Nuclear Fission vs Nuclear Fusion 101 Video Review

1. What makes a nucleus unstable or radioactive? _____
2. Why does it become unstable or radioactive? _____
3. Explain what occurs during Nuclear Fission? _____
4. What are the reactants and products in a Nuclear Fission reaction? _____
5. How can using nuclear fission energy be better than using coal? _____
6. Draw and label the nuclear fission chain reaction below:

7. Explain the difference between an uncontrolled nuclear chain reaction and a controlled nuclear chain reaction. _____
8. Write three pros of using Nuclear Fission Energy.
    a. - _____
    b. - _____
    c. - _____
9. Write three cons of using Nuclear Fission Energy.
    a. - _____
    b. - _____
    c. - _____
10. Explain what occurs during Nuclear Fusion. _____
11. Where does Nuclear Fusion occur and what is required for it to take place? _____
12. What are the reactants and products in a Nuclear Fusion reaction? _____
13. Draw and label the Nuclear Fusion reaction below.

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14. Fill in the T-chart for Nuclear Fission vs. Nuclear Fusion below.

Nuclear Fission	**Nuclear Fusion**

Check for Understanding: Use your knowledge of Nuclear Fission & Nuclear Fusion to answer the following questions.

1. Lighter elements are combined to form the Sun and stars. What is this process called? What are the two lighter elements? What products come from this reaction? _____

_____

2. What are two advantages of using nuclear energy over coal? _____

_____

3. The nucleus of a large atom splits and two smaller atoms are formed. What is this process called? What are the reactants and products of this reaction? What are two disadvantages of this process? _____

_____

4. What are three differences between nuclear fission and nuclear fusion? _____

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5. What are two pros and cons of using nuclear fission energy to produce electricity? _____

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