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Chapter 9 Reading Guide: The Scientific Revolution and the Enlightenment

Events Leading to the Scientific Revolution

1. What revolution took place over a length of time and changed the way Europeans viewed the world around them?

Discovery of the New World

- 2. What led to the discovery of new plant and animal life and possibly encouraged greater interest in the natural sciences?
- 3. Whose advancements in the fifteenth century helped fuel an interest in learning about the stars?

Invention of the Printing Press

4. What allowed scientific knowledge to spread more rapidly?

Rivalry Among Nation-States

5. Who funded the voyages of Christopher Columbus?

Reformation

- 6. According to historian Max Weber, what helped create capitalism?
- 7. Where did much of the Scientific Revolution come from?
- 8. What movement created a larger reading public by encouraging people to read the Bible?

Renaissance Humanism

9. What movement was interested in the writings of the classical world and rediscovered scientific texts of the ancients?

Medieval Worldview Prior to the Scientific Revolution

- 10. What medieval worldview was based on a synthesis of Christian theology and the scientific beliefs of the ancient authors?
- 11. Who took the works of Aristotle and harmonized them with the teachings of the church?
- 12. According to medieval people, what were the four basic elements that made up the world?
- 13. What system placed the Earth as a stationary object around which heavenly bodies moved?

The Copernican Revolution

- 14. Which Polish mathematician and astronomer wrote *Concerning the Revolutions of the Celestial Spheres* in 1543?
- 15. What system explains that the planets move in a circular motion around the sun?

After Copernicus

- 16. Who constructed the best astronomical tables of the age?
- 17. Which of Tycho Brahe's students used his data to support the Heliocentric system and proposed that planetary orbits are elliptical?

Galileo

- 18. Which Florentine scientist built on the work of Copernicus and designed his own telescope?
- 19. What book written by Galileo in 1632 resulted in the condemnation of his work by the Catholic Church?
- 20. What did Pope Urban VIII do to Galileo because of his writings?

21. Which Dominican friar was executed by the papal inquisition in 1600 for arguing that there may be a plurality of worlds in the universe?

Sir Isaac Newton

- 22. Who was the greatest figure of the Scientific Revolution?
- 23. What book was published by Isaac Newton in 1687 and is his masterpiece?
- 24. According to Newton, what operates under the effects of gravity?
- 25. Who showed that white light was a heterogeneous mixture of colors, fathered differential calculus, and became head of the British Royal Society?

The Impact of the Scientific Revolution on Philosophy

- 26. Who contributed to the Scientific Revolution the idea of experimental methodology?
- 27. List the three major works of Francis Bacon:
- 28. According to Bacon, what should be examined from nature?

René Descartes

- 29. Which French philosopher promoted deductive thought?
- 30. What philosophy uses reason to go from a general principle to a specific principle?
- 31. What is Descartes's famous quote?
- 32. What kind of mathematics did he develop?
- 33. What book explains Descartes system which reduces nature to two basic elements: mind and matter?
- 34. How did he view the operation of the world?

Blaise Pascal

- 35. Who wrote Pensées?
- 36. What is Pascal's notion that it was better to wager on the existence of God than on the obverse, since the expected value that comes from believing is always greater than the expected value of not believing?
- 37. What Catholic faction closely resembles the Calvinist belief in predestination?

Thomas Hobbes

- 38. Who used dissections to show the role the heart plays in the circulation of blood through the body?
- 39. Who believed that man was like an animal in that he was stimulated by appetites rather than by noble ideas and that life without government was "nasty, brutish, and short"?
- 40. What book was written by Thomas Hobbes which outlined his political philosophy?
- 41. According to Thomas Hobbes, who has complete and total power over his subjects?
- 42. According to Thomas Hobbes, who must never rebel?

John Locke

- 43. What book was written by John Locke and published after William and Mary came to the throne and served as a defense of the revolution as well as a basis for the Bill of Rights?
- 44. What country was established based on the political principles outlined by John Locke?
- 45. According to John Locke, what does man enter into with the state?
- 46. What three things are not given up by man when he enters into a social contract with the state?
- 47. What should man have the right to do when the government becomes oppressive and challenges man's natural rights?
- 48. Which of John Locke's books attacks the idea that religion could be spread by force?
- 49. Which of John Locke's books states that at birth, the mind is a blank slate or *tabula rasa*?

The Eighteenth-Century Enlightenment

- 50. In response to the question, "What is the Enlightenment", who responded with "Dare to know"?
- 51. According to Immanuel Kant, what should be used to probe for answers to questions on the nature of mankind?
- 52. What would be the ultimate reward for using reason?
- 53. What term describes the thinkers of the Enlightenment?
- 54. What did French thinkers establish as an international community of writers who communicated in French?
- 55. What country profoundly influenced the early Enlightenment as a bastion of freedom and economic expansion?

