Springboard

Connect

27a The Odd-Shaped Horse

27b Needs and Wants

27c **Excellent Experiments**

27d Art Rocks

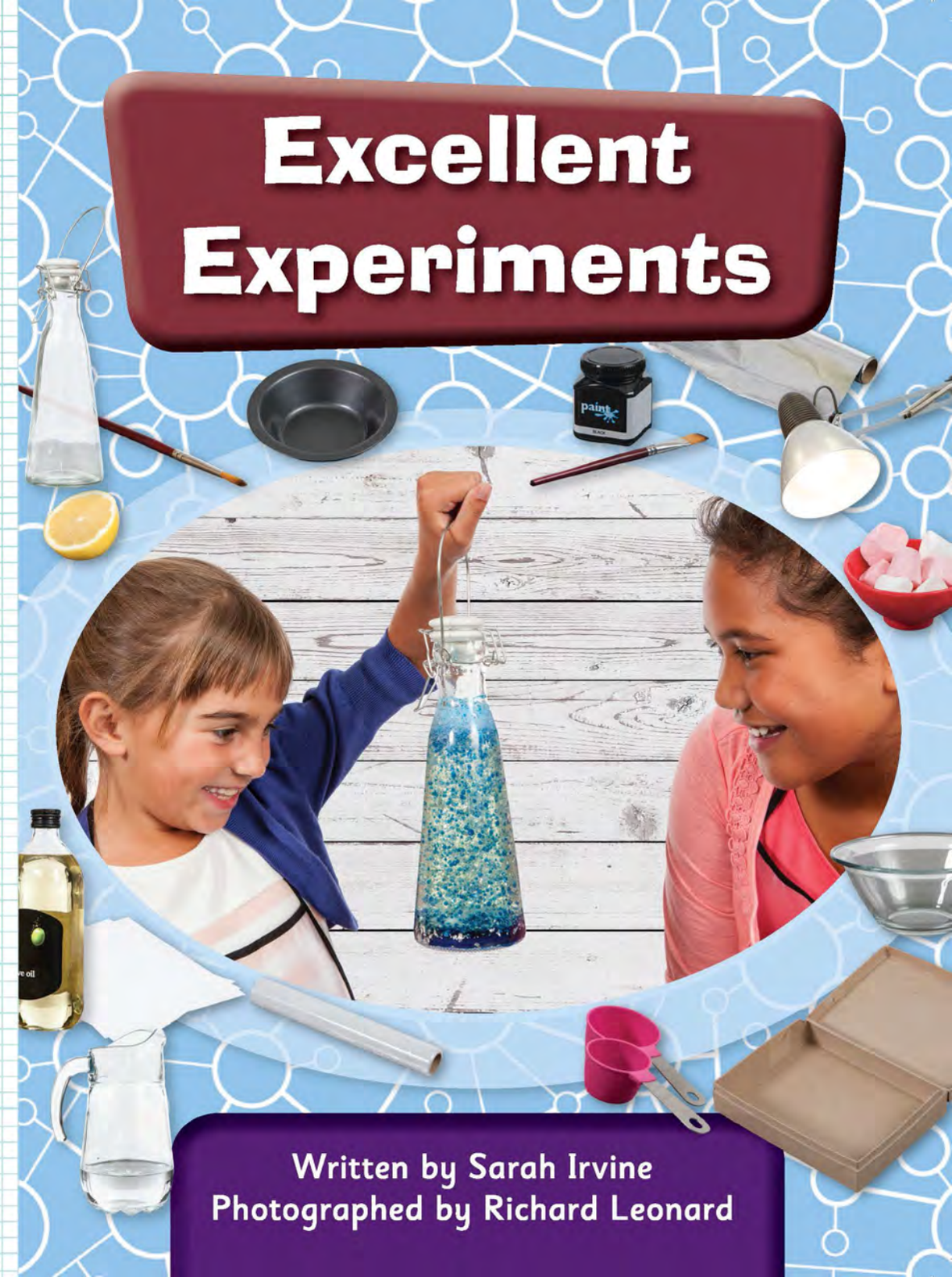
27e The Sundial Alien Field Trip

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Excellent Experiments



Written by Sarah Irvine

Photographed by Richard Leonard

Word Count	843
Text Type	Procedure
High-Frequency Word Focus	dark, sun
Content Words	carbon, colour, gas, heat, liquid, matter, oxygen, particles, science, scientist, shape, solid, water
Language Features and Text Structure (specific text features, sentences, punctuation, vocabulary, sound and letter knowledge)	action verbs; morphemes – meanings of root words; suffixes *s*, *ed*, and *ing*

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Photographed by Richard Leonard; shutterstock.com/Oksancia and titosart and Silm and grafvision and Peshkova and apartment and VLADGRIN, background.

