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**THE**  
**COSMIC**  
*Diary* OF OUR  
**INCREIBLE**  
**UNIVERSE**

**TIM PEAKE**

**With STEVE COLE**

**Illustrated by Max Rambaldi**

wren  
& rook



**If found  
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book to:**

Small planet  
travelling around  
a middle-aged  
star called the  
Sun

Seven other  
planets also spin  
around the Sun,  
along with asteroids,  
comets and dwarf  
planets

The Solar System  
is surrounded  
by this distant  
bubble of icy  
objects

The Sun is one  
of about 800  
million stars in this  
section of space

This is our galaxy –  
a group of at least  
100 billion stars  
and 100 billion  
other planets

The Earth  
Solar System

Oort Cloud

Orion Arm

Milky Way

Local Group

Virgo Supercluster

Laniakea Supercluster

The Universe



An infographic set against a dark, starry space background. On the left, a large orange trapezoidal shape contains several postage stamps: a rocket ship, a satellite, and a planet. Lines radiate from this shape to five circular callouts on the right. The background also features a ringed planet, a globe of Earth, and various stars and nebulae.

About 80 small galaxies spin slowly around the Milky Way and the galaxy next door, Andromeda

This contains about 100 small groups of galaxies including the Local Group

Pronounced 'lah-nee-ah-keh-ah' this huge structure contains 100,000 galaxies

Beyond these superclusters, the Universe contains at least 2 trillion other galaxies!

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from  
Tim Peake**



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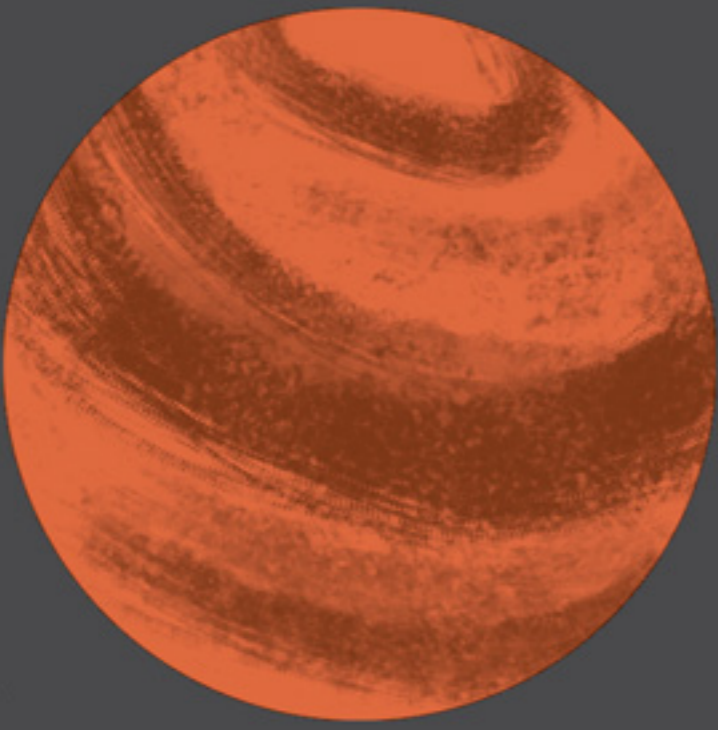


