

## Build a Better School Sustainability Design Project Middle School Grades

***MS-LS2-5 Ecosystems: Interactions, Energy, and Dynamics***

***Evaluate competing design solutions for maintaining biodiversity and ecosystem services.***

***MS-ESS3-3 Earth and Human Activity***

***Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.***

***MS-ETS1-1 Engineering Design***

***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.***

Kick off an engineering and design project at The Watershed Institute’s Platinum LEED-Certified building. Students will take part in activities designed to help them understand the importance of working together to solve problems. Then they will learn about sustainable design through a game of Green Jeopardy before diving into a deeper engagement through a variety of lessons, tours and treasure hunts. This day of exploration will start them off on a long-term project back at school. Teachers may choose to have students design retrofits to their school or design a completely new building. The project has flexible timelines and the teacher may decide if the students spend a week, month or a semester on the design. Our experts can help you work out the criteria, constraints and timeline for a custom project. After completion, student teams may present their designs to our staff at the center or at your own school.

***Possibilities abound in this STEM centered project.***



<b>Science/Engineering Practice:</b>	<b>Disciplinary Core Idea:</b>	<b>Cross Cutting Concept:</b>
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Engaging in Argument from Evidence. Constructing Explanations and Designing Solutions. Asking Questions and Defining Problems	Human Impacts on Earth Systems Defining and Delimiting Engineering Problems Developing Possible Solutions	Patterns, Stability and Change Cause and Effect Influence of Science, Engineering, and Technology on Society and the Natural World Science Addresses Questions About the Natural and Material World
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