

Ferryway School

Innovative elementary school uses Adobe® Presenter to integrate science and engineering concepts into the classroom with engaging eLearning experiences

Ferryway School

<http://webdev.malden.mec.edu/ferryway/>

Industry

K-8 Education

Challenges

- Leverage technology to engage learners
- Integrate engineering principles into curriculum
- Raise statewide test scores

Solution

- eLearning
The Ferryway School uses Adobe Presenter software to create an innovative learning environment for students to embrace engineering principles.

Results

- Tripled student testing proficiency rate
- Cut at-risk student rate in half
- Gave faculty invaluable presentation tools
- Strengthened teachers' existing software knowledge
- Encouraged students to explore technology

Systems At A Glance

- Adobe Presenter
- Adobe Creative Suite® 3 Web Premium. Components used include:
 - Adobe Flash® CS3 Professional
 - Adobe Photoshop® CS3
 - Adobe Fireworks® CS3
 - Adobe Dreamweaver® CS3

Lessons come to life

Being a good elementary school teacher often means being a master of multiple subjects—from math and science to history and languages. Educators are always looking for ways to harness the power of technology to help deliver subject matter in the classroom and at home in ways that effectively engage 21st century learners.

Ferryway School in Malden, Massachusetts—a kindergarten through eighth grade mathematics, science, and technology magnet school—encourages students to pursue scientific inquiry. With The Massachusetts Science Curriculum Framework incorporated into classroom and science learning center activities, Ferryway sets high standards for highly motivated students to pursue in-depth studies in science and engineering. The state-mandated framework standardizes expectations and results for student performance and requires testing on an annual basis.

In response to a nationwide need for technology integration in the classroom, educators at Ferryway are using Adobe Presenter software to provide fourth- and fifth-grade students with self-paced eLearning modules about the principles of mechanical engineering. The project, which revolves around waterwheels at the nearby historical Saugus Iron Works, brings a chapter of real-world American history to life while teaching engineering principles.

Creating engaging student experiences

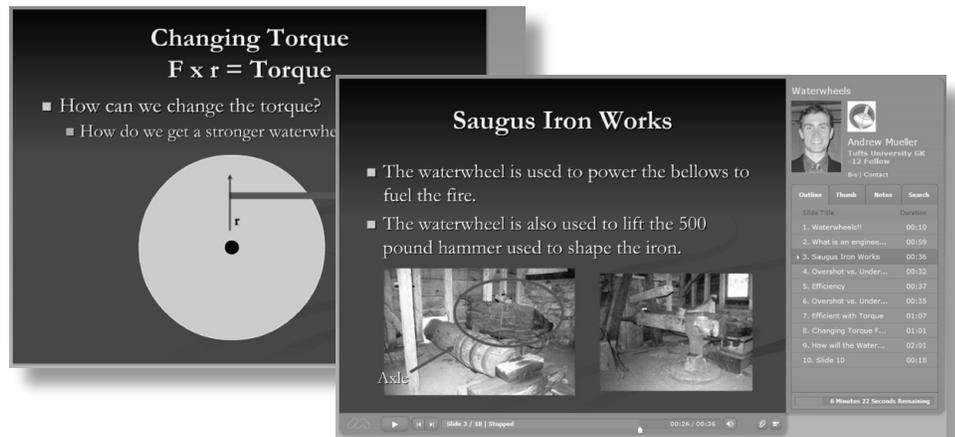
“Teachers want and need to leverage technology to develop curriculum that will engage students,” says Robert Simpson, teacher at Ferryway and an Adobe Education Leader. “Adobe Presenter was the perfect solution to leverage teachers’ existing PowerPoint skills so they can easily integrate visuals, animation, and narration into lessons.”

The Saugus Iron Works waterwheel lessons were developed in Adobe Presenter software by Andrew Mueller, who taught at Ferryway School through the Tufts Engineering the Next Step (TENS) GK-12 program. This program at Tufts University, funded by the National Science Foundation, pairs graduate fellows like Mueller with 5th through 12th grade school teachers in the Malden area to help them integrate engineering concepts and activities into classroom lessons.

