

The book *Isaac Newton* has been revised by the publisher. Six pages of pictures that have been added; consequently, the page numbers that are referenced in the Science Exploration box of *Resurrection to Reformation* no longer match the plans. Below are updated instructions that have the new page numbers.

UNIT 29 – DAY 1 Science Exploration:

Read *Isaac Newton* p. 69-86. Today you will add to your science notebook. At the top of a white paper, write “Newton Experiments and Invents”. Under the title, copy Job 22:12. Beneath the Scripture verse, draw and color small pictures to represent some of Isaac Newton’s inventions and experiments that were mentioned in this chapter. Some possible ideas include soap bubbles, a prism and spectrum of colors, a small telescope, a burning glass, a new thermometer, and an ear trumpet. Label your drawings. Key Idea: After the fire in London in 1666, the Black Death did not return as expected. So, Isaac Newton returned to Trinity College and received a Fellowship position. This allowed him time and money to experiment. Newton’s experiments with light led him to make a new kind of telescope.

UNIT 29 – DAY 2 Science Exploration

Read *Isaac Newton* p. 87-95. You will be writing a written narration about the pages you read today. Use a clean page for your narration in your science binder or sketchbook. To prepare for your narration, think about the following questions: *What was the Invisible College? Why did the Invisible College need a royal charter? Why did Newton wish to meet Robert Boyle? What did Newton send to the Royal Society? Describe the reaction of the Royal Society to Newton’s paper on light and color. Who disagreed with Newton’s paper? Why? What lesson did Newton learn from this experience?* Now, write an 8-12 sentence narration that begins, *The Invisible College was...* When you have finished writing, use the *Written Narration Skills* in the Appendix for help in editing. Key Idea: Newton was invited to join the Invisible College. His paper on light and color caused an uproar.

UNIT 29 – DAY 3 Science Exploration

Read *Isaac Newton* p. 96-104. Orally retell or narrate to an adult the portion of the text that you read today. Use the *Narration Tips* in the Appendix as needed. Key Idea: Newton’s friend and roommate, John Wickins, left to become a pastor near Monmouth. Dr. Barrows became Master of Trinity at Cambridge and enforced the rule that a Fellowship could not extend beyond 7 years. Newton went to London to petition King Charles II to allow him to stay at Trinity longer. On his trip to London, Newton met the members of the Royal Society. King Charles granted his petition.

UNIT 29 – DAY 4 Science Exploration

Read *Isaac Newton* p. 105-117. Refer to the three laws of motion on p. 113-114 of *Isaac Newton*. At the top of a blank page, write: *What are some ways in which you could demonstrate Newton’s 3 laws of motion?* Under the question, write: ‘*Guess*’. Write down your guess. To demonstrate the first law, place a ball inside a plastic cup. Lay the cup down and slide it open end forward across the table. Then, abruptly stop the cup. What happened to the ball? How does this demonstrate the first law of motion? To demonstrate the second law, you need an object with 4 wheels that can hold other items (i.e. dump truck, stroller, riding toy, wheeled luggage, cart, skateboard). Push the item and watch it roll across the floor. Now pile heavy items like books, cans, or blocks on top of or inside the item that rolls. Push it again. What do you notice? Push harder. Now what do you notice? How does this demonstrate the second law of motion? To demonstrate the third law, blow up a balloon and hold the end by pinching it shut. Then, let the balloon go. What action is taking place? As the air comes out of the balloon, what reaction is taking place? How does this demonstrate Newton’s third law of motion? Next, on the paper write: ‘*Procedure*’. Draw a labeled picture of the three laws. Then, write: ‘*Conclusion*’ and explain what you learned. Key Idea: Newton wrote *Principia*, dividing it into 3 books. The first book defined the 3 laws of motion.

UNIT 30 – DAY 1 Science Exploration

Read *Isaac Newton* p. **118-130**. Today you will add to your science notebook. At the top of a white paper, write “Isaac Newton (1643-1727)”. Under the title, use 3 different colored markers to outline three large bubbles. You will copy a different quote in each bubble. First, copy Newton’s quote from paragraph 5 on p. **127** that begins, “*The true God is a living...*”. Next, copy Newton’s quote from the last paragraph on p. **128** that begins, “*The folly of interpreters...*”. The quote ends at the top of p. **129**. Last, copy Newton’s quote from the last paragraph on p. **139** that begins, “*I do not know what I may appear...*”. The quote ends at the bottom of the page.

Key Idea: Newton was selected to go to Parliament to represent the University in the House of Commons.

UNIT 30 – DAY 2 Science Exploration

Read *Isaac Newton* p. **131-142**. Orally retell or narrate to an adult the portion of the text that you read today. Use the *Narration Tips* in the Appendix as needed.

Key Idea: In 1696, Isaac Newton was appointed to be Warden of the Mint. He moved to London to oversee the recoinage in England. Every coin in England was remade and the old coins were recalled. Newton also investigated and prosecuted William Chaloner for being a counterfeiter. Newton was knighted by Queen Anne in 1705 for his services to his country. In his later years, he returned to Parliament for a brief time and then was named President of the Royal Society. His last book *Opticks* was about his experiments and discoveries with light. *Opticks* was written in English in an easy-to-read style.