NAME:

- 1. What part of atomic structure defines a chemical element?
- 2. What is a mass number of an element?
- 3. What is an isotope? Give an example. (A sketch would be great!)

4. What makes a heavy, large nucleus unstable?

5\*. Fact #1: A typical banana contains about 10<sup>20</sup> atoms of unstable radioactive potassium isotope K-40 with a half-life of 1.25 billion years.
Fact #2: Scientists predict that the Sun will expand into a Red Giant and engulf the Earth in about 7.6 billion years.
Question: Approximately how many radioactive K-40 atoms from a single banana will still be around ready to get swallowed by the Sun 20?