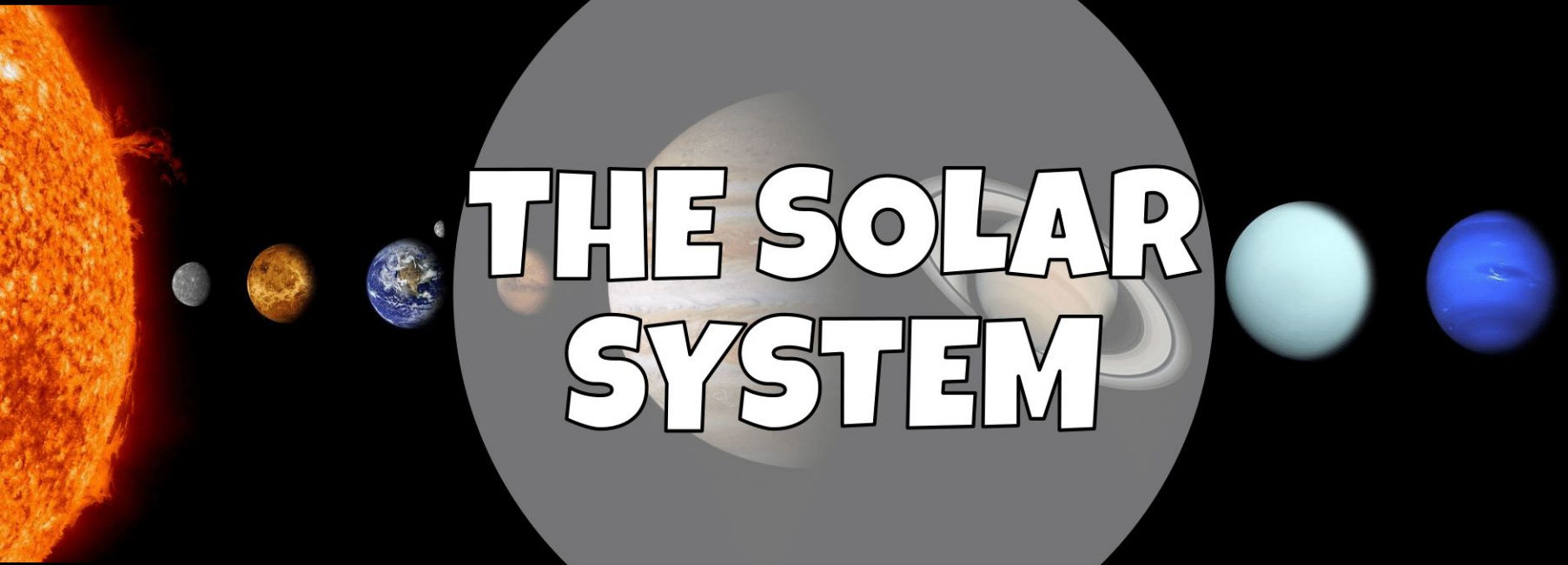
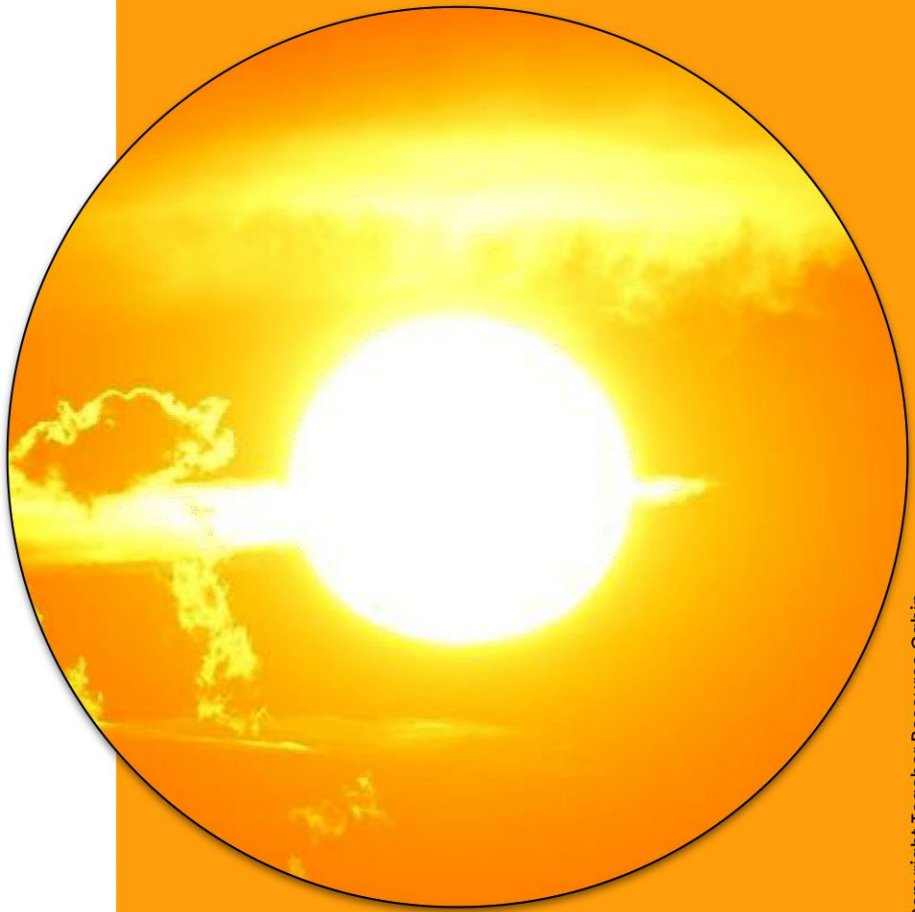


