

6th Grade Science Pacing Guide 3rd Quarter 2016-2017

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: Metacognition

Standard	Week	SPI/CCSS	Chapter/ Sections	Concept	Labs/Activities/ Informational Text	NGSS Connections/ Habits of Practice
	1-2	<p>SPI 0607.6.3 Distinguish among a day, lunar cycle, and year based on the movements of the earth, sun, and moon.</p> <p>SPI 0607.Inq.3 Interpret and translate data in a table, graph, or diagram.</p> <p>SPI 0607.Inq.4 Draw a conclusion that establishes a cause and effect relationship supported by evidence.</p> <p>CCSS Reading 6-8.2 CCSS Reading 6-8.8 CCSS Writing 6.2</p>	Chapter 10 Section 1, 2	The cosmos is vast and explored well enough to know its basic structure and operational principles.	<p>Activity: Day and Night on the Spinning Globe</p> <p>Activity: Revolution and Rotations Skit</p> <p>Informational Text Mayan Calendar Reading</p> <p>Assessment Probe: Darkness at Night</p>	<p>NGSS: Scale, Proportion, Quantity</p> <p>HOP: Practice 1</p>
	3	<p>SPI 0607.6.6 Use a diagram that shows the positions of the earth and sun to explain the four seasons.</p> <p>SPI 0607.Inq.3 Interpret and translate data in a table, graph, or diagram.</p> <p>SPI 0607.Inq.4 Draw a conclusion that establishes a cause and effect relationship supported by evidence.</p> <p>CCSS Reading 6-8.2 CCSS Writing 6.2 CCSS Writing 6.4 CCSS Writing 6.6 CCSS Writing 6.9</p>	Chapter 10 Section 1	The cosmos is vast and explored well enough to know its basic structure and operational principles.	<p>Lab: Equinox and Solstice Model page 292 Alternative Assessment</p> <p>Formative Assessment: Missed Conception</p> <p>Informational Text: Reasons for The Seasons</p> <p>Lab: Reasons for the Seasons</p> <p>Assessment Probe: Summer Talk</p> <p>Activity Space Cycles: Seasons</p> <p>Informational Text: Why there are seasons</p>	<p>NGSS: Cause & Effect</p> <p>HOP: Practices 1, 4</p>

	4	<p>SPI 0607.6.4 Explain the different phases of the moon using a model of the earth, moon, and sun. SPI 0607.Inq.3 Interpret and translate data in a table, graph, or diagram. SPI 0607.Inq.5 Identify a faulty interpretation of data that is due to bias or experimental error.</p> <p>CCSS Reading 6-8.2 CCSS Reading 6-8.8 CCSS Writing 6.2 CCSS Writing 6.6</p>	Chapter 10 Section 2	The cosmos is vast and explored well enough to know its basic structure and operational principles.	<p>Assessment Probe: Moonlight Assessment Probe: Gazing at the Moon Activity: What Causes Moon Phases? Assessment Probe: Going through a Phase Informational Text: The Moon Activity: Moon Phase practice sheets Activity: Gourmet Moon Phases Informational Text: Ever Changing Sky Informational Text: What is the dark side of the Moon</p>	NGSS: System & System Models HOP: Practices 1, 8
	5	<p>SPI 0607.6.5 Predict the types of tides that occur when the earth and moon occupy various positions. SPI 0607.Inq.3 Interpret and translate data in a table, graph, or diagram. SPI 0607.Inq.4 Draw a conclusion that establishes a cause and effect relationship supported by evidence. SPI 0607.Inq.5 Identify a faulty interpretation of data that is due to bias or experimental error.</p> <p>CCSS Reading 6-8.2 CCSS Reading 6-8.3 CCSS Writing 6.6</p>	Chapter 10 Section 3	The cosmos is vast and explored well enough to know its basic structure and operational principles.	<p>Activity: Timing the Tides Activity Graphing Tides Activity: How Tides Work Informational Text: What causes the tides</p>	NGSS: Cause & Effect HOP: Practices 1, 4
	6	<p>SPI 0607.6.7 Explain the difference between a solar and a lunar eclipse. SPI 0607.Inq.3 Interpret and translate data in a table, graph, or diagram. SPI 0607.Inq.4 Draw a conclusion that establishes a cause and effect relationship supported by evidence. SPI 0607.Inq.5 Identify a faulty interpretation of data that is due to bias or experimental error. SPI 0607.T/E.1 Identify the tools and procedures needed to test the design features of a prototype.</p>	Chapter 10 Section 2	The cosmos is vast and explored well enough to know its basic structure and operational principles.	<p>Activity: Eclipses Assessment Probe: Lunar Eclipses Assessment Probe: Solar Eclipses Lab: Lunar and Solar Eclipses Activity: Eclipse Packet</p>	NGSS: Cause & Effect HOP: Practices 1, 6

