**GPS – Fission and Fusion**

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period\_\_\_\_\_\_\_\_\_\_

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| ***Bellwork*** | |
| CH10_13a | 1. What are the three types of decay we talked about yesterday? |
| 1. When an atom is ***radioactive***, it is… \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. ***Half-life of radioactive isotopes*** a. The length of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ it takes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the atoms of a sample of radioactive isotopes to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.   b. Varies from fractions of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to billions of \_\_\_\_\_\_\_\_\_\_\_\_\_\_  c. Do you remember plutonium’s half-life? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   1. ***How can we use radioactive half-lives?*** Can be used to determine the \_\_\_\_\_\_\_\_\_\_\_ of old objects, such as  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. 2. ***Nuclear fission*** 🡪 the process of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a nucleus into two nuclei with smaller masses 3. ***Chain reaction*** 🡪 an ongoing series of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ reactions 4. ***Nuclear fusion*** 🡪 two nuclei with low masses are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to form ONE larger \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a. Can only happen when nuclei are moving \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   b. Temperature must be as high as the temperature of a \_\_\_\_\_\_\_\_\_\_\_ | |

Complete the review matching activity either alone or with one partner!