

公众号：W

National Geographic Readers: Planets

By: Elizabeth Carney

This reader is a great introduction to our solar system, including all of the planets and dwarf planets.

6-8

Age Range

15-30 mins

Length

660L

Lexile[®] Measure

3.6

AR Level

Planets

Elizabeth Carney

 NATIONAL
GEOGRAPHIC
Washington, D.C.

What's a Planet?

Circle, circle in the sky,
you're bright enough
to catch my eye.
You're not a star,
but a place
where gas or rocks
swirl in space.



Space Clues

GAS: Something that has no shape or size of its own. Gas can spread out into the space around it.

STAR: A huge ball of hot gas that makes heat and light

Hello, Planets!

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Q

What did two stars say to each other on Valentine's Day?

for you!

A

When you look up high in the night sky, you might see lots of bright lights. Most of these lights are stars.



Space Clues

ORBIT: The path an object follows around another object, such as a star

REFLECT: To bounce back

Most stars have planets moving around them. Planets are round objects that orbit a star. They don't create their own light. They only reflect light from stars.



The Sun

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The sun is our star. Our planet Earth orbits the sun. The sun makes a lot of heat and light.

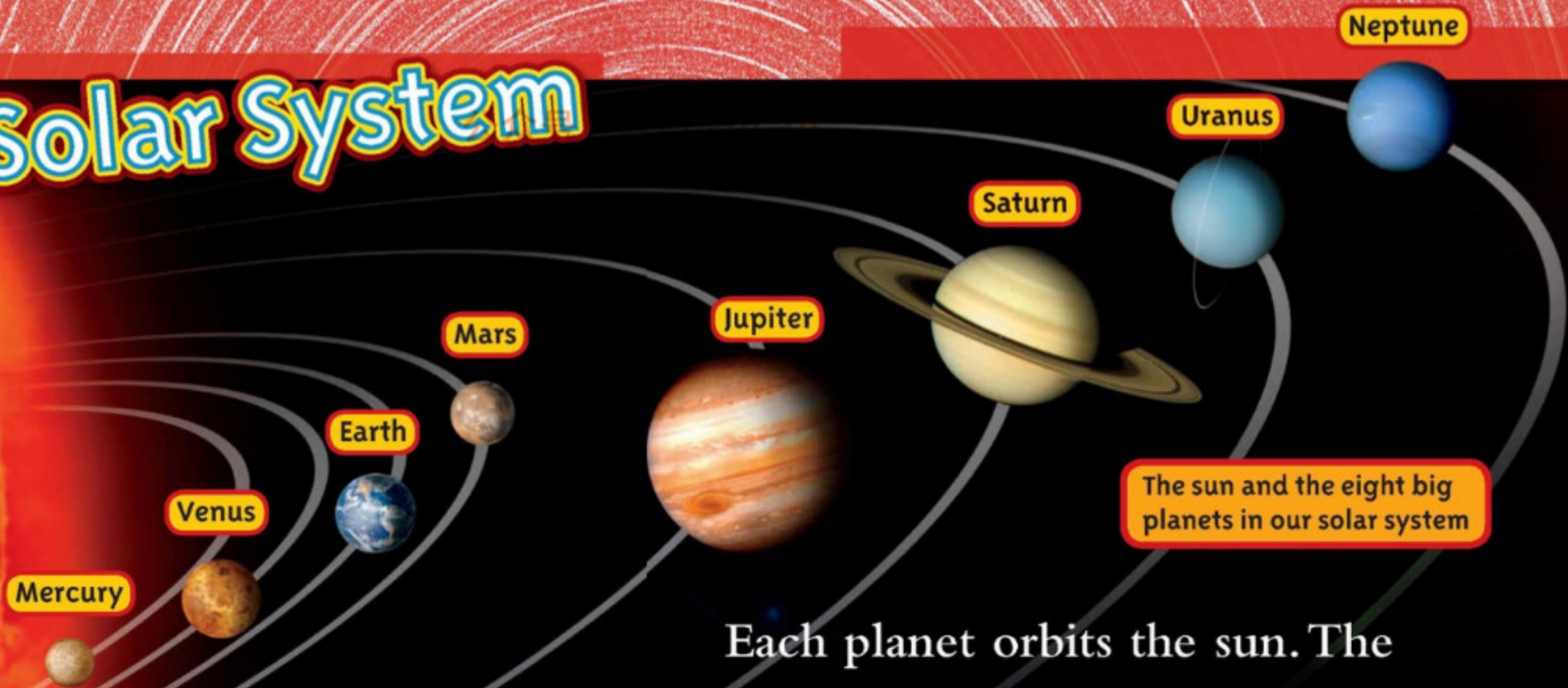
Its surface is about 100 times hotter than a hot summer day! It's also very big. One million Earths could fit inside the sun!

