

## Workshop Overview

Our workshops are hosted at community resource center in the historic First Parish Unitarian Universalist Church in Kennebunk, Maine, our fiscal agent. Virtual workshop fees \$600/week.

Non-refundable deposits of \$200 due by June 1 to guarantee a seat. Can enroll up to workshop date if seats available.

Credit card Link:

<https://tinyurl.com/8ftyy497>

Please send remittance check to:  
**FPUU Kennebunk, 114 Main Street,  
Kennebunk, Maine 04043**

**ATTN: Summer 2019 Workshops**  
[mainemodelingworkshop@gmail.com](mailto:mainemodelingworkshop@gmail.com)

Please write "Modeling Workshop"  
in the subject line

Electronic registration link:

<https://tinyurl.com/gur7y9t>

## Graduate Education Credit Availability

Details Contact Bill Thornburg at  
[amtaexec@modelinginstruction](mailto:amtaexec@modelinginstruction).

## What to bring and how to find us



Hoping to bring F2F back in 2022

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

Due to low enrollment we have had to cancel F2F offering for the summer of 2021 – we are looking forward to trying to host the workshops again in 2022.

### Virtual Workshops:

Please join our two veteran master instructors as they expertly weave a combination of modeling process and chemistry or physics story lines that satisfy national STEM teaching standards while making for an outstanding professional development training opportunity. Tom Pfeiffer will teach his 10<sup>th</sup> year of chemistry 1 instruction, second year of chemistry 2 instruction, and Matt Watson returns for his fourth year of physics instruction and first year of waves instruction.

## Maine Summer 2021

Modeling Workshops  
Chemistry–Weeks 1-3  
Mechanics–Weeks 1-2  
Waves – Week 3



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

Week 1: July 5-9

Week 2: July 12-16

Week 3: July 19-23

Location: First Parish UU  
Kennebunk, Maine

More workshop pictures and details at:  
[Mainemodelingworkshop.wordpress.com](http://Mainemodelingworkshop.wordpress.com)

## 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

### Week Three

9. Advanced topics, in part determined by participant interest.

## 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

### Week 2 of Workshop

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

## 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.