| Scientist | Contribution(s) | Impact |
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| Alessandro Volta | Volta is known for the invention of the electric battery, to which he gave his name for the voltaic pile and later the term 'volt'. | The invention of the electric battery enabled other scientists to conduct experiments such as the decomposition of water into hydrogen and oxygen. This birthed the field of electrochemistry. |
| Anders Celsius | He observed the aurora borealis and built the Uppsala Observatory and also invented the centigrade scale of temperature. | Most of the modern world uses the centigrade scale as the standard of measurement for temperature. It is used by individuals and scientists to communicate temperature in a standard manner no matter location in the world, although the USA uses Fahrenheit alongside Celsius, and scientists also use Kelvin. |
| Andreas Vesalius | Vesalius studied the human body and illustrated the first complete textbook on the subject of the human anatomy. | Following the work of Vesalius, European learning began to include medical topics and move towards greater study of anatomy and biology. Anatomy was made into a scientific discipline. |
| Antoine Lavoisier | Lavoisier proved the existence of hydrogen as well as oxygen, and he demonstrated the latter's part in combustion. He came up with theories such as products of a chemical reaction being equal in mass to reactants. He also worked to compose the metric system and establish norms of modern chemistry. | Through his findings, Lavoisier revolutionized chemistry and composed the first comprehensive listing of known chemicals, which would help organize the study. The discovery of oxygen and hydrogen as important, reactive elements would help to shape chemical experiments. The metric system became the |

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| | | standard of measurement in most of the world, and is used as a standard of communicating measurements between scientists no matter their nationality. |
| Anton Leeuwenhoek | Leeuwenhoek made microscopes with single lenses instead of compound microscopes. Using these microscopes, he observed protozoa and bacteria in the late 17th century. He called them animalcules. He communicated with the Royal Society of England his studies of organisms. | His private efforts led to improvements in the construction of microscopes and the beginning of microbiology. Leeuwenhoek's findings let to scientific study of the makeup of organisms and combatted theories of spontaneous generation. He enabled scientists to better understand the world of microorganisms, and therefore expand knowledge in associated fields of science (medicine, etc.). |
| Blaise Pascal | Pascal's most important contribution is Pascal's Principle of Pressure. He also invented an early mechanical calculator. | The Pascal is now a unit used to measure pressure. Pascal's Principle of Pressure is that "pressure applied to a confined liquid is transmitted undiminished through the liquid in all directions regardless of the area to which the pressure is applied." This helped to explain the behavior of liquid and shaped understanding of future studies. His other inventions, such as the calculator or contributions in math, would be important in simplifying work and moving mathematics forward. |

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| Carolus Linnaeus | Linnaeus established the naming system for species, known as binomial nomenclature. | Binomial nomenclature has been used up to the modern day, and continues to be used, simplifying the organization of species and making it easier for scientists to map out and understand the relationships of species. |
| Christiaan Huygens | Huygens established the wave theory of light, determined the shape of Saturn's rings, and studied dynamics. | Despite not being recognized during his time, Huygens' principle has been used to properly predict and observe the behavior of light waves, helping to prove laws of reflection and refraction. Understanding of light also enables humans to manipulate it for purposes of communication, for example. |
| Evangelista Torricelli | Torricelli invented the barometer and helped develop integral calculus. He was the first man to create a sustained vacuum. | The barometer has been used to help humans to forecast the weather and better understand the behavior of the atmosphere. Vacuums would be important in future experiments. |
| Francis Bacon | Francis Bacon's most important contribution is his work on developing ideas of the Baconian method. He also helped advocate for what would culminate in the Royal Society and fathered British empiricism. | The Baconian Method was the new investigative method that replaced Aristotle's methods. This method would form the basis of the scientific method, basing study around questions, observations, and experiments. |
| Gabriel Fahrenheit | Fahrenheit was known for designing thermometers with alcohol and later mercury, as well as using a | The Fahrenheit scale is still in use in the United States today, and his studies of temperature and alcohol |

