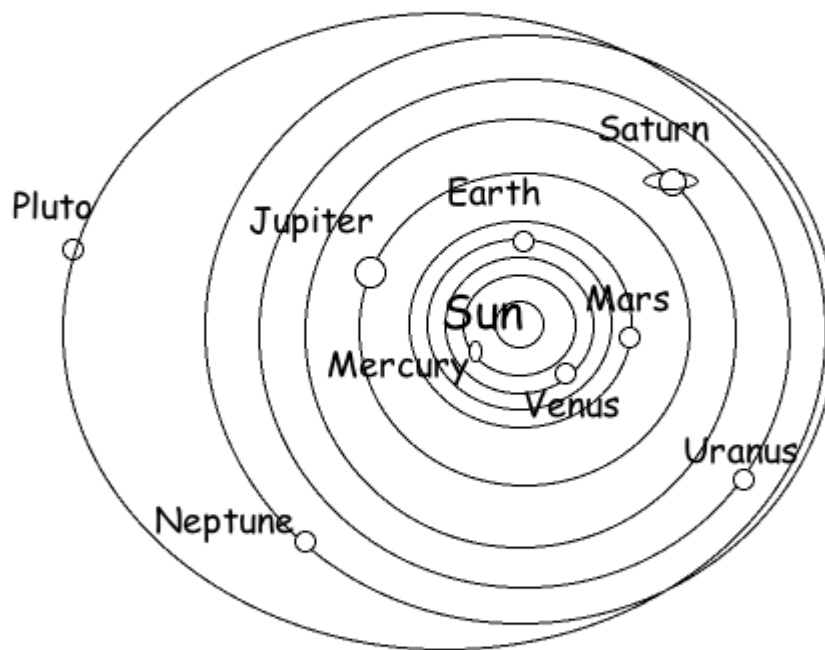


The Planets of our Solar System

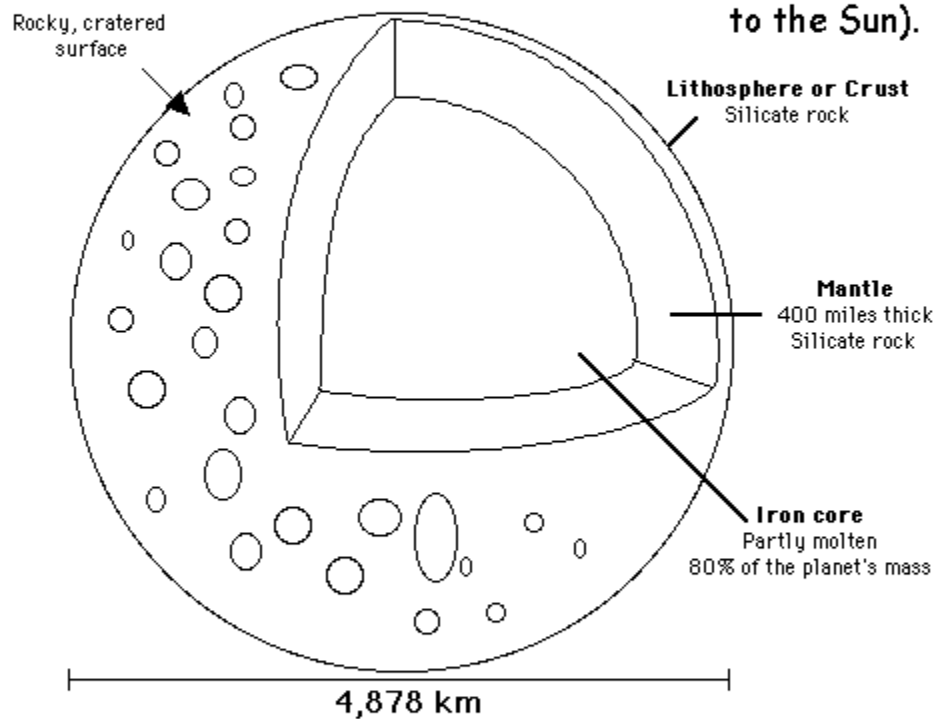


By _____

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Mercury

There are eight planets orbiting the Sun in our Solar System. Mercury is the planet closest to the Sun. It is the second-hottest planet (after Venus) and the smallest planet (smaller than the plutoid Pluto). It has no moons. From Earth, you can only see it near sunrise or sunset (this is because Mercury is so close to the Sun).



