

# BCS Integrated Science

## Pacing Guide (Still in progress...)

(In Wks.)	CHS	BCHS	RCHS	RHS
Unit 1	4	4	9	9
Unit 2	7 (5)	4 (5)	9	9
Unit 3	2-3 (3)	2 (3)	9 (6)	9
Unit 4	2-3 (3)	4 (3)	6-7 (6)	6-7
Unit 5	2-3 (3)	4 (3)	2-3 (6)	2-3

Possible Benchmarks: After Units 1, 2, 4

### Unit 1: Motion

<b>HS-PS2-3:</b> Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.	<b>Priority Standard</b>
<b>HS-PS2-1:</b> Analyze data to support the claim that Newton’s second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.	<b>Priority Standard</b>

<p><b>HS-PS2-2:</b> Use mathematical representations to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system.</p>	<p><b>Priority Standard</b></p>
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## Unit 2: Energy

<p><b>HS-PS2-5:</b> Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current.</p>	<p><b>Priority Standard</b></p>
<p><b>HS-PS3-5:</b> Develop and use a model of two objects interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction.</p>	<p><b>Priority Standard</b></p>
<p><b>HS-PS3-2:</b> Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motion of particles (objects) and energy associated with the relative position of particles (objects).</p>	<p><b>Priority Standard</b></p>
<p><b>HS-PS4-1:</b> Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.</p>	<p><b>Supporting Standard</b></p>

### Unit 3: Space

<b>HS-ESS1-3:</b> Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun’s core to release energy that eventually reaches Earth in the form of radiation.	<b>Priority Standard</b>
<b>HS-ESS1-2:</b> Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.	<b>Priority Standard</b>
<b>HS-ESS1-3:</b> Communicate scientific ideas about the way stars, over their life cycle, produce elements.	<b>Priority Standard</b>
<b>HS-PS2-4:</b> Use mathematical representations of Newton’s Law of Gravitation and Coulomb’s Law to describe and predict the gravitational and electrostatic forces between objects.	<b>Supporting Standard</b>
<b>HS-ESS1-4:</b> Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.	<b>Supporting Standard</b>

### Unit 4: Earth Plate Tectonics

<b>HS-ESS2-1:</b> Develop a model to illustrate how Earth’s internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.	<b>Priority Standard</b>

<b>HS-ESS1-5:</b> Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.	<b>Priority Standard</b>
<b>HS-ESS2-3:</b> Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection.	<b>Priority Standard</b>

## Unit 5: Human Impact

<b>HS-ESS3-1:</b> Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.	<b>Priority Standard</b>
<b>HS-ESS3-5:</b> Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth's systems.	<b>Priority Standard</b>
<b>HS-ESS2-2:</b> Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.	<b>Priority Standard</b>
<b>HS-ETS1-3:</b> Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.	<b>Supporting Standard</b>