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| | scale that he developed after extensive experimentation, named after him: the Fahrenheit scale, ranging from 0 to 212. | and mercury helped to influence research into other ways of measuring the temperature of materials such as water and the development of other measurement systems. |
| Galileo | Galileo supported Copernicus' claims of a heliocentric model, clashing with the church and being accused of heresy. He constructed and used a telescope to observe the solar system, helping to prove the heliocentric model | While it is debatable as to the importance of Galileo's work seeing how he built off of other ideas, he was influential in emphasizing and popularizing science as wholly separate from the Church and reliant upon observation, analysis, and experimentation. His conflict with the Church also impacted relations between the scientific community and religious community, a rift that continues to often divide individuals. |
| Gottfried Leibniz | Leibniz is known for his efforts to develop the basics of calculus. He studied and expanded upon calculus. | While Newton may have worked some on Calculus, it is Leibniz who truly expanded Calculus into what is recognizable as the form of mathematics today. Calculus is used in many disciplines, including engineering, medicine, physics, economics, and other scientific fields. Utilizing Calculus, scientists have been able to come to solutions to problems through the development of mathematical models. |
| Isaac Newton | Newton established the Newtonian laws of physics after extensive study following his assertion of | Newton further expanded on the scientific method, which continues to shape the scientific field to the |

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| | gravity. He also studied alchemy, chemistry, and mathematics, such as his manuscripts relating to a theory of chemical force. | modern day, as well as establishing laws of physics that are still largely true, which, by allowing us to explain natural phenomena, enabled study and explanation of other subjects in science. Understanding of physics enabled humans to conceive and produce technological wonders of propulsion, for example. Newton's work in calculus also helped to form a base from which calculus could be further expanded into the important mathematical field it is today. |
| Johannes Kepler | Kepler established three laws of planetary motion. He asserted that planets orbit the sun in an elliptical fashion, "the time necessary to traverse any arc of a planetary obit is proportional to the area of the sector between the central body and that arc", and the fact that there existed an exact relationship between the square of periodic times of planets and the cubes of the radii of their orbits. | Kepler's assertions transformed the heliocentric model, which had been popularized by Copernicus, into a dynamic model in which active pushing and pulling occurred between the celestial bodies, with the Sun having great force in push and pull. |
| Nicolaus Copernicus | Copernicus is most known for his assertion of a heliocentric model of the solar system instead of a geocentric one. | Copernicus is largely credited with the Heliocentric model, which revolutionized observation of the solar system and the space we inhabit as Earthlings, even though Aristarchus of Samos first |

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| | | promulgated a heliocentric model many, many centuries before Copernicus. The Heliocentric model is the model of the Solar System we follow today, as it has been proven through observation, and this understanding enabled scientists over the past several centuries to better draw conclusions about the behavior of celestial bodies and therefore effects upon the Earth, such as the movement of the Earth around the Sun affecting Earth's weather. |
| Rene Descartes | Descartes abandoned Aristotelianism and wrote instead of mind-body dualism. He promoted experimentation and observation in science. He is best known for his ideas of philosophy, opposing assumption based on blind faith. | Descartes practically founded modern philosophy and promoted rational thought. Most humans today adhere to following rational thought and reasoning to gain knowledge. The philosophy of Descartes is still taught. By using reasoning to come to conclusions and by popularizing such reasoning, the dogmatic principles of the past were discarded and belief systems were obsoleted, enabling the scientific community to move forward and support of the scientific pursuit of knowledge to increase. |
| Robert Boyle | Boyle is known for the eponymous Boyle's Law, a law of chemistry in which the volume of gas is | Boyle's Law is still adhered to and taught in Chemistry today. This understanding of the behavior of gas has |

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| | inversely related to pressure. | enabled experiments that are conducted with that knowledge in mind to perform research necessary in making important discoveries in the manipulation of elements for human benefit. |
| Tycho Brahe | Tycho Brahe accurately mapped over 700 stars in the universe prior to the invention of the telescope, and challenged common beliefs of the universe's organization. He devised his own tools for this research. | Brahe was astounding in his accomplishments without the tools available to later scientists, and by mapping the stars, Brahe invented new precise instruments to enable mapping of the stars. These instruments enabled the pursuit of scientific knowledge even with the lack of later technologies. |
| William Harvey | William Harvey studied and described the circulation of blood in the human body, mapping and demonstrating the complete circuit of the veins and arteries. | Understanding the anatomy of the human body revolutionized medical practices. Without understanding of anatomy, 'doctors' conducted practices that were wholly unreasonable and largely ineffective, often hurting patients through operations such as bloodletting. By understanding the operations of the human body, more reasonable and logical medical practices could be established that would advance medicine to being capable of saving human lives with the rate of success we see in the modern day. |

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