How many moons does Mercury have? _____

Is Mercury the hottest planet? _____

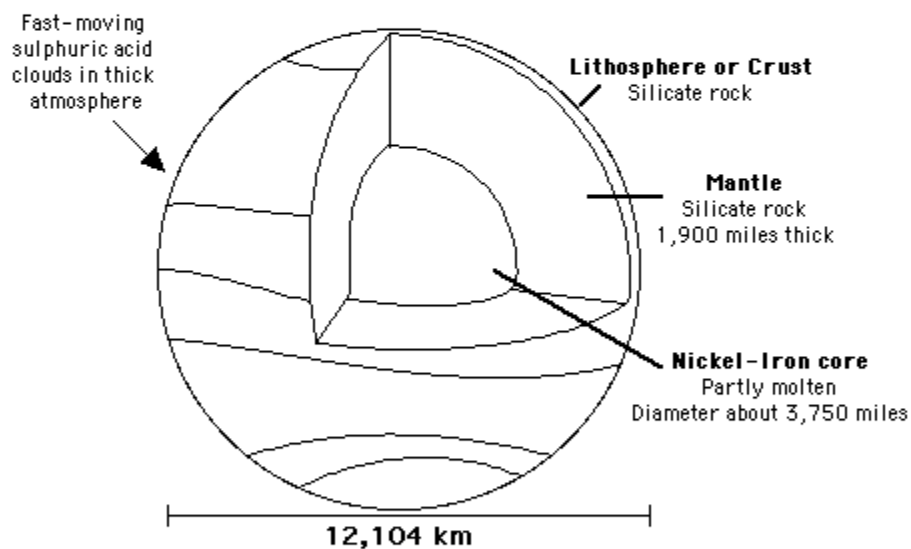
Is Mercury's surface smooth or cratered? _____

When can you see Mercury? _____

Venus

Venus is the second planet from the Sun. It is the hottest planet in the Solar System; it is covered with fast-moving sulphuric acid clouds which trap heat from the Sun. Its thick atmosphere is mostly carbon dioxide. Venus is slightly smaller than the Earth. It has no moons. Venus is known as the "morning star" or the "evening star" since it is visible and quite bright at either dawn or dusk (this is because Venus is closer to the Sun than we are).

Venus



How many moons does Venus have? _____

Is Venus the hottest planet? _____

Is Venus cloudy? _____

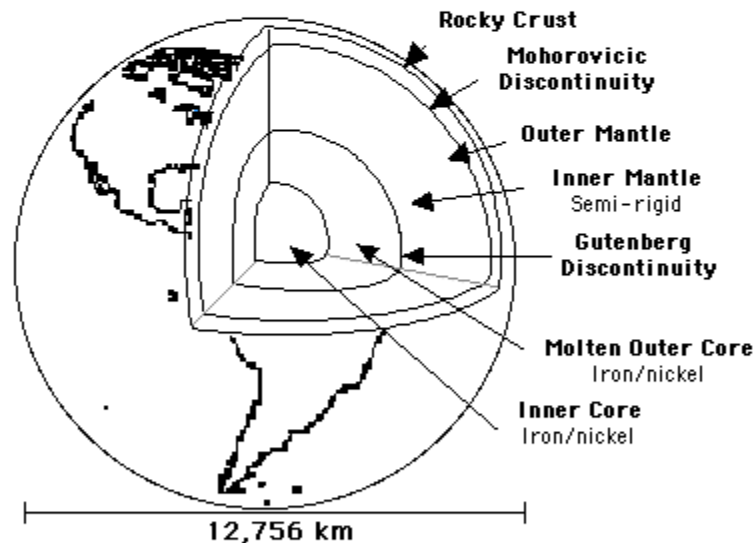
What is another name for Venus? _____

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Earth

Earth is the third planet from the Sun, the densest planet in our Solar System, and the planet we live on. It has one moon. The Earth orbits, on average, 93 million miles (149,600,000 km) from the Sun. This distance is defined as one Astronomical Unit (AU). The Earth is the fifth-largest planet in our Solar System (after Jupiter, Saturn, Uranus, and Neptune). The Earth's atmosphere is composed of 78% nitrogen, 21% oxygen, 0.9% argon, 0.03% carbon dioxide, and trace amounts of other gases.