THE SOLAR SYSTEM

- A solar system is a collection of a sun, planets, comets, asteroids, meteors, and space debris.

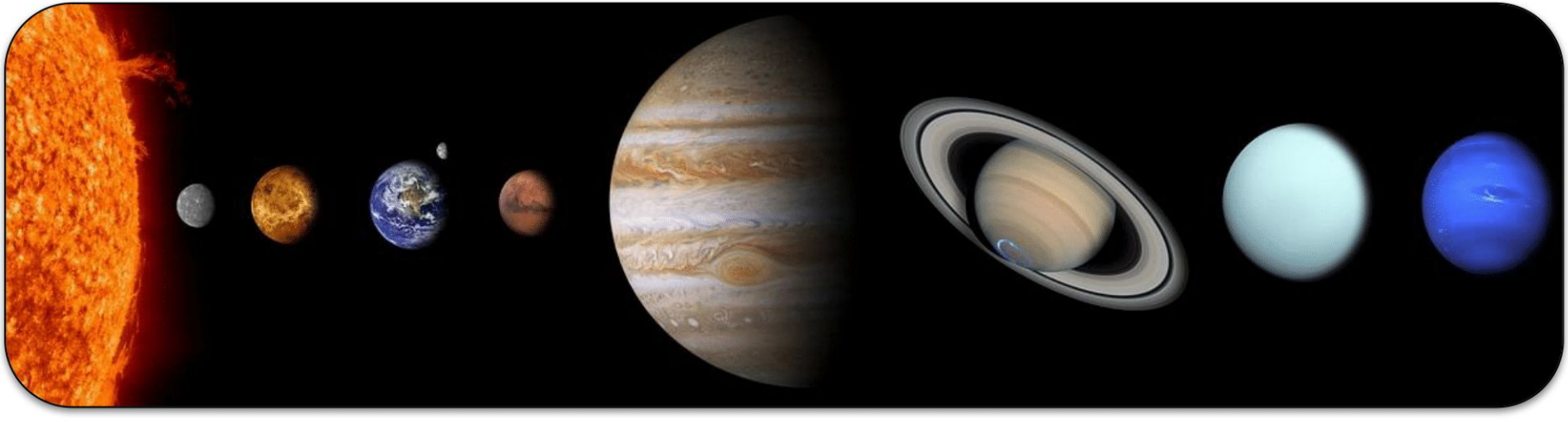
- Our Solar System is estimated to be 4.6 billion years old.
    - The Sun is a star that makes up most of our Solar System's mass.



THE SOLAR SYSTEM

- The solar system has eight planets that orbit the Sun.

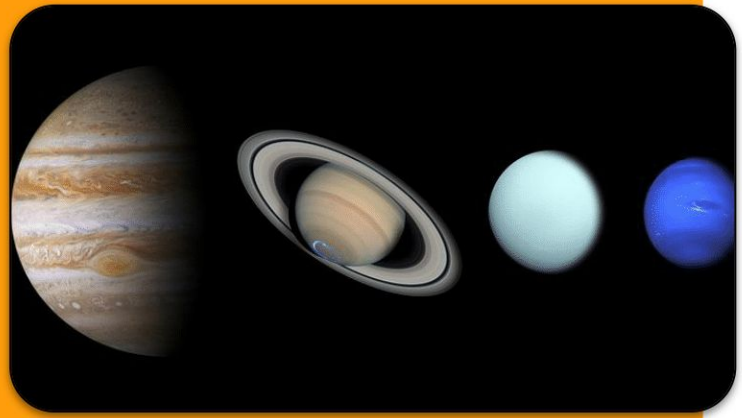
- The closest planet to the Sun is Mercury, followed by Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune.

