Main Criteria: Forward Education
Secondary Criteria: Next Generation Science Standards (NGSS)
Subjects: Mathematics, Science, Technology Education
Grades: 7, 8

Forward Education

Harnessing the Sun's Energy with Solar Panels

Next Generation Science Standards (NGSS)
Science
Grade **7** - Adopted: **2013**

STRAND	NGSS.MS-ESS	EARTH AND SPACE SCIENCE
TITLE	**MS-ESS3**	**Earth and Human Activity**
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	MS-ESS3-1	Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.
PERFORMANCE EXPECTATION	MS-ESS3-3	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
PERFORMANCE EXPECTATION	MS-ESS3-4	Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.
PERFORMANCE EXPECTATION	MS-ESS3-5	Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.

STRAND	NGSS.MS-ETS	ENGINEERING DESIGN
TITLE	**MS-ETS1**	**Engineering Design**
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	MS-ETS1-1	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.
PERFORMANCE EXPECTATION	MS-ETS1-2	Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.
PERFORMANCE EXPECTATION	MS-ETS1-4	Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.

Next Generation Science Standards (NGSS)
Science
Grade **8** - Adopted: **2013**

STRAND	NGSS.MS-ESS	EARTH AND SPACE SCIENCE
TITLE	**MS-ESS3**	**Earth and Human Activity**
		Students who demonstrate understanding can:

PERFORMANCE EXPECTATION	MS-ESS3-1	Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.
PERFORMANCE EXPECTATION	MS-ESS3-3	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
PERFORMANCE EXPECTATION	MS-ESS3-4	Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.
PERFORMANCE EXPECTATION	MS-ESS3-5	Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.
STRAND	**NGSS.MS-ETS**	**ENGINEERING DESIGN**
TITLE	**MS-ETS1**	**Engineering Design**
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	MS-ETS1-1	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.
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