

Modelers' contributions: URLs to add to "weblinks for modelers" webpage. March 28, 2021

Eugenia Etkina, founder/developer of ISLE, which is super-compatible with Modeling Instruction, wrote on March 27, 2021: "For now, the best place is our Facebook group "Exploring and Applying Physics". I have materials for teaching ISLE online for all chapters. We have almost 900 members. Please tell people to answer the question, when they ask to join, or I will not let them in."

She wrote also, "This URL has tons of stuff including the labs for online learning (the second link)".

<http://sites.google.com/site/scientificabilities/>

<http://sites.google.com/site/scientificabilities/online-learning>

Aaron Debbink, long-time Modeling Workshop leader in Cincinnati, Ohio, posted to the modeling listserv on March 8, 2021: "I have continued to put together a series of videos to help students collect and analyze data for more modeling labs. Some of the labs also include a video which discusses the consensus conclusions from the class. Feel free to use them for your students."

Physics Modeling (online data collection videos):

<http://docs.google.com/document/d/1azslPh6vGnj9Reu-wjE-RVtfAwSx6ZygI0aSZHaLANc/edit?usp=sharing>

Lee Trampleasure, long-time modeler in northern California, posted on March 10, 2021: Momentum bar charts (make a copy):

[http://docs.google.com/spreadsheets/u/0/d/1xY\\_aFoWG3CgM399in37aZ8Kl2YqHzAaB7nEnDhboGJI/copy](http://docs.google.com/spreadsheets/u/0/d/1xY_aFoWG3CgM399in37aZ8Kl2YqHzAaB7nEnDhboGJI/copy)

Lee explained:

There are two tabs: one for one object with impulse, and one for two objects with initial/final from a collision/explosion. I don't have any formulas written into it, that's up to my students to do (and will change depending on the information given in a problem). Students can either write equations into the spreadsheet, or just use it to check numbers they calculated outside the spreadsheet.

The spreadsheet generates the bar chart, so students can view how their solutions fit or don't fit conservation of momentum.

Jamie Vesenka, modeler since 1998 and Modeling Workshop leader/organizer, posted on March 11, 2021:

Momentum bar charts: Two-particle conservation of momentum representations:

<http://www.geogebra.org/m/M6NSNRBk> elastic, inelastic and explosive "collisions"

<http://www.geogebra.org/m/pc5C2csM> combinations of Inelastic and Elastic Collisions

Lynn Jorgensen's optics activities (Powerpoint: at-home investigations for all HS levels):

<http://docs.google.com/presentation/d/1tSiYem7yao9giMLBzDR74G8J9zr8YXX4BiROuic--t4/edit#slide=id.p>

Adapted for AP-2:

<http://docs.google.com/presentation/d/1eXCGEOuGL3Zy6RICADfIKkafum5LNM2tyWA2-9wTHpw/edit - slide=id.p>

Jane Jackson keeps up-to-date on physics education research (PER) in two ways:

1) by subscribing to an e-mail blast that is equivalent to this URL that lists recent articles (FREE in pdf) in the journal called Physical Review Physics Education Research:

<http://journals.aps.org/prper/recent>

2) by downloading peer-reviewed papers in the yearly PER-Central Proceedings, in the physics education research section of the ComPADRE website:

<http://www.compadre.org/per/perc/proceedings.cfm>