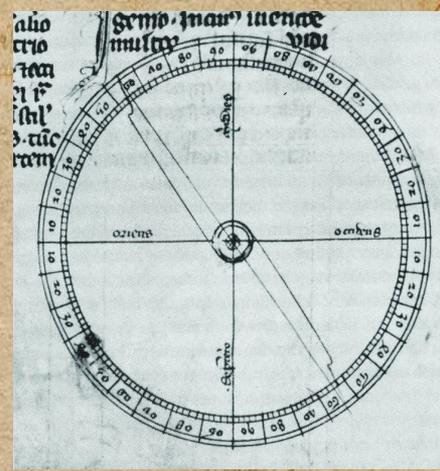


THE SCIENTIFIC REVOLUTION: KEY DEVELOPMENTS



INTRODUCTION TO THE SCIENTIFIC REVOLUTION



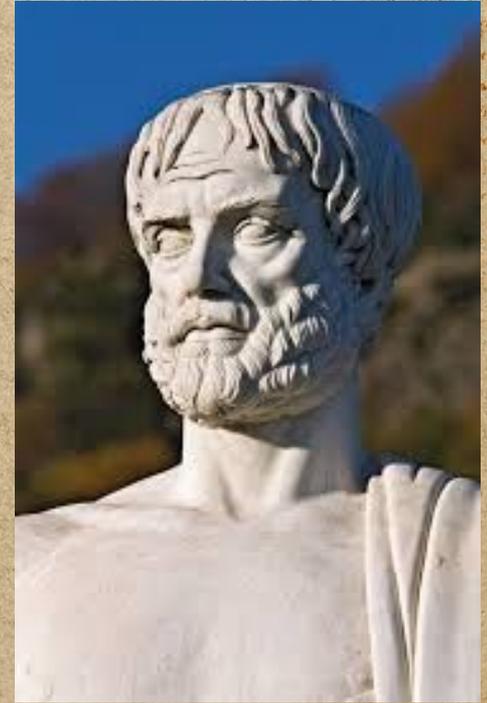
- ❖ The Scientific Revolution began in the 1500s.
- ❖ Scientists, known as natural philosophers, used reasoning and observation.
- ❖ Transformed life in Europe and beyond.

ORIGINS OF MODERN SCIENCE

✦ Prior to 1500, knowledge came from the Bible and Aristotle.

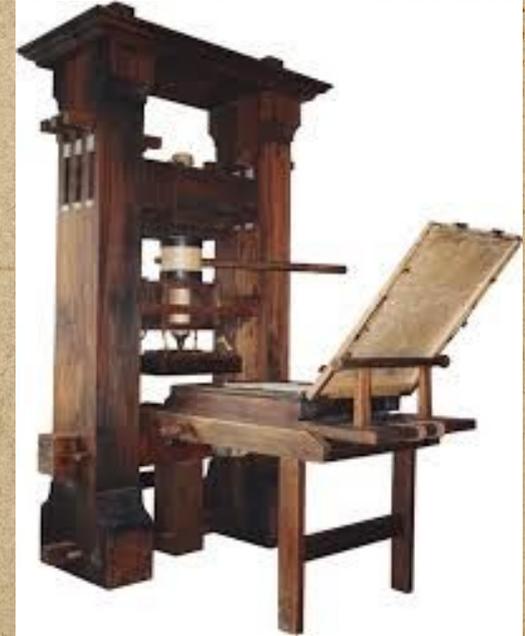
✦ The Renaissance and Reformation encouraged independent thought.

✦ Questioning spirit led to the growth of science.



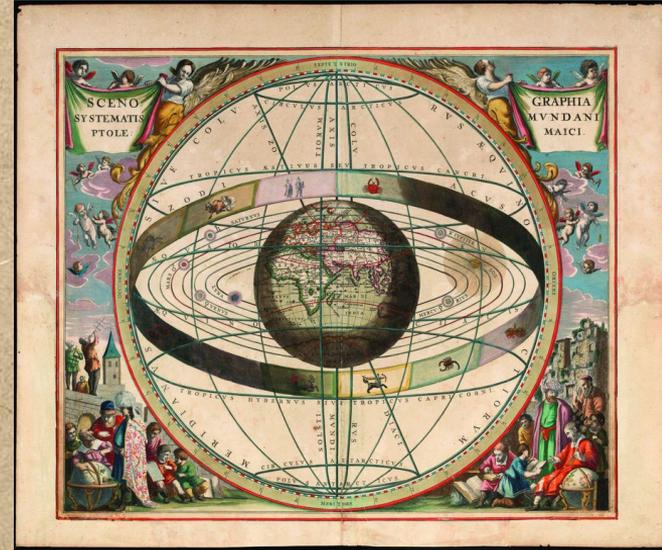
FACTORS INFLUENCING THE REVOLUTION

- ❖ Universities fostered scientific studies.
- ❖ Overseas trade brought new knowledge from various cultures.
- ❖ The printing press spread information rapidly.



