



Ideas about the Solar System

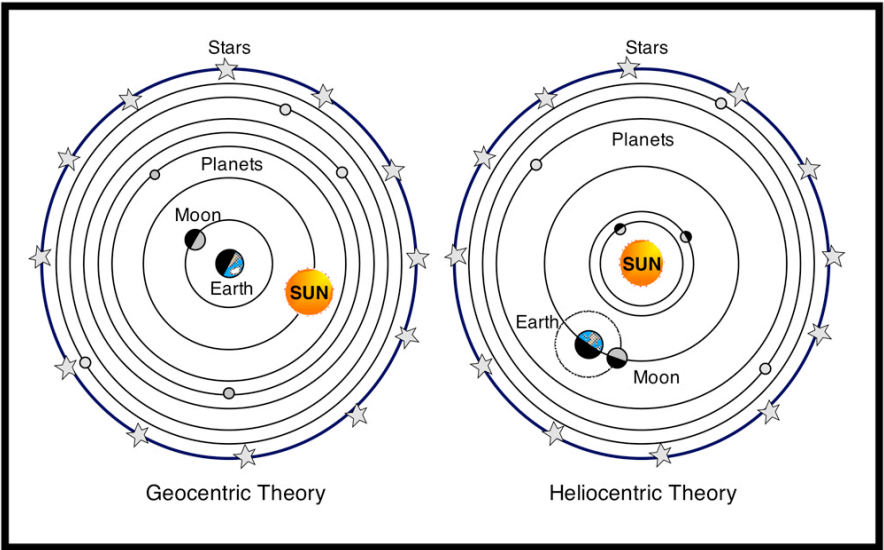


At this time in history everyone knows that the earth orbits around the Sun. But this has not always been true. Early people believed that the solar system was geocentric. Geo means earth and centric means center, so they believed that the earth was the center of the solar system and all the planets and the Sun revolved around it. After many years of studying the skies and the invention of the telescope, astronomers proved that the solar system was heliocentric (helio meaning Sun). There are some important astronomers and mathematicians whose ideas contributed to our knowledge of the solar system. We will see them in the power point your teacher shows you.

Watch and listen to the power point. Place the words from the word bank next to the scientist who worked with these ideas.

WORD BANK		
Heliocentric	Geocentric	Epicycles
Gravity	Inertia	Invented Telescope
Elliptical Orbits		

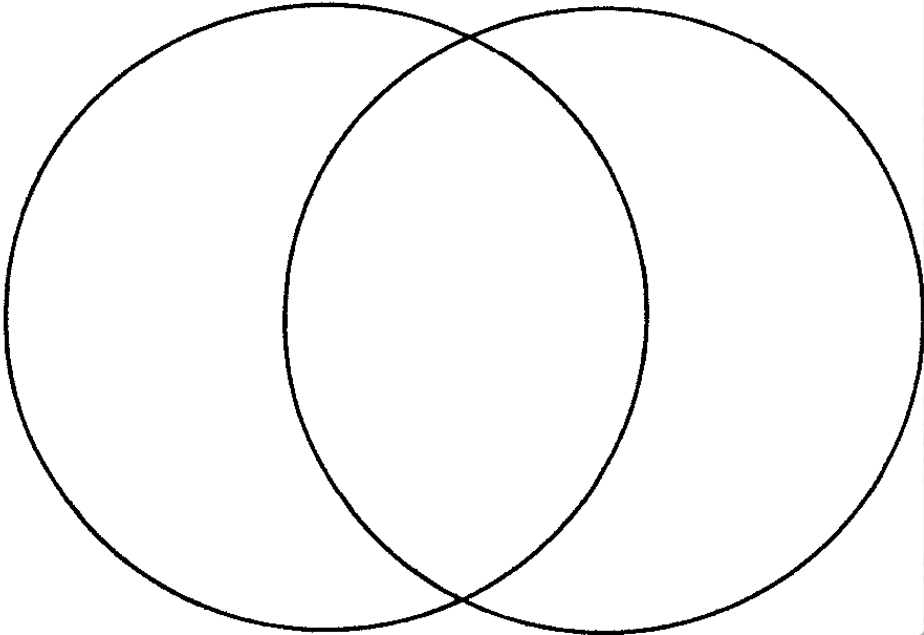
Scientist	Ideas
Ptolemy	
Copernicus	
Galileo	
Kepler	
Newton	



1. Observe the image of the Geocentric and Heliocentric Theories above.
2. Fill in the Venn diagram below comparing the two images.