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GETTING STARTED

Activating prior knowledge: Invite students to talk about any experiments they have done. Have them tell what they needed, what they did, and what the results were. Ask them why scientists do experiments.

Book introduction and prediction: Using the interactive digital book or the printed version, read the title to students. Discuss the photographs on the cover. Ask students to flick through the book or the screens, looking at the photographs, charts, and layout. Have them use the graphics and structure to suggest the text type and to predict what the book may be about. Read the entries on the contents page to confirm their predictions. Identify and discuss any words or features that may cause concern.

Outlining focuses: Explain to students that as well as reading about experiments, they will talk about the structure of a procedure, the use of action verbs, meanings of root words, and the suffixes *s*, *ed*, and *ing*.

DURING THE READING SESSION

Literacy

Modelling: Depending on what is appropriate to the group, you can remind students of, and model, specific reading strategies, such as how to approach unfamiliar words and identify signal words.

Guiding: Ask students to read their books independently. As you move about the group, use your knowledge of each student's ability to help you decide when to intervene or assist. For example, if a student cannot read a word, or can read it but appears not to understand it, give prompts or clues to assist. Suggest strategies, such as using picture cues and knowledge of letter/sound patterns.

Interacting, interpreting, analysing and evaluating: At appropriate intervals, and/or at the conclusion of reading, ensure students make meaning from the text by asking questions and encouraging discussions. Why is it important to follow rules when doing an experiment? Why did the slime behave like both a solid and a liquid? What do you need to make a lava lamp? How can you make invisible ink "visible"? Why did the marshmallow melt? Have students discuss whether this is an imaginative, informative, or persuasive text and the audience to which they think the author was directing the book.

Literature

Responding and examining: Ask students if they think it was better to read a book about experiments they could do (like this one) or one that simply described experiments other people had done.

Language

If you are using the digital book, invite students to take turns operating it for the following activities.

Text structure and organisation: Ask students about the important features of a procedural text. Discuss the relevance of the list of materials, the numbered steps, and the photographs showing each action. Ask why each numbered step begins with an action verb.

Expressing and developing ideas: Draw attention to the words *coloured* on page 5 and *formed* on page 6. Ask students to tell you the root words and their meanings. Discuss the two different rules applied when *ed* was added. Point out the words *colouring* on page 5 and *baking* on page 12, and repeat the steps above, referring to the suffix *ing*. On page 9, point out the words *particles*, *solids*, and *gases*. Again, discuss the root words and then the rules applied when the suffix *s* was added.

PUTTING THE LEARNING INTO PRACTICE

Small group/independent activities: Have students reread the text independently, then proceed to the activities listed in the Teacher Guide.

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Be a Super Scientist

Science is fun! It helps us understand how things work. Scientists ask questions. They make statements that say what might happen, or **predictions**. Then, they do experiments to see if their predictions were correct. This book is full of experiments that you can do, so you can be a super scientist, too. Collect the equipment. Follow the instructions. Make your predictions. Then, turn the page to find out what happened.





Rules Checklist

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Before you begin –		Yes/No
1.	Did you ask an adult if it is OK to do the experiment?	
2.	Did you study the experiment all the way through?	
3.	Did you collect all the items you will need?	
4.	Did you make sure your equipment is clean?	

When you have finished –		Yes/No
1.	Did you tidy up and clean your equipment?	
2.	Did you wash your hands?	

Remember –

If you have any questions or are not sure what to do, stop what you are doing and ask an adult for help.

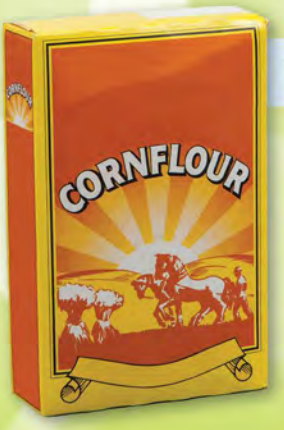
Slime Time

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You will need –

a bowl





1 cup cornflour



dark food colouring



measuring cups



water

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What you do –

1. Pour the water into the bowl.
2. Put a few drops of dark food colouring into the water, then stir.
3. Slowly sprinkle the cornflour into the coloured water.
4. Stir well, and leave the mixture for five minutes.









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5. Put your hand into the mixture. Squeeze the slime into a hard ball.
6. Open your hand. Let the slime trickle through your fingers.

Is this mixture formed of compact particles, a **solid**? Is it formed of loose particles that can slide past each other, a **liquid**? What do you think will happen if you leave the slime in the sun?





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What Happened?

Everything you see is made of matter. Most matter on Earth exists as a solid, as a liquid, or as particles that have a lot of free space between them, a **gas**. The cornflour is a solid. The water is a liquid. The mixture you made behaved like both.