Earth



How many moons does Earth have? _____

How far from the Sun is Earth? _____

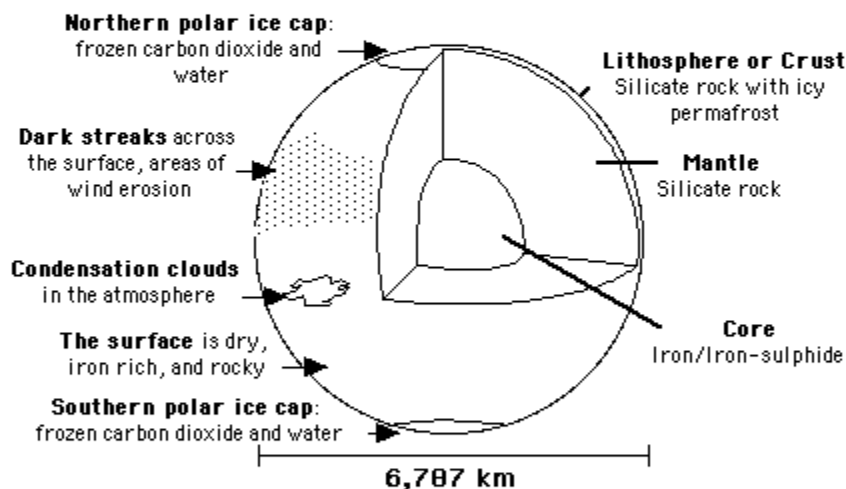
What is the most common gas in the Earth's atmosphere? _____

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Mars

Mars is called the red planet. It is the fourth planet from the Sun and the most Earth-like planet in our Solar System. It is about half the size of Earth; it has a dry, rocky surface and a very thin atmosphere (95% carbon dioxide). The north and south poles of Mars are covered by ice caps composed of frozen water and carbon dioxide. Olympus Mons is the largest volcano on Mars (it may be the biggest volcano in the Solar System). Mars has two tiny moons, Phobos and Deimos.

Mars



How many moons does Mars have? _____

What color is Mars? _____

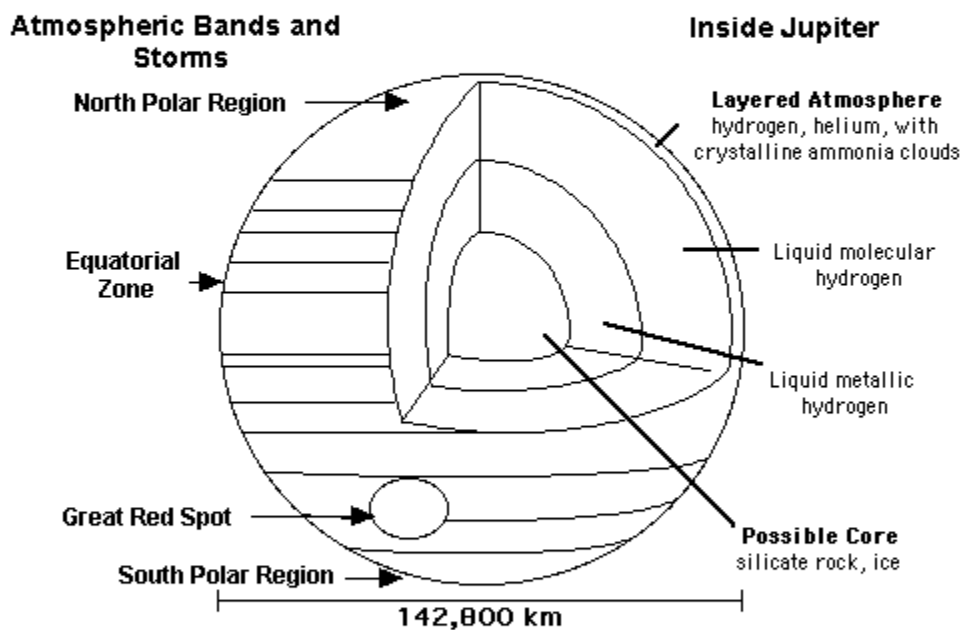
Does Mars have icy poles? _____

What is the most common gas in Mars' atmosphere?

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Jupiter

Jupiter is the fifth planet from the Sun. It is a gas giant and the biggest planet in the Solar System. Jupiter is so big that all the other planets in our Solar System could fit inside Jupiter (if it were hollow). Jupiter has a thick atmosphere, dozens of moons, and a dark, barely-visible ring. The huge red spot is a long-lasting storm.



