

# Discovering Jupiter - Activities (Ages 12-15)



## Today we are going to investigate:

- How to find Jupiter in the sky
- The weather features on Jupiter
- Jupiter's orbital period
- Jupiter's internal composition

## Activities

- 1 Start up Night Sky and use your finger to move around the sky. Find the planet Jupiter (Tip: if you can't find it, try typing 'Jupiter' into the Search box). Double tap on Jupiter for a close up view of the planet's 3D model. Use your finger to move the planet around so you can see different views of Jupiter.

**Question:** Which of these description fits Jupiter best?

- a) Terrestrial (Rocky and metallic)      b) Gaseous

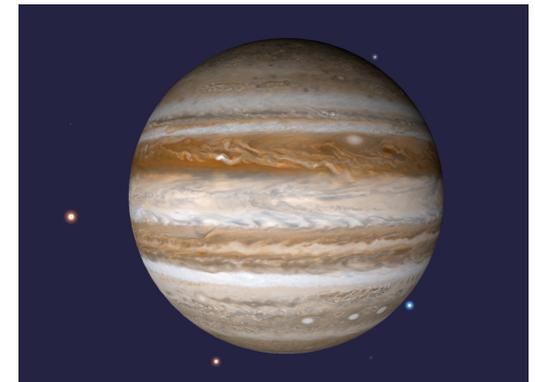
- 2 As Jupiter is a **gas giant** planet, most of the features you see on it are weather phenomena in its upper atmosphere. You will see coloured bands of cloud but there are numerous oval features. These are storms similar to cyclones on Earth. The largest of these is known as the Great Red Spot.

**Question:** Can you find the Great Red Spot? (Tip: it looks like a big orange eyeball!)

- 3 Astronomers first noticed the Great Red Spot in the 1600s and this giant storm has been raging all this time. It is so large that you could fit two Earths side by side in it! Jupiter is by far the largest of all the planets.

**Question:** How many Earths could fit inside planet Jupiter?

- a) 13 times      b) 30 times      c) 1300 times



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- 4 Jupiter is the fastest spinning of the planets; this means it has the shortest day. A day on Jupiter (one rotation) lasts just 10 hours. However, as Jupiter is further from the Sun than the Earth, it takes longer to orbit the Sun than Earth. You can investigate this for yourself using Night Sky. Return to Sky View by tapping the  in the top right corner of the screen. Note which constellation Jupiter is currently in front of. Use the Space Travel tab to advance the year one year at a time by tapping the year and scrolling through the years until Jupiter returns to the same constellation.

**Question:** Roughly how long did it take Jupiter to complete its orbit of the Sun?

- a) 6 years                      b) 12 years                      c) 18 years

- 5 Double tap on Jupiter to return to the 3D model. In the top right menu tap on  for a view of the planet's interior. Tap on each layer to bring up a descriptive label.

**Question:** What are the four layers that make up Jupiter?  
(Tip: The outer most layer is extremely thin, rotate the planet to get a better view).

### What we have discovered:

- Jupiter is a gas giant planet with a turbulent atmosphere
- Its atmospheric features include gigantic storm systems
- Jupiter is the largest planet in the Solar System
- Jupiter takes about 12 years to orbit the Sun
- Jupiter is largely composed of different forms of hydrogen

