



FAST FACTS

Project : Nutrition - Science Research

Teacher: Marnie Steele, steele_marnie@svvsd.org

School: Trail Ridge Middle School

Location : Longmont, Colorado

Website: trms.stvrain.k12.co.us

Start/End date: October 2013-May 2014

Mentors provided by: Agilent Technologies, Genentech, GlaxoSmithKline, Google, Inc., Hewlett-Packard Company, Intel Corporation, MasterCard, Merck & Co., Inc., and Thomson Reuters

Contact: David Neils, ITP Founder/Director, 970-481-9795 davidn@telementor.org

Students learn what they're made of through self-designed research

“You are what you eat.” A dated adage? Perhaps. But the 7th-grade students in Marnie Steele’s year-long science class learned there’s merit in those words.

Her students began the 2013-2014 school year by reading Michael Pollan’s “The Omnivore’s Dilemma,” which explores how food choices not only impact physical health, but also our collective political, economic, psychological and even moral lives. After finishing the book, they were fascinated by the thought that food production should be emotionally, environmentally and economically friendly. “Because of this, I decided to take my students to Cure Organic Farm, a local farm run on similar principals,” Steele says. “It was a fabulous learning opportunity for my students and brought many of the concepts they read about in the book to life.”



Mentor talk
Students communicate with mentors though secure ITP website

From there, all 33 of Steele’s students investigated for themselves where food comes from and the impacts food production has on society. Steele structured the class to teach students how to conduct authentic scientific research, as well as empower them to develop personal responsibility for their own health related to their food and beverage choices. Steele says, “Often as a teacher it is easier and less stressful to plan out all of your students’ learning experiences. With this project, I established overall guidelines, but the students chose the real nutrition issues they wanted to tackle.” The topics her students chose to investigate are impressive. They include:

- Whether organic food contains pesticide residue and how that’s reflected in food labeling
- The effect of hydration on student performance, both physical and mental
- How food dyes affect the ability of mice to navigate a maze
- The shelf life of organic food as compared to non-organic food and fast food.

These types of inquiries by her students required more individualized, one-on-one guidance than Steele could provide by herself, so she enlisted the help of professionals through the International Telementor Program (ITP).



“...the best learning experiences are those that challenge us, yet when we are able to work through the difficulties, we come out stronger than when we began.”

Marnie Steele, Trail Ridge Middle School Teacher

“I needed mentors who were interested in helping address the nutrition challenges young people face today. Mentors who have a passion for health, healthcare and creative problem solving,” says Steele. The professionals who mentored Steele’s students helped them apply the scientific method while developing their investigations and organize their findings into presentations they gave to classmates, school staff and individuals from the local community at the end of the school year.

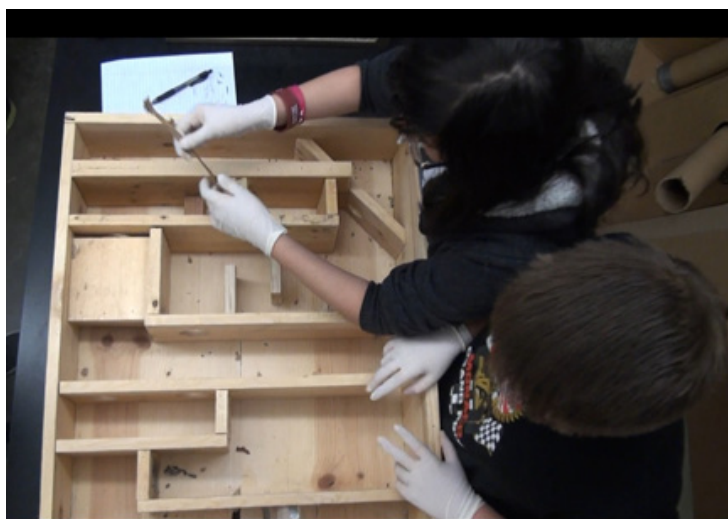
Steele hadn’t heard of ITP before her principal asked if she wanted to use its mentors for her project-based course. After conducting her own research about ITP, she thought the program offered the assistance she needed and felt that working with professionals “... would be challenging and exciting for my students, so I said ‘yes.’ It was a good decision.”

Beyond getting expert advice from mentors about their selected nutrition-based science projects, students learned how to ask for feedback, incorporate that feedback into their work, provide reflections about their work and communicate appreciation for the help they received.

One student says, “The best part of working with my mentor was getting really good feedback, support and resources. He really took the time to find the most detailed and credible websites he could to help me with my project. It was also fun to conduct a huge experiment that can help others with their problems or questions.”

Student comments like these show that, “ITP provides students with support for authentic learning, but the benefits go way beyond helping students with a solid science project. When students start a project they typically have very few tools in their collaborative tool box, but upon completion they realize they have many skills they are eager to apply to other classes and interests,” says David Neils, ITP founder and president.

Steele adds, “This ITP project has been a good experience for me to step back and allow my students to struggle, problem solve and find out what their next steps should be. I like that the students need to take ownership for their learning because the best learning experiences are those that challenge us, yet when we are able to work through the difficulties, we come out stronger than when we began.” 🌍



A-Maze-ing food dye experiment
Students test how food dye affects a mouse's navigation skills

WWW.TELEMOTOR.ORG

The International Telementor Program ■ David Neils, Founder/Director

