



Staircases to Nowhere

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Seniors used physics, art, and carpentry to plan and build model and life-sized staircases of their own designs. First students designed 1:10 scale model staircases alone or with a partner. They had to find some mathematical equation or pattern that modeled something about their staircase and show it in a poster. In the next phase of the project, students designed 1:5 model staircases, which they had to carefully plan and execute. The larger size required them to be more detail-oriented in their designs. In the final stage of the project, students worked in groups to build 1:1 life scale staircases around the school. The four full stairway installations will be permanent and must hold up to significant human teenage wear and tear. The 1:1 staircases required teamwork as well as design, engineering, physics, and carpentry skills.

Teacher Reflection

The scale models, the one-to-ten, were basically whimsy and play. In the one-to-five, students were thinking about structure and how to build these things. The full sized ones were practical and buildable. They all lent different things to the creative process of the students. In the first staircase they learned that play is important to design. In the second, they learned that planning is important to creating something. In the third one, they learned that collaboration is critical to doing something bigger than yourself.

Student Reflections

I learned that it takes an immense amount of planning to produce things in the real world. You can't just B.S. something that you want to look nice.
—Sophie

It requires stepping out of your comfort zone and realizing that you have to put forth a team effort, that everyone does work. Sometimes it's work you don't really want to do, but you do it anyway.
—Czarina

To learn more about this project and others, visit <http://dp.hightechhigh.org/~jrobin/Projects.html>