Voltaire

- 56. Who was the greatest of the philosophes?
- 57. What philosophy believes that God created the universe and then stepped back from creation to allow it to operate under the laws of science?
- 58. Who said *Écrasez l'infame!* (Crush the horrible thing!) in reference to the Church?
- 59. What was Voltaire's most famous work?

Montesquieu

- 60. Who wrote Spirit of the Laws in 1748?
- 61. According to Montesquieu, what will provide the possibility of checks and balances?

Diderot and the Encyclopedia

- 62. What was the greatest collaborative achievement of the Enlightenment?
- 63. Who oversaw this project?
- 64. Which two Founding Fathers purchased copies of the Encyclopedia?

Jean-Jaques Rousseau

- 65. Which of the *philosophes* championed emotion over reason?
- 66. What form of government did Rousseau advocate?
- 67. What revolution did Rousseau influence after his death?

- 68. What book of Rousseau's begins with the line "All men are born free, but everywhere they are in chains."?
- 69. Who did Rousseau have little faith in to use reason as a means of leading a more satisfactory life?
- 70. Who explained that the focus needed to be placed on reforming the overall community?
- 71. According to Rousseau, how is sovereignty to be expressed?
- 72. According to Rousseau, how does one find freedom?
- 73. Which of Rousseau's novels deals with a young man who receives an education that places higher regard on developing his emotions over his reason?

The Spread of Enlightenment Thought

74. Where was the Enlightenment originally rooted?

Germany

- 75. Who was the greatest figure of the German Enlightenment?
- 76. In which of his works does Kant argue against the idea that all knowledge was empirical, since the mind shapes the world through its unique experiences?
- 77. Which generation of artists were inspired by Kant's ideas and felt stifled by the application of pure reason?

Italy

78. Who called for a complete overhaul in the area of jurisprudence in his work *On Crimes and Punishment* in 1764?

List three arguments made by Beccaria in his book:

79

80.

81.

Scotland

- 82. Which Scottish philosopher cast doubt on revealed religion and argued against the existence of miracles in his book *Inquiry into Human Nature*?
- 83. Who wrote the monumental work *Decline and Fall of the Roman Empire*?
- 84. Which Scottish Enlightenment economic philosopher wrote *Inquiry into the Nature and Causes of the Wealth of Nations* in 1776?
- 85. What is a system of navigation acts, tariffs, and monopolies that stood as the economic underpinnings for most of the nations of Europe and was criticized by Adam Smith?
- 86. What term is used to describe the free market system in which individuals should be free to pursue economic gain without being restricted by the state?
- 87. What does this term literally mean?
- 88. How would this system be regulated?
- 89. What would lead to the meeting of supply and demand?
- 90. Who did Adam Smith influence in England?
- 91. Who did Adam Smith influence in France?

Women and the Enlightenment

- 92. Who organized most of the Parisian salons?
- 93. Who were not tremendous advocates of the rights and abilities of women?
- 94. Which of King Louis XV's mistresses played a critical role in helping Diderot and his *Encyclopedia* avoid censorship?
- 95. Which *philosophe* advocated the idea that men and women occupied separate spheres and that women should not be granted an equal education to men?
- 96. Which Enlightenment Englishwoman wrote that women should enjoy the right to vote as well as to hold political office in her book *Vindications of the Rights of Women*?

European Powers in the Age of Enlightenment

97. Which two major powers emerged over the course of the 18th century?

List the three "Enlightened Absolutists" and their respective countries: 98.

99.

100.

101. What form of government did the non-republican philosophes believe in?

Prussia and Austria

- 102. What war had devastated Prussia in the seventeenth century?
- 103. What marked the end of this conflict?
- 104. What term is used for Prussian nobility?
- 105. Who was the ruler of Brandenburg and was called the "Great Elector"?
- 106. Who made Prussia into a kingdom in 1701 and gained the title King Frederick I?
- 107. Under whose rule would Prussian power reach it zenith in the eighteenth century?
- 108. Which Austrian ruler pushed a series of reforms that removed some of the hardships that had been placed on the serf population?
- 109. Which of Maria Theresa's sons succeeded her as the Emperor of Austria?
- 110. What did Joseph II issue in 1781 that granted Jews, Lutherans, and Calvinists the freedom to worship?
- 111. Who succeeded Joseph II as emperor in 1790 and reversed many of his brother's Enlightenment policies?
- 112. Which Holy Roman Emperor pushed other European states to accept his daughter as heir to the throne?
- 113. What allowed for the Habsburg lands under his control to remain intact under one ruler and granting the right of a female to succeed to the throne of Austria?
- 114. Who immediately launched an attack on Silesia, the richest part of the Austrian empire?
- 115. Who accepted the Pragmatic Sanction and helped Maria Theresa put down a rebellion in Bohemia in exchange for the recognition of Hungary as an independent nation?
- 116. In what war did Austria gain support from Russia, Sweden, Denmark, and Great Britain?