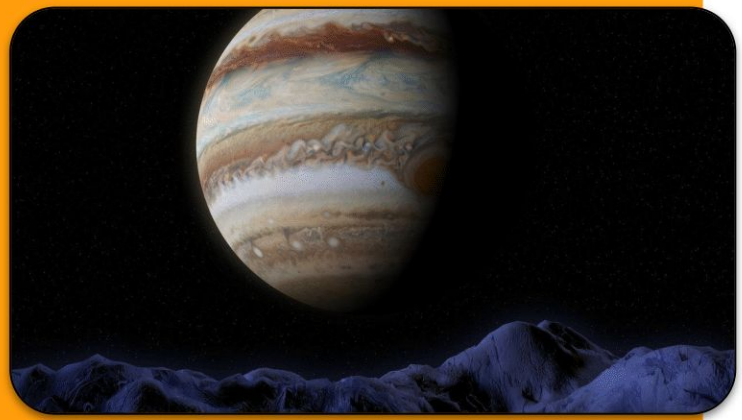


THE SOLAR SYSTEM

- The first four planets are referred to as terrestrial planets.
  - Mercury, Venus, Earth, Mars
- They are made mostly of metal and rock.
- These planets are mostly solid.

THE SOLAR SYSTEM





- The remaining four planets are sometimes referred to as "gas giants."
  - Jupiter, Saturn, Uranus, Neptune
- These planets are significantly larger than the first four planets.
  - Made mostly from gases

THE SOLAR SYSTEM

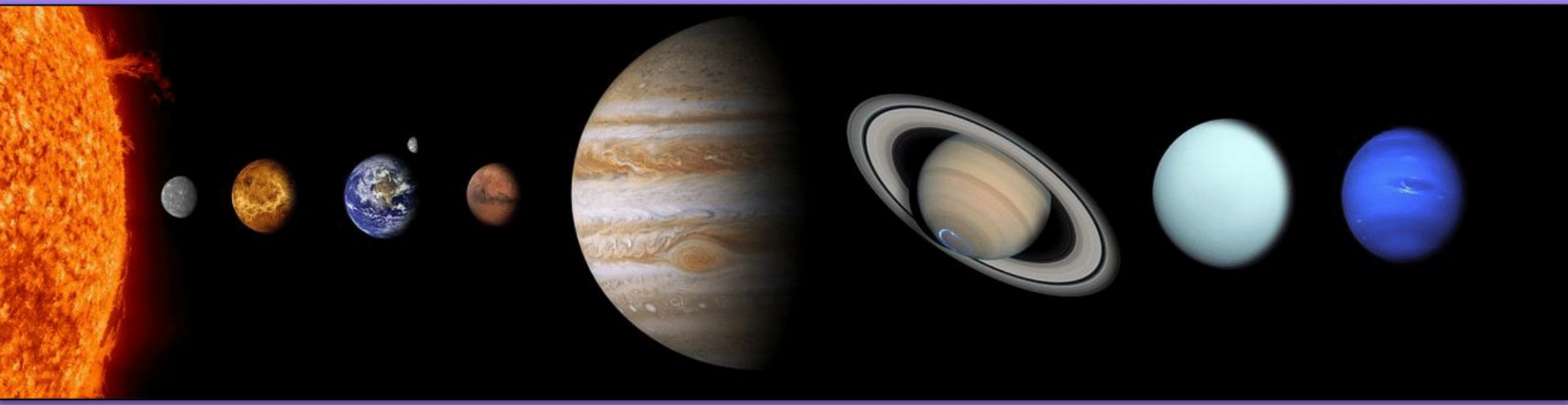
- Our Solar System is located in “The Milky Way Galaxy.”

- A galaxy is a large group of stars, gas, and dust that are bound together by gravity.

Why do you think our galaxy is called “The Milky Way?”

Think about it!

Drag and drop to label the name of each planet in order.



Uranus

Venus

Neptune

Mercury

Jupiter

Mars

Earth

Saturn

PLANETS

- A planet is an object that orbits around the Sun and has a shape that is stable due to its own gravity.

- The path that each planet takes to travel around the Sun is called an orbit.

PLANETS

- The time it takes a planet to complete one orbit determines how long a year on that planet is.

