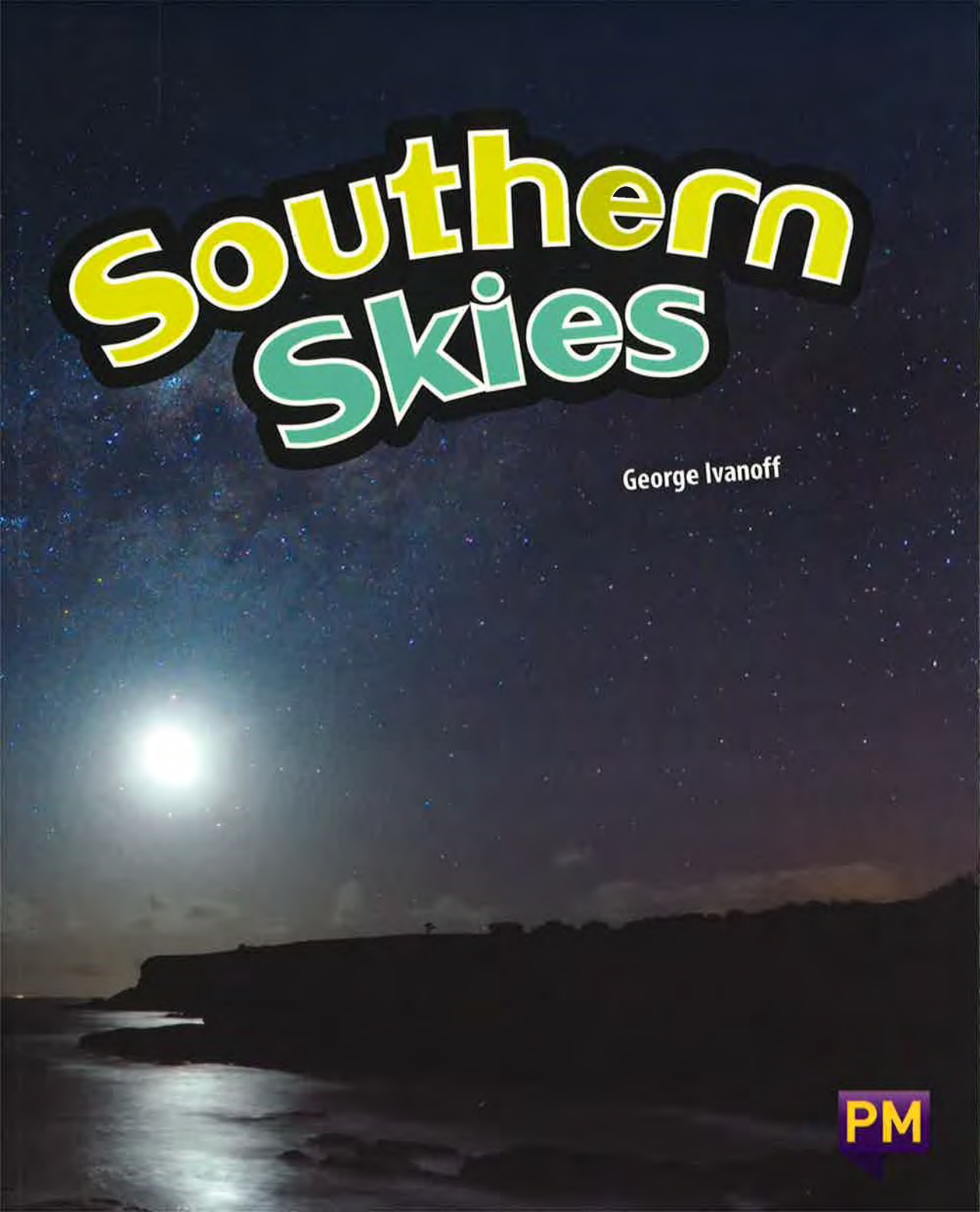

Southern Skies
George Ivanoff
PM

For teachers' inspection ONLY

Southern Skies

Level 28 **Curriculum Areas** Humanities – Geography; Science
Running Words 2382 **Text Types** Information Report (Informative) pages 2–28, 30
Narrative (Imaginative) page 29

Retelling to encourage critical thinking about the content

Ask each student to retell the information report and narrative in his or her own words. Record the retellings for further discussion and reflection.

