# The Scientific Revolution Assessment

Name:

Date:

## Step 1: Complete the chart.

Use at least three complete sentences to describe the contribution and significance of each of the scientific thinkers listed and two additional thinkers of your choice. An example is provided for you.

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| **Scientific Thinker** | **Contribution and Significance** |
| *Galileo* | *Galileo was Italian. He studied multiple subjects including math and astronomy. Galileo developed a better telescope that enabled him to provide evidence for the sun-centered universe (heliocentric) theory developed by Copernicus. He suffered for his work since the theory contradicted Church teaching.* |
| Francis Bacon | Francis Bacon was an English philosopher who basically helped kickstart the modern scientific method. Instead of just accepting what ancient texts or traditions claimed, he pushed for observation, experimentation, and inductive reasoning—basically, looking at real-world evidence to form conclusions. His approach completely changed how people went about learning and discovering new things. Thanks to Bacon, science became less about “what’s always been believed” and more about “what can actually be proven.” |
| Rene Descartes | René Descartes, the French philosopher and mathematician, is famous for that iconic line, “I think, therefore I am.” His big thing was reason—he believed it was the best tool for figuring out what’s true. Descartes also made huge contributions to math, especially in analytical geometry. But what really set him apart was his insistence on questioning everything. Doubt wasn’t a problem for him; it was the starting point. This mindset helped shape the way scientific investigations are done even today. |
| Sir Isaac Newton | Isaac Newton, an English mathematician and physicist, revolutionized science with his laws of motion and universal gravitation. His discoveries explained the movement of objects both on Earth and in space, bridging the gap between celestial and terrestrial mechanics. His groundbreaking book, Principia Mathematica, became one of the most influential scientific works in history, not just explaining the physical world but transforming the way people viewed it. |
| Johannes Kepler | Johannes Kepler was a German astronomer best known for formulating the three laws of planetary motion. While many still believed in perfect circular orbits, Kepler showed that planets move in ellipses. His work provided strong evidence for the heliocentric model, proving that the Sun—not the Earth—was at the center of the solar system. By refining humanity’s understanding of how planets move, Kepler’s discoveries changed the course of astronomy forever. |
| Tycho Brahe (Your choice 1—pick another thinker presented in the lesson.) | Tycho Brahe was a Danish astronomer famous for his precise and detailed observations of the night sky. Before the invention of the telescope, he created sophisticated instruments to accurately measure the positions of stars and planets. His dedication to collecting accurate data revolutionized astronomy. Brahe’s extensive records of planetary movements were essential for his assistant, Johannes Kepler, who later used them to develop his laws of planetary motion. Tycho’s work was a crucial link between traditional astronomy and the emerging scientific revolution. |
| Robert Boyle (Your choice 2—pick another thinker presented in the lesson.) | Robert Boyle, an Irish chemist, physicist, and inventor, is often considered the father of modern chemistry. He is best known for Boyle’s Law, which describes the inverse relationship between the pressure and volume of a gas, a fundamental principle in physics and chemistry. Boyle was a strong advocate for the scientific method, emphasizing the importance of careful experimentation and observation. His work helped shift chemistry away from mystical alchemical practices, establishing it as a rigorous scientific discipline. Boyle’s contributions laid the foundation for modern chemical science. |

## Step 2:

"Revolution" can be defined as a complete or significant, wide-reaching change. What made the Scientific Revolution revolutionary? Explain your response in at least **one complete paragraph**, using details you learned in the lesson.

The Scientific Revolution revolutionized the way humans understood the universe and gained information about it in a profound manner. Before, most information about the universe stemmed almost wholly from religious doctrine, writings of long ago, and unchallenged custom. But in the Scientific Revolution, observers began to espouse observation, testing, and the scientific method as paramount for discovering reality. That transformation encouraged humans to challenge traditional thinking and seek fact-based explanations for life, physics, and the universe, opening doors for modern science. The revolution wasn't new information, but a new way of thinking in terms of putting reason, inquiry, and observation first, and one that continues to shape our reality today.