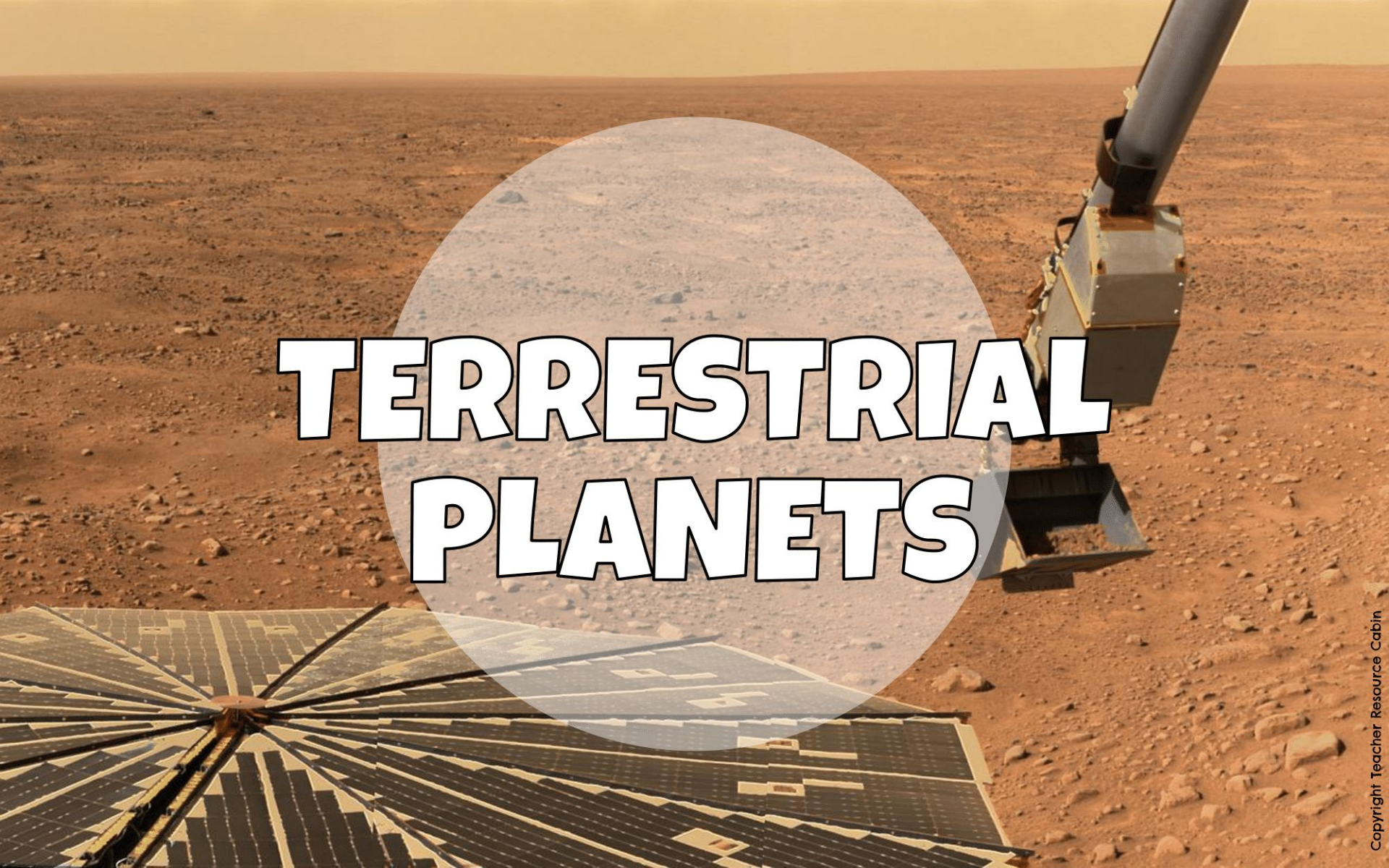
- The time it takes for a planet to do one full orbit around the Sun is called a revolution.

How long does it take for the Earth to complete one revolution?

PLANETS

- A planet also spins or rotates around its centre (axis)
- The time it takes a planet to do one complete rotation is the time that makes up one day on the planet.

How long does it take for the Earth to complete one rotation?

