

## Model, Meet Classroom. Classroom, Meet Model.

### Introducing Models to the Classroom Using Technology

Technologies used in the presentation:

- Augmented Reality — It is possible to produce these...but the technology for creating and distributing is still a bit rough, but here is the example I showed in the presentation: <http://sponholtzproductions.com/3d/>
- beSocratic — Developed for chemistry by Melanie Cooper, this web application has been used to revolutionize chemistry instruction. It can be used for any discipline...If you are interested in using beSocratic, please let me know so that we can develop this resource as college and university tool: <http://besocratic.chemistry.msu.edu/>
- CMAP Tools — A free tool set that allows you and your students to create concept maps and system models and to connect the concepts to web resources and files: <http://cmap.ihmc.us/>
- NetLogo — This free simulation software has many ready to go simulations in its model library. The simulations are easily modified and you can make your own with a modest investment of time: <https://ccl.northwestern.edu/netlogo/>
- pHet Models — Free simulations on basic concepts in disciplines, many come with teacher activities or documentation. <https://phet.colorado.edu/en/simulations/category/new>
- Simbio — This is one example of a company that offers simulations for purchase. Their SimUText series combines readings with integrated simulations that help scaffold the material: <http://simbio.com/>
- Excel — My sample model came from the BioQuest Curriculum Consortium's ESTEEM (Excel Simulations and Tools for Exploratory, Experiential Mathematics) check out their variety of models here: <https://smilessoftware.com/TextExpander/index.html>
- TextExpander2 — This is the program that allows you to use hot keys to provide feedback or produce emails in a fraction of the time: <https://smilessoftware.com/TextExpander/index.html>
- Discussion Forum — We talked about using D2L's discussion forum tools to create a student help desk that can help support your modeling in the classroom (remember there is also a 3rd party discussion forum tool Piazza that you can also integrate with D2L).
- Google Slides — You can use MSU's Google Apps to run collaborative sessions in class where you can easily display student work: <http://googleapps.msu.edu/>
- R — The statistical modeling program for many can be downloaded here: <https://www.r-project.org/> And Modeling PDF <http://www.r-bloggers.com/introduction-to-simulation-using-r/>

## Literature Cited:

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