

Scientist in the Science Classroom

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GK12 Fellow 2007 in Dr. May's classroom

Integrated Science

Chemistry



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Classroom Goals

- ❖ **Engage and challenge all students**

Mole of MOLES PBL

- ❖ **Develop scientifically literate students**

- ❖ Scientific knowledge
- ❖ Reading/writing/critical thinking skills

journaling

- ❖ **Relate chemistry the real world**

- ❖ career choices
- ❖ life

PowerPoint presentations

The Essentials of Journaling

- Make your own journal
 - report covers, paper, cover sheet
 - Dr. Theilacker - “RARE response”
- Rubric on Effective Writing
 - Spelling/grammar
 - Answering the question fully
 - Thoughtfulness
- Immediate Feedback
- Evaluation of Transfer





Journal Entries

"My definition of a good paragraph is answering the question and using examples with detail."

What is your definition of a good paragraph?

" a good paragraph is a paragraph that includes information, statistics, facts, opinions, or statements pieced together in sentences formatted in an elaborate but understanding level."

Compare what you know about chemistry today to what you knew six weeks ago.

" I learned to write chemical reactions, oxidation #'s and valence electrons. Forming compounds with elements and ions are also topics we discussed in chemistry class. We learned electron distribution and how to form them. Towards the end of the six weeks and now, we are currently learning about the 5 reaction types single & double displacement, decomposition, sythesis and combustion."

As you now know, the period table contains many patterns. In this journal entry, describe three of the patterns that you have learned. Feel free to use diagrams to explain the patterns. You may also use the chemistry textbook as a reference.



How can we tell the difference between planets? Use vocabulary and explain how to distinguish one planet from another. Think about which qualities of a planet a spacecraft would want to record to help us identify it.

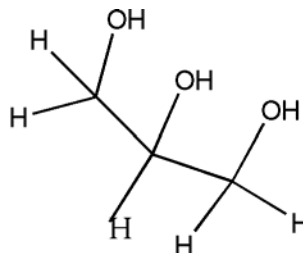
What would you tell someone who thought chemistry has nothing to do with life or their surroundings?

"If someone told me that chemistry had nothing to do with life I'd say YOU'RE CRAZY. The air we breathe has oxygen in it and oxygens on the periodic table of elements, that's chemistry right there."

Research Presentations

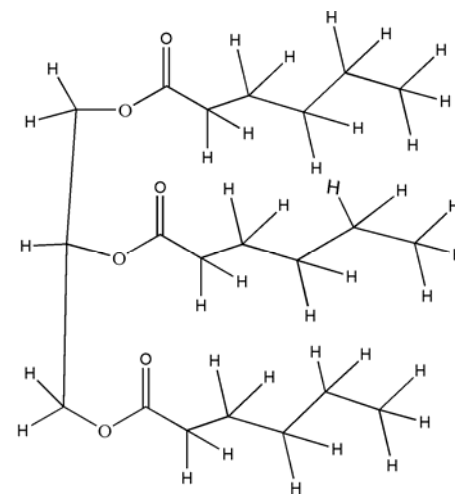
- Chemistry in your Careers

- Perms catalyze rearrangements of disulfide bonding of protein in hair
- Organic Chemistry of Olive Oil



- Medically relevant Elements

- titanium hips
- anemia



Personal Reflections

- Deep appreciation for the challenge of teaching
- Time-management skills
- A need for a connection between professional scientists and teachers

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