

Teaching in Chemistry & Science

Online Resource Guide

Please feel free to add sections. It would be great if you would use the headings so that the sections appear on the left. (Click "Normal Text" above to get a list of heading options).

Links to Online Lectures

- <https://www.khanacademy.org/science/chemistry> (Khan Academy)
- <https://www.youtube.com/user/tdewitt451/playlists> (Tyler DeWitt)
- <https://app.senecalearning.com/courses/add?Subject=Chemistry> (Seneca)
- https://www.youtube.com/channel/UCAa3_pU3FV9gLLQX6ID1_LQ/playlists (Chemistry Is My Jam - handouts included in description) [Tyler DeWitt](#)
- <http://www.bozemanscience.com/chemistry> Bozeman Science (most science subjects are here as well as chemistry)
- <https://www.ck12.org/student/>
- <https://njctl.org/materials/categories/>

Useful Links

- [Education Companies Offering Free Subscriptions due to School Closings](#) (Education companies offering free subscriptions due to school closings)
- <http://sciencegeek.net> (The review section under each course has great practice for students - The website does not save grades but I've had students send me a screenshot before to get credit).
- <http://zoom.us> (Great for recording your screen to create lectures. I have also used it to have students self-proctor their tests in online courses. They recorded their screen and themselves while taking an online test.)
- CamScanner is a great app for having students scan with their phone. Exports as a PDF.
- CK12 flexbook with reading video lecture, questions and practice Free. We access it through Schoology
https://flexbooks.ck12.org/flexbooks/student/?gclid=CjwKCAjwmKLzBRBeEiwACCVihjLl6CuwyHZIVZheJ4sMK2ITiTGWLqgl6elAndEVTBs5r24GXhktPBoCngMQAvD_BwE
- <https://www.envisionsuccess.net/blog/how-to-format-a-document-for-accessibility-and-digital-ada-compliance> (This talks about making documents ADA Compliant - or making them so that a screen reader can easily navigate through them).
- Sophia.org tutorials/pathways - self-paced; students are assigned points that you can check (not sure how many there are - there is definitely one on nomenclature). (<https://www.sophia.org/>)
- Unit conversions tutorial: <http://joneslhs.weebly.com/>
- [Screen castify](#): screen recorder (free version is only 5 minutes, education version of program is \$29 a year and is wonderful)
- [Hyperdocs](#): not webquests! Great way to teach digitally

- Suggestions as to how to teach inquiry based courses like modeling
http://modeling.asu.edu/listserv2/listserv2_classMgmt/OnlineTeachingUsingModelingInstruction.pdf
- Articles to use for applications of chemistry
<https://www.acs.org/content/acs/en/education/resources/highschool/chemmatters/articles-by-topic.html>
 - Teacher's guides including questions
<https://www.acs.org/content/acs/en/education/resources/highschool/chemmatters/articles-by-topic.html>

Online Labs

- [Virtual Labs](#) ChemCollective
- <http://www.mrpalermo.com/virtual-lab-precision-and-significant-figures.html> (The labs tab has a section for virtual labs)
- [Computer Simulation or Animation](#)
- [Screen experiments](#) (Love the titration experiment. It has several levels and grades the student as they go. I've had students send a screenshot of their results before. I give them extra credit if they beat my score.)
- https://www.playmadagames.com/?fbclid=IwAR01f6TjSJp_voOTTvbBQ71nNifJYs5IUATnYkKnIXbgZH1fE8EXaNZBCIQ
- <https://phet.colorado.edu/>
- Videos on various topics with embedded questions (assignable in Google Classroom)
<https://edpuzzle.com/>
- ChemCollective Lab Simulations - <http://www.chemcollective.org/>
- Chem Review Modules (from NSTA): <http://chemreview.net/>
- Chemistry simulations from Cal Polytech:
<https://elearning.cpp.edu/learning-objects/objects.php?page=1&keyword=chemistry>
- High adventure science: <http://has.concord.org/>
- [Flinn Online Science Labs](#)

Videos

- Chemistry Shorts:
<https://www.youtube.com/channel/UCVgLI67T2SG2NWjN2vSOaCg/videos>

Platforms for Classroom Websites

- <http://classroom.google.com>
- <http://www.edpuzzle.com>
- <https://app.senecalearning.com/teacher/classes>

Science and Measurement

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The Atom

- Virtual flame test lab and worksheet
https://drive.google.com/file/d/1v_Rq6_9QrUfalUTfhyNXw-jM5weWZDGV/view?usp=sharing

The Electromagnetic Spectrum

- <https://science.nasa.gov/ems>

The Periodic Table

- [Tour of the Periodic Table - Bozeman Science](#)
- [Atoms and the Periodic Table Blended Learning](#) - By Emily Hardy-White
- [Happy Birthday to the Periodic Table](#)

Bonding/Chemical Reactions

- https://education.jlab.org/elementbalancing/?fbclid=IwAR1o5QM3XYSa_0W2ZyGnzqNIHCWLCxBSuh7y3bX3fkXW-oWtcCaeHrACx0 (Balancing Simulation)
- Virtual lab- Activity series <http://www.mrpalermo.com/virtual-lab-activity-series.html>
- Redox virtual lab
<https://drive.google.com/file/d/17docwraL0STA2FTZV3edBR3uJg7OZ9li/view?usp=sharing>
- [Bonding and Nomenclature Unit](#) By Emily-Hardy White
- [VSPER and IMF Unit](#) by Emily Hardy-White

Mole Conversions/Stoichiometry

- Murder Mystery online lab using formula weight <http://chemcollective.org/mr/>
- [Emily Hardy-White Online Ready Solutions Unit](#)

- I created everything in this unit. Please make copies of them and use whatever you need. I deployed it in Google Classroom the years I used it.
- [Mole Unit](#)
- [Stoichiometry Unit](#)
- [Chemical Reactions Unit](#)

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Gas Laws

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Thermochemistry

- Specific heat virtual lab (Needs FlashPlayer!)
<https://drive.google.com/file/d/1URImA4of6vs8SEquV7WIPnZTnbawXEdC/view?usp=sharing>

Kinetics

- <https://www.slps.org/site/handlers/filedownload.ashx?moduleinstanceid=55613&dataid=44073&FileName=Kinetics%20with%20Answers.pdf>

Equilibrium

- <http://web.gccaz.edu/~lisys52871/00152note/14Equilibrium.pdf>

Electrochemistry

- https://media.pearsoncmg.com/bc/bc_0media_chem/chem_sim/html5/Electro/Electro.php

Acids and Bases

- Ocean acidification lesson plans:
https://dataintheclassroom.noaa.gov/content/ocean-acidification?utm_medium=email&utm_source=GovDelivery

AP Chemistry Educreations

AP Questions for review

- <https://www.educreations.com/profile/467925/>