Springboard

# Connect


30a Mrs Kim's Ketchup

30b Blind Triathletes

30c Cracked!

30d Science at Work

30e Earth, the Sun, and the Moon

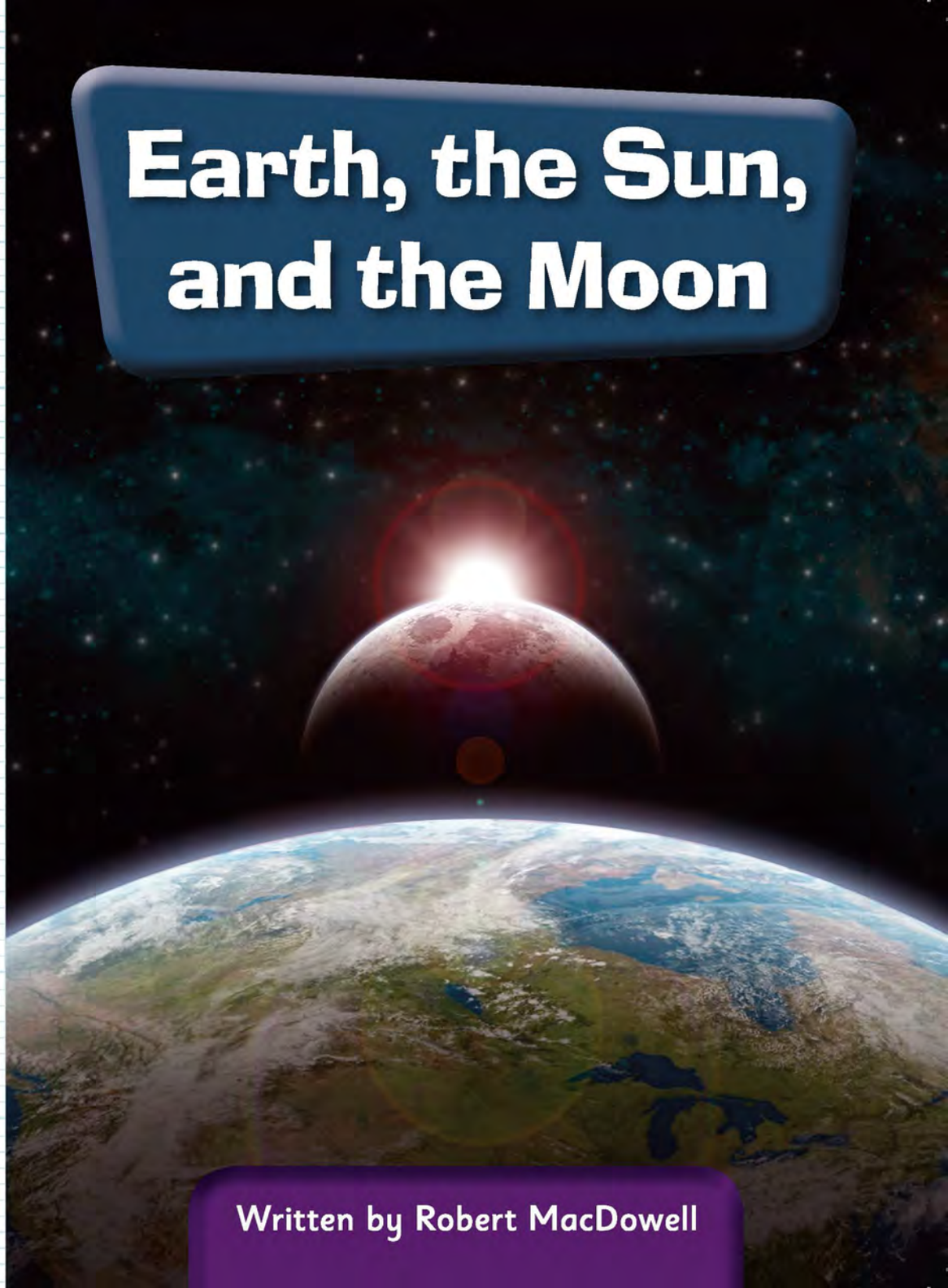


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# Earth, the Sun, and the Moon




Written by Robert MacDowell

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|---|---|
| Word Count | 998 |
| Text Type | Information Report |
| High-Frequency Word Focus | |
| Content Words | astronomer, atmosphere, Earth, gravity, mass, moon, orbit, planet, solar system, star, sun, |
| Text Structure and Sound and Letter Knowledge (specific text features, sentences, punctuation, vocabulary, sound and letter knowledge) | homophones |

Earth, the Sun, and the Moon
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## GETTING STARTED

**Activating prior knowledge:** On the board or paper draw up three columns headed *The Sun*, *The Earth*, and *The Moon*. Ask students what they know about each these three features of our solar system.

