

Workshop Overview

Our workshops are hosted at community resource spaces in the historic First Parish Unitarian Universalist Church in Kennebunk, Maine, our fiscal agent. Fees: \$1400/ two-week or \$800/ one week.

Non-refundable deposits for half the fees are due by June 1, balance by July 12 – waiting listees contacted on June 2. Please send check to:

**FPUU Kennebunk, 114 Main Street,
Kennebunk, Maine 04043**

ATTN: Summer 2019 Workshops
mainemodelingworkshop@gmail.com

Please write "Modeling Workshop"
in the subject line

Electronic registration link:

<https://tinyurl.com/gur7y9t>

Graduate Education Credit Available!

\$375/3-credits/week through
Dominican University. For Details
Contact Bill Thornburg at
amtaexec@modelinginstruction.org

ATTN: Grad credit attendees may
start Sunday evening before each
week's workshop, for details
contact Jamie jvesenka@gmail.com

What to bring and how to find us



Directions to the workshop are at:

<http://www.uukennebunk.org/howtofindus.php>

You are strongly encouraged to bring laptop computers to the workshop to familiarize yourself with the use of the technology, including Vernier sensors. July is warm and humid on coastal southern Maine. Kennebunk beach is and several nature reserves are a few miles away. Delicious homemade lunches by local chef included.

***Please join us for these dynamic
workshops.***

Free Housing Option for individuals in private homes. Deadline June 1, use the following subject line when contacting about free housing option:

ATTN: Modeling Housing

Or visit the link below to find other housing options at your own expense:

<http://www.visitthekennebunks.com/>

Maine Summer 2019

Modeling Workshops
Biology – Week 1
Chemistry – 2 Weeks
Physics – 2 Weeks
Waves – Week 2
(2 weeks possible)



Fireworks at Gooch's Beach in Kennebunk Maine, note the parabolic motion 😊

Week 1: July 22-26, 2019
Week 2: July 29 - August 2, 2019
Location: Kennebunk, Maine

More workshop pictures and details at:
Mainemodelingworkshop.wordpress.com

Breakfast & lunch provided – if you have dietary restrictions *beyond* gluten or lactose intolerance, please consider securing food locally to substitute for offered items at breakfast or lunch.

Biology 1 week Topics

Potential Topics

1. Experimental Design
2. Classifying Life
3. Evolution
4. Energy

Chemistry 2 week Outline

Week One

1. Physical properties of Matter
2. Particles in Motion
3. Sticky Particles
4. Describing Substances

Week Two

5. Counting Particles Too Small to See
6. Particles with Internal Structures
7. Chemical Equations
8. Stoichiometry

Physics 2 week Outline

Week One

1. Measurement and Graphing.
2. Constant velocity particle
3. Constant acceleration particle
4. Tip-to-tail vector addition
5. Free particle ($\sum F=0$)

Week Two

6. Constant force particle ($\sum F=ma$)
7. Energy & restoring force particles
8. Central force particles
9. Impulsive force particle

Waves Topics

Typically Week 1

1. Simple Harmonic Oscillator
2. Waves on a string
3. Sounds Waves/Resonance
4. Doppler Shift

Typically Week 2

5. Colors/Interference
6. Refraction/Diffraction
7. Ray Optics

Goals

1. To train teachers in the use of a model-centered, constructivist method of teaching while improving their content knowledge in science.
2. To provide continued professional development for experienced instructors as well as mentoring of new instructors.
3. To integrate computer courseware effectively into the chemistry and/or physics curriculum.
4. To establish electronic support and a learning community among participants.
5. To help participants to make better use of national resources for chemistry and/or physics education.
6. To strengthen local institutional support for participants as school leaders in disseminating standards-based reform in science education.

Modeling Workshop

The workshops on both chemistry and physics thoroughly address all aspects of middle & high school teaching, integrating teaching methods with course content for chemistry and physics classrooms. Special emphasis will be placed on modeling concept development and integrating technology appropriate for the middle and high school.



Participants will be introduced to the *Modeling Method* as a systematic approach to the design of curriculum and instruction. Participants will be instructed on computer hardware and software selection, techniques for laboratory data collection analysis and Internet use to help them become experts on the best uses of technology in education. Participants will be given techniques to deliver in-service training and help in strengthening local teacher alliances.