5 The Scientific Revolution

Guide for Reading

How did astronomers change the way people viewed the universe?

* It helped people understand How the universe is.

What was the new scientific method?

How did Newton's work link physics and astronomy?

What advances were made in chemistry and medicine?

1. Identify

(a) Nicolaus Copernicus: proposed a sun-centered model of universe

(b) Tycho Brahe: supported evidence to Copernicus theory

(c) Johannes Kepler: was an astronomer and mathematician

(d) Galileo Galilei : was the 1st person to see mountains on the moon

(e) Andreas Vesalius: had the 1st accurate and detailed study of human body

(f) William Harvey: showed how the heart as a pump to force blood through veins and arteries

(g) René Descartes: was part of the new scientific method

2.Define (a) heliocentric: measured from or considered in relation to the center of the sun.

(b) gravity: the force that attracts a body toward the center of the earth, or toward any other physical body having mass.

3.Why did each of the following challenge the heliocentric theory:

(a) scholars: because it went against the church and against the teachings of Ptolemy.

(b) the Church: they thought it contradicted the Biblle

4.How did the new scientific method that was developed in the 1500s and 1600s differ from the traditional approach to science?

* scientists and natural philosophers study only the natural world

5.How did Newton explain the workings of the universe?

* By publishing Mathematical Principles of Natural Philosophy.

6.Identify three advances in medicine during the 1500s and 1600s.

* In 1500s Italian physician Sanctorius investigates metabolism,
* 1600s Abroise Pare' introduces that ligation of arteries is essential for the control of hemorrhage,
* 1600s Italian mathematician Alfonso Borelli investigates the area of physiology

7.Critical Thinking Applying Information Identify three ways in which your life would be different if the Scientific Revolution had not occurred.

- I don’t really know how our lives would be without the Scientific revolution because many of the objects we use now day to day have been invented there, but I think that maybe we would be behind in technology, also medicine would be behind, and people would still thinking we are the center of the universe