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Volt project generates enthusiasm for learning

In 2010 at Sterling High School in central Kansas, a teacher named Dan Whistler started a simple math lesson, which blossomed into a much bigger project.

It started when the environmental science instructor did some research on the then-new Chevrolet Volt and told his students to figure out how much money he would save on his 40-mile commute to school if he drove that plug-in electric hybrid vehicle instead of his pickup truck.

A student responded by suggesting they acquire a Volt to use for the study.

Whistler took this idea and ran with it. He went about getting approval from the school board and acquiring sponsors for the project to provide enough funding for a three-year lease on a Volt.

His students enthusiastically plotted data from Whistler's daily commute on graphs and charts to show the amount of fuel he would use and the cost savings he would realize over time when driving the hybrid.

Whistler took the time to have charging stations installed at both the school and his home to get the most accurate energy consumption data possible.

He recalled recently that his students responded very well to this method of teaching through real-world examples as opposed to more standard teaching methods.

“A standard assessment is a good way to measure learning,” Whistler said. “But it isn’t the only way.”

The Volt project serves as an example that real-world teaching strategies can be highly effective and can lead to amazing educational opportunities for further research and studies.

Whistler said the assignment gave himself and his students “the chance to get out in public and show a real-world application of the information they gathered.”

This project provided students the opportunity to see how data they analyzed is important not only at the environmental level but also at the economic and political levels.

As Whistler said, it gave the students a chance to see that “Everything is connected to everything else.”

The effectiveness of Whistler's real-world teaching method has been made evident by the volume of educational activities involving the Volt in which his students have since taken part, such as showing it at various conferences, including the Kansas Energy Expo.

Whistler’s advice to other teachers trying to get similar projects off the ground at their schools is “Be willing to learn with your students.”

If both teachers and students look for the most recent and relevant information, he said, the project has validity and everyone gets something out of the experience.

“Textbooks are fine, but by the time something is in a textbook, it is old news,” Whistler said.

The Volt is still being used by the school district, and Whistler plans to have some of his freshman students conduct some analysis using it at the end of this school year.

"I never could have imagined the things we have done with the Volt," he said.

Whistler said his future intentions include possibly diving into the analytics behind the energy usage of buildings.

"I see that as a way to expand on the project we've done with the car," he said.