Is Jupiter the biggest planet? _____

Does Jupiter have a ring? _____

Is Jupiter's atmosphere thick or thin? _____

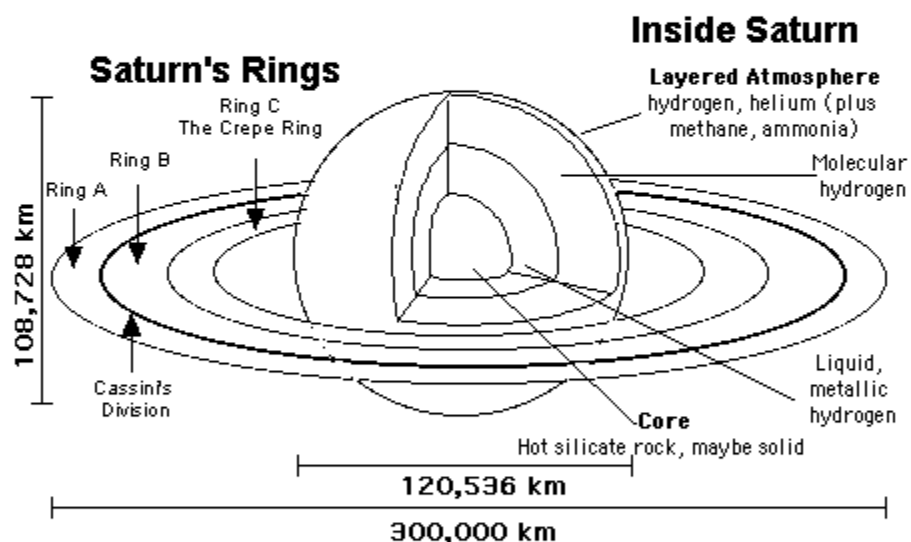
What is the red spot? _____

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Saturn

Saturn is the sixth planet from the Sun. It is a gas giant and the second-biggest planet in our Solar System.

It has beautiful rings that are made mostly of ice chunks (and some rock) that range in size from the size of a fingernail to the size of a car. Saturn is made mostly of hydrogen and helium gas. It has dozens of moons. Saturn is visible without using a telescope, but a low-power telescope is needed to see its rings.



Saturn

Is Saturn rocky or gaseous? _____

Is Saturn the biggest planet? _____

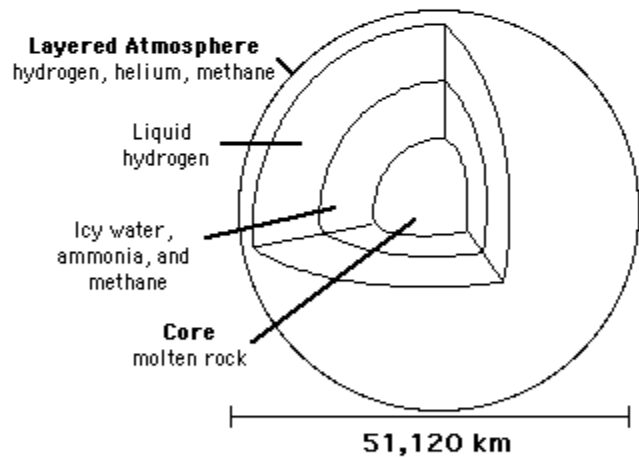
Does Saturn have moons? _____

Can you see Saturn's rings using your eyes
alone? _____

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Uranus

Uranus is the seventh planet from the sun in our solar system. This huge, icy planet is covered with clouds and is encircled by a belt of 11 rings and 22 known moons. Uranus' blue color is caused by the methane (CH_4) in its atmosphere; this molecule absorbs red light. Uranus' rotational axis is strongly tilted on its side (97.9°). Instead of rotating with its axis roughly perpendicular to the plane of its orbit (like all the other planets in our Solar System), Uranus rotates on its side (along its orbital path); this tipped rotational axis gives rise to extreme seasons on Uranus.



