



Todd Wold, Lompoc, CA

Todd Wold earned his Master's in Education from the University of Washington in 2004. His practicum was on "*Using Inquiry-Based Science Teaching to Help Close the Gender Gap in the Physical Sciences*". He is in his eleventh year of teaching chemistry, physics, earth science, astronomy, algebra, and/or geometry. Todd continually strives to implement inquiry based learning throughout his teaching. He implemented the Summer of Science (S.O.S.) program in Shoreline, WA in 2003, presented at the NWCSI conference in 2004, helped develop and lead the first annual Bioengineering Camp at the University of Washington in 2004, began a Biodiesel Project in 2006 that is actively growing, and is an active teacher in the Space, Technology, and Robotics Systems (STaRS) Academy. Todd resides in the little town of Lompoc in Santa Barbara County, CA.

Workshop topics:

Elementary Education is the Key

In this workshop participants will see what the data shows regarding the achievement gap in STEM (Science, Technology, Engineering, and Mathematics) classes. They will see what a vital role elementary education and teacher expectation plays in student efficacy in STEM areas. The workshop will provide opportunities for teachers to collaborate and reflect on practices, as well as practice inquiry based activities that can transfer to their own classroom.

Audience: Ideal for elementary teachers, administrators, and STEM instructors.

Format: Workshop includes group activities, discussion and lecture.

Length: 2-3 hours.

Status of Women and Girls in STEM

This workshop will evaluate the overall status of women and girls in STEM, ranging from Primary Education to Career. Participants will collaborate in small groups to evaluate what is working and what is not working for girls, women, and various ethnicities within the full range of STEM learning. Participants will walk away from this workshop with real goals and strategies to help make real change.

Audience: Ideal workshop for elementary teachers, STEM teachers, counselors, and administrators.

Format: Lecture, small group collaboration, and large group collaboration.

Length: 2-3 hours.

Summer Camps

In this workshop, participants will discuss various ways to fully immerse students in STEM related topics that will be exciting and educational. Todd will share successes he has had with a Lego Robotics Camp, the Summer of Science (S.O.S.) Camp, and the Bioengineering Camp at the University of Washington as well as a current week long camp he is implementing for the STaRS Academy (Space, Technology, and Robotics Systems) summer 2008.

Audience: Ideal for administrators, project coordinators and instructors.

Format: Lecture, discussion and hands-on activities.

Length: 3-4 hours.

Long Term Inquiry Based Activities

In this workshop, Todd will share about his STaRS Academy Biodiesel Project. Participants will take a look at how an inquiry based activity such as this can help polarize all students. Participants will meet in collaborative groups to discuss new ideas and various ways inquiry activities will better reach girls and minorities in the classroom.

Audience: Ideal for administrators, counselors, project coordinators, and instructors.

Format: Lecture, discussion, small group activities, large group activities.

Length: 3-4 hours.

Contracts include:

Northwest Christian Schools International (NWCSI)
Space, Technology, and Robotics Systems (STaRS) Academy
National Alliance for Partnerships in Equity (NAPE)

Previous and Ongoing Projects:

Lego Robotics Camp (researcher): Dr. Kathleen Martin University of Washington
Involved in the research of differing gender approaches to the same Lego Robotics projects within a range of primary and middle school boys and girls.

Summer of Science (S.O.S.) Day Camp: Todd Wold M.Ed.
Implemented a week long camp as a part of practicum project. Developed a program of inquiry based activities to enhance students primary education.

Bioengineering Day Camp: Tim Krell, Mare Sullivan, Todd Wold
Assisted in implementation of a week long day camp where ninth grade students worked on inquiry based activities within the bioengineering department at the University of Washington. Students worked directly with professors and researchers on specific activities related to microfluidics, HIFU (high intensity focused ultrasound), nanotechnology, and tissue engineering.

STaRS Academy Day Camp: John Galisky, Todd Wold
Helping design and oversee a week long day camp using hands on activities to gear up STaRS Academy students for the school year. Students will be prepared for their STEM courses and introduced to the opportunities they have within the academy as well as future college and career opportunities they are preparing for.

STaRS Biodiesel Project: Todd Wold
Began the research for this project Fall of 2006, developing an extensive webpage as a year long culminating project. After relocating to Lompoc, California, Todd began phase two building a Biodiesel Reactor that has the capabilities of creating up to 100 gallons of Biodiesel fuel every three days. This project is teaching chemistry as well as stewardship of renewable and sustainable resources, while involving students with the local businesses and involving the local community with the school.

Qualifications:

Bachelor of Science: *Natural Science: Physics*
University of Puget Sound 1994
Master's of Education: Practicum: *Using Inquiry-Based Science Teaching to Help Close the Gender Gap in the Physical Sciences*
University of Washington 2004

Washington State Teacher Certificate #443182A
Science, Chemistry, Middle Level Math/Science

California State Teacher Certificate #070342504
Chemistry preschool-adult
Intr. Math/Science preschool-adult

Member:

State of California STEM Equity Pipeline
California Partnership of Academies (CPA)
National Science Teacher's Association (NSTA)
Computer Using Educators (CUE)