**Radiation**

You might be surprised at how many uses there are for radioactivity. In the left column, list as many uses as you can think of. Then research to find out five other applications of radioactivity.

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| **What I Know…** | **What I learned after Researching …** |
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**Vocabulary:** Explain the terms below in your own words.

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| **1. Radioactivity:** |
| **2. Wave (in Physics):** |
| **3. Emit:** |
| **4. Disintegrate:** |
| **5. Nucleus:** |
| **6. Neutron:** |
| **7. Isotope:** |
| **8. Half-life:** |
| **9. Gamma Rays:** |
| **10.Electromagnetic Radiation:** |
| **11. Fision:** |
| **12. Fussion:** |

**Questions:** Research and answer the following questions.

1. **What is half-life? Why is it important?**
2. **What is a radioactive isotope?**
3. **How do we know the age of the Earth?**
4. **Research the element Gallium. Is it radioactive and what exactly is it?**
5. **What are nuclear weapons? Provide two examples.**
6. **How long does it take for radioactive wastes to stop giving off radioactivity?**
7. **What is a gamma ray?**
8. **What is uranium? What for and why is it used?**
9. **Who was Enrico Fermi?**
10. **Where is the element fermium located?**
11. **Can toxic waste cause mutations in animals?**
12. **What happens when the number of protons and neutrons become the same in radioactive materials?**
13. **How do X-ray imaging work?**
14. **What does RIA mean? Who discovered it?**
15. **What was Chernobyl disaster?**
16. **Construct a table to write the Pros and Cons of nuclear power plants.**

**Articles Analysis**: Read the article Sickness & Health and fin dan article that talks about radioactivity. Write a Summary/ Outline of the main facts for both artciles.

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| **Sickness & Health** |

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| **Real Life** |