

# the Rock Magnet

For Rockhounds Juniors, Teens & "Greyhounds"

MHVG&MS

Volume 1 No. 11 November 2011

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## Meet Our Four Giant Gas Planets!



Jupiter

"Hello, I am called Jupiter, after the Roman God Jupiter! I am the fifth planet from the SUN and largest planet in our Solar System. I am a **Gas Giant**, the third brightest object in the night sky after the Moon and Venus. My gasses are hydrogen and helium and I am thought to have a rocky core of heavier elements. My rotation is very rapid hence the bulge around the middle. My outer atmosphere is divided into several bands at different latitudes, resulting in turbulence and storms along their interacting boundaries. My **Great Red Spot** is a giant storm, first seen in the 17th century. I do have a faint planetary ring and a powerful magnetosphere. I have a least 64 moons, four of which were discovered by Galileo in 1610. Ganymede, is my largest moon. In 1994, pieces of the comet Shoemaker- Levy collided with me. I am told this is the first collision of two solar system bodies ever to be observed from Earth."

"Saturn here, I am a **Gas Giant** too, the sixth planet from the SUN, second largest and most beautiful! Have you not admired my rings? My mass is just over 95 times greater than Earth's. My interior is a core composed of iron, nickel, silicon and oxygen compounds, surrounded by a deep layer of metallic hydrogen, an intermediate layer of liquid hydrogen and helium and a outer layer being gaseous. My wind speeds can be as much as 1,119 miles per hour; that gives me my smooth complexion. Naturally, I am noted for my rings. Other gas giants have rings but nothing like mine. My rings are mostly ice particles with smaller amounts of rocky debris and dust. I have 62 moons and hundreds of moonlets. Titan is my largest moon. I am just very special, I even have an automobile named after me."



