

Name _____



GALILEO SEES THE LIGHT

Adapted from Thursday's Classroom

<http://www.thursdayclassroom.com/03feb00/articlela.html>

If you go outside at night and watch the stars for a long time, you will see that they move across the sky. They move because the Earth is turning. Long ago, many people thought that the Earth did not move. They thought that the stars, the Moon, and the Sun moved around the Earth! If you think that sounds silly, remember, these early scientists did not have any telescopes. All they had were two eyes, curiosity, and a star-filled sky.

Four hundred years ago, a scientist named Galileo loved to study the stars. At first he looked at the stars and planets with his eyes, but he wanted to see more. He decided to build a telescope. It wasn't the first telescope, but it was the best telescope in the world.

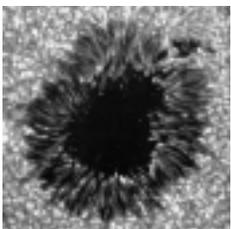
Can you imagine his excitement as he pointed his new telescope towards the stars? He could see that our Moon had mountains and valleys! He saw moons around Jupiter. His telescope amazed people all over Europe. Galileo showed his telescope to many famous people and let them look through it.

Galileo also used his telescope to study the Sun. During the summer of 1611, instead of going to the beach, he studied spots on the Sun. At first Galileo looked at the Sun through the telescope. What a mistake! It hurt his eyes.

Then, one of his students had a great idea. He pointed the telescope at the Sun and made an image of the Sun on a piece of paper. Galileo had already hurt his eyes, but this made it possible to study the sunspots safely.

Every day, he carefully drew pictures of the sunspots on the Sun. By looking at his drawings, he could tell that the sunspots were moving. He studied the drawings. He added up his numbers. Wow! The Sun must be spinning! He figured that the Sun spins around once every 27 days.

Galileo spent a lot of time looking at the planets. When he pointed the telescope at Jupiter, he also saw four tiny points of light. Each day the lights moved, but they were always around Jupiter. Galileo had discovered Jupiter's four biggest moons! This discovery made him famous.



Doing experiments made Galileo even more famous. Before Galileo, scientists did not do experiments. They thought and reasoned. Galileo made up experiments to prove his ideas.

Galileo also looked at the planet Venus. He was surprised by what he saw. Sometimes Venus looked like a crescent; sometimes it was full (like phases of the Moon). The only way that could happen would be if Venus moved around the Sun! In those days many people thought that the Earth was the center of everything. The Earth stood still and everything moved around our planet. The phases of Venus and the moons of Jupiter proved that the planets move around the Sun.

In Galileo's time, most people believed that the Earth stood still. Galileo's ideas were strange and exciting. There was a group of people that had the job of guarding people against bad ideas. This religious group was called the Inquisition. The Inquisition did not want Galileo to teach that the Earth moved around the Sun. They told Galileo that he could no longer teach those ideas. They thought that Galileo was wrong!

Now, we know that the Earth is not at the center of our solar system. Like all the other planets, the Earth moves around the Sun.

Thanks to Galileo and other brave scientists, we know the truth. The Earth is not at the center of everything. The most important thing Galileo taught us was a new way of doing science. By watching and experimenting you can learn a lot about nature. Galileo was a great scientist.

Fill in the blanks with these vocabulary words.

experiments 27 Sun sunspots Galileo telescope

Many years ago people thought that the Earth did not move. They thought that the stars, Moon, and the Sun moved around the Earth. Galileo used his _____ to study the Sun. By making an image of the Sun on a piece of paper, Galileo could study _____ safely. By looking at his drawings, _____ could tell that the sunspots were moving. He discovered that the _____ must be spinning. He figured out that the Sun spins on its axis once every _____ days. Galileo taught us a new way of doing science—by doing _____.