

Standard	Long Term Target	Learning Target	Formative Assessments	Summative Assessment
Describe several different types of energy forms including heat, chemical, and mechanical energy	I can describe the different types of energy that exist in our universe	I can compare and contrast potential and kinetic energy	Energy Notebook Ramp It Up Lab "Potential and Kinetic Energy" Article/Notes	Ramp it Up Graph/ Conclusion PE KE flow chart/venn summarizer
		I can explain how mass and speed affect potential and kinetic energy	Energy Notebook Ramp It Up Lab "Potential and Kinetic Energy" Article/Notes	Ramp it Up Graph/ Conclusion PE KE flow chart/venn summarizer
		I can explain how magnets and wire work to affect electrical energy	David Blaine article Wind turbine lab How Electro Magnets Work article/notes Turn, Turn, Turn lab	TTT Making Sense of It Summary
		I can use content specific vocabulary to summarize the different types of energy	Energy Notebook Energy Power Point / Notes	TTT Making Sense of It Summary REAL device Flow Chart
Use examples of energy transformations from one form to another to explain that energy cannot be created or destroyed	I can describe the energy transformations in a system	I can identify the different types of energy present in a system	REAL device case studies	REAL device Flow Chart
		I can explain how energy is conserved as it flows through a system	REAL device case studies	REAL device Flow Chart
		I can explain how heat travels through matter through conduction, convection, and radiation	Heat is On! Lab History of Measuring Heat Frayer Model CCR PowerPoint CCR Organizer	CCR Acrostic Poem

Explain the similarities and differences between different types of waves both in structure and how they travel	I can explain the similarities and differences between waves that travel through matter and electromagnetic waves that travel through space	I can identify the different parts of a wave	Overview of Sound Waves Reading Sound, EM waves NASA videos Big Waves note catcher Waves Frayer Model	Waves selected response Waves RAFT assessment
		I can use the properties of a wave to locate it on the electromagnetic spectrum	Big Waves note catcher Solar Array Lab	Waves selected response Waves RAFT assessment
		I can compare and contrast waves that travel through matter and waves that travel through empty space	Earthquake Article Sound EM waves NASA videos	Waves selected response Waves RAFT assessment

<b>Power Standard</b>	<b>Learning Target</b>	<b>Assessment</b>
<b>Technology Education</b>		
What is the process for developing potential design solutions?	I can design and build a model wind turbine that generates electricity.	model wind turbine
How can the various proposed design solutions be compared and improved?	I can use logger pro data to analyze and improve my wind blade design.	wind lab design challenge
How are engineering, technology, science & society interconnected?	I can design and build a model invention that transforms energy and benefits society.	invention
Students will develop an understanding of engineering design.	I can describe the engineering process used to create my invention.	design journal KED Talk
Students will develop an understanding of the role of troubleshooting, research and development, invention, and experimentation in problem solving.	I can describe optimum wind blade design and configuration.	design journal

<b>Science</b>		
Describe several different types of energy forms including heat, chemical, and mechanical energy	I can describe the different types of energy that exist in our universe	Annotated energy flow chart
Use examples of energy transformations from one form to another to explain that energy cannot be created or destroyed	I can describe the energy transformations in a system	Annotated energy flow chart
Explain the similarities and differences between different types of waves both in structure and how they travel	I can explain the similarities and differences between waves that travel through matter and waves that travel through space	Annotated energy flow chart
Describe how science and technology can help address societal changes including population, natural hazards, sustainability, personal health and safety, and environmental quality	I can explain how humans' energy consumption impacts our Earth and society	KEDtalk power point
Communicate, critique, and analyze their own scientific work and the work of other students	I can write a scientific lab report that has gone through the peer review process	Lab report of wind turbine experiment

<b>English</b>		
Write arguments to support claims with clear reasons and relevant sources.	I can support a claim with clear reasons and relevant evidence.	Persuasive essay
Analyze how particular lines of dialogue or incidents in a story or drama propel the action, reveal aspects of a character, or provoke a decision.	I can explain how environmental and cultural settings motivate a character to solve a problem.	Reading response log
<b>MATH</b>		
Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.	I can write the equation of a line of best fit and use it to make predictions	Culminating project
Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	I can construct and interpret scatter plots and use a line of best fit when appropriate	Wind Turbine Data Collection Activity

<b>Social Studies</b>		
Cite textual evidence that most strongly supports an analysis of a primary and secondary sources and draw inferences from the text.	I can cite the strongest evidence from a primary or secondary source to support my analysis.	National Needs Report
Determine the central ideas or information of a primary or secondary source and analyze how they are developed over the course of the text.	I can objectively summarize a primary or secondary source.	National Needs Report Turbine Site Plan
Write informative/explanatory texts.	I can develop multiple body paragraphs to support my topic.  I can use examples, statistics, expert analysis and facts to support my topic.	Turbine Site Plan  National Needs Report