National Science Teachers Association (NSTA) Conference

Indianapolis Indiana

March 29 through April 1 2012

1. List three sessions you attended.
2. **Session sponsored by Bio-Rad demonstrating their: Bio-Rad GMO Investigator Kit**

This kit was designed to allow students to determine if their favorite foods have been genetically modified (GM). This kit can be used in current biology courses (Bio 114, 121 & 122). Although Nutrition 107 does not have a lab component, a demonstration type activity using this kit could be very beneficial.

1. **Biology with Vernier**  This was a hands-on workshop where participants were allowed to use the Vernier technology in performing transpiration, cell respiration and EKG experiments.

**Inquiry-based Biology with Vernier workshop.** Using Vernier software & Technology, inquiry labs can be introduced into biology courses.

1. **Bio-Rad: Integrated Molecular Biology Labs for College Level.** This workshop introduced a flexible modular lab series which included an advanced series for cloning, sequencing, and bioinformatics, and protein expression and purification using affinity chromatography.
2. One significant item you learned from the conference that you were unaware of and would like to share with *biology colleagues.*

Session entitled “**Adventure into the Digital Biology Classroom: Revolutionizing Science Education”** introduced Animalearn’s The Science Bank which describes a tour of cutting-edge technology. There is a free lending library which offers innovative science teaching tools.

1. What one activity would you recommend we implement immediately?

**“Teaching an Integrated Unit on the Cell”** All current biology classes include a unit on cells. This session emphasized creating a meaningful learning environment where students complete integrated activities involving cell structure and function.

1. What one activity would you recommend we implement in FY 14 budget (Long Term)

I was particularly intrigued by the idea of digitizing the various laboratory experiments presently being done here at OH. Many of the current labs are observation type activities, which does not allow for accurate data acquisition. For instance, counting “bubbles” to measure photosynthesis. Using the Vernier system, students would be allowed to accurately measure and analyze data of many systems being studied in biology. This could also promote inquiry-based learning. I strongly recommend investing in this system in the near future.

1. If we had available funds what would you recommend we implement?

I would strongly recommend investing in the Vernier software & Technology system.

1. Additional comments pertaining to how this conference supports the grant objectives or KPIs of the District.

The conference served as a means of sharing insights and practices of my colleagues, science teachers. It was a tremendous professional development experience with featured speakers, exploration of the exhibit hall, exhibitor workshops, teacher workshops and other presentations.