To introduce basic mechanical engineering concepts, Mueller used Adobe Presenter to build two feature-rich presentations about the Saugus Iron Works waterwheel—complete with diagrams, formulas, and explicative narration that provide students with a self-paced overview of how waterwheels produce energy, including formulas, procedures, and exercises on how to calculate torque.

Lessons learned from the Adobe Presenter modules become reality for the fifth grade students at Ferryway when they go on a field trip to the Saugus Iron Works historical site to see restored waterwheels in action. Back at school, teams compete in a waterwheel building contest, making their own waterwheels from styrofoam, plastic pipe, and paper cups. “eLearning should be multi-modal to be an effective instructional tool,” says Simpson. “Adobe Presenter enables content experts to effectively present self-paced technical information. From there, classroom teachers can bring those concepts to life.”

Teachers at Ferryway used Adobe Presenter to build two feature-rich presentations that provide students with a self-paced overview of how waterwheels produce energy, including formulas, procedures, and exercises on how to calculate torque. The team also is using Adobe Dreamweaver CS3 to build a website that includes a variety of hands-on exercises, readings, videos, a blog, an assessment unit, and more.



“Using Adobe Presenter, we are effectively eliminating technical barriers to better learning. Teachers can use their existing PowerPoint skills to develop dynamic eLearning content that students can access from any browser. It’s a win-win situation that adds tremendous value to the educational experience in the classroom and at home.”

Robert Simpson,
Technology specialist,
Ferryway School

Advanced proficiency

The waterwheel modules are available on the Saugus Iron Works wiki, a content-rich resource for Malden area teachers to build web-based lessons and incorporate them into classroom curriculum. The ultimate goal of the wiki is to raise student achievement by enabling teachers to develop their own eLearning content, like the waterwheel presentations.

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Ferryway School is committed to teaching students at the highest possible levels, and has realized some truly significant student performance gains since embracing Adobe Presenter and a variety of other Adobe tools.

A year before implementing Adobe solutions, only 5% of Ferryway’s students scored at the advanced level on the state’s Massachusetts Comprehensive Assessment System (MCAS) exam, while 20% fell into the warning category. In one year’s time, however, 17% of all Ferryway students achieved at the advanced level, while only 6% fell into the at-risk category. “When students can engage with lessons in the online environment, in the classroom, and then see it in action in a real-world experience, the benefits show in test scores,” says Simpson.

Fifth graders flock to the web

The Ferryway teachers see Adobe Presenter as a great entry point for embracing technology in the classroom, and are making plans to step up to more advanced tools including Adobe Creative Suite 3 tools. Moving forward, the Ferryway team is using Adobe Dreamweaver CS3 to build a Saugus Iron Works website that includes a variety of hands-on exercises, readings, videos, a blog, an assessment unit, and more. The site also includes Adobe Flash Player video about the 1950s iron work’s restoration project, which is the basis for a new set of interactive, hands-on American history eLearning modules.

The Iron Works video content was digitized using Adobe Flash CS3 Professional software as part of a Teaching American History grant project. As well, the staff used Adobe Fireworks CS3 software to create rollover effects, and Adobe Photoshop CS3 software to edit images and apply sepia tones. “We are definitely taking our technology-in-education plans to the next level with Adobe Creative Suite 3 Web Premium tools,” notes Simpson.

Math and science teachers in grades 5 to 8 throughout the Malden school district are relying increasingly on content experts and using the Adobe Presenter waterwheel lessons and website to effectively engage students with technical content. “When we look at the measurements of students’ performance gains, we know we are doing something right,” says Simpson. “We attribute the Adobe Presenter waterwheel modules as one of the principal reasons students are making such great progress.”



Adobe Systems Incorporated
345 Park Avenue
San Jose, CA 95110-2704
USA
www.adobe.com

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