## Peak Area Leadership in Science Professional Development Opportunities Three Ways to RSVP: RSVP form for Secondary Science Teachers (new!) www.sciencehubs.org, email: RSVP@sciencehubs.org, or Call Tammy Johnnie at (719) 598-2732.



# Saturday, January 30, 2016 "Measurements Matter" and "Smelly Science" **U.S. Air Force Academy Chemistry Department 9 - 5**

Our PALS HUB activities at the USAF Academy will include something for everyone. We will provide activities that (1) expand participants' knowledge base; (2) provide the opportunity to do experiments that can be used in their classrooms; and (3) provide the opportunity to do experiments in a research-style environment using advanced equipment.

Facilitated by Dr. Ron Furstenau, USAFA Department of Chemistry

#### **Activities include:**

"The Chemistry of Smells: Developing Models" - hands-on exercise

"Smelly Science" - lunch presentation will answer some deep philosophical questions such as "what is the smelliest known chemical?" and "why do farts and vomit smell so bad?"

"Synthesis and Analysis of Divanillin" - lab to synthesize, isolate, and analyze a compound with little or no smell (divanillin) starting with a compound that smells like an ice cream shop (vanillin)

"Measurements Matter" - Take a closer look at the precision and accuracy of glassware used to determine the density of water and explore other measurement experiments.

Bring your science notebook! Bring your own lunch © (Some snacks and beverages will be provided.)

Come and update your science content... network with other science teachers... get free teacher materials... win a door prize... earn professional development hours... have fun ©



You must RSVP for this workshop!

You must present a valid photo ID at the USAFA North Gate for entrance.

Meet at the south steps of the Cadet Field House at the U.S. Air Force Academy at 9:00 for check-in.



We will leave the parking lot promptly at 9:15. Late participants will not be able to attend. No early departures.

Escorted Access Only.

This workshop is possible because of GENEROUS funding provided by:

#### The Mikkelson Foundation

Providing Support for Teachers to Improve Technical Knowledge and Skills

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Photo at DiCenso.

In compliance with Colorado School of Mines regulations, children of participants may not attend Hub meetings or activities.

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