



Objects and Materials

Chemical Sciences



Written for the Australian Curriculum: Science

Sienna Osborne | Randall Hall | Richard John

AUSTRALIAN CURRICULUM: SCIENCE

Strand:	Science Understanding, Science as a Human Endeavour
Sub-strand:	Chemical Sciences
Descriptor:	Objects are made of materials that have observable properties People use science in their daily lives

SCIENCE WORDS

Objects, materials, rubber, plastic, paper, wood, metal, glass

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 picture on the front cover. Ask what the book might be about.
- Ask your child if they know any examples of materials. Look through the book and talk about the pictures. Can they identify any materials?
- Refer to the science words. Discuss each word and its meaning. These words will appear in the book.

DURING READING

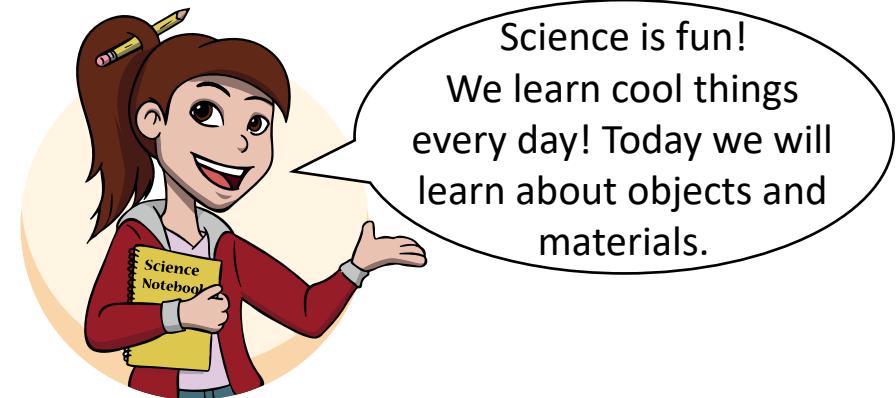
- Ensure the book is being held correctly and your child is tracking the words from left to right across the page.
- Encourage your child to look at the pictures for clues if they are unsure of a word.
- Should your child need help to decode a word, break it down into its individual sounds, and blend them together from left to right.

SCIENCE CONCEPTS IN THIS BOOK

Students learn to differentiate objects from the materials from which they are made. Objects and structures we encounter every day are made from a wide range of materials including metal, plastic, rubber, glass, ceramic, wood, paper and concrete.

The material used in a particular object or structure is determined by the **properties** of that material. For example, rubber would not be used for the foundation of your house or for the windows. The reason is that rubber has **properties** that include low compressive strength and low optical transparency. Concrete has high compressive strength so it is an excellent material for the foundation of your house. Glass has high optical transparency and is an excellent material for windows.

Your child will learn later that it is actually the arrangement of tiny particles (such as atoms and molecules) that dictate the properties of materials; so **particle arrangement dictates the properties of materials, and the properties of materials dictate their uses.**



Objects and Materials



Written for the Australian Curriculum: Science

Sienna Osborne | Randall Hall | Richard John

Here are some objects.

Objects are made of materials.



This ball is an object.

The ball is made of
rubber.

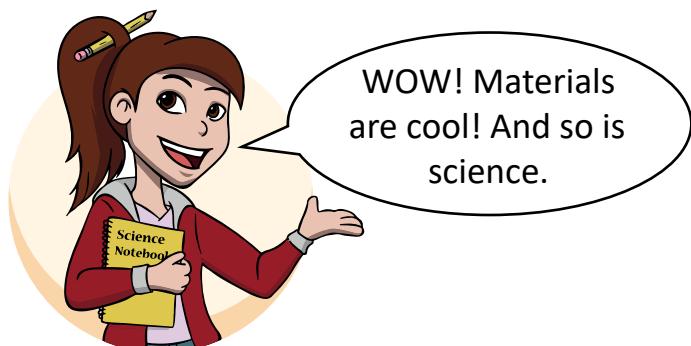
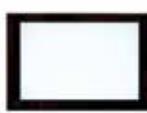


The properties of
a material determine its
use. Rubber has elastic properties
which is why rubber balls can
bounce.



Objects are made of lots of materials.

What are these objects made of?



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 material are books made of?
- Why is rubber a good material for making bouncy balls?
- Why do you think the bottle is made of glass?
- What is your favourite material? Why? (Think of metal, plastic, rubber, paper, glass, wood etc.)

First published in Australia in 2017
Publscious Pty Ltd

Copyright © Sienna Osborne, Randall Hall, Richard John 2017

Reproduction and communication

Apart from any fair dealing for the purposes of private study, research, criticism or review, as permitted under the Act no part of this book may be reproduced, stored in a retrieval system, communicated or transmitted in any form or by any means without prior written permission. Inquiries should be addressed to the publisher

National Library of Australia Cataloguing-in-Publication data:
Osborne, Sienna; Hall, Randall; John, Richard
Objects and Materials
ISBN: 978-0-6481832-1-1

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



Objects and Materials

Chemical Sciences

In this book Suzie the Scientist helps us learn about objects and materials. We see examples of different materials being used for different objects. Suzie also helps us understand how the properties of materials determine their use.

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 the learning outcome "Objects are made of materials that have observable properties" from the Chemical Sciences sub-strand.



WOW!
Materials 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 **materials** with your child.

Suggested Reading Level:



PM 2-3, Fountas & Pinnel B-C

Griffith
UNIVERSITY

Rotary
District 9640

P&C Qld
Supporting State Schools

ISBN 978-0-6481832-1-1



9 780648 183211 >

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