

Understanding the Universe

Once upon a time, people told stories to explain the universe and the things in it. In 2000 BC, the ancient Egyptians thought the Sun circled Earth. In 350 BC, a Greek thinker named Aristotle said Earth was the center of the whole universe. This would mean that the Sun, Moon, planets, and stars revolved around Earth.

People believed Aristotle's idea for more than 1,500 years! But then Nicolaus Copernicus from Poland disagreed. He said the Sun, not Earth, is at the center of the universe.

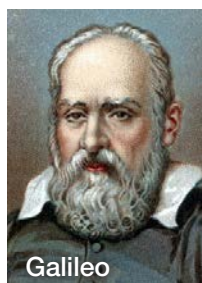
People called Copernicus crazy!

Sixty years later, an Italian scientist looked through one of the first telescopes in the world. His name was Galileo. He saw four moons circling the planet Jupiter. What he saw led him to two new ideas. Planets revolve around stars. Moons revolve around planets. This changed the way people thought about the universe.



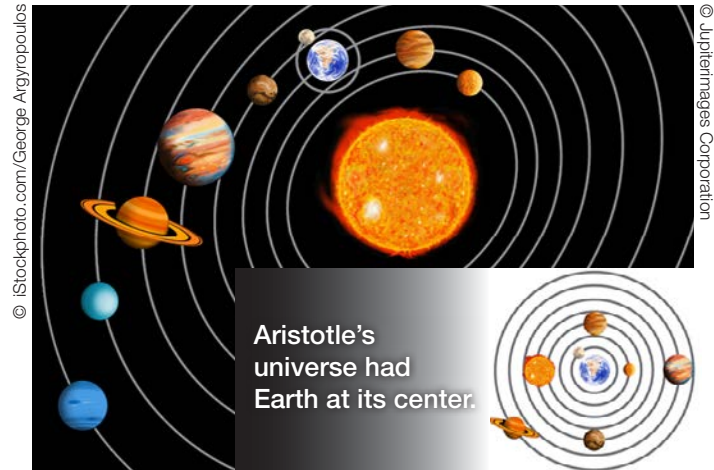
Copernicus

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Galileo

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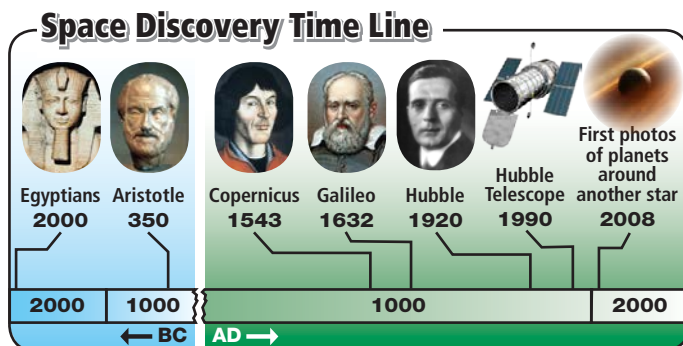
Aristotle's universe had Earth at its center.

The solar system as we know it today, with the Sun at the center, then Mercury, Venus, Earth (with the Moon), Mars, Jupiter, Saturn, Uranus, and Neptune

More new information was added in 1920. American astronomer Edwin Hubble pointed to fuzzy spots in the sky. He said they are not in the Milky Way Galaxy. They are other galaxies. And they are speeding away from us!

Today many scientists use a theory called the big bang theory. They say the universe is bigger than people once thought. They say a huge explosion created an ever-expanding universe.

Do you think we are done learning about the universe? Not yet. History shows that our ideas about the universe keep changing and growing.



Brain Check

- Describe Aristotle's idea of the universe.
- What was Edwin Hubble's discovery?
- What ideas do you think will change in the future?

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