Is Uranus rocky or gaseous? _____

Does Uranus have rings? _____

What gas causes Uranus' blue color? _____

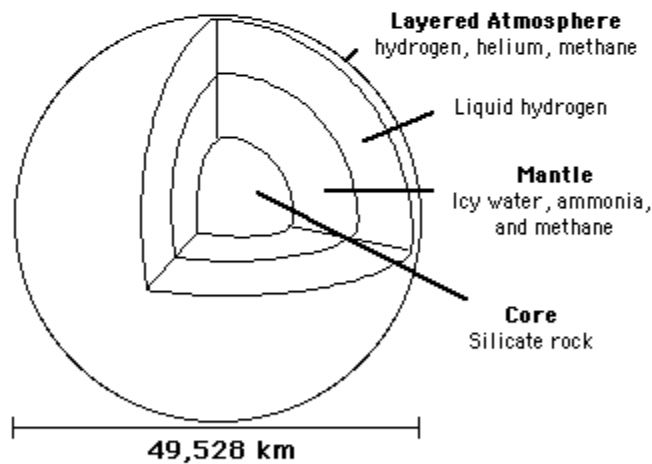
Does Uranus have moons? _____

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Uranus

Neptune

Neptune is the 8th planet from the Sun. This giant, frigid gas planet has a hazy atmosphere and strong winds. This gas giant is orbited by eight moons and narrow, faint rings arranged in clumps. Neptune's blue color is caused by the methane (CH_4) in its atmosphere; this molecule absorbs red light. Neptune's existence was predicted in 1846. Neptune's rotational axis is tilted 30 degrees to the plane of its orbit around the Sun (this is a few degrees more than the Earth). This gives Neptune long-lasting seasons; the poles are in constant darkness or sunlight for 40 years at a time.



Does Neptune have moons? _____

Does Neptune have rings? _____

What color is Neptune? _____

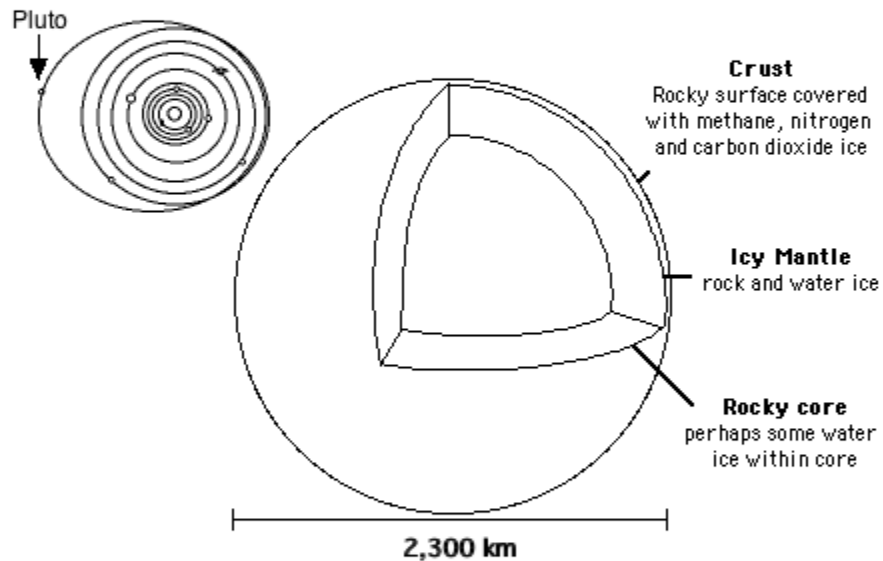
How long are the poles in darkness or light? _____

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Neptune

Pluto

Pluto is a dwarf planet that usually orbits beyond Neptune. It was discovered in 1930. The gravity on Pluto is only 8% of the gravity on Earth. A year on Pluto takes 247.7 Earth years. Pluto is smaller than a lot of the other planets' moons, including our moon. It has one big moon (called Charon) and two tiny moons.



What is Pluto's big moon called? _____

Is Pluto smaller than the 8 planets? _____

Does Pluto always orbit beyond Neptune? _____

Is Pluto bigger or smaller than our moon? _____

Quiz

1. Which planet is closest to the Sun? _____
2. Which is the hottest planet? _____
3. What is the third planet from the Sun? _____
4. Which planet is called the red planet? _____
5. Which planet has a huge red spot? _____
6. Which planet has the largest rings? _____
7. Name the gas giant planets: _____,
_____, _____,
and _____.
8. Name Pluto's largest moon. _____
9. Name two planets with no moons: _____
and _____.
10. What planet is the most Earth-like? _____

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Quiz