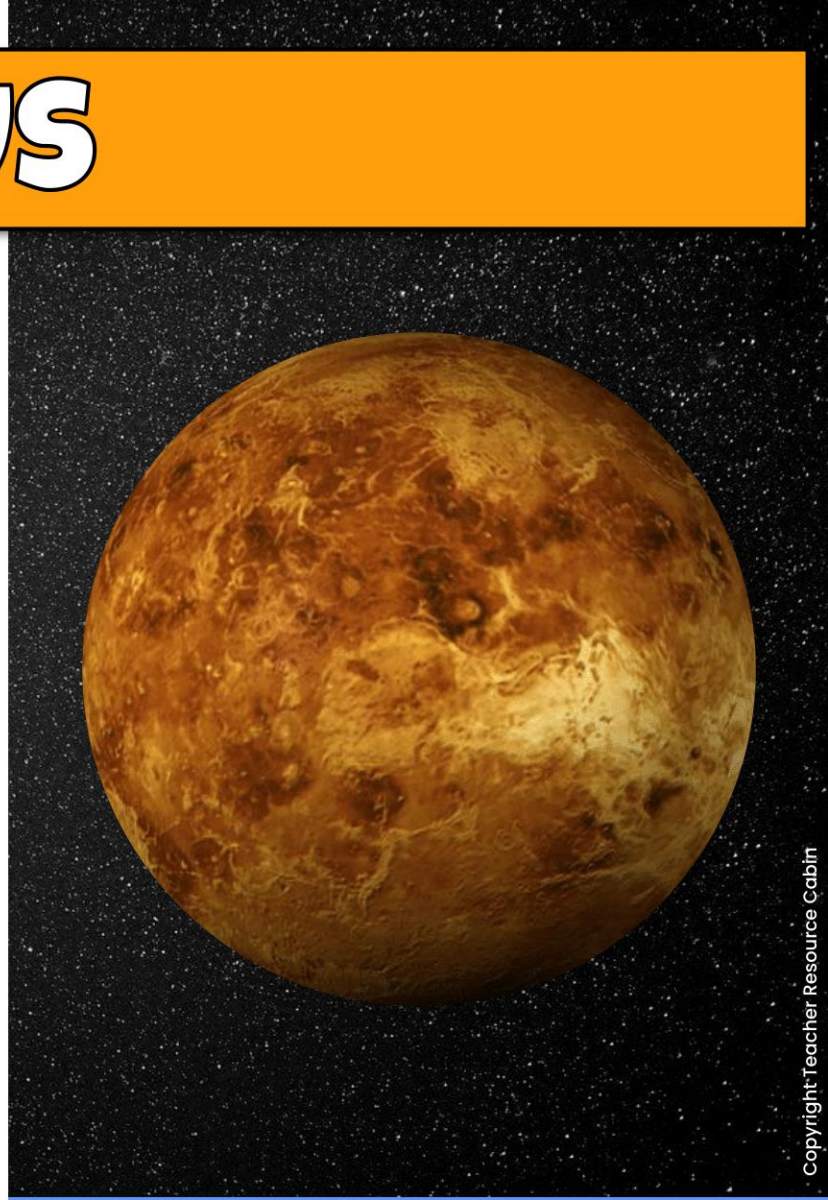


MERCURY

- Mercury is the smallest terrestrial planet in our Solar System.
- About one-third of the size of Earth
- Made mostly of iron and nickel
- Water may exist on Mercury
    - Too close to the Sun to be a home to life

VENUS

- Venus is roughly the same size as Earth
  - Atmosphere consists mostly of carbon monoxide
  - Hottest planet in our Solar System
- Scientists believe that Venus may have active volcanoes
- Like Mercury, Venus has no known moons



EARTH

- Earth is the largest terrestrial planet and is the only planet with an abundance of water.
  - Atmosphere contains water vapour
  - Temperatures are suitable for life

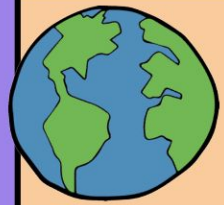
- Earth has regular seasons because it tilts on its axis as it moves around the Sun.

