

Standards Alignment: Mission Breakdown

Mission	Next Generation Science Standards	Common Core Standards
Earth Odyssey	<p><b>MS-ETS1-2:</b> Evaluate competing design solutions using a systematic process to determine how well they meet criteria and constraints of the problem.</p> <p><b>MS-ETS1-3:</b> Analyze data from tests to determine similarities and differences among several design solutions to identify best characteristics of each can be combined into a new solution to better meet the criteria for success.</p>	<p><b>RST.6-8.1:</b> Cite Specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</p> <p><b>RST.6-8.7:</b> Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually.</p> <p><b>MP.2:</b> Reason abstractly and quantitatively.</p> <p><b>RST.6-8.9:</b> Draw evidence from informational texts to support analysis, reflection, and research.</p> <p><b>WHST.6-8.7:</b> Conduct short research projects to answer a question including a self-generated question, drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.</p> <p><b>RST.6-8.3:</b> Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.</p> <p><b>RI.7.1:</b> Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.</p>



## Standards Alignment: Team Breakdown

Team	Next Generation Science Standards	Common Core Standards
<p style="text-align: center;"><b>ATMO</b> <i>Atmosphere</i></p>	<p><b>MS-PS1-3:</b> Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.</p> <p><b>MS-ESS2-5:</b> Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.</p> <p><b>MS-ESS2-6:</b> Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.</p>	<p><b>RST.6-8.1:</b> Cite specific textual evidence to support analysis of science and technical text texts, attending to the precise details of explanations or descriptions.</p> <p><b>SL.8.5:</b> Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.</p> <p><b>RST.6-8.7:</b> Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually.</p> <p><b>MP.2:</b> Reason abstractly and quantitatively.</p> <p><b>RST.6-8.9:</b> Draw evidence from informational texts to support analysis, reflection, and research.</p>
<p style="text-align: center;"><b>BIO</b> <i>Biology</i></p>	<p><b>MS-LS1-6:</b> Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.</p> <p><b>MS-ESS3-5:</b> Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.</p>	<p><b>RST.6-8.1:</b> Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</p> <p><b>SL.8.5:</b> Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.</p> <p><b>RST.6-8.7:</b> Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually.</p> <p><b>MP.2:</b> Reason abstractly and quantitatively.</p> <p><b>RST.6-8.9:</b> Draw evidence from informational texts to support analysis, reflection, and research.</p>
<p style="text-align: center;"><b>CRYO</b> <i>Cryology</i></p>	<p><b>MS-PS3-3:</b> Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.</p> <p><b>MS-ESS3-2:</b> Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects,</p> <p><b>MS-ESS3-5:</b> Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.</p>	<p><b>RST.6-8.3:</b> Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.</p> <p><b>RST.6-8.1:</b> Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions</p> <p><b>SL.8.5:</b> Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.</p> <p><b>RST.6-8.7:</b> Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually.</p> <p><b>MP.2:</b> Reason abstractly and quantitatively.</p> <p><b>RST.6-8.9:</b> Draw evidence from informational texts to support analysis, reflection, and research.</p>