**Book introduction and prediction:** Read the book's title to the students and have them identify features of the solar system in the picture on the cover. Ask students to flick through the book, looking at the photographs, pictures, and diagrams. Have them use the graphics and layout 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 features of the solar system, they will talk about the interview structure of the text, present and past tense, homophones, and parts of a sentence.

## 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 a word 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. What is the major difference between Earth, the sun, and the moon? Why do we have day and night and the seasons? Which objects in space give off light and how do they do so? Why can't we live on the moon? Has the book raised any new questions for you? 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 reading this book in any way changed their preferences for reading informative texts or fictional texts. Encourage them to give reasons for their preferences.

### Language

**Text structure and organisation:** Discuss the specific interview structure of this text, having students identify how it differs from most information reports they have read. Ask how it still fulfils the requirements of a report.

Use the text on pages 4 and 5 to discuss present tense as a language feature of this text. Ask students why this text is written in present tense. Ask why the author has used some past tense on page 18.

**Expressing and developing ideas:** Discuss the meaning of the word *homophone*. Draw attention to the words *sun*, *to*, *way*, *through*, and *night* on page 8. Ask students for the homophones of these words. Have them make a list of other text words and their homophones. Use the sentences on page 16 to revise the parts of different sentences. Have students identify the verb, subject, adjectives, nouns, and any other surrounding information.

## PUTTING THE LEARNING INTO PRACTICE

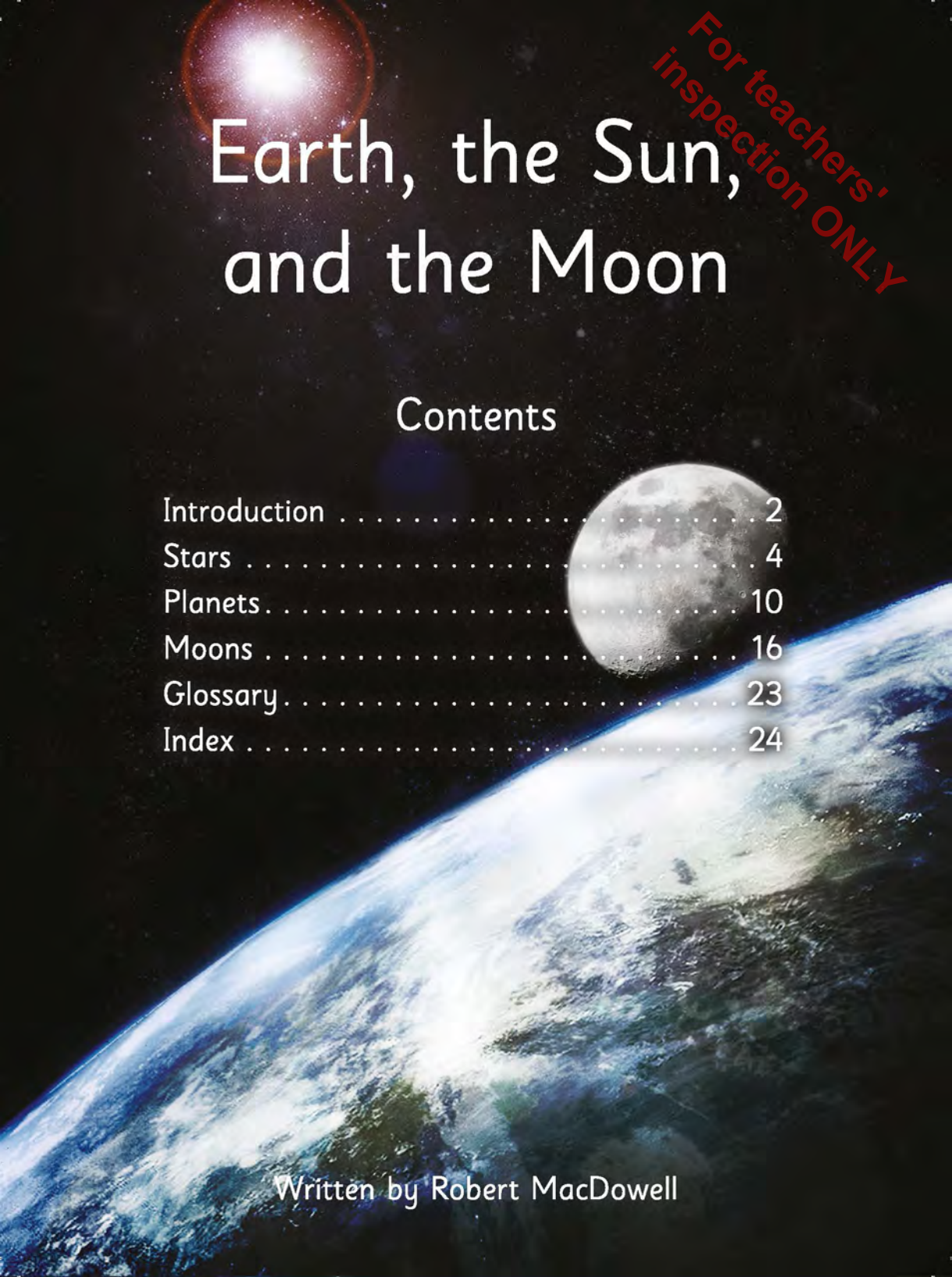
**Small group/independent activities:** Have students reread the text independently, then proceed to the activities listed in the Teacher Guide.

