



Instructor: Barbara Braunstein (2003 Science Teacher Workshop participant)

School District: Becton Regional High School

Lesson Title: Alchemy in My Life – Ionizing radiation

Grades: 9,10,11,12

Subjects: Chemistry

Overview: A teacher created website will guide students in the creation of a presentation on Ionizing Radiation/ Radioactivity.

Objectives:

- Students will conduct research using a variety of materials.
- Students will create a presentation and written explanation illustrating and understanding of ionizing radiation and radioactivity.

Materials and Resources: Chemistry textbook, web sites and teacher created website.

<http://www.kn.sbc.com/wired/fil/pages/listnuclearbb.html>

The Activity:

- Students will research a grading rubric and a web link for this project
- He web page includes an explanation of the project and hotlinks for research sites that will assist them.
- Hotlinks are included on the web page to guide students to useful research materials and illustrations of some possible formats for their final product.
- Formats for the final projects can be: poems, songs, comic strips, a web page, PowerPoint presentation, newsletter or something of their choosing.

The web page looks like this:

Alchemy in My Life

an Internet Hotlist on Nuclear Chemistry

Created by Ms. Braunstein
Becton Regional High School

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Introduction

Did you know that radiation is part of our daily lives?

Is Radioactivity good or bad?

Will I die? (The answer is yes- but will radioactivity have anything to do with that???)

What causes radioactivity? Where does it come from? What the is it?

What the heck does that topic mean????

These and other questions are what you will research and answer in this project.

In addition to using books and magazines to find out about Nuclear Chemistry, why not also use the power of the Internet? The links below will get you started.

You will be expected to create a song, poem, comic strip, poster, webpage, PowerPoint presentation, (or something I did not think) of to illustrate your knowledge of radioactivity. Make sure to include these nearly all of these terms: Ionizing radiation, alpha particle, beta particle, gamma radiation, radioactivity, exposure, dosage, contamination, half-life, isotope

Use your text and these sites to research topics related to nuclear chemistry and radioactivity.

You will present your creation to the class, along with a written explanation of the facts illustrated in your creation.

A reference list will be included at the end your written work.

Big hint!!!

*****Be kind to your teacher and keep your written portion as brief as possible (I have a life outside of school too).

The Internet Resources

- [Filamentality Site link](#) - Link to create your own quick and easy webpages or to search existing activities you may use or modify.

<http://www.kn.pacbell.com/wired/fil/>

Basic Nuclear Science

- [ABC's of Nuclear Chemistry](#) - A good overview of atomic particles and radioactivity <http://www.lbl.gov/abc/Basic.html>
- [Radioactivity](#) - A thinkquest site on radioactivity

<http://library.thinkquest.org/17940/texts/radioactivity/radioactivity.html?tqskip=1>

Department of Environmental Protection Resources

- [Radiation Workshop Web Resources](#) - Links to web sites on radiation compiled by NJDEP

<http://www.nj.gov/dep/rpp/llrw/scitlink.htm>

Silly Science Links

- [Singing Science Records](http://www.acme.com/jef/science_songs/) - Examples of science songs recorded long ago.
- [Chemistry Comics](http://www.uky.edu/Projects/Chemcomics/) - <http://www.uky.edu/Projects/Chemcomics/> - Take a look at these comics for some ideas of how weird your project can be.

Science links

- [Mad Scientist Network](http://www.madsci.org/) - It is the scientist who never sleeps- ask experts questions, search for relevant resources <http://www.madsci.org/>