<p><b>NRG</b> Energy</p>	<p><b>MS-ESS1-1:</b> Develop and use model of the Earth-sun- moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.</p>	<p><b>RST.6-8.1:</b> Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</p>
<p><b>GEO</b> <i>Geology</i></p>	<p><b>MS-PS3-3:</b> Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer. <b>MS-ESS3-2:</b> Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.</p>	<p><b>RST.6-8.3:</b> Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks. <b>RST.6-8.7:</b> Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually. <b>MP.2:</b> Reason abstractly and quantitatively. <b>RST.6-8.9:</b> Draw evidence from informational texts to support analysis, reflection, and research.</p>
<p><b>SAT</b> <i>Satellite</i></p>	<p><b>MS-ETS1-2:</b> Evaluate competing design solutions using a systematic process to determine how well they meet criteria and constraints of the problem. <b>MS-ETS1-3:</b> Analyze data from tests to determine similarities and differences among several design solutions to identify best characteristics of each can be combined into a new solution to better meet the criteria for success.</p>	<p><b>MP.2:</b> Reason abstractly and quantitatively. <b>RST.6-8.1:</b> Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions. <b>RST.6-8.9:</b> Draw evidence from informational texts to support analysis, reflection, and research.</p>
<p><b>OCEAN</b></p>	<p><b>MS-ESS2-4:</b> Develop a model to describe the cycling of water through Earth’s systems driven by energy from the sun and the force of gravity. <b>MS-ESS3-2:</b> Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects, <b>MS-ESS3-5:</b> Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.</p>	<p><b>RST.6-8.1:</b> Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions. <b>RST.6-8.7:</b> Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually. <b>MP.2:</b> Reason abstractly and quantitatively. <b>RST.6-8.9:</b> Draw evidence from informational texts to support analysis, reflection, and research.</p>
<p><b>SW</b> <i>Space Weather</i></p>	<p><b>MS-PS2-5:</b> Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even through the objects are not in contact.</p>	<p><b>WHST.6-8.7:</b> Conduct short research projects to answer a question including a self-generated question, drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration. <b>SL.8.5:</b> Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points. <b>RST.6-8.7:</b> Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually. <b>MP.2:</b> Reason abstractly and quantitatively. <b>RST.6-8.9:</b> Draw evidence from informational texts to support analysis, reflection, and research.</p>

**STANDARDS ALIGNMENT: PRE MISSION CONTENT**

Lesson Plan	Next Generation Science Standards	Common Core Standards
<p><b>The Importance of the Sun</b></p>	<p><b>MS-ESS1-1:</b> Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.</p> <p><b>MS-ETS1-1:</b> Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.</p>	<p><b>RST.6-8.1:</b> Cite specific textual evidence to support analysis of science and technical texts.</p> <p><b>RST.6-8.7:</b> Integrate, quantitative or technical information expressed in words in a text with a version of that information expressed visually.</p> <p><b>MP.2:</b> Reason abstractly and quantitatively.</p> <p><b>WHST.6-8.7:</b> Conduct short research projects to answer a question, including a self-generating question, drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.</p>
<p><b>Earth's Atmosphere &amp; Carbon Dioxide</b></p>	<p><b>MS-ESS3-2:</b> Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects</p> <p><b>MS-ESS3-5:</b> Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.</p>	<p><b>6.EE.B.6:</b> Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or depending on the purpose at hand, any number in a specified set.</p> <p><b>RST.6-8.1:</b> Cite specific textual evidence to support analysis of science and technical texts.</p> <p><b>RST.6-8.7:</b> Integrate, quantitative or technical information expressed in words in a text with a version of that information expressed visually.</p> <p><b>MP.2:</b> Reason abstractly and quantitatively.</p>
<p><b>The Water Cycle</b></p>	<p><b>MS-ESS2-4:</b> Develop a model to describe the cycling of water through Earth's system driven by energy from the sun and the force of gravity.</p> <p><b>MS-ESS2-6:</b> Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.</p> <p><b>MS-ESS3-5:</b> Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.</p>	<p><b>SL.8.5:</b> Include multimedia components and visual display in presentations to clarify claims and findings and emphasize salient points.</p> <p><b>MP.2:</b> Reason abstractly and quantitatively.</p> <p><b>RST.6-8.1:</b> Cite specific textual evidence to support analysis of science and technical texts.</p>
<p><b>Remote Sensing and Communications</b></p>	<p><b>MS-ESS3-4:</b> Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.</p> <p><b>MS-ESS3-5:</b> Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.</p>	<p><b>RST.6-8.1:</b> Cite specific textual evidence to support analysis of science and technical texts.</p> <p><b>WHST.6-8.1:</b> Write arguments focused on discipline content.</p> <p><b>WHST.6-8.9:</b> Draw evidence from informational texts to support analysis, reflection, and research.</p>