- 117. What three countries allied together during this war?
- 118. What ended the War of Austrian Succession in 1748?
- 119. What country emerged as a German state and a major rival to Austria?
- 120. What was Maria Theresa's foreign minister Count Kaunitz able to bring about in 1756?
- 121. What traditional enemy of Austria reversed its former policy and allied with Austria as a result of the Diplomatic Revolution?
- 122. Which country broke off its ties with Austria as a result of the Diplomatic Revolution?
- 123. What war was started when Frederick the Great, King of Prussia, launched an attack in 1756 and invaded Saxony?
- 124. After the defeat of the French and Austrian armies, which army arrived from the east and took Frederick's capital of Berlin?
- 125. Whose coronation in 1762 staved off the complete destruction of the Prussian state?
- 126. What is the name given to the American theater of the Seven Years War?
- 127. Which country lost territory to Britain in North American (Canada) and India?

Russia

- 128. What country had not been influenced by developments of Western Europe by the eighteenth century?
- 129. What emerged as the dominant state in Russian by the sixteenth century?
- 130. Under whose reign was there a significant expansion of territory under the control of Muscovy?
- 131. What period followed the death of Ivan the Terrible in 1584?
- 132. Which dynasty was established in 1603 and would continue to rule Russia until the Revolution of 1917?
- 133. Who did the most to transform the Russian state into a major European power?
- 134. What did Peter the Great establish to ensure the loyalty of his nobility as well as use them for governance?
- 135. What warm water port city did Peter the Great build in 1703 to become a "Window on the West"?
- 136. What war resulted in a defeat of the Swedes by the Russians from 1700 to 1721?
- 137. Which Russian empress initially dabbled with Enlightenment reform until she was later convinced that Enlightenment thought could pose a challenge to her monarchy?

Poland

- 138. Who founded the dynasty that would rule Poland for four centuries in 966?
- 139. What religion did Poland adopt thus tying Poland to the culture of Western Europe?
- 140. What was created in 1385 with the marriage of Lithuanian Grand Duke Jagiello and Polish Queen Jadwiga?
- 141. In which battle did the Poles secure an important victory against the Teutonic Knights?
- 142. Which faction wielded most power in Poland?

- 143. Which Polish king played a critical role in driving the Turks from the gates of Vienna in 1683?
- 144. Who became the king of Poland in 1764?
- 145. Who was his former lover?
- 146. Which three countries forced Poland in 1772 to accept a partition that cost Poland 30 percent of its territory?
- 147. What was the name of the Polish parliament?
- 148. Which two countries carried out the Second Partition of Poland in 1793?
- 149. Which veteran of the American War for Independence led the Polish revolt in 1794 to retain statehood?
- 150. What happened to Poland in the third and final partition in 1795?
- 151. When did Poland reemerge as an independent state?

Great Britain

- 152. Who became the King of England upon the death of Queen Anne in 1714?
- 153. What was his sole qualification for becoming the King of England?
- 154. Who failed to restore the Stuart dynasty after losing the Battle of Culloden in 1746?
- 155. What dominated political life in Britain after the Glorious Revolution of 1688?
- 156. What position was the most significant parliamentary development of the 18th century?
- 157. Who was Britain's first Prime Minister?
- 158. Which British political party supported the rights of the monarch and supported the Church of England?
- 159. Which British political party was closely allied with the spirit of the Glorious Revolution of 1688 and supported religious tolerance?
- 160. Who argued that parties were essential to parliamentary government and were a fundamental component for political stability in his book *Thoughts on the Couse of the Present Discontent*?
- 161. What act was passed in 1765 in order to raise revenue to pay for the debt incurred due to the French and Indian War?
- 162. Which two societal groups were ticked off with this act?
- 163. What did the American colonists argue was unacceptable as long as they were not represented in Parliament?
- 164. What did the Americans establish in 1774?
- 165. Where did open hostilities break out in America?
- 166. What did the Americans finally win in 1783?
- 167. Which member of the House of Commons was arrested in 1763 for publishing a satirical attack on George III in his newspaper *The North Briton*?
- 168. What did the Great Reform Bill of 1832 expand?

France

- 169. Which Catholic sect held beliefs on predestination that were similar to the Calvinists?
- 170. Who supported the papal decree to ban the group but was blocked by provincial *parlements*?
- 171. What were law courts primarily made up of nobles that had the right of registering royal edicts before they could be enforced?
- 172. Who restored the *Parlements* after they had been abolished by Louis XV in order to curry favor with the nobility?