



# Science Teacher WORKSHOPS



**\$595** PER **Class**

Additional teachers from the same school district or PAISTA receive a **10% DISCOUNT.**

Fee includes all materials and lunch. Participants are responsible for their own travel and lodging. Inquire about on-campus dorm rooms and nearby hotel accommodations upon registration.

Workshops are for science teachers interested in modeling applications and are appropriate for teams of physics and math teachers interested in integrating the two subjects. Class size is limited to 18. Act 48 continuing education credit is available. Attend one workshop or both.

Dr. Kathy Malone is the lead mentor for all science teacher workshops. She has taught physics and chemistry in public and private schools for over 20 years and has trained teachers in all parts of the country. She holds an undergraduate degree from the University of New Orleans and masters' degrees from the University of New Orleans and Carnegie Mellon University. She received her doctorate in cognition and physics education from Carnegie Mellon in 2005.



TO REGISTER, E-MAIL [SUMMERPROGRAMS@SHADYSIDEACADEMY.ORG](mailto:SUMMERPROGRAMS@SHADYSIDEACADEMY.ORG) OR CALL (412) 968-3160



Shady Side Academy  
423 Fox Chapel Road  
Pittsburgh, PA 15238

Non Profit Org.  
U.S. Postage  
PAID  
Pittsburgh, PA  
Permit No. 609

June 22-26

M-Th: 9 a.m. – 4:30 p.m.  
F: 9 a.m. – 1p.m.

### MODELING INSTRUCTION IN PHYSICS I: ENERGY AND CONSTANT VELOCITY

- Focus on a conceptual energy unit that contains numerous representations
- Detail how energy is used as a theme throughout the course
- Detail how energy is threaded throughout the constant velocity unit

### MODELING INSTRUCTION IN CHEMISTRY

- Theory and practice of modeling chemistry
- Evolution of diagrammatic representations
- Energy representations throughout the modeling process
- Integration of lab centered practices

### MODELING INSTRUCTION IN BIOLOGY

- Modeling instruction: theory and practice
- Evolution
- Energy: cellular respiration
- Cell structure and function

June 29-July 3

M-Th: 9 a.m. – 4:30 p.m.  
F: 9 a.m. – 1p.m.

### MODELING INSTRUCTION IN PHYSICS II: ENERGY AND CONSTANT VELOCITY

- Focus on the development of an initial conceptual model of energy
- Demonstrate how the energy model is quantified
- Detail the connection between the development of the energy and momentum models
- Detail the construction of an impulsive force and momentum model