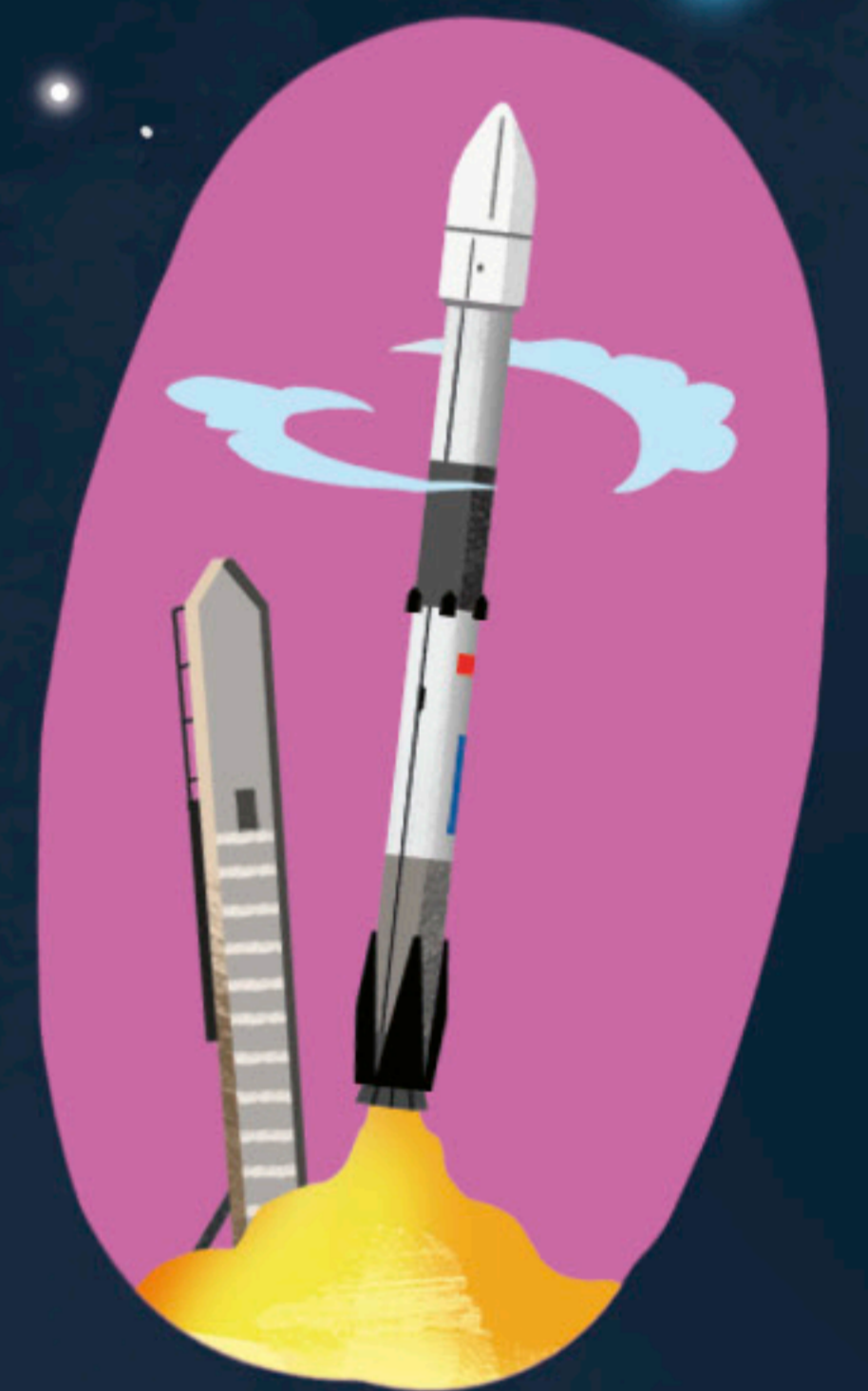


*Tell me about...*

# SPACE



**A FIRST  
SCIENCE book  
for curious  
minds!**

*Written by Emily Dodd  
Illustrated by Chorkung*

# Looking Up

One of the brilliant things about space is that we can see it from Earth! Here are some of the things you can see:

## Stars

These beautiful twinkling dots are enormous balls of burning gas. They shine out light as they burn.



## Constellations

For thousands of years, people have looked up at the stars and made dot to dot pictures. We call these star pictures constellations.



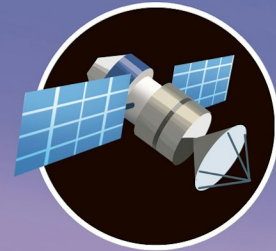
## Did you know.?

Stars look small but most are much bigger than Earth. They're just very, very far away.



## Planets

Bright dots that don't twinkle are planets. They don't make their own light. They reflect the Sun's light, like mirrors.



That looks like a flying horse!