Geocentric

Heliocentric





Systems make up Systems

The word system comes from the Greek meaning a whole made of several parts. Most systems share common characteristics, including

- Systems have structure and are made up of components or parts.
- Systems are interconnected to other systems
- Systems have functions

There are natural and man-made systems and both are designed for their parts to work together.

What To Do:

1. Look at the lists below and determine which components go together to form the system.
2. Cross out the component that doesn't fit in the system.

Computer System

Mouse
Keyboard
DVD drive
Hard drive
Software
Fingers
Printer

Human Body System

Stomach
Brain
Battery
Eyes
Ears
Toes
Heart

Earth System

Rain
Clouds
Land
Ocean
Mars
River
Air

Questions:

1. Which of the systems above are natural systems?

2. Which of the systems above are man-made systems?

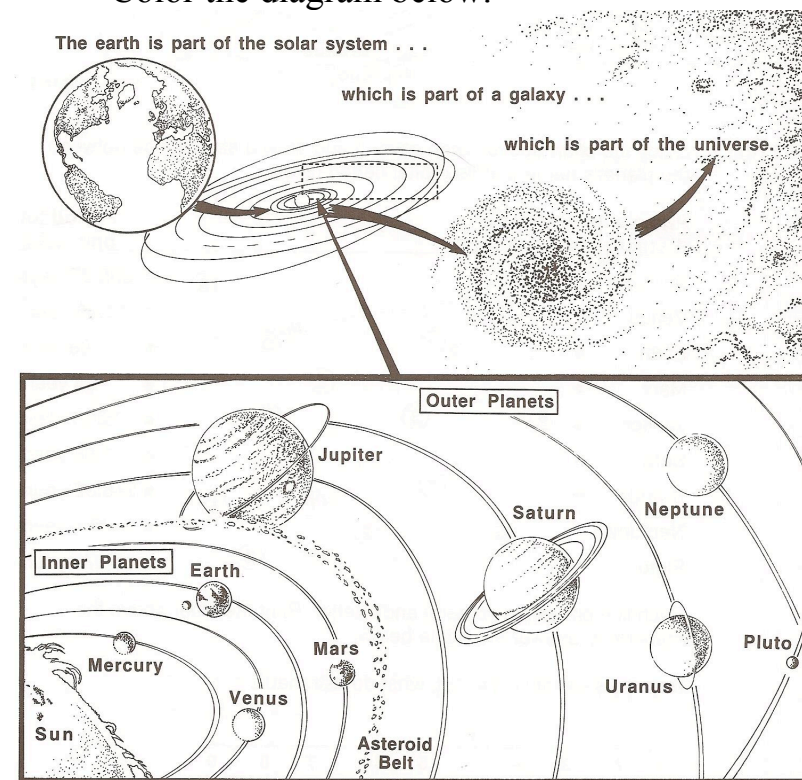
3. Name 5 components of your classroom system.



Everything in space is part of the universe.

The solar system consists of the sun and eight known planets that revolve around it. The sun is just one star of the 100 billion or so that make up the Milky Way galaxy. In the universe, there are millions of other galaxies, each containing billions of stars. So each system is part of another system that makes up the entire universe.

- Color the diagram below.



Questions:

1. Name the components of the universe shown in the diagram above. _____
2. Everything we know of is in the universe but the universe doesn't have a name like the galaxy or the solar system. What would you name the universe?

☐

Name _____ period _____

EXIT TICKET

Ideas about the Solar System

1. Which of the following astronomers is known for his work in gravity and inertia?

- A. Ptolemy
- B. Galileo
- C. Newton

2. Which of the following astronomers is known for inventing the telescope?

- A. Ptolemy
- B. Galileo
- C. Newton

3. Which of the following astronomers is known for believing the earth was the center of the solar system?

- A. Ptolemy
- B. Galileo
- C. Newton

4. What does geocentric mean?

- A. Earth in the center
- B. Sun in the center

5. How is our solar system arranged?

- A. Geocentric Model
- B. Heliocentric Model

☐

Name _____ period _____

EXIT TICKET

Ideas about the Solar System

1. Which of the following astronomers is known for his work in gravity and inertia?

- A. Ptolemy
- B. Galileo
- C. Newton

2. Which of the following astronomers is known for inventing the telescope?

- A. Ptolemy
- B. Galileo
- C. Newton

3. Which of the following astronomers is known for believing the earth was the center of the solar system?

- A. Ptolemy
- B. Galileo
- C. Newton

4. What does geocentric mean?

- A. Earth in the center
- B. Sun in the center

5. How is our solar system arranged?

- A. Geocentric Model
- B. Heliocentric Model