Earth

The sun

Don't look directly at the sun. It could hurt your eyes.

Our Solar System



The sun and the eight big planets in our solar system

Our sun and Earth are part of what we call our solar system. There are eight big planets and five small, dwarf planets in the solar system.

Each planet orbits the sun. The strong pull of the sun's gravity holds the planets in orbit, which keeps them from floating away. Gravity is the same force that makes a baseball fall to the ground when you drop it.



Space Clues

GRAVITY: An invisible force that pulls objects toward a planet or star

The Inner Planets

Mercury, Venus, Earth, and Mars are in the hotter part of our solar system.

Venus



Mercury



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Earth

Mars



These planets are the four closest to the sun. They are made of rock and metal.

Your Planet Earth

Earth is the third planet from the sun. The planet we call home spins at just the right distance from the sun.

Q

What did Neptune say to Saturn?

Give me a ring sometime!

A

It's far enough away to be not too hot, yet close enough so it's not too cold. Here, the conditions are just right for life.

sea animals



plants and trees



land animals



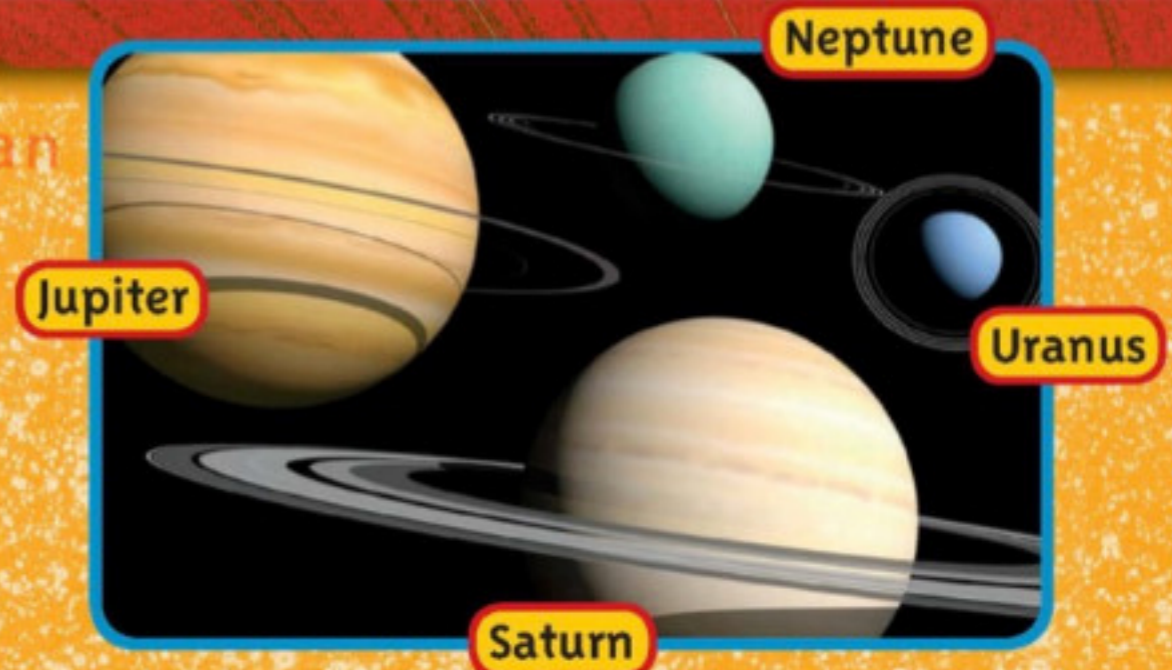
The Gas Giants



Saturn

rings

The gas giants do not have a hard surface like the rocky inner planets.



Beyond the rocky inner planets, there are four gas giants. They are Jupiter, Saturn, Uranus (YOOR-eh-nes), and Neptune. These huge planets are made of big clouds of gas and liquid. Gravity pulls the gas and liquid into a planet shape.

All gas giants have rings. The rings are made of mostly ice and dust.

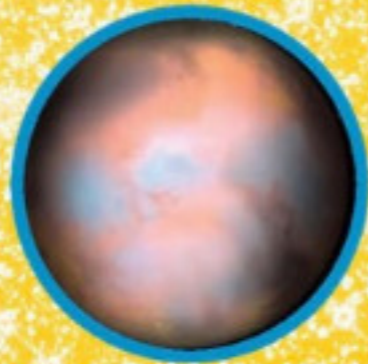
Dwarf Planets

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MakeMake
(MAH-keh-MAH-keh)

Dwarf planets are planetlike objects that are part of our solar system. They are much smaller than regular planets.



Ceres (SEER-eez)



Pluto

18



Eris (EHR-is)

This dwarf planet is shaped like an egg.



Haumea
(Ha-oo-MAY-ah)

A dwarf planet can be round or egg-shaped. Unlike regular planets, dwarf planets may share their orbits with other space objects.