		<p>SPI 0607.T/E.2 Evaluate a protocol to determine if the engineering design process was successfully applied.</p> <p>CCSS Reading 6-8.2 CCSS Writing 6.6 CCSS Writing 6.9</p>				
Week 7-8	<p>SPI 0607.10.1 Distinguish among gravitational potential energy, elastic potential energy, and chemical potential energy.</p> <p>SPI 0607.Inq.2 Select tools and procedures needed to conduct a moderately complex experiment.</p> <p>SPI 0607.Inq.4 Draw a conclusion that establishes a cause and effect relationship supported by evidence.</p> <p>SPI 0607.Inq.5 Identify a faulty interpretation of data that is due to bias or experimental error.</p> <p>SPI 0607.T/E.1 Identify the tools and procedures needed to test the design features of a prototype.</p> <p>SPI 0607.T/E.2 Evaluate a protocol to determine if the engineering design process was successfully applied.</p> <p>SPI 0607.T/E.3 Distinguish between the intended benefits and the unintended consequences of a new technology.</p> <p>CCSS Reading 6-8.2 CCSS Reading 6-8.9 CCSS Writing 6.2</p>	Chapter 12 Section 1	Various forms of energy are constantly being transformed into other types without any net loss of energy from the system.	<p>Informational Text: Ball of Energy Lab: Ball Bounce Informational Text: Dropping The Ball Activity: Potential Energy Activity: Energy Skate Park Formative Assessment: Frayer Model</p>	<p>NGSS: Scale, Proportion, Quantity and Systems & System Models HOP: 7, 9</p>	
Week 9	<p>SPI 0607.10.2 Interpret the relationship between potential and kinetic energy.</p> <p>SPI 0607.Inq.2 Select tools and procedures needed to conduct a moderately complex experiment.</p> <p>SPI 0607.Inq.4 Draw a conclusion that establishes a cause and effect relationship supported by evidence.</p> <p>SPI 0607.Inq.5 Identify a faulty interpretation of data that is due to bias or experimental error.</p> <p>SPI 0607.T/E.1 Identify the tools and procedures needed to test the design features of a prototype.</p> <p>SPI 0607.T/E.2 Evaluate a protocol to determine if the engineering design process was successfully applied.</p> <p>SPI 0607.T/E.3 Distinguish between the intended benefits and the unintended consequences of a new technology.</p> <p>CCSS Reading 6-8.2</p>	Chapter 12 Section 1	Various forms of energy are constantly being transformed into other types without any net loss of energy from the system.	<p>Lab: Kinetic and Potential Energy Activity: Spool Racer Informational Text: Forms of Energy</p>	<p>NGSS: Scale, Proportion, Quantity and System & System Models HOP: 7, 9</p>	

		<p>CCSS Reading 6-8.3 CCSS Reading 6-8.4 CCSS Reading 6-8.8 CCSS Writing 6.2</p>				
	<p>Week 10-11</p>	<p>SPI 0607.10.3 Recognize that energy can be transformed from one type to another. SPI 0607.Inq.1 Design a simple experimental procedure with an identified control and appropriate variables. SPI 0607.Inq.2 Select tools and procedures needed to conduct a moderately complex experiment. SPI 0607.Inq.3 Interpret and translate data in a table, graph, or diagram. SPI 0607.Inq.4 Draw a conclusion that establishes a cause and effect relationship supported by evidence. SPI 0607.Inq.5 Identify a faulty interpretation of data that is due to bias or experimental error. SPI 0607.T/E.2 Evaluate a protocol to determine if the engineering design process was successfully applied. SPI 0607.T/E.3 Distinguish between the intended benefits and the unintended consequences of a new technology.</p> <p>Chapter 12 Section 2 Chapter 13 Sections 2, 3, 4 Various forms of energy are constantly being transformed into other types without any net loss of energy from the system. Lab: Kinetic and Potential Energy (Q3.9) NGSS: Energy & Matter and Flows, Cycles, Conservation HOP: 4, 7 SPI 0607.10.4 Explain the Law of Conservation of Energy using data from a variety of energy transformations.</p> <p>CCSS Reading 6-8.1 CCSS Reading 6-8.2 CCSS Reading 6-8.3</p>		<p>Various forms of energy are constantly being transformed into other types without any net loss of energy from the system.</p>	<p>Activity: Energy Packet Informational Text: Heat, Energy, and Bicycling in New York City Lab/Text: Glow Sticks Activity: Energy Transformations Informational Text: Everyday Energy Informational Text: How does a Yo-Yo Work?</p>	

	<p>CCSS Reading 6-8.5 CCSS Reading 6-8.7 CCSS Writing 6.2 CCSS Writing 6.4 CCSS Writing 6.6 CCSS Writing 6.7 Chapter 12 Section 3 Various forms of energy are constantly being transformed into other types without any net loss of energy from the system. Informational Text: How Does a Yo-Yo Work? (Q3.10) NGSS: Energy & Matter and Flows, Cycles, Conservation HOP: 4, 8</p> <p>Supplemental Instruction/ Testing (Quarter Exams)</p>				
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