Think and Talk About …

Fact boxes in the book encourage each student to explore the statements further and to share the information with others.

Questions to reinforce meaning and stimulate discussion

Literal

1 Which is the brightest star in the sky?
2 Why do Alpha Centauri A and Alpha Centauri B appear to be one star in the night sky?
3 What are the Small and Large Magellanic Clouds?

Inferential

4 Why are the star patterns seen from the Northern Hemisphere different from those seen in the Southern Hemisphere?
5 Why can the planets be seen from both the Southern Hemisphere and the Northern Hemisphere?
6 What could happen if a massive asteroid collided with Earth?
7 In about what year will Halley's comet next pass close to Earth?
8 Why does a star appear to shine brightly?
9 Why was the constellation Scorpius given that name?
10 How could Māori and Indigenous Australian peoples use the stars to know when to hunt for eggs or plant crops?

Applied Knowledge

11 How do scientists know that comets are made of ice rather than rock?
12 Why was an 'International Astronomical Union' formed?
13 Why are telescopes put into space to orbit Earth?

Vocabulary

Replace the adjective 'previous' in this sentence:
The previous record holder was the Great Comet of 1811.

Links with other PM Guided Reading Books and Cards

Level 27	Book	Information Report/Explanation	*How Animals Communicate*
Level 28	Book	Recount	*Amazing Stories of Survival*
Level 28	Card	Information Report	*Night Skies*

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Look Up

The night sky is full of light. The Moon shines brightly, reflecting the light of the Sun. Thousands of stars can be seen, on a clear night.

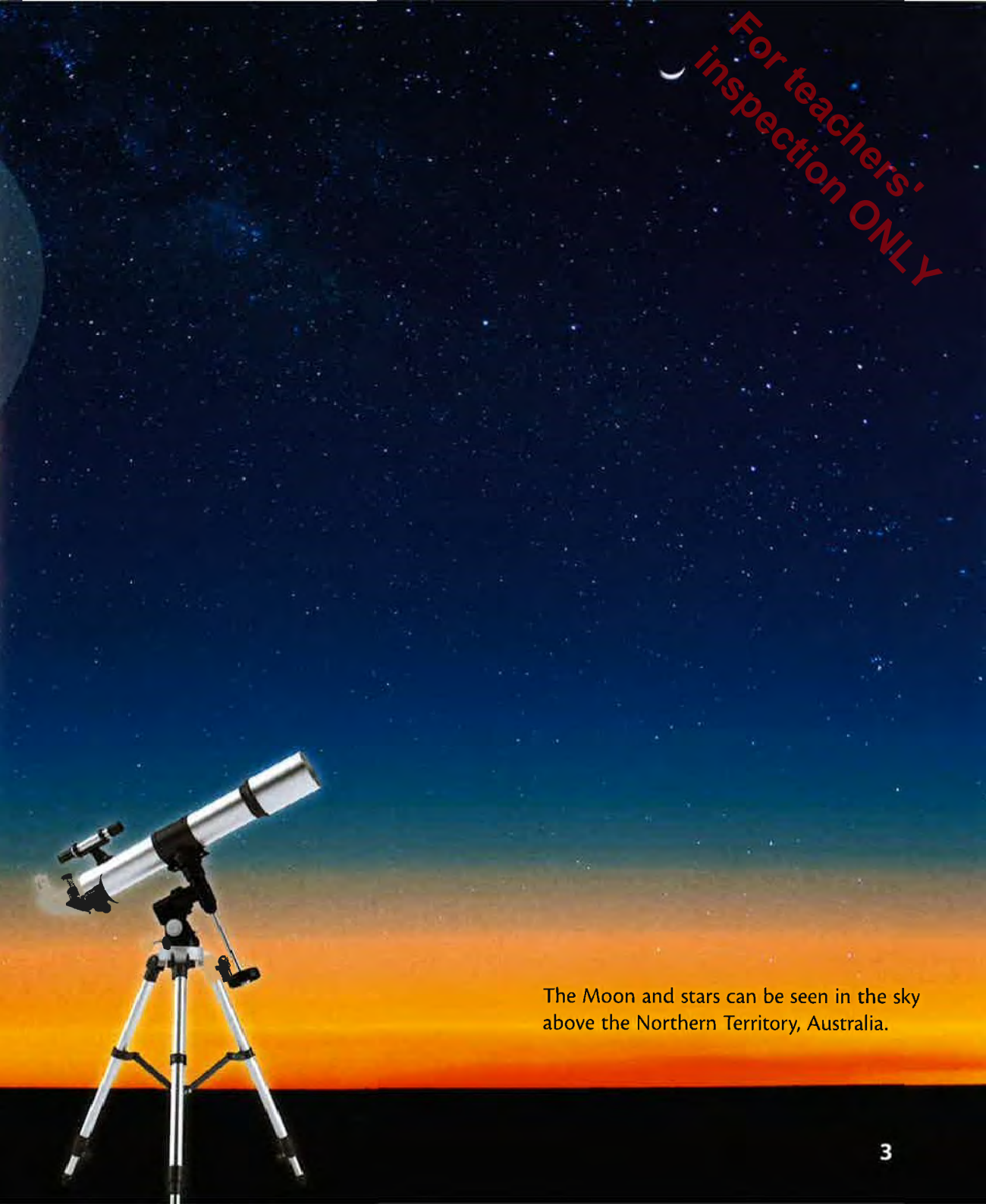
From Earth, the stars form patterns that are easy to see. Australia and New Zealand are in the Southern Hemisphere. From these countries, different patterns of stars can be seen than from countries in the Northern Hemisphere, such as Canada and the USA.