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# Earth, the Sun, and the Moon

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# Introduction

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**Springboard Connect:** Today, we're talking to astronomer Susan Hawking about our solar system. She will answer some of our readers' questions. Welcome, Dr Hawking. First of all, can you explain the differences between Earth, the sun, and the moon?



**Susan Hawking:** Certainly. The differences come from the fact that they are different kinds of objects. The sun is a star. Earth is a planet. The moon is...well, a moon.



**SC:** The sun, Earth, and the moon behave in mysterious ways. Why does the sun rise and set? Why does Earth have seasons? Why does the moon disappear?



**SH:** Good questions! These things all have to do with the different ways stars, planets, and moons move through space.



Earth, the sun, and the moon move in different ways.

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# Stars

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**SC:** What exactly are stars?



**SH:** Stars are objects with a lot of material inside them, or **mass**. Stars have so much mass that their insides are very hot. This allows them to make light. This is the difference between stars versus planets and moons.



We can see stars in the sky because they give off light.

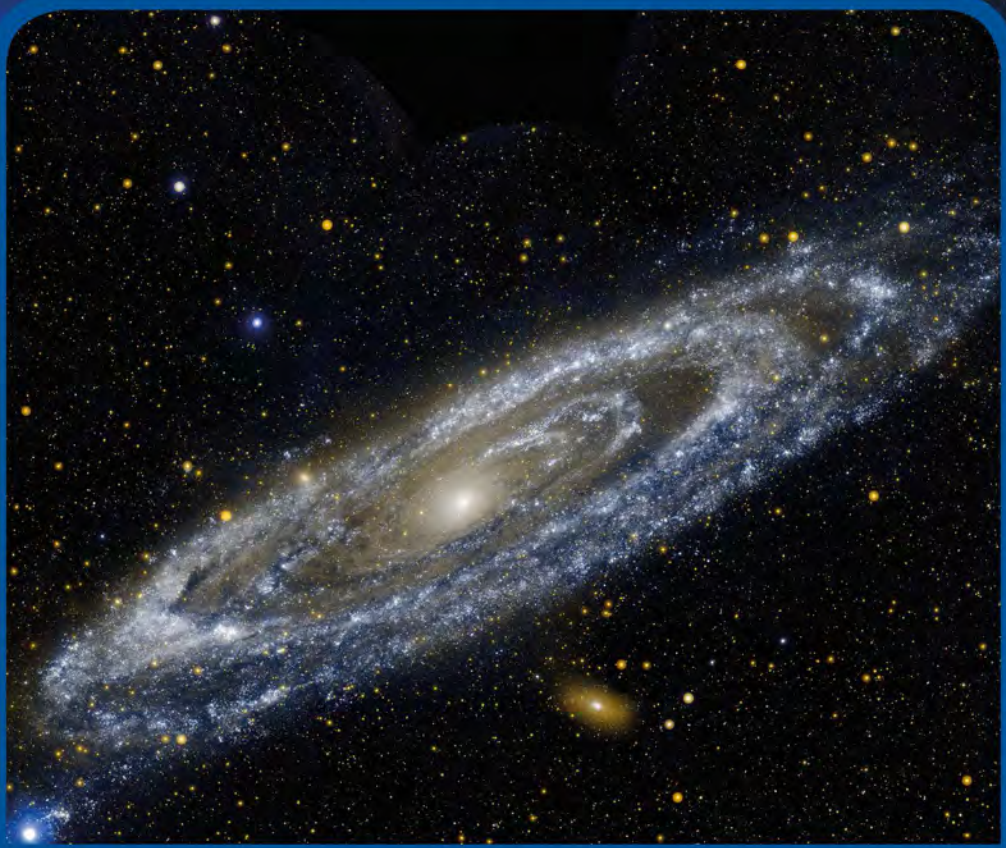
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**SC:** How do stars move through space?



