



THE PLANETS



Alice Harman



THE **FACT CAT** PLANETS

Alice Harman



WAYLAND



FACT CAT

Get your paws on this fantastic new mega-series from Wayland!

Join our Fact Cat on a journey of fun learning about every subject under the sun!

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FACT CAT FACT

There is a question for you
to answer on each spread
in this book. You can check
your answers on page 24.



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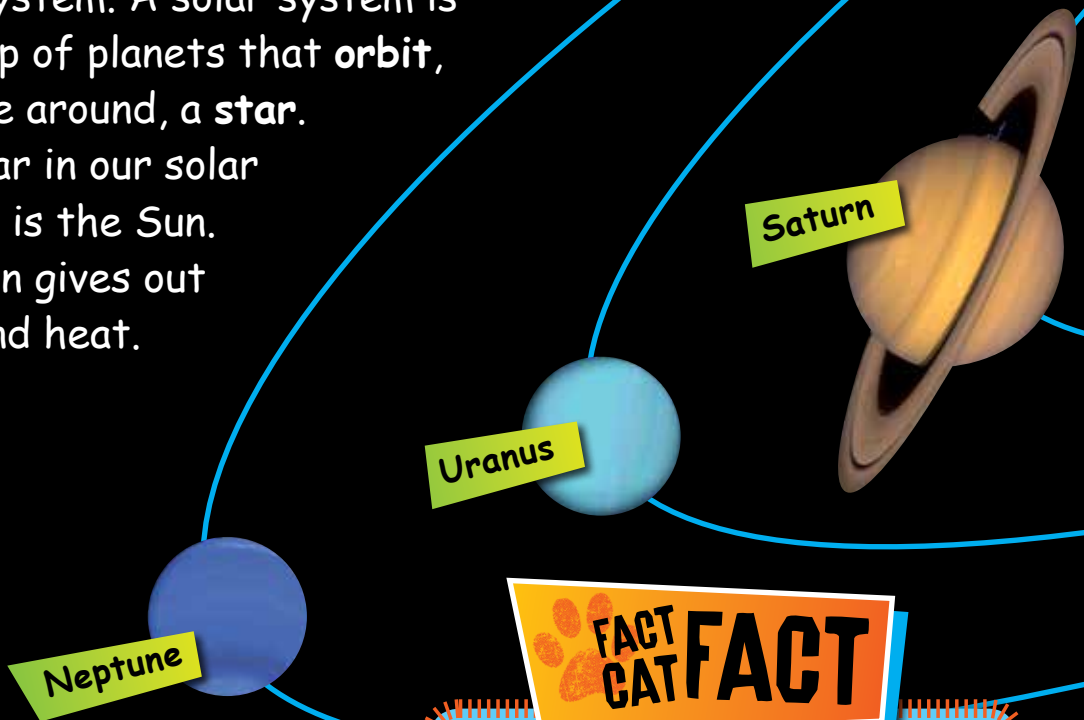
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OUR SOLAR SYSTEM

There are eight planets in Earth's solar system. A solar system is made up of planets that orbit, or move around, a star.

