

All About the Gas Giants

- The four gas giants in our solar system are Neptune, Uranus, Saturn, and Jupiter. These are also called the Jovian planets.
- "Jovian planet" refers to the Roman god Jupiter and was intended to indicate that all of these planets were similar to Jupiter.
- Jupiter is about 11 times the diameter of Earth, Saturn 9 times, and Uranus and Neptune about 4 times Earth's diameter.
- A gas giant is a GIANT planet that is made of gas! They are different from rocky or terrestrial planets that are made of mostly rock.
- Unlike rocky planets, gas giants do not have a well-defined surface – there is no clear boundary between where the atmosphere ends and the surface starts!
- The gas giants have atmospheres that are mostly hydrogen and helium.
- All four planets rotate relatively rapidly – while Earth spins once on its axis every 24 hours, Saturn spins once every 10 hours.
- Like Earth, all the gas giants have wind bands. These are seen as east-west stripes. Jupiter has the most well defined bands.
- Gas giants may have a rocky or metallic core but the majority of their mass is in the form of gas (or gas compressed into a liquid state – to get an idea of what this could be like, think of liquid mercury in a thermometer).
- Jupiter and Saturn probably have liquid metallic hydrogen interiors (liquid hydrogen conducts electricity).
- Scientists believe Uranus and Neptune have interiors that contain a mixture (or layers) of rock, water, methane, and ammonia.
- All four gas giants have rings and moons. Saturn's rings, made of mostly ice, are the most spectacular, and the only ones known before the 1970s. As of 2004, Jupiter was thought to have the most moons, with more than sixty discovered!