**SH:** Stars' movement is controlled by the force that attracts everything in the universe to everything else, or **gravity**. Stars move around in a path, or **orbit**, the centre of their galaxy. Its gravity holds them in place.



All the stars in a galaxy orbit around its centre.

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**SC:** Tell us about our star, the sun, and whether or not we could live there.



**SH:** It's impossible to live on the sun! The sun's huge mass makes it very hot. It has 330,000 times more mass than Earth. On its surface, it is over 5,000 degrees Celsius. In its centre, or **core**, the temperature rises to around 15 million degrees Celsius.



The sun is so hot it can burn you on Earth.

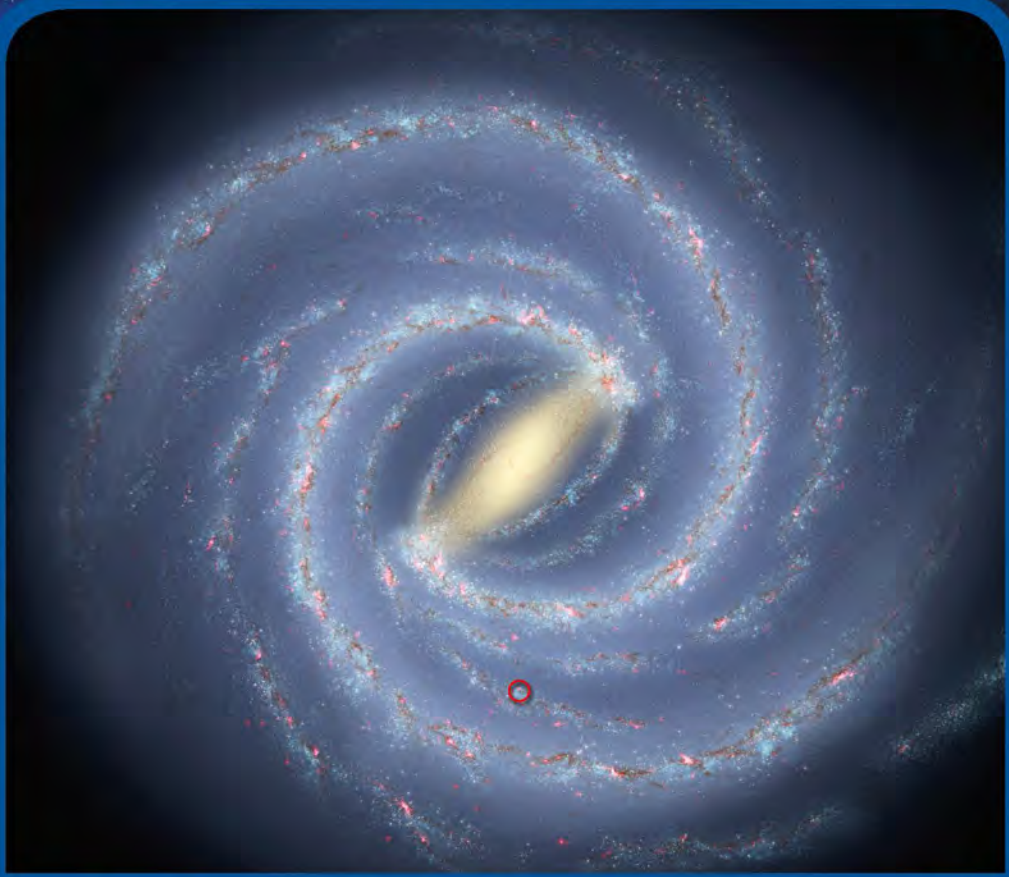
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**SC:** It's a good thing the sun is so far away from us!



**SH:** Yes, the sun is 150 million km from Earth. But its mass is so huge that its gravity keeps Earth from moving away. Earth orbits around the sun, just as the sun orbits around the centre of our galaxy.



An artist's impression of our galaxy, with our sun's location circled