



Trustee Talk

STEAMING toward the future at Hoffer Elementary School

By Trustee Anne Price, Banning Unified School District, Trustee Area #1

"The best way to predict the future is to create it." — Business management expert Peter Drucker

A program that blends science, the arts, and every subject in between is helping students at Hoffer Elementary School chart a promising future.

They're doing amazing things while taking part in the *STEAM* program, which stands for *Science, Technology, Engineering, Arts & Mathematics*. For instance, students are capturing computerized images of Earth from outer space by linking up with an orbiting satellite. They're building dozens of types of robots and creating miniature versions of the Eiffel Tower using 3D printers. And students are using 3D pens to draw objects in mid-air that harden moments later.

In California, *STEAM* is an enrichment program aimed at improving schools and raising student achievement.

"The jobs these kids will be doing haven't even been invented yet," says Principal Matt Beilstein. "But our students are building a sound foundation for the future."

As a trustee and a former science teacher who won a National Science Foundation grant, I'm awed by the projects at Hoffer Elementary School. Many of these youngsters possess the potential to be the next generation of scientists that our world so desperately needs.
<http://www.banning.k12.ca.us/District-Administration/School-Board/Anne-Price-Trustee/index.html>

A history of *STEAM*

The STEAM program builds on and expands the *STEM* program (Science, Technology, Engineering, & Mathematics) that started in the 1990s. The California Department of Education says the *STEAM* program's hands-on, project-based learning enhances critical thinking, analysis, and collaboration. Research shows that fourth graders taking *STEAM*

score 16 points higher than students who didn't take such programs. And *STEAM* students enjoy a big advantage when it comes to good-paying jobs in rewarding careers. In California, there's a surplus of jobs if you have a *STEAM* background (1.5 jobs for every job seeker.) At Hoffer Elementary School, the *STEAM* program is designed to make our students college and career ready.

It all started six years ago when Principal Beilstein seized on the *STEAM* program as a way of exciting and enriching students. Every student at Hoffer Elementary takes part in the program — the only one of its kind in the Banning Unified School District.

***STEAMING* at Hoffer Elementary School**

Hoffer Elementary School plans and develops *STEAM* activities for an hour on Friday's to enrich and support Next Generation Science Standards that emphasize "learning by doing." Those teaching a *STEAM* lesson rotate into a colleague's classroom. In turn, that colleague takes over the *STEAM* instructor's classroom. As members of the *STEAM Club*, students can work on their projects inside the science lab before school starts.

It's a comprehensive effort aimed at enlightening young minds during a formative stage in their education. For instance, older students build and pilot soap box derbies and younger students operate smaller solar cars. They both learn about the intricacies of speed, distance and time. Students sharpen their math skills by playing chess and learning the geometry behind moving their Knights, Bishops and other pieces during board games. Youngsters experience the science of growing their own food by tending a large community garden and they discover how to plot and shoot movies on their iPads. When it comes to art, students are taught how to sketch and paint with imagination by a visiting artist. And during the school year, Hoffer Elementary stages Soap Box Derby races on its own track and championship chess matches on the playground using life-sized pieces that must be picked up, carried, and set down.

So if you want to see how plastic emitted from the tip of a 3D pen can create an object right before your eyes, or understand the world of automation and robotics, the *STEAM* program is the perfect opportunity for your child. Please come join us when the new school year starts on Aug. 7!