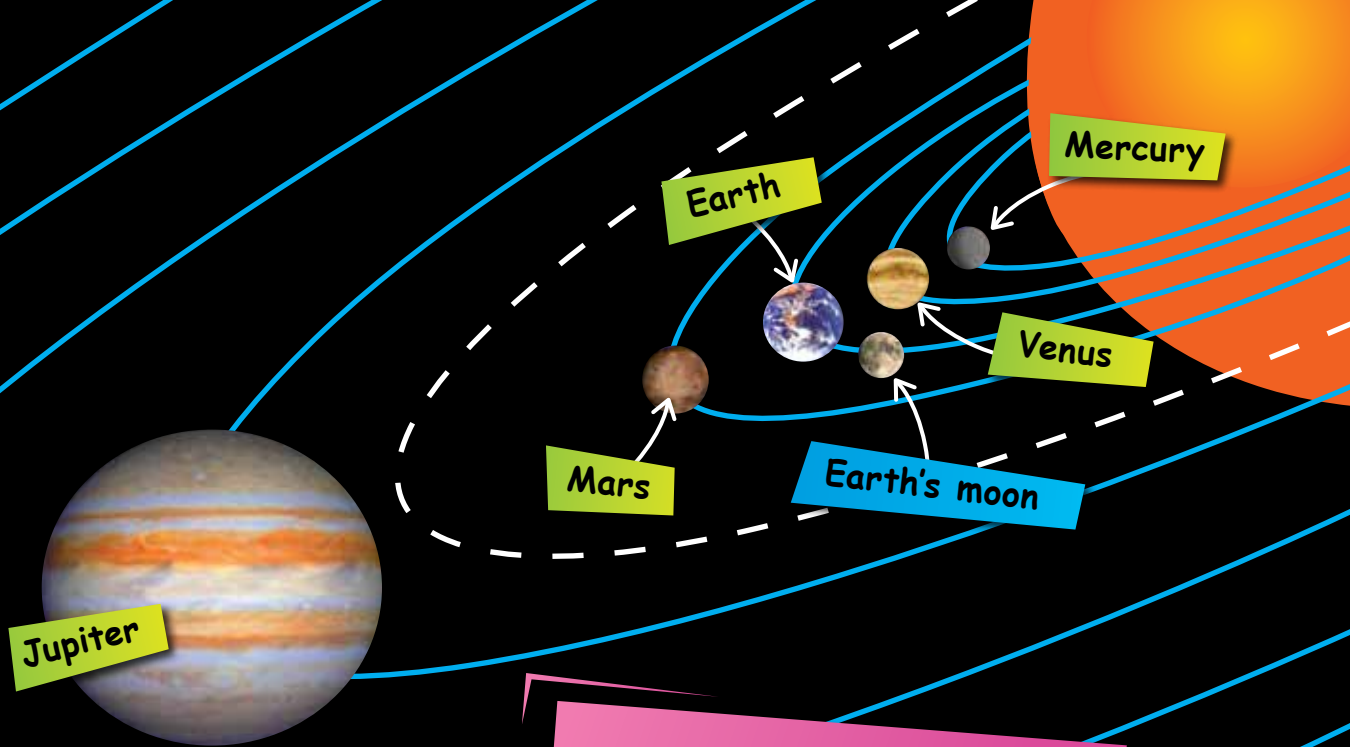
The star in our solar system is the Sun. The Sun gives out light and heat.

The dotted line between Mars and Jupiter shows an area where there are many asteroids. These are small chunks of rock and metal that orbit the Sun.



FACT CAT FACT

Until 2006, people said that there were nine planets in our solar system. The ninth planet was called Pluto, but this is now called a **dwarf planet** instead.



Apart from Earth, all these planets are named after ancient Roman gods and goddesses. Which planet is the only one named after a goddess?

Earth and five of the other planets have moons. These are large objects that are made of rock or ice. They orbit a planet, while that planet orbits the Sun.

