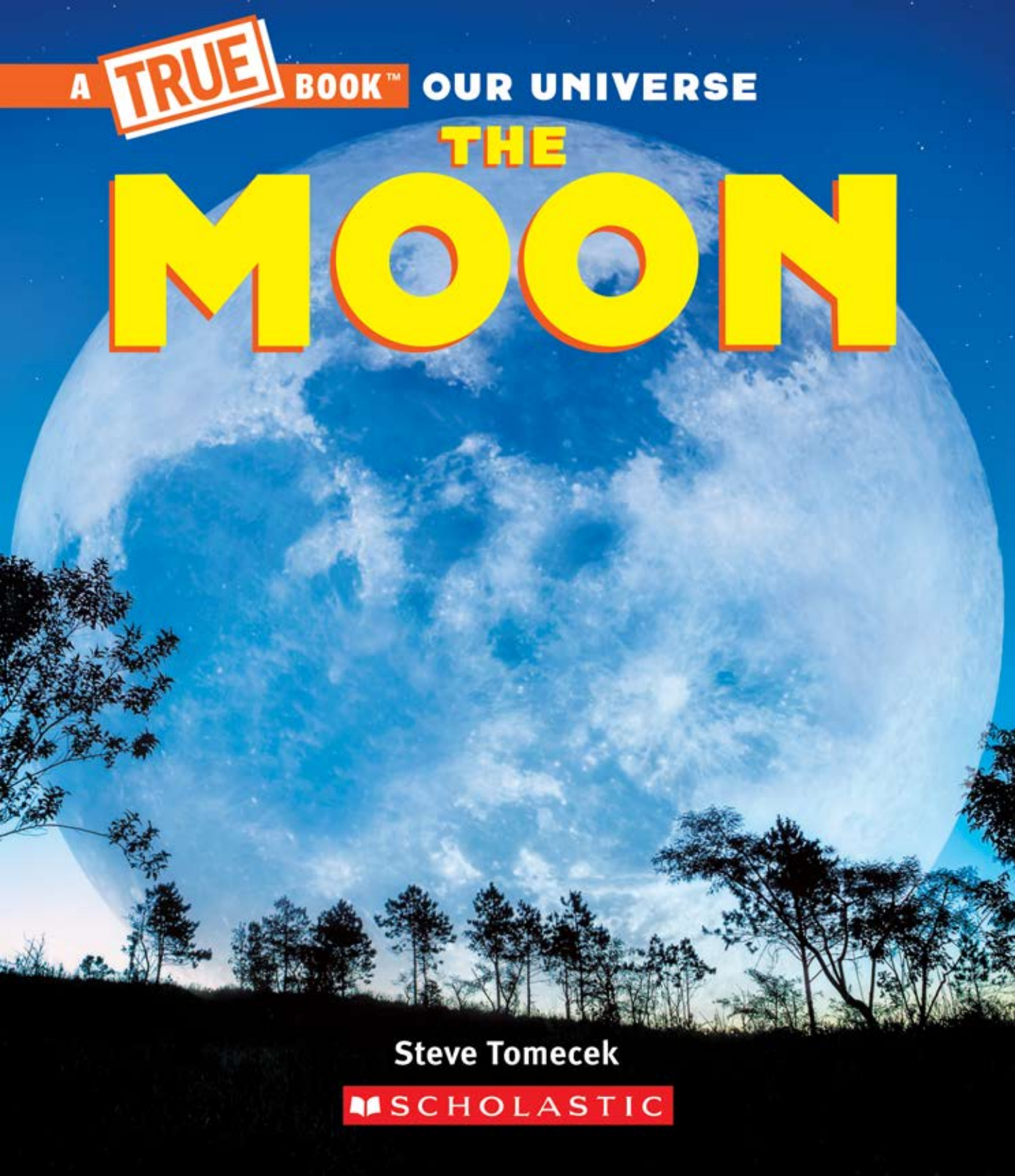
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