



Experiments

Physical Sciences



Written for the Australian Curriculum: Science

Sienna Osborne | Randall Hall | Richard John

AUSTRALIAN CURRICULUM: SCIENCE

Strand:	Science Inquiry Skills, Science Understanding
Sub-strand:	Physical Sciences
Descriptor:	A push or pull affects how an object moves Pose and respond to questions Participate in guided investigations Use measurements to collect and record observations

SCIENCE WORDS

Experiment, ramp, stop-watch, measure, speed, result, table (i.e. a data table), record (i.e. record observations), concludes, fast, faster, fastest

INFORMATION FOR PARENTS OR CAREGIVER

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 pictures. Ask your child if they have conducted any experiments at school.
- Refer to the science words above. Discuss each word and its meaning. These words will appear in the book.

DURING READING

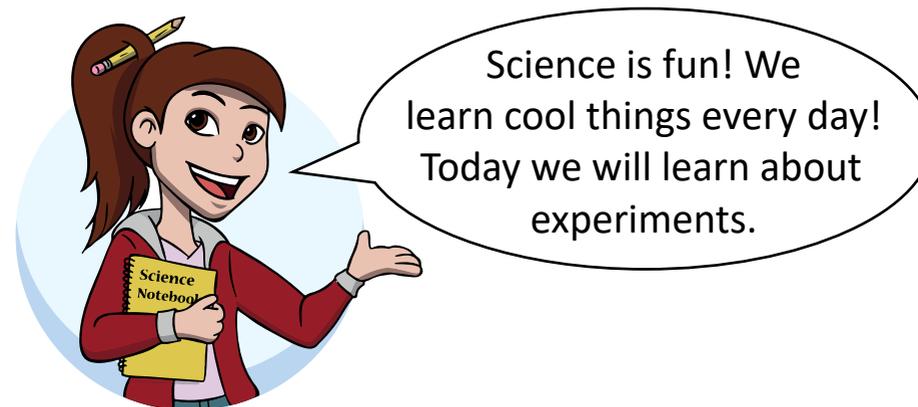
- At this level, your child should attempt to read their home reader on their own. There may be words they are unsure of. Encourage them to break these words down into their individual sounds, blending them from left to right.
- Stop your child on the pages where Suzie the Scientist appears. Discuss the science vocabulary and interesting information presented.

SCIENCE CONCEPTS IN THIS BOOK

Science is characterised by observations, experimentation and reasoning (including drawing inferences and conclusions). In this book Suzie the Scientist helps Luke construct a guided experiment to answer a question of his own making. Encouraging children to ask and answer their own questions through **guided inquiry** is a key ingredient for student engagement and success in science.

Luke constructs an experiment in which he races cars down a ramp of varying heights to see which ramp height will result in the fastest speed. Luke controls certain experimental variables to produce a “fair test”. He **changes** one variable (ramp height), **measures** another variable (time) and keeps all other variables the **same** (e.g. length of ramp, the car used, the force of gravity etc.).

The mnemonic “**C**ows **M**oO **S**oftly” can be used to guide children to design fair tests. It helps them to consider which variable they will **change** (**C**ow); which variable they will **measure or observe** (**M**oO); and which variables they will keep the **same** (**S**oftly).



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Luke likes racing cars.