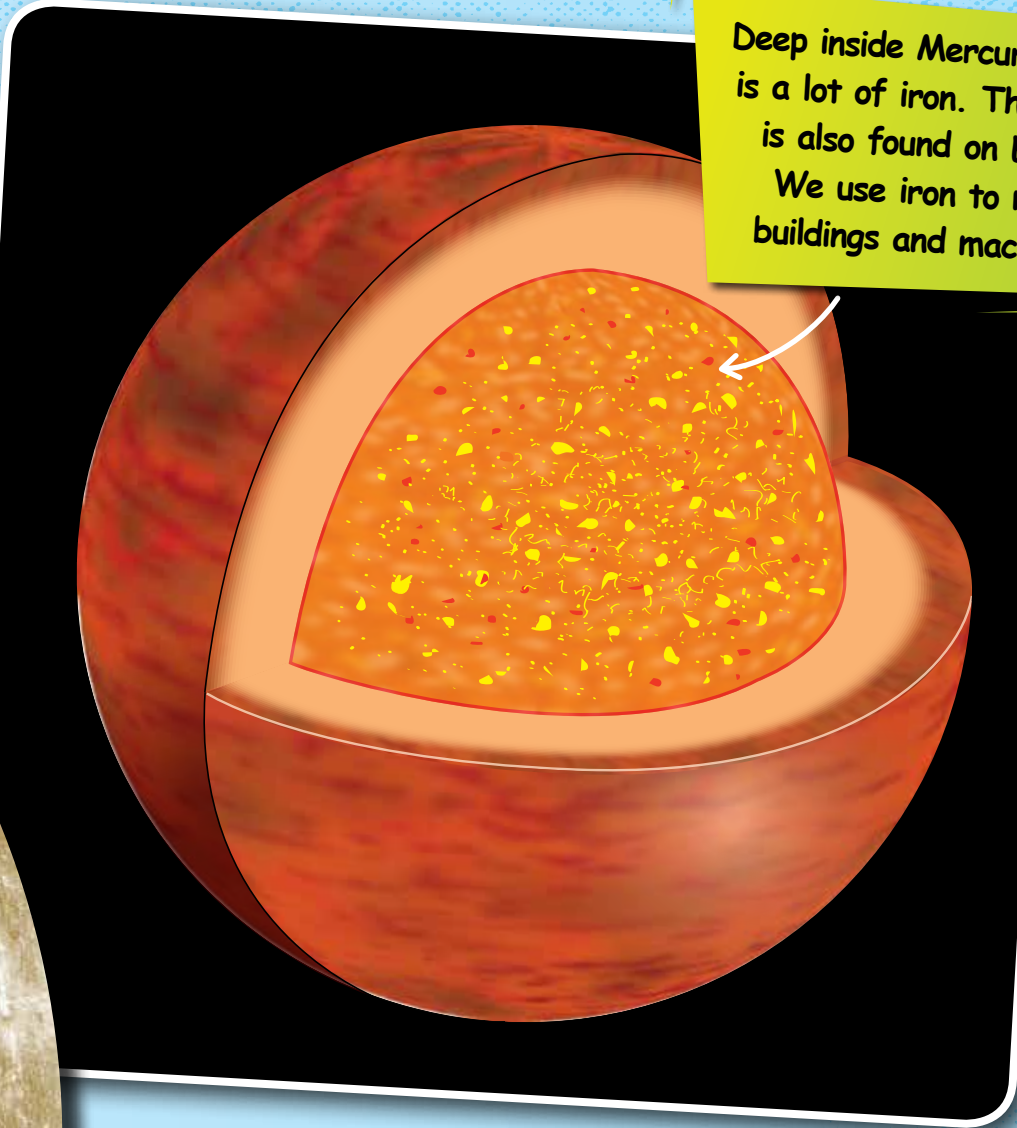
MERCURY

Mercury is the closest planet to the Sun, so it can get extremely hot. However, the planet also cools down quickly. This means that it can be very cold at night.

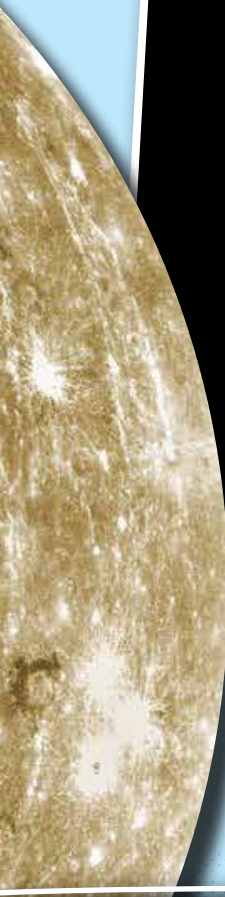
So far, only one spacecraft has ever been to Mercury. Can you find out when it was there?