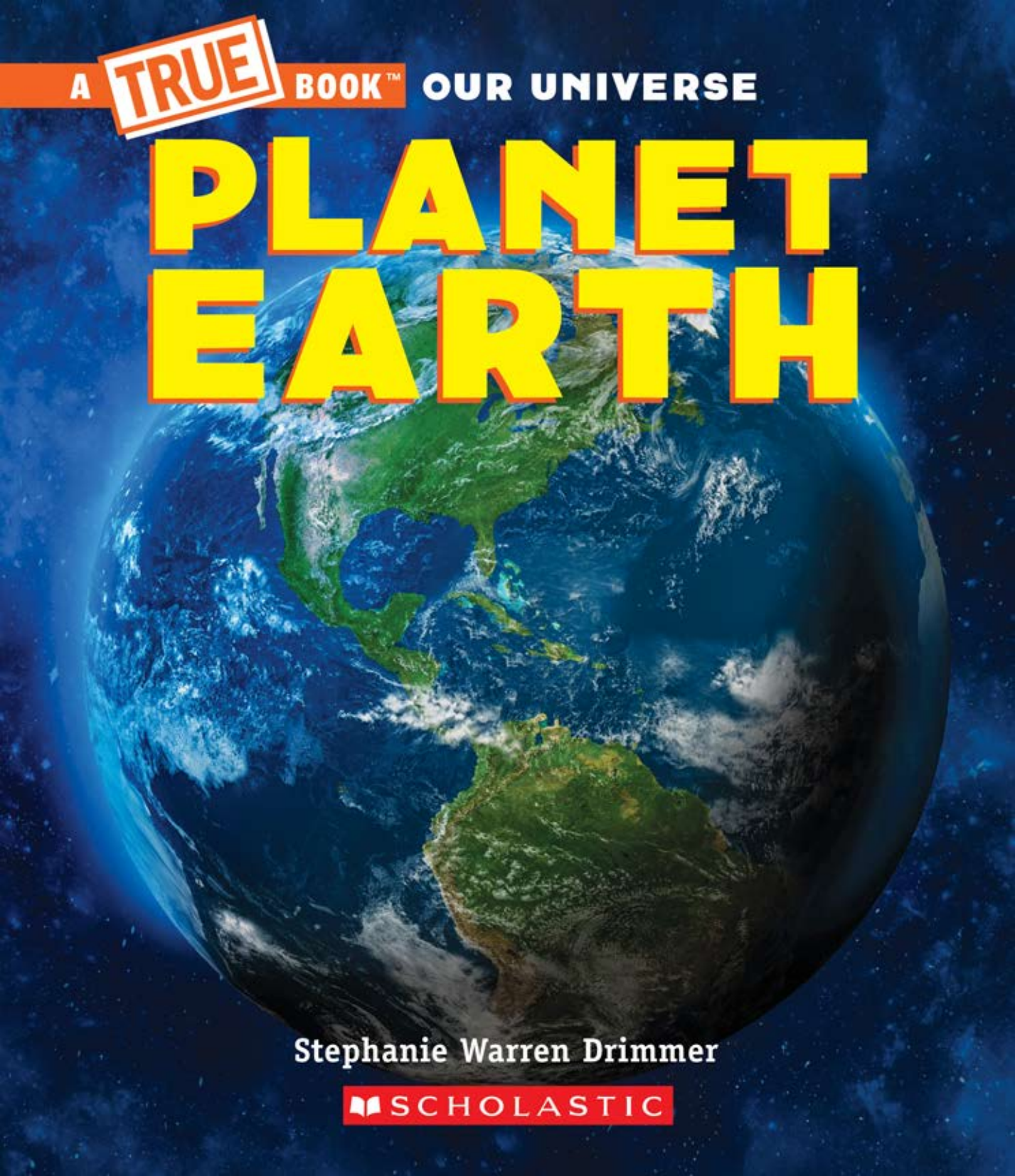
PLANET EARTH



