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| **Unit IV – A Question of Sovereignty** |
| **(4-3) Scientific Revolution – pg. 203 – 218** |
| **Guided Reading Questions** |

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*Answer the question or define the term for each:*

**New Directions in Thought and Culture in the Sixteenth and Seventeenth Centuries**

1. What two factors simultaneously challenged European thought and culture in the 16th and 17th centuries?

**People to Know**

* Nicolaus Copernicus (1473-1543)
* Tycho Brahe (1546-1601)
* Johannes Kepler (1571-1630)
* Francis Bacon (1561-1626)
* Galileo Galilei (1564-1642)
* René Descartes (1596-1650)
* Thomas Hobbes (1588-1679)
* John Locke ((1632-1704)
* Isaac Newton (1642-1727)

**The Scientific Revolution**

1. Why might the term “revolution” be inaccurate in describing the Scientific Revolution?

**Nicolaus Copernicus Rejects an Earth-Centered Universe**

1. How was Nicolaus Copernicus’s work “revolution-making”?
2. Describe the Ptolemaic system as enhanced by Aristotle.
3. How impactful was Copernicus’s work soon after it was published?

**Terms to Know**

* geocentricism
* Ptolemaic model
* heliocentric
* empiricism
* mechanism
* “institutions of sharing”

**Tycho Brahe and Johannes Kepler Make New Scientific Observations**

1. How did Johannes Kepler impact the study of astrology and how did Tycho Brahe help to contribute to that impact?

**Galileo Galilei Argues for a Universe of Mathematical Laws**

1. How did Galileo change how we view the universe?

**Isaac Newton Discovers the Laws of Gravitation**

1. What final piece of information did Isaac Newton contribute to the problem of explaining planetary motion?

**Key Events**

**1543 –** Copernicus publishes work on *heliocentricism*

**1609 –** Kepler publishes *The New Astronomy*

**1620 –** Bacon publishes *Novum Organum*

**1651 –** Hobbes publishes *Leviathan*

**1687 –** Newton publishes *Principia Mathematica*

**1689-90 –** Locke publishes his work on government

**Philosophy Responds to Changing Science**

**Nature as Mechanism**

1. Describe the idea of mechanism and how it impacted European thought.

**Francis Bacon: The Empirical Method**

1. Describe Bacon’s impact on European thought.

**René Descartes: The Method of Rational Deduction**

1. How is Descartes’s method of reasoning different from Bacon’s? What is the difference between *induction* and *deduction*?

**Thomas Hobbes: Apologist for Absolute Government**

1. Describe the idea behind Hobbes’s “social contract”.
2. Under Hobbes’s ideas, what role does the ruler have under the “social contract?”

**John Locke: Defender of Moderate Liberty and Toleration**

1. How did John Locke view human beings?
2. What are rules/laws that govern Locke’s beliefs about government?

Trust –

Toleration –

 Blank Canvas Mind –

**The New Institutions of Expanding Natural Knowledge**

1. How are late Middle Age and Reformation views on knowledge different from those that came after during the “scientific revolution”?
2. How might the “institutions of sharing” of the 17th century be compared to TED Talks/Ed of the 20th/21st centuries?

**Please read the “IN PERSPECTIVE” section for an overview of the chapter on page 234.**