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The **temperature** on Mercury can reach 430°C . This is more than seven times hotter than the highest temperature ever recorded on Earth!



Deep inside Mercury, there is a lot of iron. This metal is also found on Earth. We use iron to make buildings and machines.



Mercury is the smallest planet in the solar system. It is mostly made of metal. It has a thin **surface** layer of rock around its metal **core**.

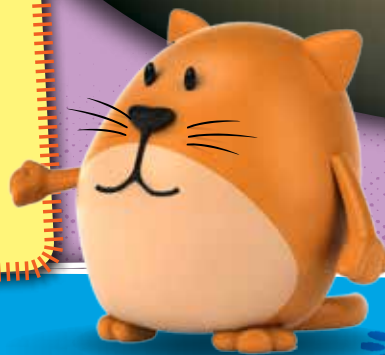
VENUS

Venus is a much hotter planet than Mercury, even though it is further away from the Sun. This is because Venus has a thick layer of **carbon dioxide gas** around it. The gas traps the heat from the Sun.

There is more and more carbon dioxide gas around Earth, because of **pollution** from cars, aeroplanes and factories. How might this change the planet?

FACT CAT FACT

If you went to Venus, you would be squashed flat! This is because the air around you would be 92 times heavier than it is on Earth.



Venus is the closest planet to Earth, but humans could not survive there. As well as being far too hot, it also has no **liquid** water. The rain on Venus is strong **acid** that would badly burn your skin.

