

POP! TEACHER RESOURCE

Lesson Plan

Weather on Neptune

Lesson Plan for *Neptune*

Grade 1

Objective

To help students explore the weather found on different planets, including how each planet's structure or atmosphere contributes to that weather.

Things Needed

- *Neptune* book
- Whiteboard
- Access to the "Neptune" web page on the Pop! website:
<https://popbooksonline.com/planets/neptune/>

Before the Activity

Read the *Neptune* book aloud to the class. Open the "Neptune" web page in your internet browser. Pull up the "Explore Links" tab and click the link for the Wonderopolis article, "What Is the Weather Like on Other Planets?" This article can also be found here: <https://www.wonderopolis.org/wonder/what-is-the-weather-like-on-other-planets>

Activity

After reading the book, ask the class to describe what the weather is like on the planet Neptune. (Answers: The planet is cold and windy. It has very fast winds. Some storms on the planet can be seen from space.)

Explain that the weather on each planet is different. To learn more about weather on other planets, read through the Wonderopolis article as a class. Write the names of the following five planets on the whiteboard: Mars, Jupiter, Saturn, Venus, and Neptune. For each planet, have the class work together to recall one fact about the planet's structure or atmosphere and one fact about the weather on the planet. Write students' answers on the whiteboard, using the following sample answers as a guide:



- Mars: Mars has almost no atmosphere. It's mostly a dry, rocky desert. Winds can kick up huge dust storms that can cover the planet and last for weeks.
- Jupiter: Jupiter is a gas giant. The big red spot on its surface is actually a giant hurricane-like storm. This storm is twice the size of Earth and has been going for hundreds of years.
- Saturn: Saturn is a gas giant. It has a white spot on its surface that is a huge thunderstorm. This storm began a few years ago. It's more than 6,200 miles wide.
- Venus: Venus has a very dense atmosphere made of carbon dioxide clouds. These clouds rain acid. The planet is also very hot. It can be almost 900 degrees Fahrenheit.
- Neptune: Neptune is very cold. It has clouds of frozen methane and very fast winds. The winds blow the clouds at speeds as fast as 1,200 miles per hour.

After completing the list on the whiteboard, call on one student to explain how each planet's structure or atmosphere is related to the weather on that planet. Use the following sample answers as a guide:

- Mars has almost no atmosphere to protect its surface, so the planet is harsh and barren.
- Jupiter is made of gas, which means its surface is not solid. Part of this surface swirls in a big storm.
- Saturn is also made of gas, so its surface is also not solid. Part of it swirls in a big storm.
- Venus's thick atmosphere traps heat to cause high temperatures. The gas this atmosphere is made of causes acid rain.
- Neptune's cold temperatures freeze the methane gas. The winds blow the frozen-gas clouds around the planet.

Evaluation

Could students recall details from the online article? Could they explain how each planet's structure or atmosphere relates to the weather that planet experiences?

Standards

This lesson plan may be used to address the Common Core State Standards' reading standards for informational texts, grade 1 (RI 1.1, 1.3), and the National Science Education Standards' Content Standard D, grades K-4.

