Nuclear Chemistry WebQuest

Please go to website below and complete the questions below:

http://people.chem.duke.edu/~jds/cruise_chem/nuclear/nuclear.html

Name _____ Date _____ Period _____

I. Introduction
   1. What is Nuclear Chemistry?
   2. What do the sun and nuclear chemistry have in common?

II. Radioactivity Pros and Cons
   1. Identify 3 Pros and 3 Cons to having Radioactivity.

III. Everyday Exposure to Radiation
   1. What are the two main sources of radioactivity in nature? _____ _____

IV. Modern Uses of Radioactive Isotopes
   1. What is a Radioactive Isotopes?
   2. Identify 5 modern uses of radioactive isotopes.

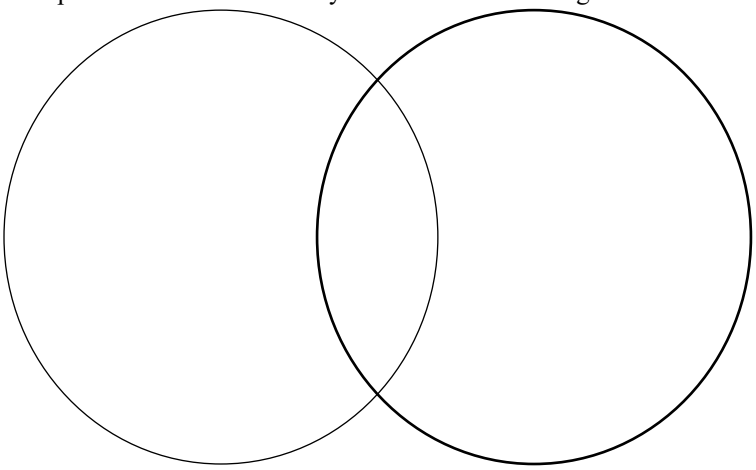
V. Detection of Radiation and your Protection
   1. Identify 3 ways that radioactivity be detected in the work place and in your daily life?

VI. The Discovery of Radioactivity
   1. Who discovered Radioactivity?

VII. Nuclear Stability and Radioactive Decay
   1. What is the stability of the nucleus of isotope?
   2. What is radioactive decay?
   3. Identify the 3 ways a radioactive nuclei can undergo decomposition. _____ _____ _____
   4. Define Alpha particle.
   5. Define beta particle.
   6. Define gamma rays.
   7. Compare alpha, beta, and gamma particles.

VIII. Other Radioisotopes Found in Everyday Life
   1. Identify 4 Examples of radioactive isotopes found in daily life.

IX. Social, Economic, and Political Concerns
   1. What are some of the social, economic, and political concerns?
   2. Compare and contrast Hair Dryers vs. Global Warning.



Extra Credit:

How many fossil fuel power stations are in your state or country?
How many nuclear power stations are in your state or country?
How much has CO2 increased since the industrial revolution?
How many lakes in your state or country have died from acid rain pollution?
Make a list of all the risks that society faces from each type of power station.

Where in the United States is a burial site being proposed?
Make a list of concerns about this proposal both positive and negative.