

## *2009 Central Jersey Modeling Institute: July 6th – 23rd*

Expanding modeling instruction throughout Central New Jersey

Montgomery Township School District is excited to host the Central Jersey Modeling Physics Institute in the Princeton area in summer 2009. Modeling Instruction in physics and chemistry is a research-based reform effort initiated at Arizona State University. The modeling physics curriculum was the only high school science program recognized as exemplary by the U.S. Department of Education (2001). It has been implemented in classrooms throughout the country and has been shown to produce dramatic improvements in student learning.

The 2009 workshop will cover the mechanics units of the modeling physics curriculum resources. Instructors of physics, chemistry, physical science, biology and earth science are welcome to attend. It is anticipated that both physics and chemistry workshops will be offered during the summer of 2010. The curriculum materials present a coherent and consistent approach to physical science, physics, and chemistry. The summer 2009 workshop will be designed instructors teaching physics first or a junior/senior level course.

- 1) improve both content and pedagogical knowledge in physics or chemistry by incorporating the modeling cycle, inquiry methods, critical and creative thinking, cooperative learning, and effective use of classroom technology in instruction.
- 2) enhance student learning and get them more excited and articulate about science.
- 3) establish a local community of support for teachers who use the modeling approach.
- 4) use research instruments to guide their teaching practice .

To learn more about modeling instruction programs, visit: <http://modeling.asu.edu/>

We also hope that this Institute will provide pre-service teachers with access to the modeling instruction. More details about the workshop:

- July 6-23, 2009 at Montgomery High School, Skillman, NJ : 8:00 AM – 4:00 PM, M-Th
- Two follow-up evening sessions to help with classroom implementation during 2009-10
- Cost: \$750.00 - for possible funding grants visit:  
<http://modeling.asu.edu/modeling/professdevelop.html>
  - o Modeling Workshops qualify for NCLB Title II-A funds
- As of April 1<sup>st</sup>, details regarding the availability of graduate credits in science instruction are still being negotiated.
- **Physics Workshop leaders:** Craig Buszka ( [cbuszka@mtsd.us](mailto:cbuszka@mtsd.us) ) and Jason Sullivan ( [jsullivan@mtsd.us](mailto:jsullivan@mtsd.us) )

If you have additional questions, please contact Jason Sullivan

[jsullivan@mtsd.us](mailto:jsullivan@mtsd.us) , 609-466-7602 x 6569 (office).

Online registration at:

<http://www.mtsd.k12.nj.us/646020112135852263/forms/TakeSurvey.asp?PageNumber=1&SurveyID=552lo610ln1IG>

Space is limited for each session and local housing arrangements are possible for participants travelling from outside the Central Jersey region. Take advantage of the workshop schedule and location (3 day weekends and easy access by train to NYC or Philly).

The Modeling method of instruction corrects many weaknesses of the traditional lecture-demonstration method, including the fragmentation of knowledge, student passivity, and the persistence of naïve beliefs about the physical world. From its inception, the Modeling Instruction program has been concerned with reforming high school physics teaching to make it more coherent and student-centered, and to incorporate the computer as an essential scientific tool.

<sup>1</sup> Jackson, Jane, Dukerich, Larry, Hestenes, David. Modeling Instruction: An Effective Model for Science Education. Science Educator. 17(1), Spring 2008.

## *Central Jersey Modeling Institute Letter of Application*

Register online:

<http://www.mtsd.k12.nj.us/645938927141035/FileLib/browse.asp?a=374&BMDRN=2000&BCOB=0&c=59302&645938927141035Nav=|&NodeID=1077&ResponseID=25831#>

Checks or purchase orders should be payable to:  
Montgomery Township School District

Send payment to:

Suzanne Calabro  
Montgomery Township School District  
1014 Route 601  
Skillman, NJ 08558  
Attn: 2009 CJMI

In addition to completing registrant information, applicants are to arrange for an administrator to complete a registration of support online at:

Administrators are invited to attend the Administrator's Modeling Orientation Day from 8:30A-1:00P on Tuesday, July 21<sup>st</sup>.

**For planning purposes, receipt of all application materials is May 31st, 2009 is appreciated**

**All correspondence will be sent via email from [jsullivan@mtsd.us](mailto:jsullivan@mtsd.us).**

If possible, you are asked to participate in two evening sessions during the school year to assist with the implementing the modeling method, and to provide the evaluation team with ongoing feedback on the effectiveness of the training. Times and dates will be arranged by the group during the institute.