iLove Teaching Chemistry with iPads
How do students learn science in your classroom?

- Students conduct experiments
- Students work at their own paces
- Students practice new skills
- Students assess their progress
- Students visualize the very big and very small
- Students create content
- Students analyze data & solve problems
- Students research new ideas
- Students assess their progress
Students conduct experiments

Apps are available through iTunes that allow students to simulate lab experiences. These could be substitutes for labs (or experiences for students who are absent on lab day) or pre-lab experiences to get students prepared for the experiment they will conduct.

Here are some for you to try:

- Titration SIM in the Lab Simulations folder
- Frog Dissection in the Biology folder
Students work at their own paces

Differentiation, remediation, and enrichment are all easier in a 1:1 environment with technology like iPads. Students can focus individually on their own needs through use of apps that explain concepts or extend ideas. With an iPad on the desk, kids have the freedom to repeat what is needed and move ahead as time allows.

Here are some for you to try:

I use **Keynote** to design lessons for my students. Try out **City of Light** in the Elementary folder or watch a video with **Khan Academy** in the Chemistry Resources folder.
Students practice new skills

With a large variety of apps that feature flashcards, games, and basic skills, practicing a new skill has never been easier. Motivated by achieving the next level, students are often willing to work on iPad drill activities because they make learning more fun.

Here are some for you to try:

Lewis Dots or Atoms HD in the Atoms and Molecules folder or MahjongChem in the Games folder or ChemLab in the Chemistry Resources folder.
Students visualize the very big and very small

The animations and videos available for the iPad allow students to see and imagine things that would be otherwise difficult to picture.

Here are some for you to try:

TB’s Universe or Atoms in Motion in the Atoms and Molecules folder or

NASA Viz in the Astronomy folder or

Cell and Cell Structure in the Biology folder
Students research new ideas

Students can read interactive textbooks and other science books in iBooks. Stay up-to-date with science news through apps like PopSci. There are many wonderful reference apps available for science! Apps like BrainPop and NSF's Science 360 allow students to watch videos and explore images.

Here are some for you to try:

Explore the elements in The Elements in the Periodic Table folder or biology topics in Click & Learn in the Biology folder.
Students analyze data & solve problems

Calculator apps are plentiful in iTunes. Numbers is an iWork spreadsheet app that allows for a save as an Excel worksheet. ShowMe and other whiteboard apps allow students to record their solutions for later sharing. Vernier has recently released Vernier Video Physics and it looks very slick!

Here is one for you to try:

Open Data Analysis in the Productivity folder.
With the sound turned down low, watch the basics tutorial.
Better yet, open a new document, create some data and try it out!
Students create content

Using apps like Pages or Google Docs, students can complete written reports and assignments.

Students can use ShowMe or Educreations to create things that can be shared on your interactive whiteboard.

Try using BookCreator or a comic strip making app to make something more unique and fun.

Here are some for you to try:

Create and record something in Show Me in the Whiteboards folder or write a book in BookCreator in the Books folder.
Students assess their progress

Students can use ready-made quiz apps or teacher-designed quiz apps. Students can use iPads as student response systems, allowing teachers to gain current information about who understands what.

Here are some for you to try:

WagMob Chemistry or i5 Chemistry in the Chemistry Resources folder or Cell and Cell Structure in the Biology folder. We’ll all try Socrative together.
Six “Must-Have” Apps for Teaching

1. Keynote: I use Keynote to write presentations that I can lead or my students can work through at their own paces. It is a great presentation app, very easy to use, useful for all subject areas.
2. Pages: Great for general word processing, can save as Word document.
3. Dropbox: Cloud storage that syncs across all devices and computers, easy way to access documents created on iPads. Folders can be shared between people, students can turn things in to Dropbox.
4. Nearpod: Very cool and EASY presentation platform
5. Evernote: Take notes, capture text and photos, create lists and reminders and sync all this to all devices
6. iBooks: A good app for reading, many free books available, easy to search for books
Apps to help with teaching

1. Teacher Productivity Apps: Apps like TeacherPal and Power School for Students help teachers organize and store information about students. There are gradebook apps and apps that help you choose who to call on. There are many, many apps to choose from to increase productivity.

2. Special Education Apps: Whether you are looking to keep track of IEPs or increase your students abilities to communicate, learn, and organize, there are great apps to install. A few to check out: Dragon Dictation (you speak, it types), IEPPal (IEP charting app), My First AAC

3. iTunesU: “the world’s largest digital catalog of free educational content” from universities and k-12 schools
Resources

• apple’s favorite education apps, grouped by subjet
  http://www.apple.com/education/apps/

• “Using Mobile Devices in Education” on Scoop.it!

• 1000 Education Apps Organized by Subject & Price
  (MegaGoogle Doc) from Edudemic
  http://edudemic.com/2012/02/1000-apps/

• 30 Cool Educational Apps for Science Lovers
  http://creativecan.com/2012/02/educational-ipad-apps-for-science/
More Resources

• The IPad as . . . from edtechteacher
   a tremendous list of apps that accomplish specific tasks (like notetaking of video-making)
   http://edtechteacher.org/index.php/teaching-technology/mobile-technology-apps/ipad-as

• Science Apps from Apps in Education

• I Education Apps Review, a community effort to grade and review apps
   I have found some of my very favorites here!
   http://www.iear.org/
Even More Resources

• **BestKidsApps**, a focus on apps for kids 0-12
  http://www.bestkidsapps.com/

• iPads in Education group on diigo.com
  http://groups.diigo.com/group/iPad-in-education
  (join diigo at www.diigo.com)

• **Free Technology for Teachers** by Richard Byrne
  (my favorite blog to follow)
  www.freetech4teachers.com
Special Thanks to:

Dr. Jacqueline Hoynes, former Superintendent, Mentor Exempted Village Schools, Mentor, OH, USA

Steve Young, Professor, Fresno Pacific University

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Thanks for coming!
Please share your ideas!