Some small dots of light are not stars, but other planets orbiting the Sun. Sometimes, there are quick streaks of light that flash across the sky. These are meteors. Sometimes, there are comets with bright tails of light that can often be seen in the night sky for months at a time.

Think and Talk About ...

The closest star to Earth is Proxima Centauri, but it cannot be seen without a telescope.

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The Moon and stars can be seen in the sky above the Northern Territory, Australia.

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Night-time Neighbours

The clearest object in the night sky is the Moon. The Moon reflects light from the Sun, which allows people on Earth to see it.

The Moon might look like a full circle, or it might look like a thin **crescent**, or something in between. The Moon revolves around Earth. As it moves, the light from the Sun falls on a different side of the Moon.

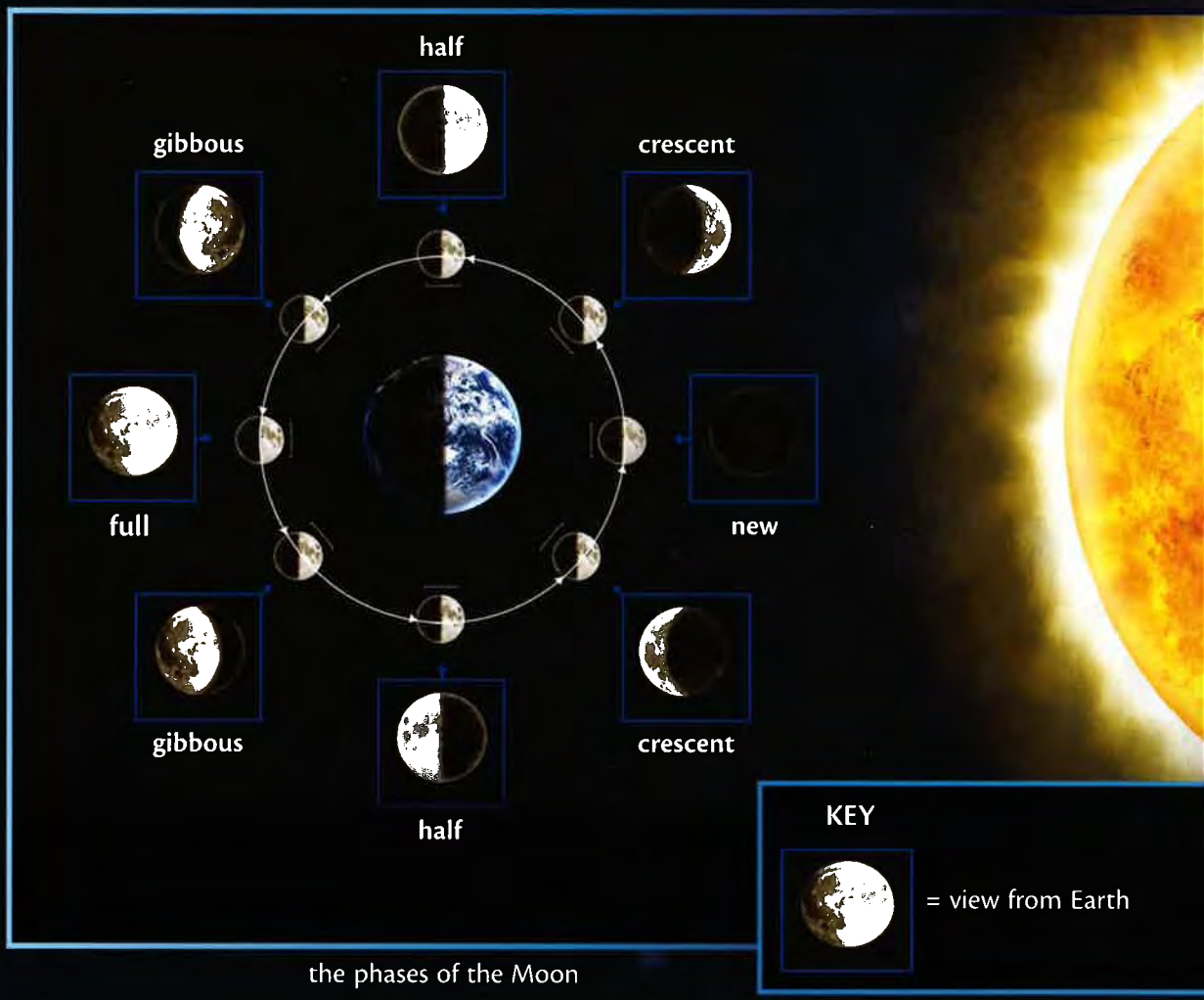


Think and Talk About ...

The planets Mars, Jupiter, Saturn, Uranus and Neptune all have moons of their own. Jupiter has over 60 moons.

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When the Sun's light is falling on the side of the Moon that faces Earth, people on Earth see a full Moon. When the Sun's light is falling on the opposite side of the Moon, people on Earth see no Moon. At times in between, the side of the Moon facing Earth is partly lit up and partly in darkness. This is what causes crescent Moons, half Moons and **gibbous** Moons.



the phases of the Moon

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The Moon appears to be large and bright in the night sky because of its **proximity** to Earth. The planets in the solar system are much further away, so they appear much smaller in the sky, even though they are actually a lot larger than the Moon. Some can be seen from Earth only with a telescope.