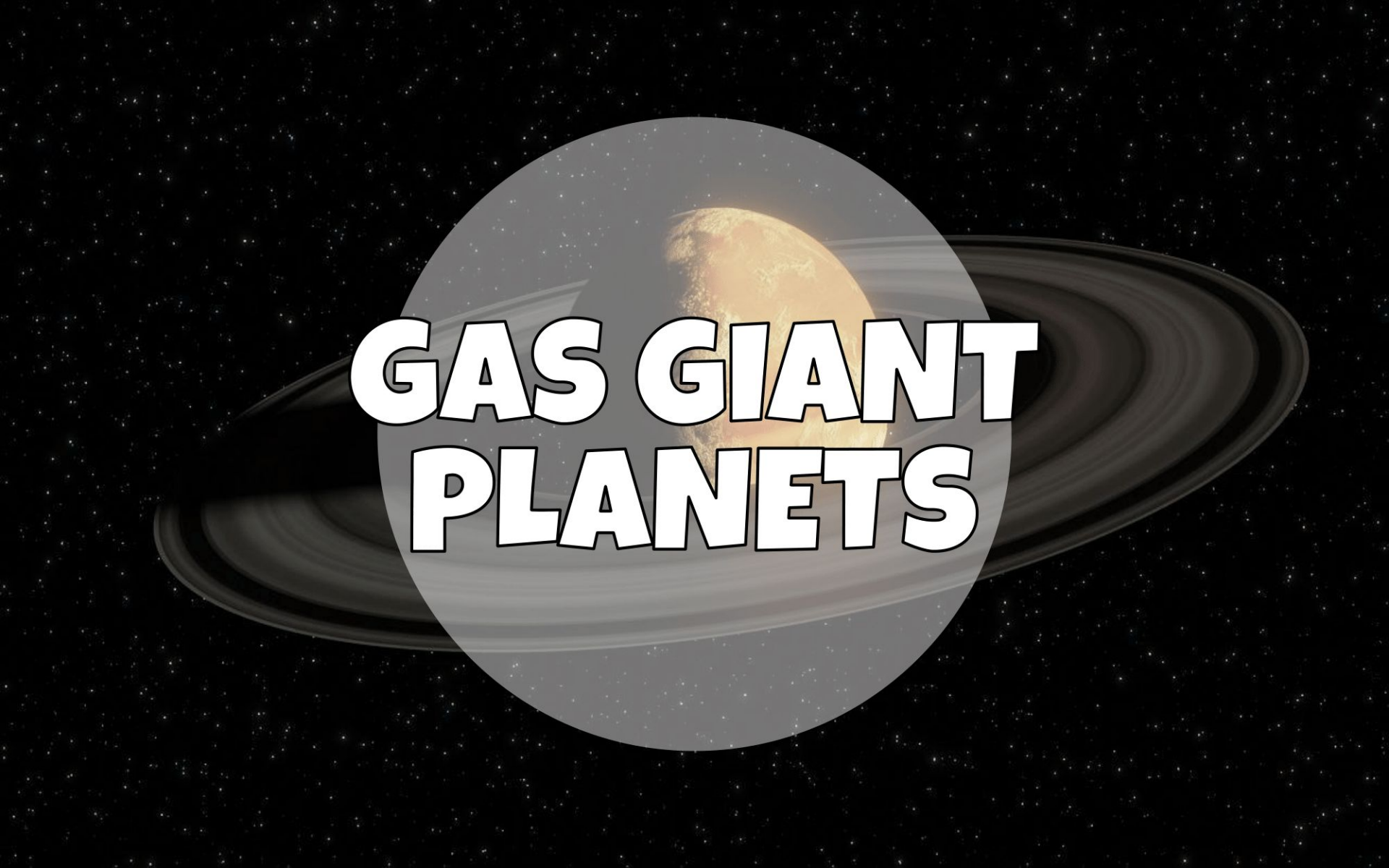
MARS

- Mars is a red planet with a crater-filled surface
  - Two moons
  - Has a year that is 687 days long
- No known life on Mars
  - Evidence of water, which is essential to support living things.

Think about it!

Write two facts about each terrestrial planet.