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Amazing Planets

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These planets are really out of this world!

WEIRDEST SPIN

Uranus

This planet spins on its side, rolling like a barrel instead of a top.



WINDIEST WEATHER

Neptune

Winds on Neptune blow much faster than Earth's strongest hurricanes.



LONGEST-LASTING STORM

Jupiter

The Great Red Spot is a hurricane on Jupiter. It has been blowing for more than 400 years.

Great Red Spot



HOTTEST PLANET

Venus

This is the solar system's hottest planet even though it is not the closest to the sun. A thick layer of gas around Venus makes it super hot.



TALLEST MOUNTAIN

Mars

Mars is the home of the solar system's largest volcano, called Olympus Mons. It's as tall as three Mount Everests stacked up.



Moons Galore!

Some planets, like Earth, have moons that travel with them. Moons are objects made of ice or rock that orbit a planet.

Some planets have no moons. Some have many. Jupiter has more than 60!

Jupiter and four of its moons



Jupiter

Saturn has a giant moon called Titan. It is one of the largest moons in the solar system. It is even bigger than the planet Mercury!



Earth's moon



Mercury



Titan

Our Moon

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Earth has only one moon. It appears large and bright in the night sky.

Astronauts first walked on the moon more than 40 years ago. They left footprints in the dirt. There is no weather on the moon to wash or blow them away. Those footprints are still there.



Space Clues

WEATHER: The changing conditions that can include temperature, rainfall, wind, and clouds

Q

Why couldn't the astronaut book a room on the moon?

A

Because it was full!



Astronaut Buzz Aldrin walks on the moon in 1969 as part of the Apollo 11 mission.

Exploring Space

Scientists have many ways of studying planets. One is to visit them. Humans can't visit other planets yet. But we can send robots to explore them for us.

A rocket blasts off from Cape Canaveral, Florida. It is heading to Mars.



Q

How did the rocket lose its job?

It got tired!

A

Robots called rovers have been sent to Mars. The rovers carry cameras and tools. They can take photographs and videos, too. The rovers send information back to Earth about what they see.

A drawing of a rover on Mars





telescope

There are other ways to learn about planets, too. Powerful telescopes allow us to see planets and moons even though they are far away.

we can

A drawing of a space probe that flew near Jupiter



Space probes also collect information about planets. These spacecraft take pictures. They measure light and temperature, too.

With these tools, scientists make exciting discoveries about other worlds. What will we learn next?

Stump Your Parents

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Can your parents answer these questions about planets?
You might know more than they do!

Answers at bottom of page 31.

Which is NOT true about the sun?

- A. It makes heat and light.
- B. It is our planet's star.
- C. It is much smaller than Earth.
- D. Planets orbit around it.



What does Neptune have that's so special?

- A. The largest volcano
- B. The hottest surface
- C. The weirdest spin
- D. The windiest weather

What is Jupiter's Great Red Spot?

- A. A moon
- B. A volcano
- C. A flood
- D. A hurricane



Which planet has just one moon?

- A. Mercury
- B. Earth
- C. Mars
- D. Uranus

Which of these are the main materials found in planets' rings?

- A. Gas
- B. Ice
- C. Dust
- D. B and C



What can you use to get a better view of objects in space?

- A. Microscopes
- B. Telescopes
- C. Submarines
- D. Flashlights

To study the environment on Mars, scientists have sent ____.

- A. Rovers
- B. Airplanes
- C. Space shuttles
- D. Astronauts





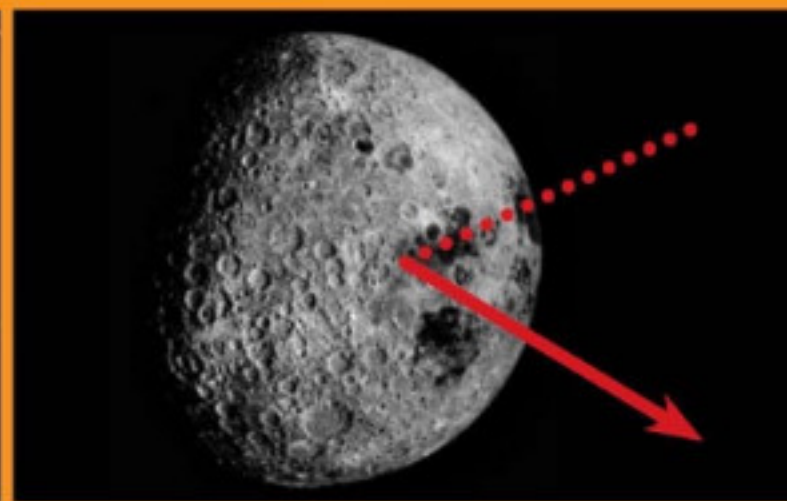
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