

## Implementing Common Core Standards

2009 North Carolina Essential Standard Objective Chm.1.1, Analyze the structure of atoms and ions. This will be supplemented with the 2004 North Carolina Standard Course of Study Objective 2.01, Analyze the historical development of the current atomic theory.

North Carolina American History Essential Standard Clarifying Objective AH1.H.1.1, Use Chronological thinking (the application of one of the four interconnected dimensions of historical thinking) to interpret data presented in time lines and create time lines. Interpreting with mastery naturally follows creation.

North Carolina Algebra II Common Core Standard A.CED.4 Objective (Domain and Cluster—Create equations that describe numbers or relationships), rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange  $c$  (speed of light in a vacuum,  $3 \times 10^8$  m/s)  $= v$  to highlight wavelength  $\lambda$ , or rearrange Einstein's equation  $E_{\text{photon}} = h$  (Planck's constant,  $6.626 \times 10^{-34}$  J s)  $v$  to highlight frequency  $\nu$ .

North Carolina Algebra II Common Core Standard F.IF.7 Objective (Domain and Cluster—Interpreting Functions-Analyze functions using different representations), Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. e. Graph exponential and logarithmic functions. Honors chemistry students are assessed by their ability to graph exponential radioactive decay. Amount remaining = (Initial amount)  $(1/2)^{t/T}$ , where  $t$  = time, and  $T$  = half-life.

English III Common Core Standard 3 (under the Reading Informational Text Strand, and the Key Ideas and Details Cluster), analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text. Students seem to especially struggle with comprehension when reading a scientific textbook.