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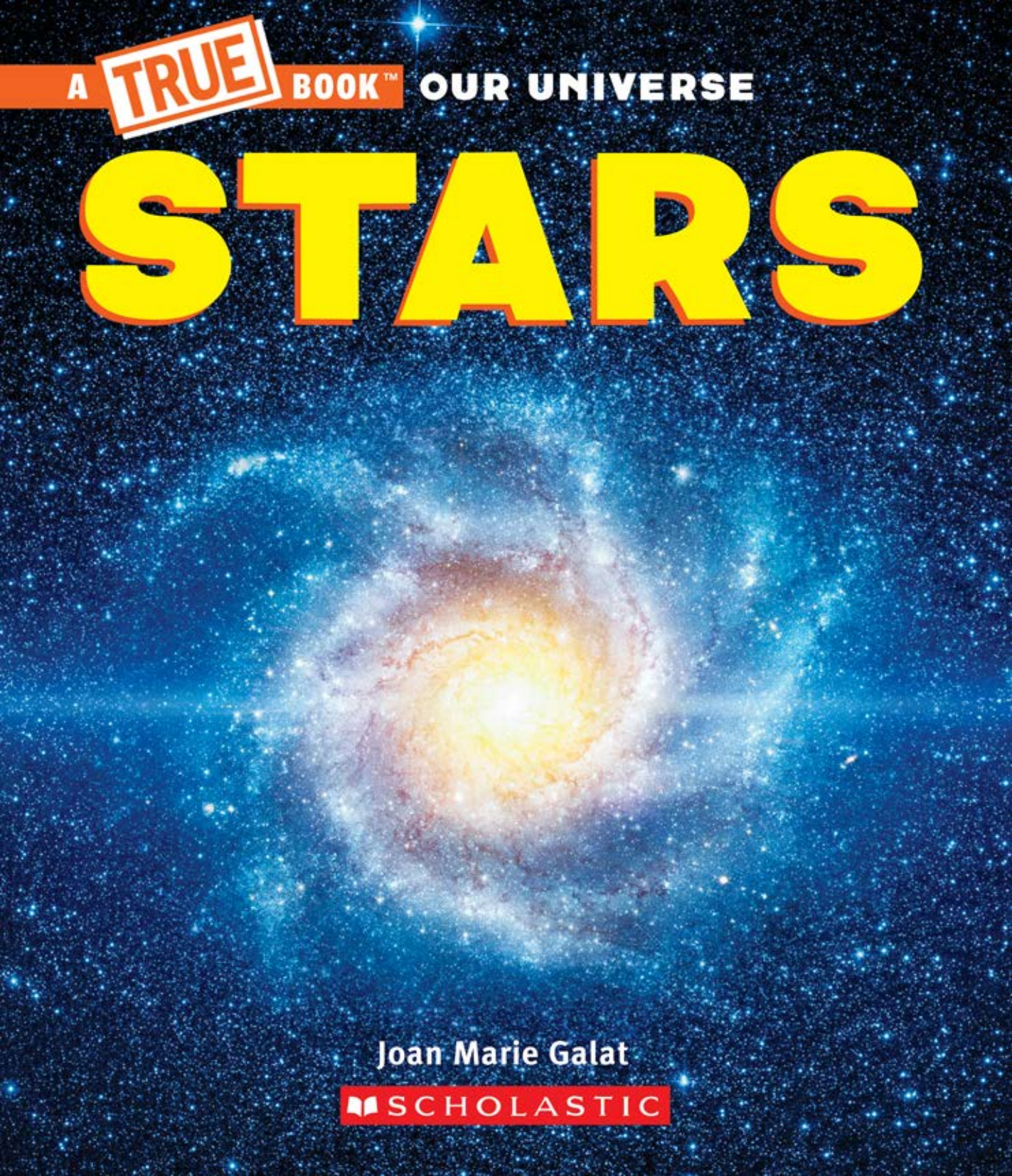