 Mercury	
 Venus	
 Earth	
 Mars	

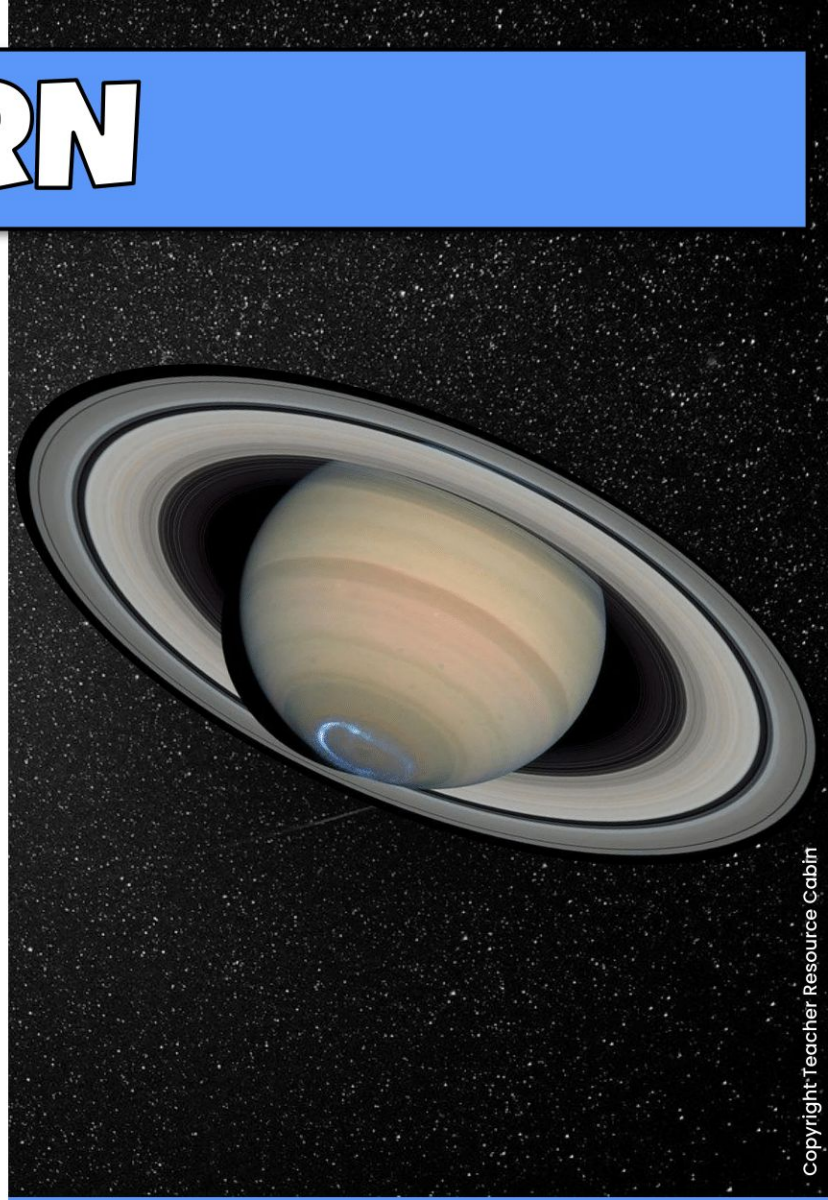

GAS GIANT
PLANETS

JUPITER

- Jupiter is the largest planet in our Solar System.
  - 318 Earths could fit inside
  - Can sometimes be seen from Earth without a telescope
- Made mostly from hydrogen and helium.
- Jupiter has at least 67 moons.

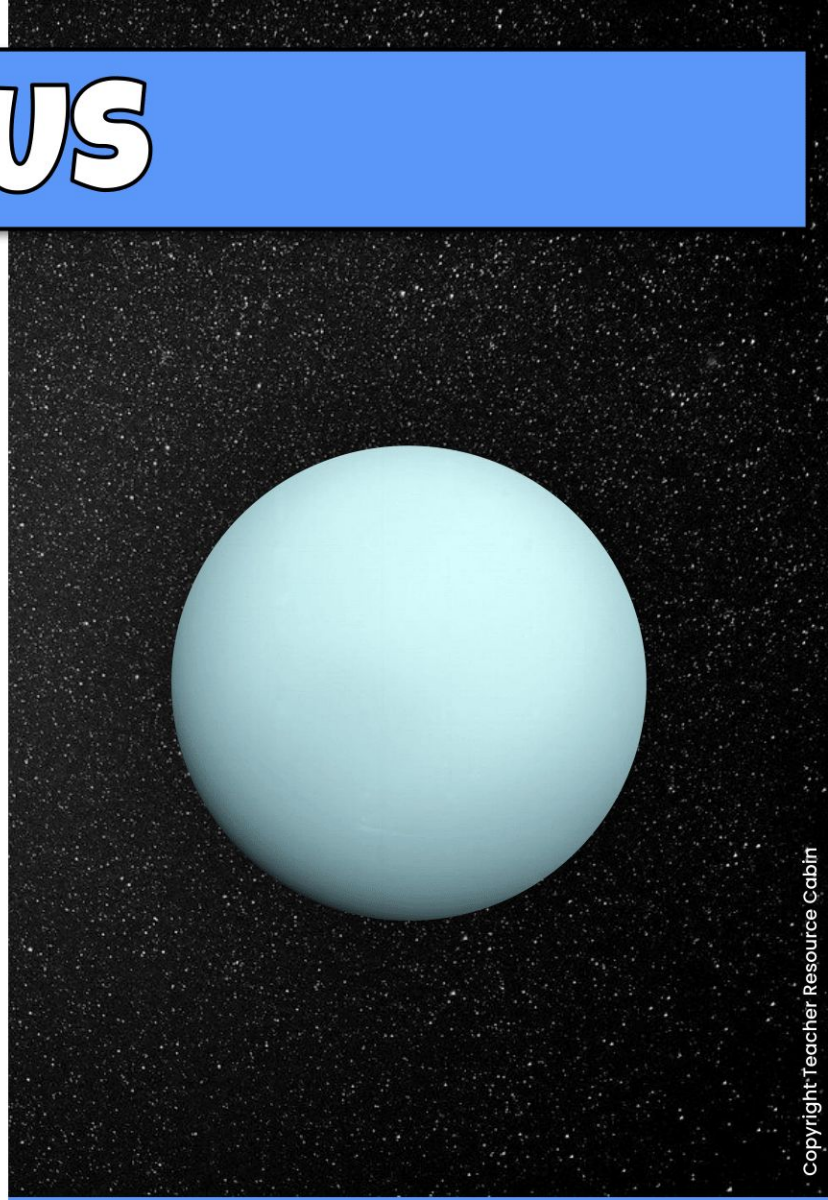
SATURN

- Saturn is surrounded by a series of large rings.
  - The rings are made from a combination of ice, dust, and rock.
  - Saturn has 62 known moons.
- It takes almost 30 Earth years for Saturn to do a full revolution around the Sun.