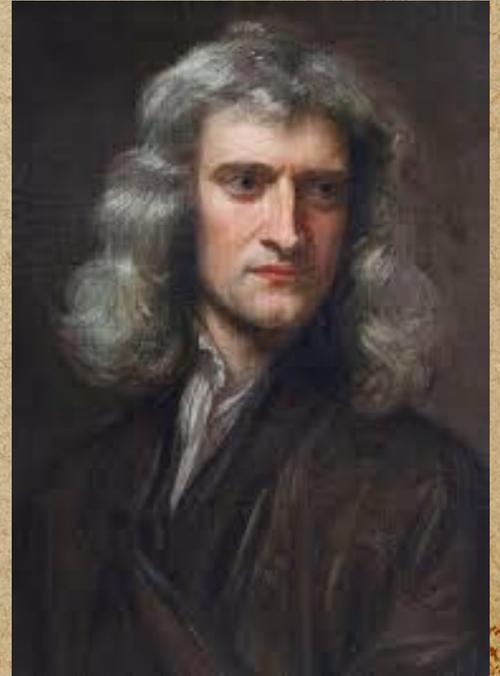
KEY BREAKTHROUGHS IN ASTRONOMY

- ❖ Earth was believed to be the center of the universe (geocentric theory).
- ❖ Copernicus proposed the heliocentric theory in 1543.
- ❖ Kepler calculated elliptical orbits; Galileo supported Copernicus with telescope observations.



NEWTON'S CONTRIBUTIONS

- ❖ Isaac Newton published Principia in 1687.
- ❖ Explained laws of gravity and motion.
- ❖ Viewed the universe as a mechanical system



DEVELOPMENT OF THE SCIENTIFIC METHOD

Steps of the Scientific Method ▼

1 State a question or a problem



2 Form a hypothesis.



3 Conduct an experiment to test the hypothesis.



4 Measure data and record results.



5 Analyze the data to determine if the hypothesis is correct.



❖ The scientific method involves observation, hypothesis, experimentation, and analysis.

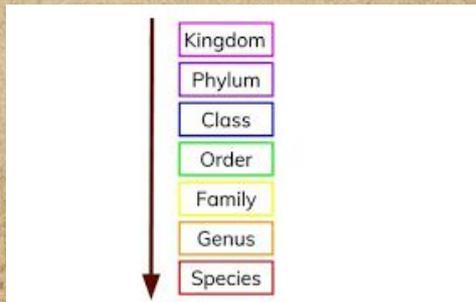
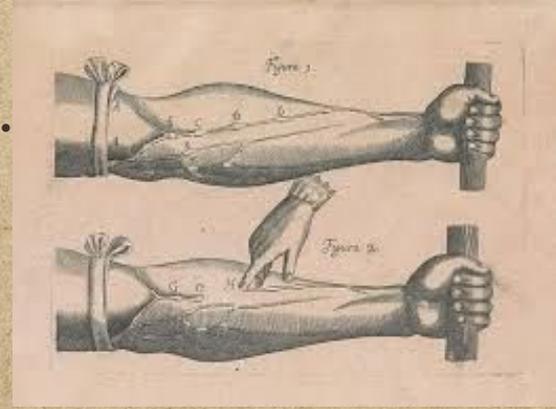
❖ Influential figures: René Descartes and Francis Bacon.

❖ Emphasized practical benefits of scientific discoveries.

EXPANDING SCIENCES

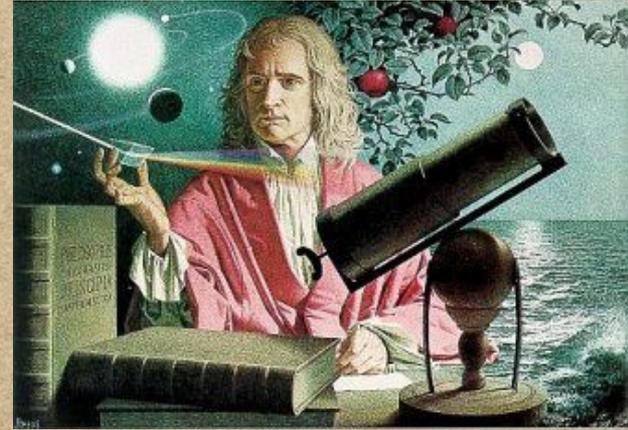


- Key discoveries in biology, medicine, and chemistry.
- Carl Linnaeus classified plants and animals.
- William Harvey discovered blood circulation
- Antoine Lavoisier explained combustion.



IMPACT ON SOCIETY

- Scientific advancements inspired new ways of thinking about human society.
- Encouraged principles of reason and progress.
- Laid foundations for modern science and technology.



CONCLUSION

- The Scientific Revolution was a gradual process.
- Its influence continues today in various fields.
- Encouraged curiosity and exploration of the natural world.