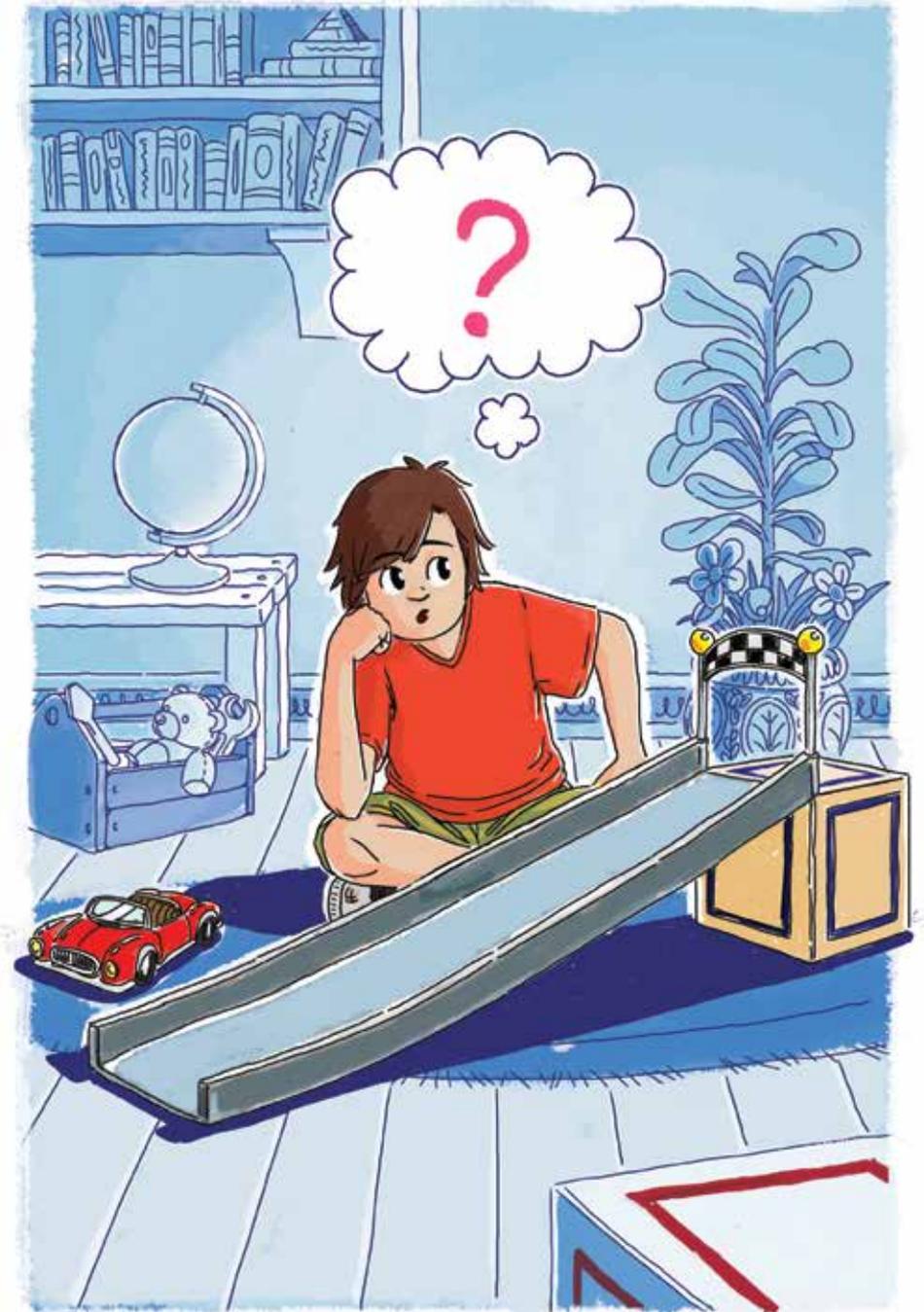
He races them down ramps to see how fast they can go. He uses blocks to make a ramp.

When he rolls his car down the ramp it rolls slowly at first and then gets faster and faster.

Luke wants to see the car go even faster. He wonders how he can make the car go faster.



When an object rolls down a hill it starts off slowly and gets faster and faster. This is called **acceleration**.

