

Radiation Cause & Effect

Answer these questions as you read the "Radiation Cause and Effect" PowerPoint, linked to your class webpage.

1. Why should the contents of the nucleus cause the nucleus to fly apart?
2. Other than the repulsive electric force, what other force is acting between particles in the nucleus?
3. What 2 subatomic particles does the "strong nuclear force" act upon?
4. Explain the difference between the "strong nuclear force" in a stable versus unstable isotope.
5. What happens when a nucleus has too few or too many neutrons?
6. How do radioactive isotopes become more stable?
7. What is/are the general characteristics of stable isotopes?

8. As the size of a nuclei increases, what must happen to the number of neutrons to make the nuclei stable?

9. What is the largest atomic number/number of protons that is stable?

10. Define in your own words the term "geothermal".

11. How can the energy from the core be converted into usable forms of energy by humans?

12. Define in your own word the term "renewable resources". What types of renewable resources have you studied in science this year?

13. Looking at the pictures on the last slide; for each picture, list the energy transformations that are taking place. Remember that the original source of the energy is nuclear (radioactive decay) in the core of the Earth.

14. Using either picture on the last slide, explain in your own words how the energy is being transformed.