

**Multiplication**

# Down on the Farm

**Number and Algebra**



**Written for the Australian Curriculum: Mathematics**

Sara MacDonald | Randall Hall | Richard John

## AUSTRALIAN CURRICULUM: MATHEMATICS

<b>Strand:</b>	Number and Algebra
<b>Sub-strand:</b>	Number and place value
<b>Descriptor:</b>	Recognise and represent multiplication as repeated addition, groups and arrays

### MATHS WORDS

Multiplication, number, adding, count, groups, three, four, five, six, twelve, fifteen, eighteen, equals, array, row, single

### INFORMATION FOR PARENTS OR CAREGIVERS

Helping your child learn to read is a rewarding and enjoyable experience for both you and your child. Here are some ways you can help your child with their reading.

#### BEFORE READING

- Introduce the book. Read the title and look at the picture on the front cover. Make a prediction – what might the book be about?
- Look through the book and talk about the pictures. Ask your child if they know how to do multiplication.
- Refer to the maths words above. Discuss each word and its meaning. These words will appear in this book.

#### DURING READING

- At this level, your child should attempt to read their home reader on their own. They may be unsure of some words. Encourage them to break these words down into their individual sounds, blending from left to right.
- Stop your child on the pages where Millie the Mathematician appears. Discuss the maths vocabulary and interesting mathematical information presented.

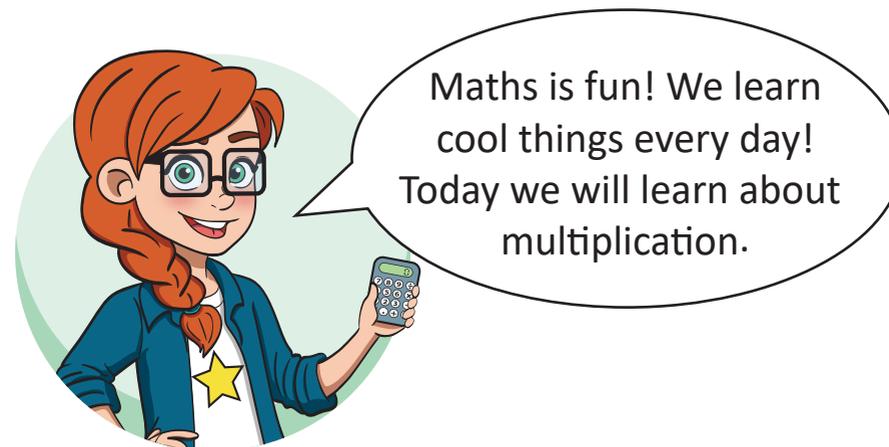
#### MATHS CONCEPTS IN THIS BOOK

In the early parts of *Australian Curriculum: Mathematics*, students are required to recognise and represent multiplication in a number of ways including via **repeated addition**, as **groups of** and by the use of **arrays**.

Students are first introduced to multiplication via **repeated addition** of equal groups. For example, the following groups of three, ||| ||| |||, can be counted as  $3 + 3 + 3 = 9$ . Students typically begin by adding each individual element of each group i.e. 1, 2, 3 .... 4, 5, 6, .... 7, 8, 9.

Students then extend their understanding of multiplication using **skip counting** techniques to count equal groups. For example, the following groups of three, ||| ||| ||| |||, can be counted by skip counting, i.e. 3, 6, 9, 12. Students come to understand this representation as four **groups of** three (or four **lots of** three) which they equate to 12 via skip counting.

The next form of representing multiplication involves the use of **arrays**. An array is a pictorial representation of grouping (or lining up) of objects into rows. The following array represents five groups of three (or  $5 \times 3 = 15$ )



## Down on the Farm



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Down on the farm, Reese and Matilda have lots of work to do.

They like caring for the animals the most.

Every morning they check the paddocks to make sure the cows and sheep are safe and sound.

Then they collect the eggs from the chicken coop for a yummy breakfast.