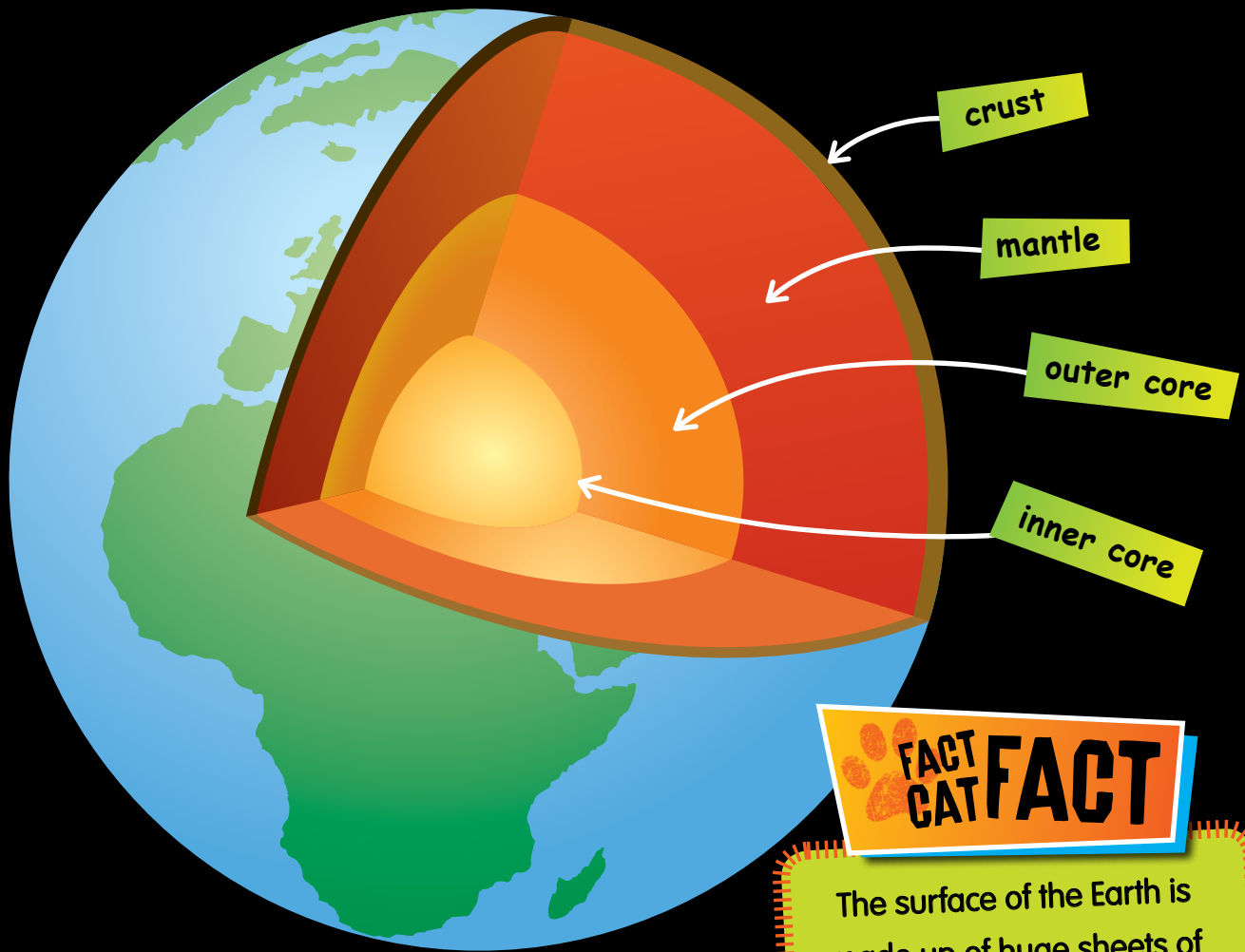


It is difficult to see the surface of Venus, as thick clouds of **poisonous** gas surround the planet. This picture has been coloured to clearly show the clouds.

EARTH

Animals and plants can survive on Earth because it is just the right distance from the Sun. This means it is neither too hot nor too cold for them. Most of the Earth's surface is covered in water, which almost all living things need.

Water in the ocean is salty. Humans and many other animals cannot drink salty water. Do you know what we call water that does not have salt in it?



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The surface of the Earth is made up of huge sheets of rock that move around on the liquid rock below. They can cause **earthquakes** when they crash into each other.

Earth is the third planet from the Sun, and the fifth largest planet in the solar system. It is mostly made of rock, but it has a metal core. Under its surface, it is so hot that rock turns to liquid.



MARS

Mars is the planet that is most like Earth. It has **volcanoes, deserts** and areas of ice. However, Mars is much colder than Earth and has many more storms.