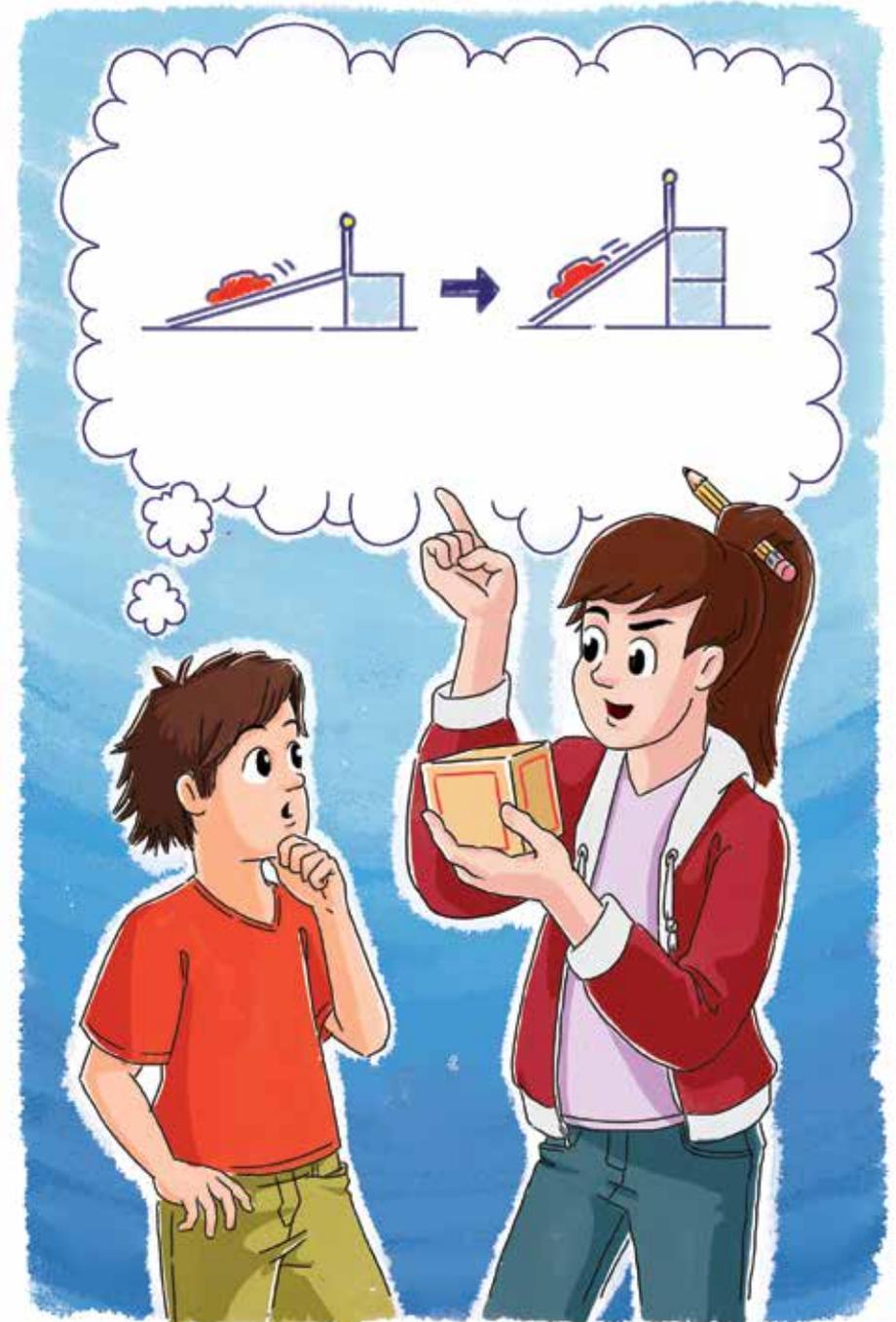


Luke asks Suzie the Scientist for help.

“How can I make my car go faster?” asks Luke.

“Try using more blocks under your ramp,” says Suzie the Scientist.

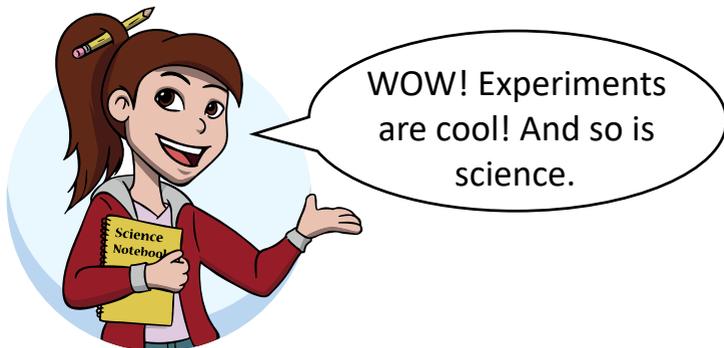
“This will make your ramp higher,” she says. “And should make your car go faster,” she adds.



Luke records his final result in the table.

He concludes that the highest ramp results in the fastest speed.

Height of Ramp	Time (Seconds)	Speed
1 Block	4	Fast
2 Blocks	2	Faster
3 Blocks	1	Fastest



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 in understanding the content of the book:

- What objects does Luke use in his experiment?
- Which ramp produced the fastest speed: the one with one block, two blocks or three blocks?
- What do you think would happen if Luke used four blocks to hold up his ramp? What would happen if he used no blocks under his ramp?
- What else could you use to roll down the ramp?

First published in Australia in 2017
Publicious Pty Ltd

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National Library of Australia Cataloguing-in-Publication data:

Osborne, Sienna; Hall, Randall; John, Richard

Experiments

ISBN: 978-0-9924582-9-4

Printed in Australia

Acknowledgements

Series Illustrators: Gemma Duffill, Sam Dunn, Carissa Harris, James Elms

Series Graphic Artist: Sam Dunn

Series Consultants: Samantha Hutchinson, Gayle Brent

Images: Shutterstock

Community Partners

The authors gratefully acknowledge the support of the following people and organisations for their assistance in the production and distribution of this series:

Jock and Beverly McIlwain, Mermaid Waters, Queensland, Australia
Griffith University, Queensland, Australia
Rotary International, Australia, District 9640
P&Cs Queensland



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Physical Sciences

In this book Suzie the Scientist helps us learn about experiments. She assists Luke to work out which ramp will result in the fastest speed when he races his car down it. Luke carries out a guided experiment where he controls, measures and changes variables.

Australian Curriculum: All books in the 'Suzie the Scientist' series are written for the *Australian Curriculum: Science* and align directly to what children learn in the classroom. This book addresses several learning outcomes from the Science Understanding and Science Inquiry Skills strands using the Physical Sciences sub-strand as the context.



Wow!
Experiments are cool! And so is science.

PARENTS, READ ALONG WITH SUZIE!

*Throughout this book Suzie the Scientist tells us interesting scientific facts. Use these pages to encourage further interest and discussion about **experiments** with your child.*

Suggested Reading Level:



PM 21-24, Fountas & Pinnell L-O



ISBN 978-0-9924582-9-4



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Publicious Pty Ltd | Gold Coast, Australia
www.suziethescientist.com.au