BCS Chemistry

Pacing Guide

(In Wks.)	CHS	BCHS	RCHS	RHS
Unit 1	4	4	4 (6)	Didn't respond
Unit 2	3 (4)	3 (4)	10 (8)	
Unit 3	4	4	9	
Unit 4	4	4	9	
Unit 5	2	2	4	

Possible Benchmarks: After Units, 1, 2, 4

Unit 1: Energy

HS-PS3-1. Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.	**Priority Standard**
HS-PS3-4. Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics).	**Priority Standard**

Unit 2: Atomic Structure

HS-PS1-1. Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.	**Priority Standard**
HS-PS1-8. Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.	**Priority Standard**
HS-PS4-4. Evaluate the validity and reliability of claims in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter.	**Priority Standard**

Unit 3: Intermolecular and Intramolecular Forces

HS-PS1-3. Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.	**Priority Standard**

Unit 4: Chemical Reactions

HS-PS1-2. Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.	**Priority Standard**

HS-PS1-7. Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.	**Priority Standard**

Unit 5: Rates and Stability of Chemical Reactions

HS-PS1-4. Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.	**Priority Standard**
HS-PS1-5. Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.	**Priority Standard**
HS-PS1-6. Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.	**Priority Standard**