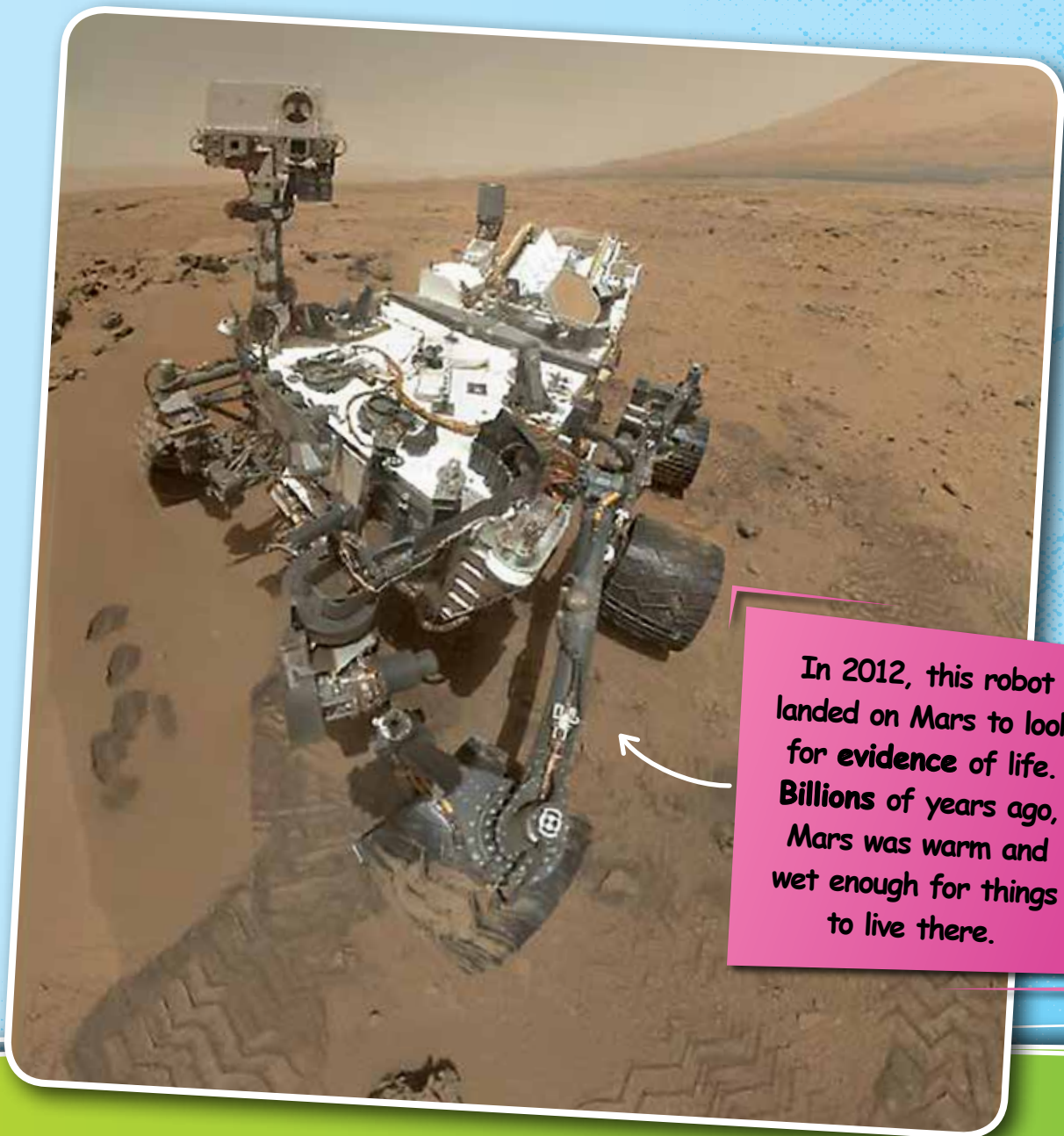
Mars is often called 'the red planet' because of its red-brown colour. What is the main colour of Earth?

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Mars is about half the size of Earth, but the two planets have the same amount of dry land. This is because there is no liquid water on Mars.

Mars is the fourth planet from the Sun. It is the second closest planet to Earth. Several spacecraft and robots have been to Mars, but they have not found any living thing there.



In 2012, this robot landed on Mars to look for **evidence** of life. **Billions** of years ago, Mars was warm and wet enough for things to live there.

JUPITER


Jupiter is the biggest planet in our solar system. It is so huge that all the other seven planets could fit inside it at once. At least 67 moons circle around Jupiter.

Jupiter's four biggest moons were discovered more than 400 years ago by a scientist named Galileo. Can you find out the names of these four moons?

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On Jupiter, there is a giant **hurricane** called the Great Red Spot. This storm is larger than Earth. It has been going on for at least 300 years.