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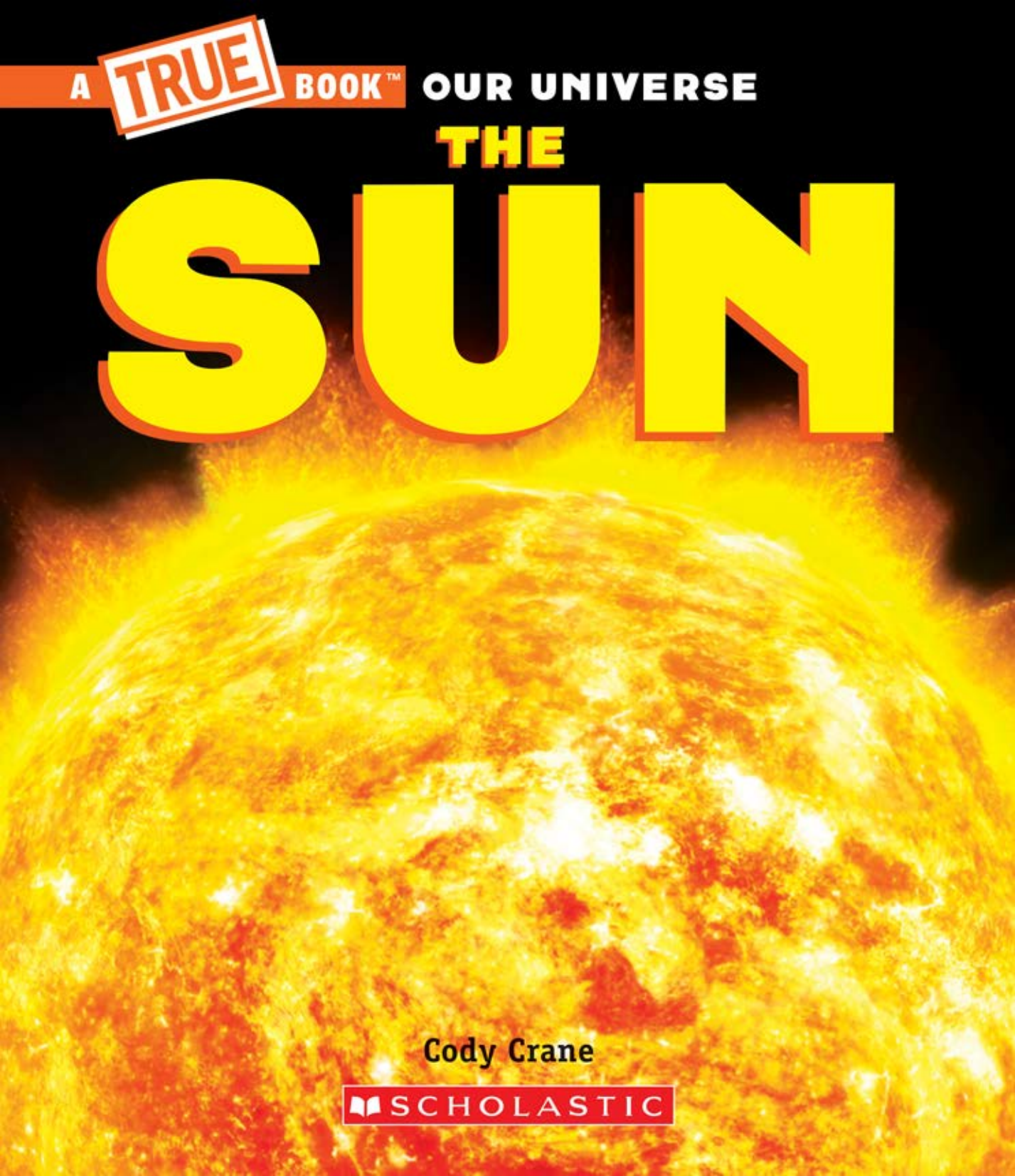
THE SUN