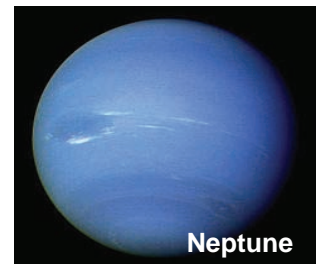
Saturn



Uranus

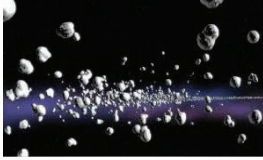
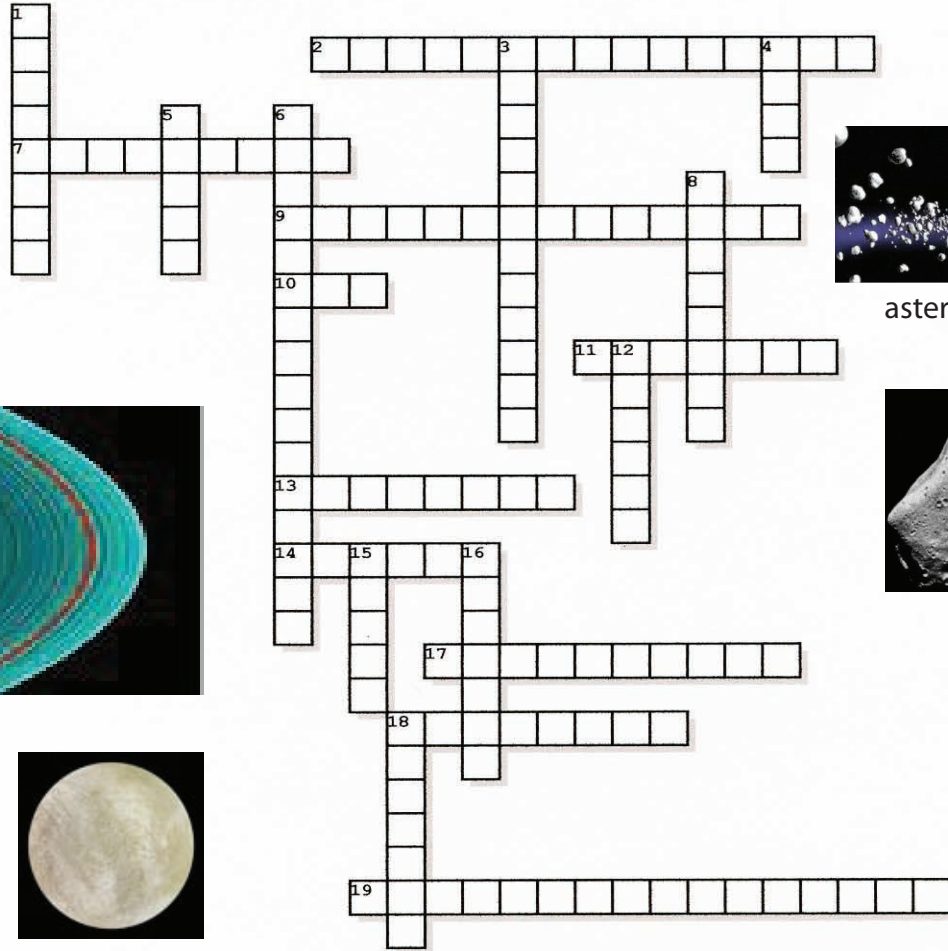
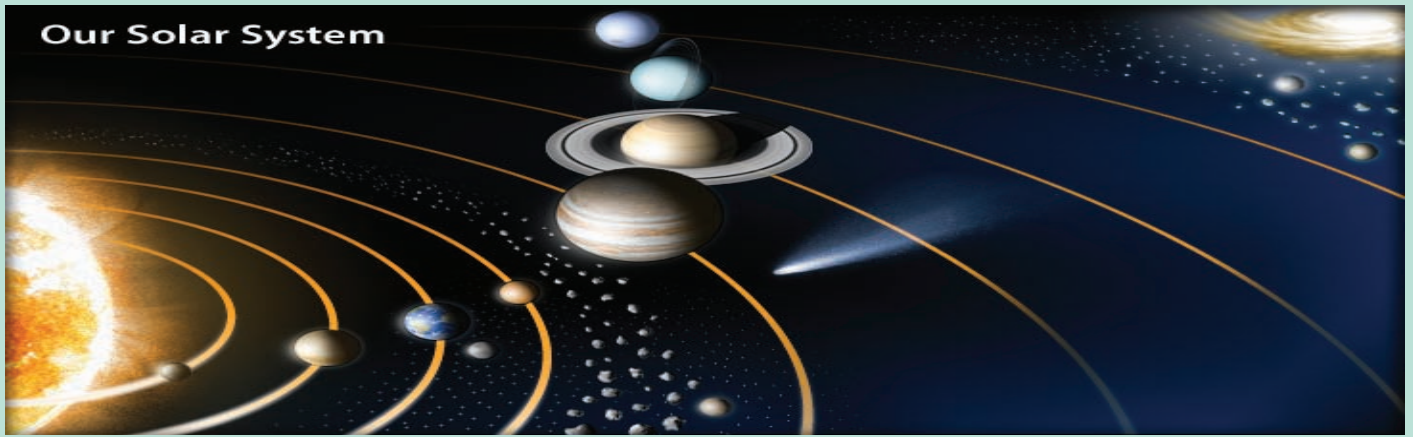
"I'm Uranus, the first planet discovered by using a telescope, in 1781 Sir William Herschel was my discoverer. I was named after an ancient Greek deity of the Sky. Just pronounce my name with a short *u* and no one will snicker. I am a **Gas Giant** planet, the seventh from the SUN, and the fourth largest planetary mass in the Solar System. I believe I should be called "**an Ice Giant**". My atmosphere's primary composition is hydrogen and helium but I have more "ices" such as water, ammonia, methane, and traces of hydrocarbons. I have the coldest planetary atmosphere in the Solar System of 49 Kelvin, -224 degrees C. or -371.2 F. I too, have a ring system and numerous moons and with my axis of rotation sideways I am the odd planet in the system, but I make up for it with a wind speed of 560 mph and a sense of humor."

"I'm not quite out here all by myself. I still have the non-planet Pluto for a companion. Yes, I am the **Gas Giant** Neptune named for the Roman God of the Sea. I am a big planet, seventeen times the mass of the Earth. I was discovered in 1846 by mathematical prediction. My atmosphere is composed mainly of hydrogen and helium with a higher proportion of "ices", so you see I like the category "**Ice Giant**". My interior is composed of ices and rock. My atmosphere is notable for its active and visible weather patterns. The Voyager 2 did a flyby and found a **Great Dark Spot** in my southern Hemisphere and recorded my great winds, the highest recorded sustained winds in the Solar System."

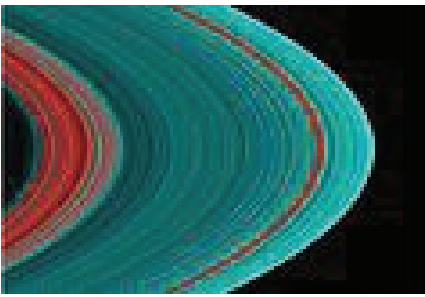


Neptune

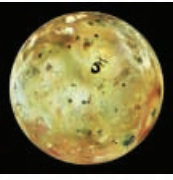
Wikipedia



asteroid belt



Europa



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**Across**

- 2 VERY LIGHT GASSES
- 7 HIT BY A COMET
- 9 SIDWAYS
- 10 NOT A SOLID
- 11 LARGEST PLANET IN THE SOLAR SYSTEM
- 13 DISCOVERED URANUS

**Down**

- 1 MINUS THREE HUNDRED AND SEVENTY -ONE DEGREES F.
- 3 LARGE STORM ON JUPITER
- 4 WATER, AMMONIA, METHANE
- 5 BITS OF ICE AND ROCK
- 6 NEPTUNE
- 8 560 MILES PER HOUR