

# History of Space Science to 1700s

## Expectations

1. Describe how early cultures created \_\_\_\_\_ to explain the universe.
2. Explain the differences between the \_\_\_\_\_ System and \_\_\_\_\_ System.
3. Describe how humans' understanding of the universe developed in \_\_\_\_\_.
4. Describe how each scientist contributed to the \_\_\_\_\_ and \_\_\_\_\_ systems.

## Myths

At the beginning of mankind, early civilizations did not understand modern science. They created \_\_\_\_\_ to explain the universe.

### Example I: Pangu Creates the World

- From \_\_\_\_\_.
- Pangu used his hands and legs to break the chaos.
- His \_\_\_\_\_ eye became the Sun.
- His \_\_\_\_\_ eye became the Moon.
- His \_\_\_\_\_ became the soil.

### Example II: The Turtle Island Myth

- From \_\_\_\_\_.
- The Earth was formed on the back of a giant \_\_\_\_\_ – “Turtle Island”.
- A woman gave birth to twins.
- The \_\_\_\_\_ Twin placed the Sun in the sky for \_\_\_\_\_.
- The \_\_\_\_\_ Twin placed the Moon in the sky for \_\_\_\_\_.
- Such myths explained the \_\_\_\_\_ before scientific astronomy.

## Ancient Greek Astronomy

### Eudoxus (390–337 BCE)

- Proposed the first geometric model of planetary motion.
- Used \_\_\_\_\_ concentric spheres with Earth at the center.
- First to use \_\_\_\_\_ and \_\_\_\_\_ to analyze the heavens.

### Aristotle (384–322 BCE)

- Expanded Eudoxus's model using about \_\_\_\_\_ concentric spheres.
- Earth is a \_\_\_\_\_ and \_\_\_\_\_ at the universe's center.
- Everything travels in \_\_\_\_\_.
- The universe is \_\_\_\_\_ and finite.

### Ptolemy (100–170 AD)

- Developed the \_\_\_\_\_ Model.
- Introduced \_\_\_\_\_ to explain \_\_\_\_\_.

## Heliocentric System

### Copernicus

- Proposed the \_\_\_\_\_ Universe.
- Planets arranged by \_\_\_\_\_.
- \_\_\_\_\_ explained by Earth's motion, no epicycles needed.

### Tycho Brahe

- Built \_\_\_\_\_.
- Proposed a \_\_\_\_\_ model.

### Johannes Kepler

- Showed planetary orbits are \_\_\_\_\_.
- Laws of Planetary Motion: \_\_\_\_\_.

## Galileo Galilei

- First to use a \_\_\_\_\_ for astronomy.
- Discovered moons of \_\_\_\_\_.
- Opposed the \_\_\_\_\_ model.
- Condemned by the \_\_\_\_\_.

## Student Activity II