

7th Grade Science Pacing Guide 2nd Quarter 2014-15

HOP: Habits of Practice

Practice 1: Asking Questions/Defining Problems

Practice 2: Developing and Using Models

Practice 3: Planning/Carrying Out Investigations

Practice 4: Analyzing/Interpreting Data

Practice 5: Using Math & Computational Thinking

Practice 6: Constructing Explanations/Designing Solutions

Practice 7: Engaging in Argument from Evidence

Practice 8: Obtaining/Evaluating/Communicating Info

Practice 9: Thinking about my Thinking (Metacognition)

Standard	Weeks	SPI/CCSS	Chapter/Pages	Concept	Labs/Activities/ Informational Text	NGSS Connections/ Habits of Practice
Standard 11: Motion	Week 1	<p>SPI 0707.11.3 Apply proper equations to solve basic problems pertaining to distance, time, speed, and velocity.</p> <p>SPI 0707.Inq.1 Design a simple experimental procedure with an identified control and appropriate variables.</p> <p>SPI 0707.Inq.2 Select tools and procedures needed to conduct a moderately complex experiment</p> <p>SPI 0707.Inq.3 Interpret and translate data into a table, graph, or diagram.</p> <p>SPI 0707.Inq.4 Draw a conclusion that</p>	Chapter 19, Section 1, 2	How do you describe and measure motion	<p>Lab: The Domino Derby</p> <p>Lab: Bubble Gum Physics</p> <p>Lab: Balloon Powered Race Cars</p> <p>Lab : Speed Challenge</p> <p>Lab: Motion- Speed, Velocity, and Acceleration</p> <p>Activity: Acceleration Pre-Assessment</p> <p>Activity: Acceleration Computer Simulation</p> <p>Activity: Marshmallow Catapult Lab</p> <p>Information Text and Activity: Virtual Car Velocity and Acceleration</p>	<p>NGSS: Stability and Change, Cause and Effect</p> <p>HOP: Practice 4 & 5</p>

	<p>establishes a cause and effect relationships supported by evidence.</p> <p>SPI 0707.Inq.5 Identify a faulty interpretation of data that is due to bias or experimental error</p> <p>SPI 0707.T/E.1 Identify the tools and procedures needed to test the design features of a prototype.</p>				
Week 2-3	<p>SPI 0707.11.4 Identify and explain how Newton’s laws of motion relate to the movement of objects.</p> <p>SPI 0707.Inq.3 Interpret and translate data into a table, graph, or diagram.</p> <p>SPI 0707.Inq.4 Draw a conclusion that establishes a cause and effect relationships supported by evidence.</p>	Chapter 20, Section 2	How do Newton’s Laws explain the motion of objects, What determines whether a force is balanced or unbalanced	<p>Lab: Force & Acceleration Lab</p> <p>Lab: Moving Bodies</p> <p>Lab: Balloon Rockets</p> <p>Activity: Newton’s Laws Discrepant Events</p> <p>Activity: Moving Man Computer Simulation</p> <p>Informational Text: On Newton’s Laws of Motion...</p> <p>Informational Text: How Helmets and Helmet Laws Can Help</p> <p>Informational Text: Car</p>	<p>NGSS: Cause & Effect NGSS: Stability and Change</p> <p>HOP: Practice 5 & 6</p>

	<p>SPI 0707.Inq.5 Identify a faulty interpretation of data that is due to bias or experimental error</p> <p>SPI 0707.T/E.3 Distinguish between the intended benefits and the unintended consequences of a new technology.</p> <p>SPI 0707.T/E.4 Differentiate between adaptive and assistive biotechnology.</p> <p>CCSS Reading 3 CCSS Reading 6 CCSS Reading 7 CCSS Writing 5 CCSS Writing 9</p>			Performance Article	
Week 4	<p>SPI 0707.11.1 Differentiate between the six simple machines.</p> <p>SPI 0707.Inq.3 Interpret and translate data into a table, graph, or diagram.</p> <p>SPI 0707.Inq.4 Draw a conclusion that establishes a cause and effect</p>	Chapter 21, Section 2, 3	How do the six types of simple machines make work easier	<p>Lab: Rotation Lab on Simple Machines</p> <p>Lab: Inclined to Move</p> <p>Activity: Simple Machines Web-quest</p> <p>Activity: Ed Heads Simple Machines Computer Activity</p> <p>Informational Text: Rube Goldberg Cartoon</p>	<p>NGSS: Systems and System Models</p> <p>HOP: Practice 5 & 6</p>

	relationships supported by evidence.			Informational Text: Understanding Simple Machines	
	CCSS Reading 2 CCSS Reading 5 CCSS Reading 7 CCSS Writing 2 CCSS Writing 5				
Week 5-6	SPI 0707.11.2 Determine the amount of force needed to do work using different simple machines. SPI 0707.Inq.3 Interpret and translate data into a table, graph, or diagram. SPI 0707.Inq.4 Draw a conclusion that establishes a cause and effect relationships supported by evidence.	Chapter 19, Section 2; Chapter 21, Section 1	How to calculate the work done by a simple machine	Lab: Work Activity: Work Practice Problem Set	NGSS: N/A HOP: Practice 5 & 6

	Week 7-8	<p>SPI 0707.11.5 Compare and contrast the different parts of a wave.</p> <p>SPI 0707.11.6 Differentiate between transverse and longitudinal waves in terms of how they are produced and transmitted.</p> <p>SPI 0707.Inq.3 Interpret and translate data into a table, graph, or diagram.</p> <p>SPI 0707.Inq.4 Draw a conclusion that establishes a cause and effect relationships supported by evidence.</p> <p>SPI 0707.Inq.5 Identify a faulty interpretation of data that is due to bias or experimental error</p>	Chapter 22, Sections 1-3	What are the two types of waves, how are they produced, and what are their characteristics	<p>Lab: The Wave Machine</p> <p>Lab: Wave Lab</p> <p>Activity: Waves, Sound, and Light</p> <p>Informational Text: Physics for Kids</p>	<p>NGSS: Patterns</p> <p>NGSS: Structure & Function</p> <p>HOP: Practice 2 & 6</p>