



# ASTRONOMY @ HOME

## ATMOSPHERE & WIND

Our solar system is made up of eight planets, five dwarf planets, 200 moons, and thousands of smaller objects. Objects that have an atmosphere can be affected by wind. You can demonstrate how wind affects their surfaces at home.

### MATERIALS & STEPS

- A large bowl of water
- A straw (or you can make a paper tube)
- A spoon
- Paper or tablecloth to protect your surface

First, use your straw to blow across the surface of the water. How does the water move? How does it change if you blow softer or harder? Imagine that this water is the surface of a gas giant planet like Neptune. As winds from Neptune's atmosphere blow across the planet, the surface changes. What would happen if you tried blowing with the straw again but using sand or flour instead of water? Do you think this might resemble the way the winds affect the more solid surface of the dwarf planet, Pluto?

Next, take your spoon and start stirring the water in your bowl in a circle. Keep stirring, as fast as you can. Now it will resemble a swirling hurricane. Water or gases combine with wind to create these huge storms on many planets, including Earth. Jupiter's red spot is actually a huge storm, that has existed for more than 150 years!

### VOCABULARY

A **surface** is the outer layer of something. On Earth, it is the upper layer of land or water.

An **atmosphere** is a layer of gases held around an object by its gravity. Earth's atmosphere is made up of several gases, including the oxygen we breathe.

A **hurricane** is a large, rotating storm with winds of at least 74 miles per hour. On Earth, they form over tropical locations.

### FUN FACT

Surfaces in our solar system were created and change in many different ways. Mercury's surface has been changed by asteroids hitting and creating craters. Did you know that one of these craters was named after Dr. Seuss?



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