

PRESCOTT UNIFIED SCHOOL DISTRICT
 District Instructional Guide
 2013/2014 School Year

Grade Level: 6th	Subject: Science	Quarter/Semester: All	Core Text: Science Explorer
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Time Block	Unit / Theme	Content (Nouns)	Skills (Verbs)	Common Core Standards
1st, 2nd, 3rd & 4th Quarter	Inquiry Process History and Nature of Science Science in Personal and Social perspectives	Observations, questions, and hypotheses Scientific testing, investigating and modeling Analysis and conclusions Communication History of science as a human endeavor Nature of scientific knowledge Changes in environments Science and technology in society	Formulate predictions, questions or hypothesis based on observations. Locate appropriate resources. Design and conduct controlled investigations. Analyze and interpret data to explain correlations and results. Formulate new questions. Communicate results of investigations. Identify individual, cultural, and technological contributions to scientific knowledge. Understand how science is a process for generating knowledge.	Refer to attached ELA standards document for detailed descriptions of coding. Sample ELA Projects are given: *projects are at the discretion of teacher or team

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			<p>Describe the interactions between human populations, natural hazards and the environment.</p> <p>Develop viable solutions to a need or problem.</p>	
Q1	<p>Graphing</p> <p>Metric/Customary Measurement and Conversion</p>	<p>Measures of Central Tendency, Types of Graphs</p> <p>Metric Units of Measurement</p> <p>Customary Units of Measurement</p>	<p>Determine the mean (and how an outlier effects the mean), median, mode, and range of a set of data.</p> <p>Construct and analyze bar, line, stem-and-leaf, and scatter plots.</p> <p>Identify appropriate units of metric and customary measurement</p> <p>Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying and dividing quantities.</p> <p>Perform measurements using appropriate scientific tools.</p>	<p>Math 6.RP.3d</p>
Q1	<p>Earth's Waters</p>	<p>Properties of Water</p> <p>Distribution of Water</p> <p>Water Cycle</p>	<p>Explain the importance of water to organisms</p> <p>Explain the composition, properties, and structure of Earth's lakes and rivers</p>	<p>Ongoing</p> <p>*Due to volume of ELA text, see attached document.</p> <p>RST.6-8.1</p> <p>RST.6-8.2</p>

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		<p>Lakes, Rivers, Oceans Bodies of Water</p> <p>Ocean Zones and Layers</p> <p>Water/Weather (transition from water)</p>	<p>Explain the composition, properties and structure of the ocean's zones and layers</p> <p>Analyze the interactions that make up the water cycle</p> <p>Describe ways that scientists explore bodies of water</p> <p>Explain how water is cycled in nature</p> <p>Identify the distribution of water within and among the atmosphere, lithosphere and hydrosphere</p>	<p>RST.6-8.3</p> <p>RST.6-8.4</p> <p>RST.6-8.5</p> <p>RST.6-8.6</p> <p>RST.6-8.7</p> <p>RST.6-8.8</p> <p>RST.6-8.9</p> <p>RST.6-8.10</p> <p style="text-align: center;">Sample ELA Project: Journey of the Water Drop</p> <p style="text-align: center;">WHST.6-8.7 WHST.6-8.2a</p> <p>WHST.6-8.2d.</p> <p>WHST.6-8.2f</p> <p>WHST.6-8.4</p>
Q2	Water to Weather	<p>Properties of Air</p> <p>Layers of the Atmosphere</p> <p>Energy in the Atmosphere</p> <p>Winds, Clouds, Precipitation</p> <p>Weather Systems</p> <p>Natural Disasters</p>	<p>Describe the properties and the composition of the layers of the atmosphere</p> <p>Analyze the impact of large scale weather systems on the local weather</p> <p>Create a weather system model that includes the sun, the atmosphere, and bodies of water</p> <p>Explain how thermal energy can be transferred</p>	<p>Ongoing</p> <p>RST.6-8.1</p> <p>RST.6-8.2</p> <p>RST.6-8.3</p> <p>RST.6-8.4</p> <p>RST.6-8.5</p> <p>RST.6-8.6</p> <p>RST.6-8.7</p> <p>RST.6-8.8</p> <p>RST.6-8.9</p>

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			<p>Explain that sunlight is the major source of energy for most ecosystems</p> <p>Evaluate the effects of natural hazards such as sandstorms, hurricanes, tornadoes, UV light, lightning caused fire</p> <p>Describe how people plan for, and respond to, droughts flooding and tornadoes Analyze the effects that bodies of water have on the climate of a region</p> <p>Analyze the following factors that affect climate: ocean currents, elevation, location</p> <p>Analyze the interactions between the Earth's atmosphere and the Earth's bodies of water</p>	<p>RST.6-8.10</p> <p>Air Quality Comparison Activity WHST.6-8.1 WHST.6-8.7 WHST.6-8.8 WHST.6-8.4</p> <p>Natural Disaster Projects WHST.6-8.2 WHST.6-8.6 WHST.6-8.7 WHST.6-8.4</p> <p>Ongoing RST.6-8.1 RST.6-8.2 RST.6-8.3</p> <p>RST.6-8.4 RST.6-8.5 RST.6-8.6</p> <p>RST.6-8.7 RST.6-8.8 RST.6-8.9 RST.6-8.10</p> <p>Climate Persuasive Research Paper/Debate WHST.6-8.1</p>
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				WHST.6-8.4
Q3	Building Blocks of Life Cell Processes	Microscopes Cells Photosynthesis Respiration	Differentiate between plant and animal cells Relate the structures of organisms to their functions Describe how the various systems of living things work together	Ongoing RST.6-8.1 RST.6-8.2 RST.6-8.3 RST.6-8.4 RST.6-8.5 RST.6-8.6 RST.6-8.7 RST.6-8.8 RST.6-8.9 RST.6-8.10 Cell Project Use metaphorical reasoning to create and justify a representation of a cell and its functions. WHST.6-8.1 WHST.6-8.4 WHST.6-8.9 WHST.6-8.4

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<p>Q4</p>	<p>Life/Body Systems</p>	<p>Chemistry of Living Things</p> <p>Hierarchy of Cells, tissues, organs</p> <p>Human body systems (Health/Sex Ed-10 days-Northstar)</p> <p>Plants (Transpiration, Absorption, and Response to Stimulus)</p>	<p>Relate the structures of organisms to their functions (see bullets on AZ 6th Grade Standards Page 5).</p> <p>Explain the hierarchy of cells, tissues, organs, and systems.</p> <p>Describe how the various systems of living things work together.</p>	<p>Body Museum</p> <p>Researched project on organs in the body system which includes a 3D interactive model.</p> <p>WHST.6-8.7 WHST.6-8.8 WHST.6-8.6 WHST.6-8.4 WHST.6-8.2</p>
<p>Q4</p>	<p>Energy</p>	<p>Renewable/Nonrenewable Resources</p> <p>Thermal Energy</p> <p>Energy Storage</p> <p>Energy Transformation</p>	<p>Identify various ways in which electrical energy is generated using renewable and nonrenewable resources (e.g., wind, dams, fossil fuels, nuclear reactions).</p> <p>Identify several ways in which energy may be stored.</p> <p>Compare the following ways in which energy may be transformed (mechanical to electrical and electrical to thermal).</p>	<p>Energy Resource Persuasive Research Paper/Debate (Sample: Building Dams Debate, Renewable vs. Nonrenewable Energy)</p> <p>WHST.6-8.1 WHST.6-8.4</p>