

Discussion Questions for Modeling Nuclear Decay

Name: _____ Teacher: _____ Date: _____

After completing the Modeling Nuclear Decay activity using the virtual dice roller, answer the following questions.

1. Since each die represents a radioactive nucleus of an atom, explain why the "total number of atoms" stayed the same after each toss.
2. With each toss (year), were there more or fewer radioactive "dice-ium" atoms remaining?
3. Does your answer to Question 2 indicate that "dice-ium" atoms are becoming more stable or less stable with each toss (year)?
4. What is the half-life of "dice-ium"? (Be sure to label the answer with the appropriate units.)
5. Was it possible to tell which radioactive "dice-ium" atoms were going to decay (show the number '6') BEFORE you clicked "Roll!" on the virtual dice roller? Explain.