

A Close Encounter with Jupiter

Vocabulary:

telescope, million, horizon, sulfurous, Galileo Galilei

Sneaky Preview! True or False??

Jupiter is 400 million miles from Earth. T. F.

Jupiter is brighter than the Moon. T. F.

A moon called Io looks like a pizza. T. F.

The biggest oceans in the solar system are on Earth. T. F.

Harry Potter and the Moons of Jupiter

Harry Potter and his friends Ron Weasley and Hermione Granger know all about the moons of Jupiter. They have to! It's part of basic wizard training at Hogwarts Academy. Turn to page 300 of *Harry Potter and the Order of the Phoenix* to find out more true facts about Io, Europa, Callisto and Ganymede.

This month Earth and Jupiter are only 400 million miles apart. That's what astronomers call "a close encounter."

400 million miles sounds like a long way. But compared to the size of the solar system 400 million miles isn't much. Pluto, for example, is 3000 million miles from Earth. Saturn is 800 million miles away. Jupiter is much closer than those worlds.

Because it is so close, Jupiter is brighter than any star in the night sky. In fact, it outshines everything except Venus, the Moon and the Sun.

See for yourself. Step outside after sunset and look east. (East is where the sun comes up in the morning.) You will see Jupiter not quite halfway up the sky. It looks like a super-bright star.

If you have a telescope, point it at Jupiter. Even a small telescope will show Jupiter's gaseous cloud belts and its four wonderful moons: Io, Europa, Callisto and Ganymede. Sometimes only two or three moons are visible. That's because one or two of them are behind Jupiter. Look again later. The missing moons will come out of hiding as they circle their planet.

These moons are called the "Galilean satellites" because they were first observed by Galileo Galilei in 1610. They are among the weirdest worlds in the solar system. Io looks like a pizza, and it has volcanoes that spew sulfurous snow. Europa and Callisto are icy places, hiding the biggest oceans in the solar system beneath their frozen crusts. Ganymede is simply big--larger than Pluto and Mercury, and almost as wide as Mars. If it orbited the sun instead of Jupiter, Ganymede would be considered a planet.

Sometimes, when people look at Jupiter through a telescope, they don't believe what they see. Jupiter looks squashed. Is there something wrong with the telescope? No, Jupiter really is flattened. The giant planet, 11 times wider than Earth, spins on its axis in only 9 hours and 55 minutes. Speedy rotation makes Jupiter bulge in the middle. The "squash" is real.

So are the pizza moon, the giant cyclone, and the mysterious alien oceans. They're all real. And they're all just 400 million miles away. This is a close encounter you won't want to miss.

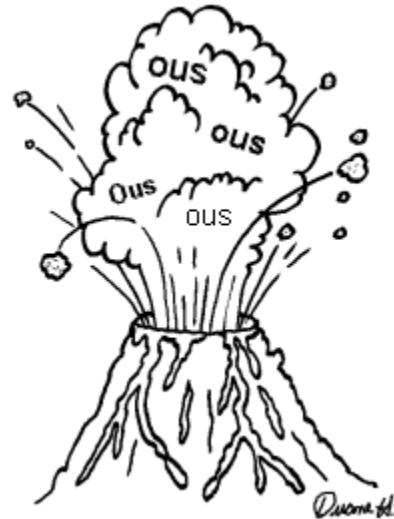
Full Of It!

OUS! OUS! OUS! Quick what does it mean?

At the end of many words, special letter combinations called suffixes can be added to give extra meaning to the word. "Ous" is a rather famous suffix.

What does it mean? If you add "ous" to a word, it adds 'having', 'full of', or 'characterized by' to the original word. Famous means full of fame. Gaseous means full of gas. How many of these words are hanging out in your brain?

So, now that you are in the know let's see what you know. Skim the article "A Close Encounter With Jupiter". Circle all of the words with the suffix "ous" at the end. Write them below and tell what they mean. Please use a complete sentence.



- 1.
- 2.
- 3.

Okay, that is fabulous. Now, check out the action below. There are a bunch of word roots that you could add to "OUS". Choose four roots and add the suffix "OUS" to them. Now take these marvelous words and, on another sheet of paper, use each one in its own incredulous sentence about one of Jupiter's moons.

poison	joy	danger
glamor	studi	humor
furi	nerv	odor

