

## STEM in Action. Sustainably Designed Gingerbread Houses; 6th Grade Science

This Project, conducted with 6<sup>th</sup> graders at East Norriton Middle School in Suburban Philadelphia is one of the finest (and most tasty!) examples of STEAM in action this past school year. Students in Don Taylor's science class first researched the basics of sustainability in the built environment, then self-selected into design/build teams to develop their ideas. In the process of building out their models, the students collaborated, negotiated, used a variety of critical thinking skills, and designed in an aesthetic unique to each model.

### Session 1: LEED

This kickoff event features a presentation to the 6th grade science class by the Architect, David Mazzocco. Architect Dave gives an overview of sustainability, its rationale, the 5 LEED categories, and then presents real-time examples of sustainability in the built and natural environments.

Watch the video: [http://youtu.be/GEbGMXn\\_Y8](http://youtu.be/GEbGMXn_Y8)



### Session 2: 6th Grade Design Groups; "Green" Gingerbread Houses

After Architect Dave's presentation about the elements of sustainability and LEED, the students broke out into small collaborative groups to begin brainstorming their gingerbread house designs. This video documents their first design session.

Watch the video: <http://youtu.be/GTIXuDs1CBE>

### Design Session #3: Sustainable Design in 6th Grade

In this session, the 6th graders at East Norriton Middle School have begun constructing their sustainable, edible gingerbread houses. Their design process has included a presentation from a sustainable architect, brainstorming about materials and design, marking up images of their model concepts, and online research about sustainability and LEED. When the models are completed, they will present and defend their finished models to their peers, their teachers, designers, and architects.



Watch the video: <http://youtu.be/w-Y3x9-Jens>

### ENMS Final Model Presentations: LEED "Certified" Gingerbread Houses

In Part 4 of the Sustainable Gingerbread House Project, Mr. Taylor's 6th grade students presented/defended their finished gingerbread house models. Each design included the LEED elements of Site, Energy, Materials, Water, and Indoor Air Quality. After their presentations, the student designs were evaluated according to a judging rubric that was collaboratively developed by the participating teachers and the students, and that included the LEED frameworks.



Watch the video: <http://youtu.be/LvIIOMibRbI>