the multiplication sentence:  $5 \times 4 = 20$ .

Repeat with hops of 10 to 60. Record in words and as a multiplication sentence.

Q. How many hops of 5 do you need to take?

Select a card and roll the dice. Say that the number on the card is the size of hop, e.g. 2, and they should multiply this by the number on the dice, e.g. 6, i.e. draw 6 hops of 2. Ask them to each draw this on their number lines, and to help their partners.



Ask them to record this on paper as a multiplication sentence:  
 $2 \times 6 = 12$ .

Repeat several times.

#### Plenary

Pose a couple of missing number problems linked to the sentences which they have just written;  $5 \times \square = 35$ .

Q. What is this question asking? How many hops of 5 are needed to get to 35?

Q. How could we check?

Take hopping on a number line as a response, but also remind them about using an array. Repeat for  $\square \times 5 = 15$ . Discuss possibilities and then reverse to see how many hops of 5 are in 15.