

Remember: Refer to *The Social Studies Helper Introduction* for how these lessons work, and how to make follow-up slide shows and questions.

Particulars

Particular Unit Lessons are, for me, **Pillar Number Three** of a general Social Studies class. First Historical Themes (How to Think About History), then Historical Periods (The Big Picture of History), and now, Particular Unit Lessons (content that generally correlates with the old CA 10th Grade World History and 11th Grade U.S. History Content Standards). Notice that I said “old”. Now, with Common Core Standards, we teachers are allowed to pick and choose what content we want to focus on; now, the emphasis is more on process—close-reading, critical thinking, formulating and structuring ideas, determining validity etc.—and assessments have been adapted accordingly. Teach less, better. This is an important and positive evolution. But history is still chalk full of knowledge; history holds lessons for the present and for the future, and these new standards don’t mean that we teachers can’t still teach content. So enjoy this new Common Core freedom, and pick and choose your content. If you’re a history nerd like me, this is fun stuff. These lessons provide context and structure. They allow you to get into the nitty gritty of historical events in a manageable and easy-to-follow way; they allow you to cover a lot of content and information quickly. So enjoy! Your students will appreciate the engagement, the detail, the context, and the pictures. They’ll appreciate that you have your act so darn together!

Answer Key

Enlightenment and Revolution 1 Renaissance, 1300-1600, rebirth, art, learning, Protestant Reformation, beliefs, Catholic Church, explorers, discovering, lands, peoples, printing press, more, read, Scientific Revolution, believed, earth, center, sun, stars, planets, geocentric, Aristotle, Ptolemy, power, sun, center, universe, Copernicus, true, planets, stars, revolved, sun, earth, heliocentric, sun-centered, Copernicus, study, planets, data, observations, Kepler, mathematical laws, motions, elliptical, circles, laws, true, Italian, heavens, telescope, Jupiter, Moons, dark, moon, rough, uneven, contradicted, against, perfect, trouble, Church, agreed, Catholic Church, Galileo, quiet, published, Pope, summoned, Rome, Inquisition, torture, recanted, back, arrest, Scientific Revolution, approach, Method, reasoning (thinking), (unclear), around, question, facts, sure, hypothesis, conclusion, facts, Method, revolution, thinking, change, science, world, astronomy, physics, Copernicus, Kepler, Galileo, method, explain, universe, Newton, clock, parts, together, gravity, motion, planets, matter, attracts, (the amount), mass, distance.

Enlightenment and Revolution 1

A. The Scientific Revolution

1. The Renai_____ (1460-16__) inspired a rebi___ of interest in a__ and lea_____, and the Prot_____ Ref_____ (1517) led more and more people to question the long-held beli___ and power of the Ca_____ Ch_____. Furthermore, European ex_____ were “dis_____” new l_____ and pe_____. These things, along with Gutenberg’s invention of the pr_____ pr_____, which would eventually lead to the availability of more and more books, led to the Scie_____ Rev_____.
2. For over 1500 years, it was beli___ that the ea___ was the ce___ of the un_____, and that the su_, the st___, and the pl_____ revolved around it. This geo_____ theory had come from the Greek philosopher, Ar_____, and later from the Greek astronomer Pto_____. Christianity also taught this, and given that the Church was the main po___ in Europe, most people believed it. There was, however, another old Greek idea that the su__ was the cen___ of the un_____, and one man, a Polish cleric named Nicolaus Coper_____, kept this in mind as he studied the hea___ above. After 25 years, Cop_____ decided that this was indeed tr___, that the pla_____ and st___ revo_____ around the s___, not the ea_____. This is the helioc_____ or sun-cent_____ theory. Fearing persecution, however, Cope_____ didn’t publish his book, *On the Revolutions of the Heavenly Bodies*, until the year of his death in 1543.
3. Over the next 100+ years, several men continued to stu___ the pl_____. Tycho Brahe, a Danish astronomer, produced mountains of accurate da___ (numbers based on actual obser_____), and after his death, his assistant, Johannes Ke_____, used this data to conclude that there were mathem_____ la___ that governed planetary mot_____; it showed that the planets revolved around the sun in elli_____ orbits instead of cir_____. Kepler’s mathematical la___ basically proved that the heliocentric theory was t_____.
4. Galileo Galilei, an It_____ scientist, was also studying the hea_____ at this time. In 1609, Galileo built his own te_____, and soon announced in his book, *Starry Messenger*, that Jup_____ had four mo___, that the sun had da___ spots, and that the earth’s mo___ had a rou_____, une___ surface. This contra_____ (went aga_____) Aristotle’s theory that the moon and stars were made of pure, per_____ substance, and Galileo soon found himself in

tr_____ with the Ch____, for it was clear that he ag_____ with Copernicus. In 1616, the Cat_____ Ch_____ warned Gali_____ to be qu_____, so when Galileo publ_____ his *Dialogue Concerning the Two Chief World Systems* in 1632, the P_____ angrily summo_____ Galileo to Ro_____ to stand trial before the Inqui_____, where, under the threat of to_____, he reca_____ (took it b_____). Galileo would live under house a_____ until his death in 1642.

5. During the Sc_____ Re_____, thinkers created a new appr_____ to science called the Scientific M_____. Rather than reas_____ (thi_____) from abstract (unc____) theories and attempting to prove them (from trying to fit the facts arou__ the theory), scientists began to:
1. Ask a que_____.
 2. Observe/Gather the f_____ and evidence (everything we can know for s_____).
 3. Experiment, and experiment some more.
 4. Create a hyp_____ (guess/theory...).
 5. Come to a co_____ based on those f_____ and well-tested experiments. Continue to test and experiment, and adapt as new knowledge is discovered.

This Scientific M_____ was a rev_____ in thi_____ and would ch_____ sci_____ and the wo_____ forever.

6. With old views of ast_____ and phy_____ shattered by Cope_____, Kep____, and Gali_____, and with the new scientific m_____ now in place, the 1600's was ripe for a brilliant scientist to emerge, one who could better ex_____ the laws of the un_____. This scientist was Sir Isaac N_____. Newton's 1687 book, *The Mathematical Principles of Natural Philosophy* was one of the most important scientific books ever written. The universe, according to Newton, was like a giant c_____, with par____ that all worked tog_____, parts that could be explained mathematically. His great discovery was that gr_____ was the force that ruled all mot_____ of the pl_____ and all ma_____ on earth and in space. According to the law of universal gravitation, every object in the universe att_____ every other object. The degree (the amo_____) of attraction depends on the m_____ of the objects and the di_____ between them.