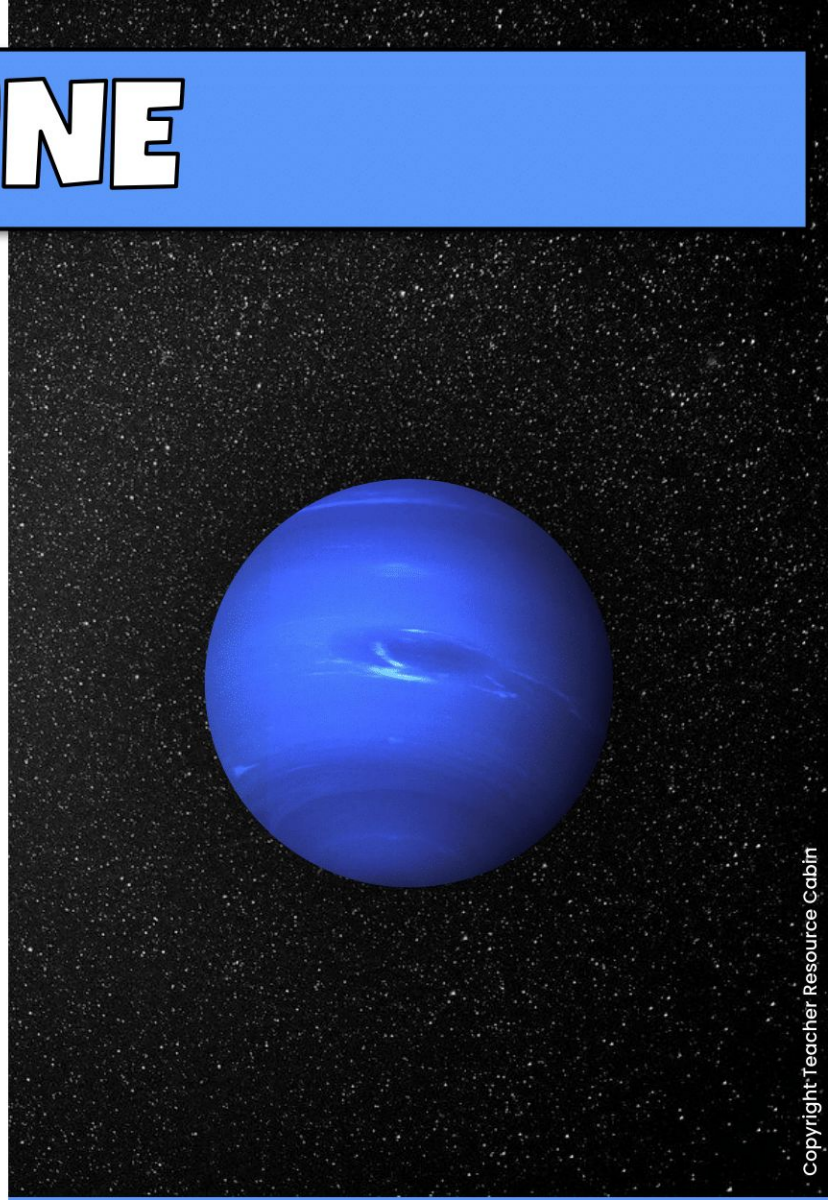
URANUS

- Made from ice, gases and liquid metal
- The temperature in Uranus is -197 degrees Celsius.
- Although Uranus is a gas giant, it has a solid core.
- Surface features violent storms with winds that can exceed 160 mph.
- Uranus has 27 known moons.



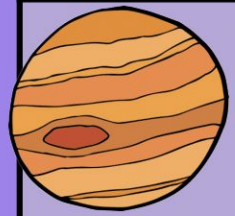
NEPTUNE

- Neptune is the furthest planet from the Sun in our Solar System.
    - 4.5 billion kilometres from the Sun.
- Neptune is a bright blue colour that is caused by methane gas.
- Neptune has 14 moons.



Think about it!

Write two facts about each gas giant planet.

 Jupiter	
 Saturn	
 Uranus	
 Neptune	

? ? ?

What does it mean to orbit something?

What things orbit Earth?