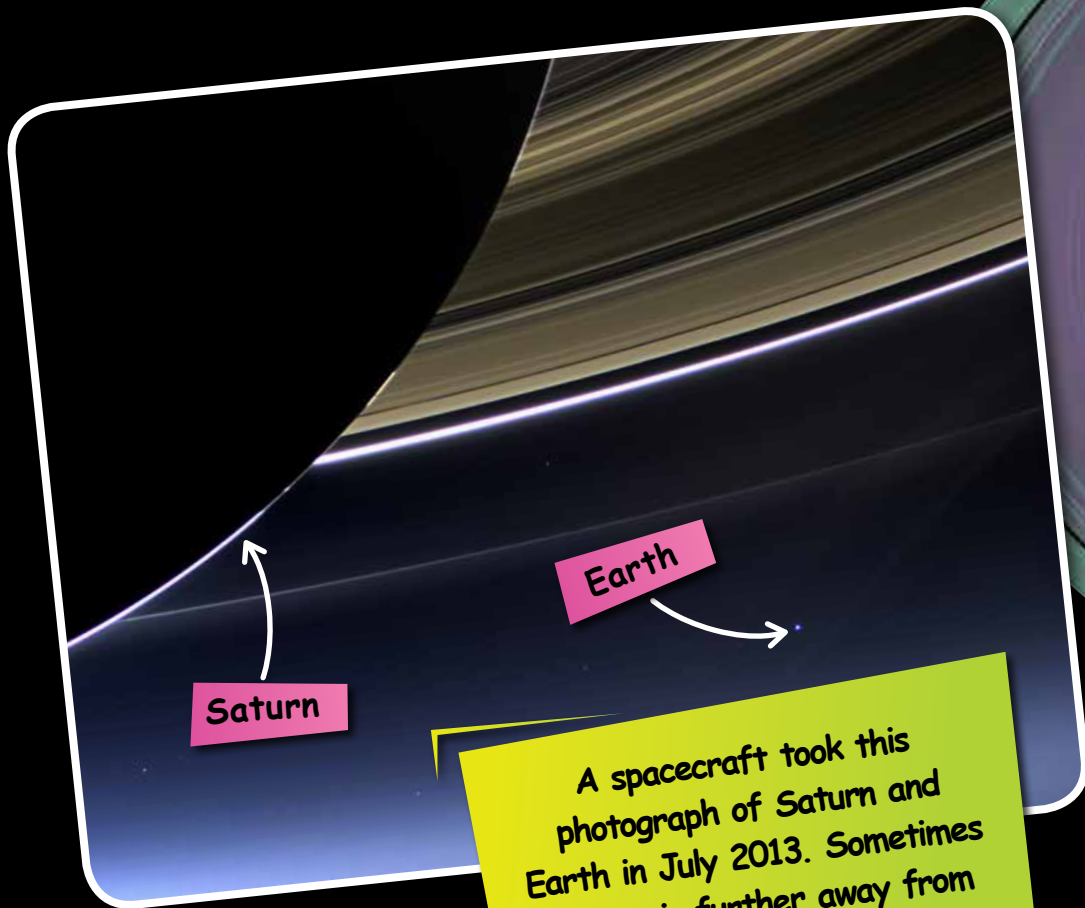


A spacecraft called Voyager I took this image. It shows Jupiter's swirling gas clouds.