Venus is the closest planet to Earth, and the easiest to see. From Earth, Venus looks like a bright star. It is the next brightest object in the night sky after the Moon. Its brightness changes depending on how far it is from Earth. It can be seen either just after sunset or just before sunrise, for several months at a time. For this reason, it is sometimes called the morning star or the evening star.

The orbits of Venus and Earth mean that sometimes these planets are closer to one another than at other times.



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Mars is redder than the surrounding stars in the sky.

Mars

Mars also looks like a bright star. It has a unique red colour. As with Venus, the path Mars follows around the Sun makes its distance from Earth **variable**. At its closest, Mars is brighter than any star in the sky.

Jupiter is a long way from Earth, but it is very large, so it can be seen in the night sky like a bright star. Although its brightness changes, depending on how far it is from Earth, it is always brighter than any star.

Jupiter

Venus

Two planets can sometimes be seen close together in the sky.

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The night sky looks different in different parts of the world. Thousands of stars can be seen at night. Many of them can only be seen from places in the Southern Hemisphere. Planets, meteors, comets and other galaxies can also be seen in the night sky.

Throughout history, people around the world have traced patterns in the stars. Long before Europeans came to Australia and New Zealand, Indigenous peoples used astronomy in their daily lives, and told stories about the stars and how they came to be.

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Text Types:
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