I can see a lion!



Look, it's moving!



## Satellites

Bright dots moving in a straight line across the sky are usually satellites. Scientists send them into space to do important jobs like making maps and taking pictures of the weather.

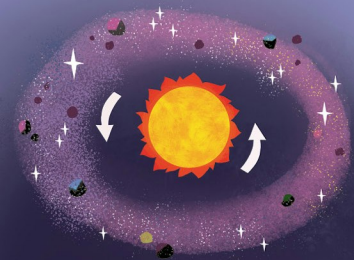
# Making Planets

All the planets in our Solar System began as tiny grains of dust. That's right, planet Earth was once smaller than a full stop!

When the Sun was just beginning, it was surrounded by a flat, round cloud of dust.



The Sun pulled the dust into a circle around it and bits of dust began crashing together to make clumps.



The clumps closest to the Sun later became the rocky planets.



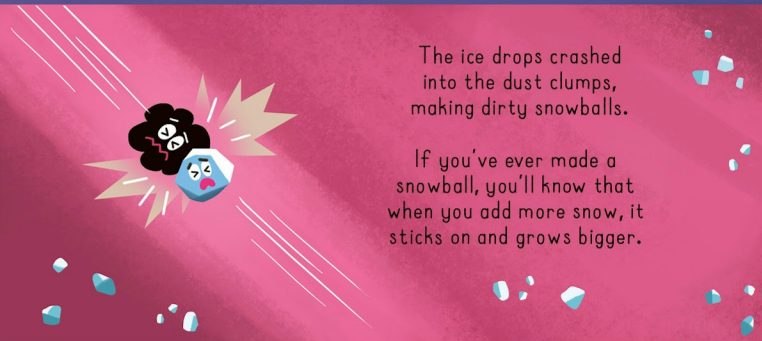
Far from the Sun, near the edges of the dust cloud, there were little drops of water. It was very cold, so the water froze into ice.

BRRR!



The ice drops crashed into the dust clumps, making dirty snowballs.

If you've ever made a snowball, you'll know that when you add more snow, it sticks on and grows bigger.



The dirty space snowballs kept crashing, joining together and getting bigger. The biggest snowballs pulled gas around them until they became the gas giant planets.

Hi, nice to meet you!



# The Rocky Planets

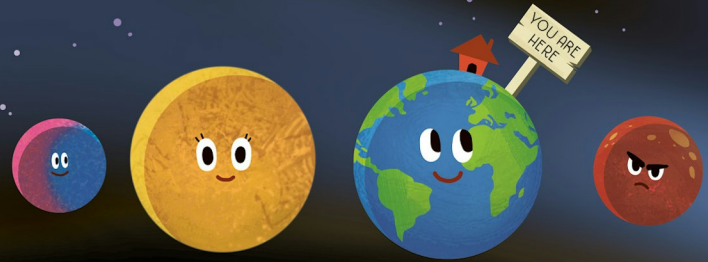
The four planets closest to the Sun were made as dust clumps collided to make pebbles. They crashed and joined together to make rocks called planetesimals, which grew into the rocky planets.

Mercury is closest to the Sun. It's the smallest, fastest planet in the Solar System. It circles the Sun four times every year!

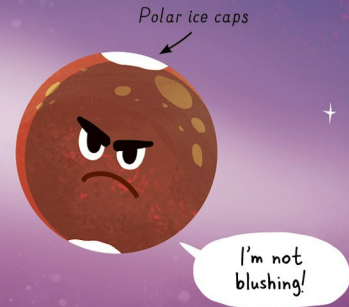
The side facing the Sun is very hot while the other side is freezing cold.



Our home Earth is the third planet from the Sun.



Mars is planet number four. It is called the 'Red Planet' because a metal called iron in its soil rusts and turns a brownish red colour.



Venus is next. It spins in the opposite way to the other planets.

It's covered in volcanoes that let out a gas called carbon dioxide. This gas traps sunlight and makes Venus very hot.



Empty river beds on Mars show that water flowed there in the past.

Where is the water?



Did you know...? Dust storms on Mars sometimes cover the whole planet!



# The Milky Way

Our Solar System is part of an enormous, swirling galaxy of stars called the Milky Way.

If you flew a long way away, the Milky Way would look like this:

In the very centre of our galaxy is a mysterious thing called a black hole.

We are here!

A black hole sucks everything into it, including light! But we're so far away that there's no danger of us being sucked inside.

On a clear night, you can see the stars in our galaxy stretching across the sky in a milky looking path. What you're seeing is the middle of the Milky Way galaxy from the outside.



There are billions of galaxies in space and they come in different shapes.

That looks like a gigantic lentil!



*Oval*

*Lenticular*

*Barred spiral*

*Irregular*

*Spiral*

Is that the Milky Way?



**Did you know...?**  
There are more stars in the universe than grains of sand on every beach on Earth put together!