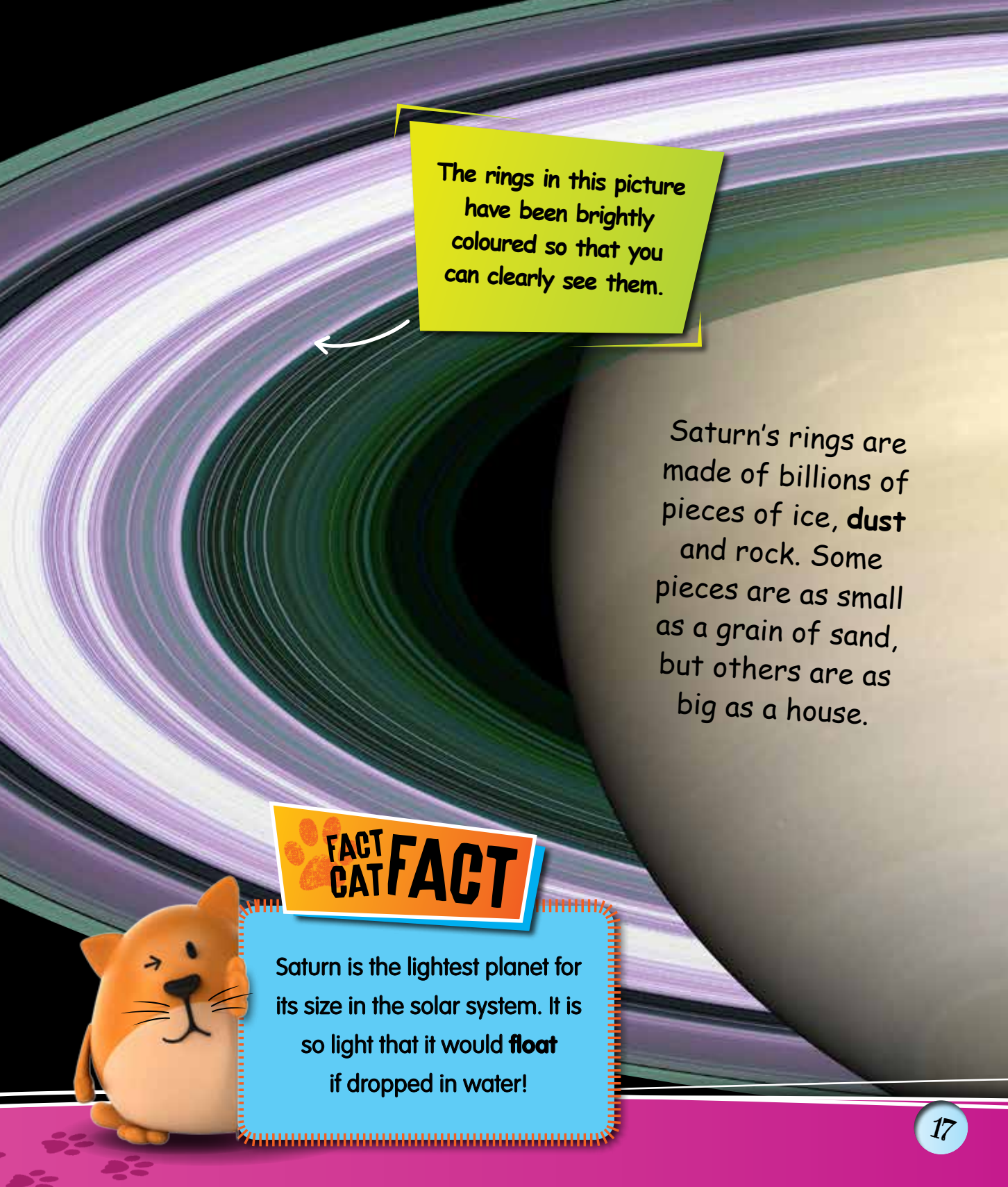
Jupiter is called a 'gas giant' because it is a huge planet that is made mostly of gas. It also has parts that are liquid. It does not have a **solid** surface like Earth does. It has a rocky core, but the rest of the planet is liquid and gas.

SATURN

Saturn is the sixth planet from the Sun. It is a gas giant like Jupiter, and it is the second largest planet in the solar system. More than 700 Earths could fit inside Saturn.



A spacecraft took this photograph of Saturn and Earth in July 2013. Sometimes Saturn is further away from the Earth than at other times. Why might this be?



The rings in this picture
have been brightly
coloured so that you
can clearly see them.

Saturn's rings are
made of billions of
pieces of ice, **dust**
and rock. Some
pieces are as small
as a grain of sand,
but others are as
big as a house.



**FACT
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Saturn is the lightest planet for
its size in the solar system. It is
so light that it would **float**
if dropped in water!