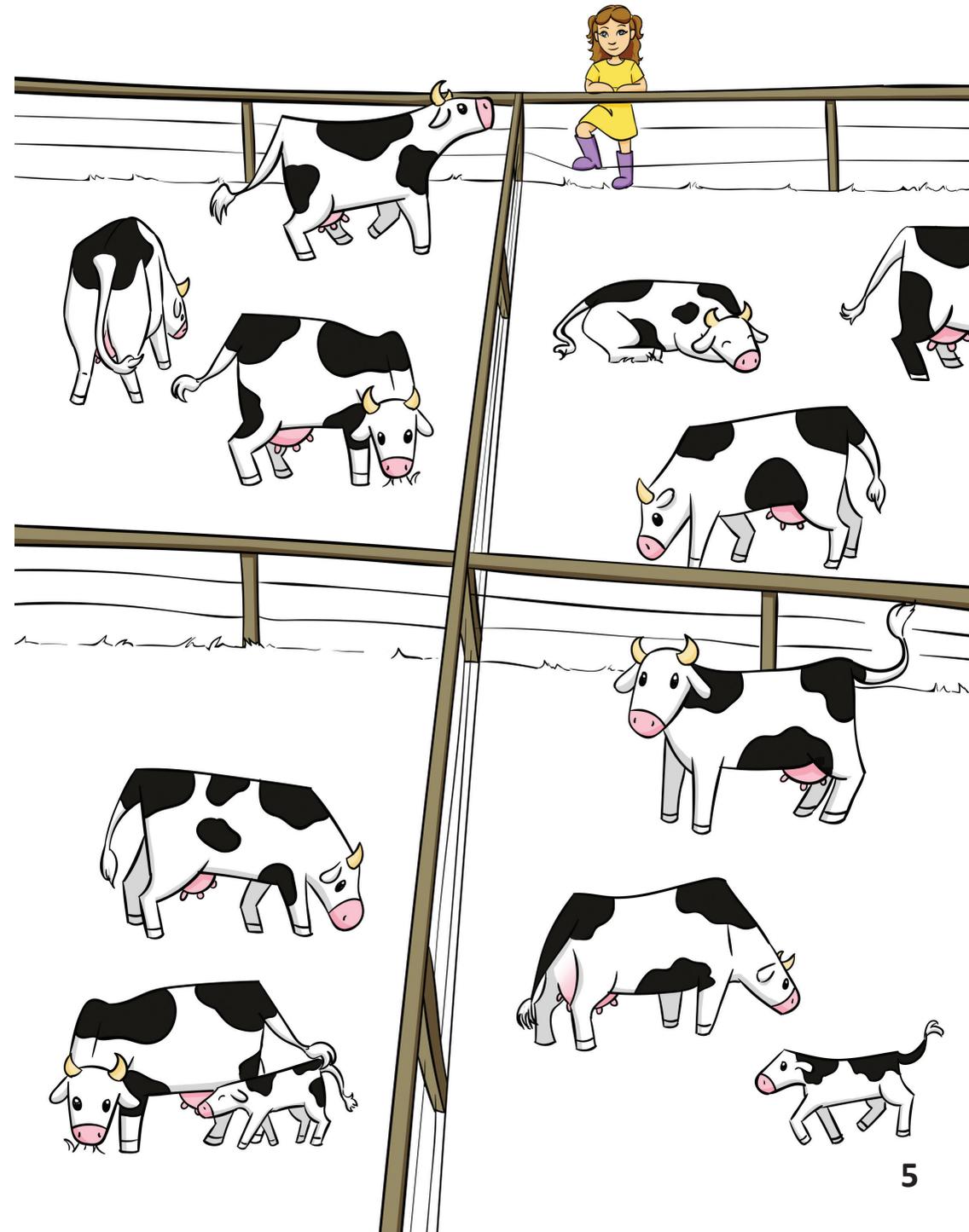


The first job of the day for Reese is to check on the cows.

She needs to make sure all the cows are safe and sound in their paddocks.

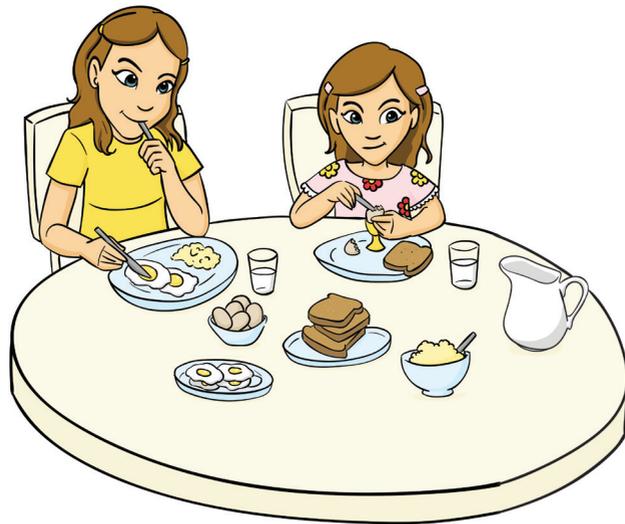
The cows are kept in four paddocks and there are always three cows in each paddock.

“Good,” she says. “There are three cows in paddock number 1, three cows in paddock number 2, three cows in paddock number 3 and three cows in paddock number 4.”



At the end of their busy morning, collecting eggs and checking on the cows and sheep, Reese and Matilda enjoy a delicious breakfast.

They don't have 18 eggs now!



## AFTER READING

Ask your child what the book was about and encourage them to re-tell it in the order in which it appeared.

Discuss the following with your child to assist them to understand the content of the book:

- How many paddocks had cows in them?
- How many paddocks are there in total on the farm?
- Why do you think it is important to count the animals on the farm?
- What other types of animals could you find on a farm?

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# Down on the Farm

Number and Algebra

Book 20 of 24

In this book Millie the Mathematician helps us to understand and represent multiplication. By doing chores 'down on the farm', Millie helps Reese and Matilda understand that multiplication can be represented by repeated addition or by groups of or by arrays. These ideas are represented in multiple ways including pictorial representations, word equations and mathematical expressions.

**Australian Curriculum:** All books in the 'Millie the Mathematician' series are written for the *Australian Curriculum: Mathematics* and align directly to what children learn in the classroom. This book addresses content from the *Number and Algebra* strand within the *Number and place value* sub-strand. The specific Australian Curriculum content descriptor addressed is: "Recognise and represent multiplication as repeated addition, groups and arrays."



WOW!  
Multiplication  
is cool! And so is  
maths.

## PARENTS, READ ALONG WITH MILLIE!

Throughout this book Millie the Mathematician tells us interesting mathematical facts. Use these prompts to encourage further interest and discussion about **multiplication** with your child.

**Suggested Reading Level:**



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