Cody Crane

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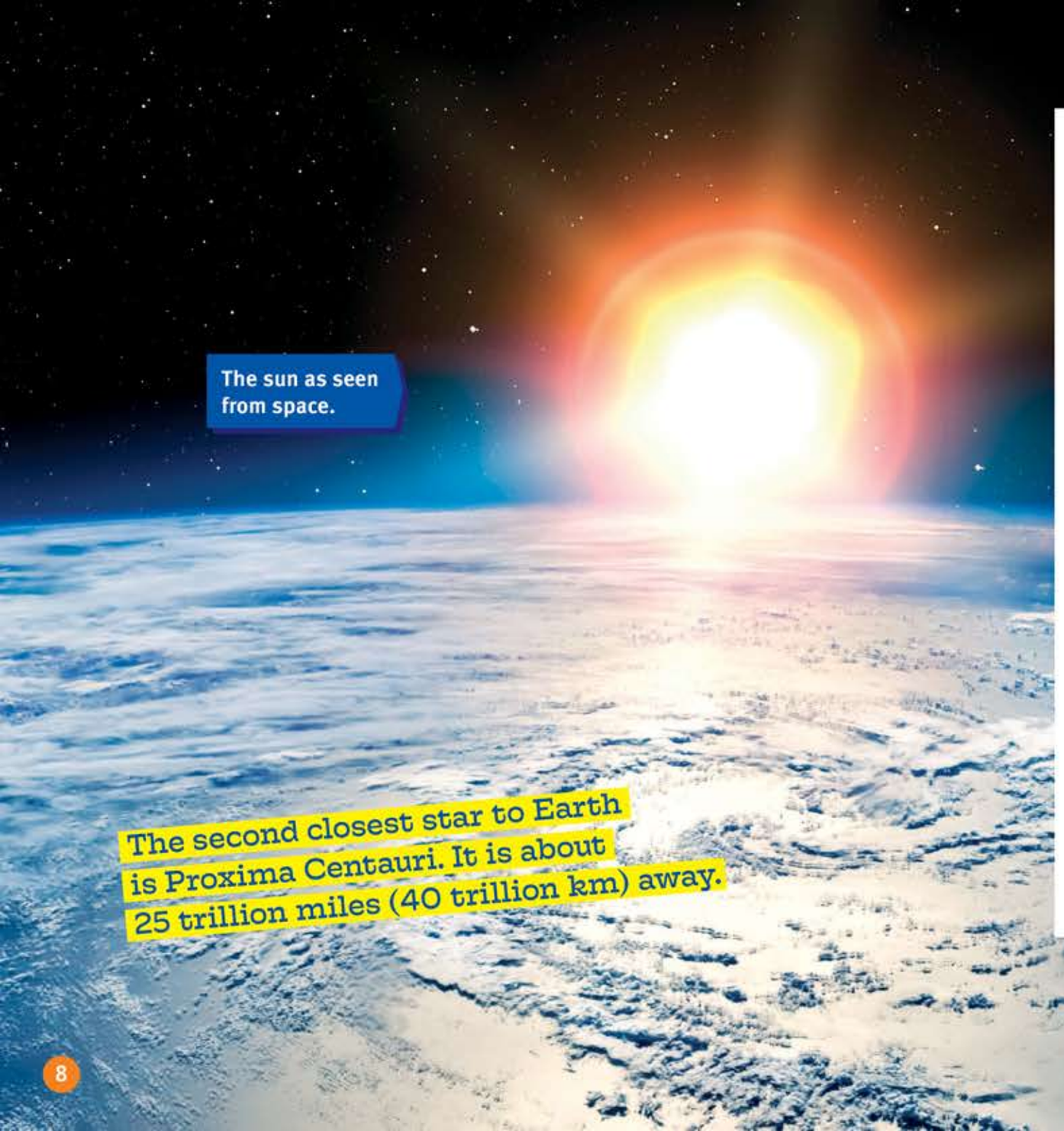


The sun as seen from space.

The second closest star to Earth is Proxima Centauri. It is about 25 trillion miles (40 trillion km) away.

CHAPTER 1

Our Star

The sun is a medium-size **star**. Like all stars, it is a huge, fiery ball in space made up of extremely hot gases. The sun is also the closest star to Earth. That is why it looks bigger and brighter than other stars we can see from our planet. Despite being the nearest star to Earth, it is still about 93 million miles (150 million kilometers) away. Imagine you could reach the sun by car. To drive there from Earth would take about 177 years!

Scientists have discovered some planets that orbit their star within the habitable zone. And they continue to discover more.

Earth might have looked like a land of snow and ice if the planet was much farther from the sun.

Sweet Spot

Even though the sun is really far away, it is the perfect distance from our planet. Earth lies in the sun's habitable zone. This is an area around a star where liquid water can exist, and possibly support life. If our planet was closer to the sun, Earth would be so hot its seas would boil away. If Earth was farther away from the sun, it would be a frozen wasteland.