**Trailblazing  
Scientists  
from Around  
the World**



# Introduction

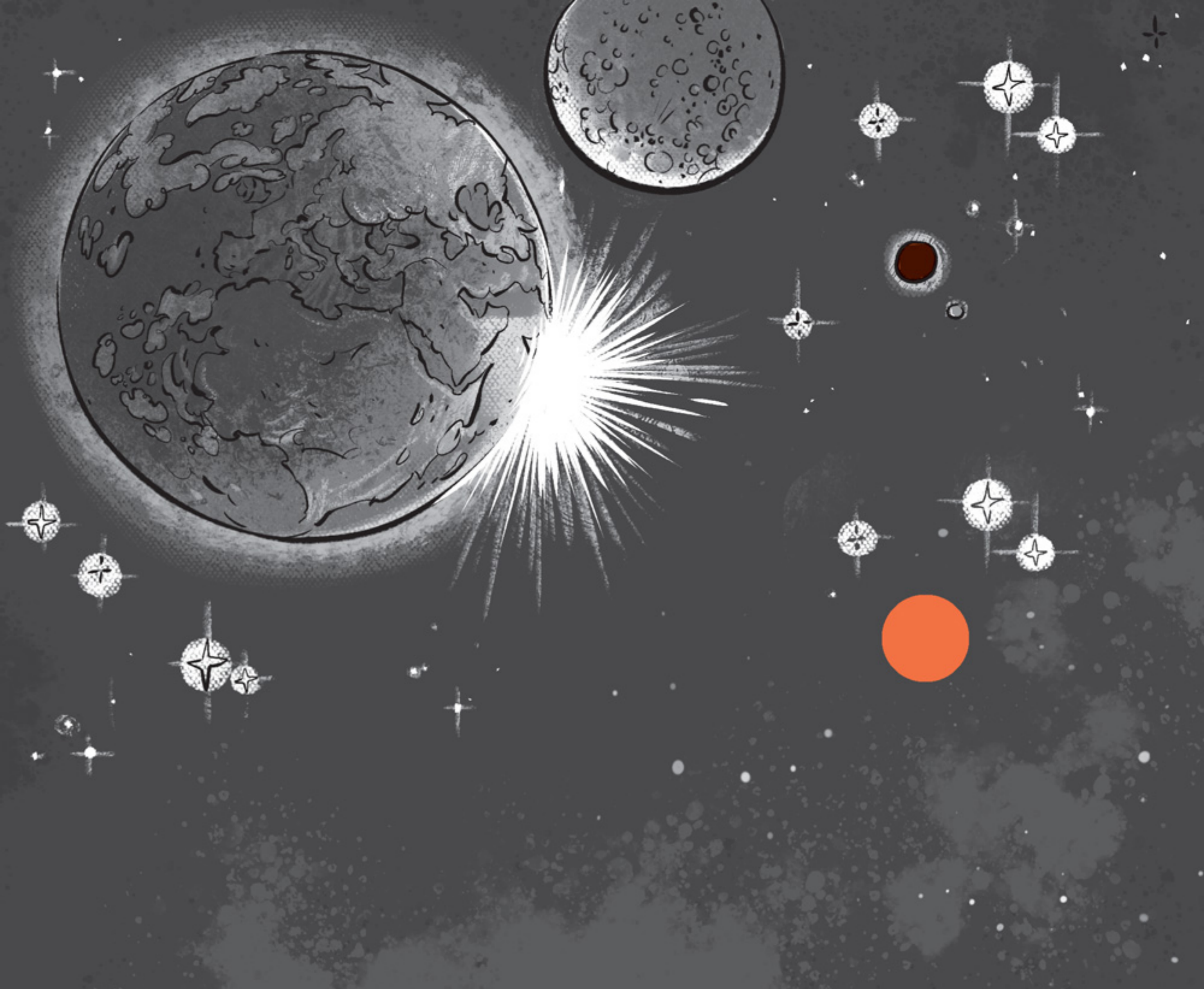
*Imagine floating in space, with no forces acting on your body. Your muscles are completely relaxed and there is no sound, except for a small hum from a pump sending oxygen into your spacesuit, keeping you alive. It's the most peaceful feeling imaginable.*



Over one shoulder you see a **beautiful planet**, full of colour: blue oceans, white clouds, orange deserts and green forests. That's Earth. That's where you were born. The planet itself looks alive – electrical storms light up the night sky, volcanoes leave trails of smoke, **swirling hurricanes** form over **warm oceans** and the eerie lights of the aurora dance over the poles. It's comforting to look at. It's home.


You look over the other shoulder. It's black. In fact, it's the blackest black you have ever seen. It's so dark you feel like you are falling into it, being sucked towards an **infinite black universe**. It's not comforting to look at. In fact, it's quite scary.





As you **effortlessly** orbit the Earth you pass from daylight to night. The Sun quickly sets and suddenly the Universe comes alive. Stars appear over the horizon and you can see the familiar planets of Venus, Mars, Jupiter and Saturn. Hundreds of billions of stars now come into view, shining their pinpricks of light through the blackness.

Your mind is trying to make sense of what you are seeing. On the one hand, looking out into endless space, you feel so **incredibly small**, so insignificant.



After all, **your planet** is just a small lump of rock orbiting a very ordinary star.

We call that star 'the Sun' like it's something special. But in fact the Sun is simply one of at least **100 billion** stars that make up the Milky Way – a very average-sized galaxy, and one of an estimated **2 trillion galaxies** that exist.

The Earth and all its neighbours orbiting the Sun – our entire solar system – could be **snuffed out** and, frankly, the Universe would barely even notice the difference.

Or would it?

To answer that, the first thing we need to do is travel back in time. So jump in, hold on tight, wind the clock back **13.8 billion years**. All the way to the beginning, and **then** pop back just a little bit further. Things are going to get pretty weird, because where we are going it seems that absolutely **NOTHING** exists.



No light.

No sound.

No time.

No space.

No school.

Just, yes – you got it . . .

**NOTHING.**