A Planet Full of Life

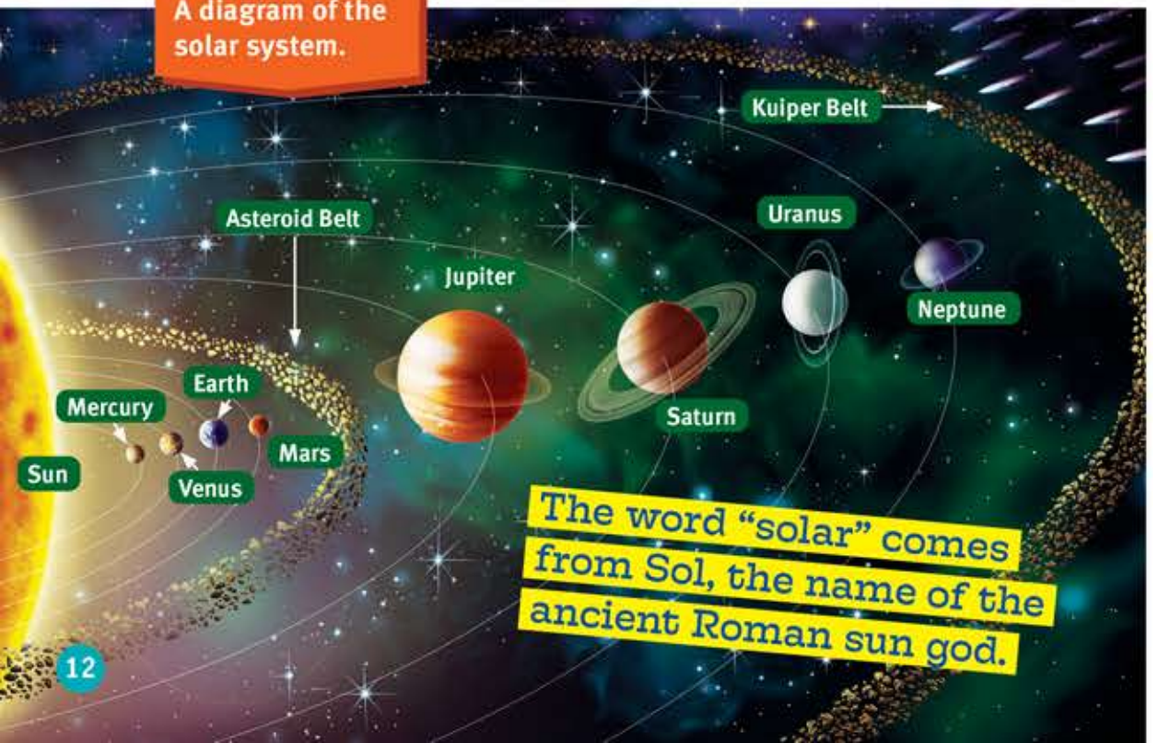
Scientists believe about eight million different species of plants and animals live on Earth. Our planet is so far the only place in the universe known to support life. The sun's warmth and light make that possible. Plants need the sun's light to grow. Many animals rely on plants for food. Humans also rely on plants and animals to survive. Without the sun, there would be no life on Earth.

Unique animals and a variety of plants create colorful diversity on our planet.

Center Stage

The sun sits at the center of our **solar system**. Earth is one of eight planets that **orbit** the sun. The solar system is also home to moons that orbit the planets. Earth has one moon. Other planets such as Jupiter and Saturn have dozens. Smaller dwarf planets such as Ceres, Eris, and Pluto are part of the solar system, too. There are also icy comets and rocky asteroids.

A diagram of the solar system.



The word "solar" comes from Sol, the name of the ancient Roman sun god.

The asteroid that may have killed the dinosaurs left a giant crater in what is now the Yucatán region of Mexico.

Sunblock

Did a lack of sun wipe out the dinosaurs? Many scientists think so. They believe a huge asteroid, or space rock, struck Earth about 66 million years ago. The asteroid was more than six miles (10 km) wide. The impact crushed rocks on the ground into dust and blasted the particles into the air. So much dust clouded the skies that it blocked out the sun. Without the sun's heat and light, temperatures dropped. Plants died and animals had nothing to eat. Three-fourths of life on Earth, including all the dinosaurs, died.