

## U6C1 Study Guide

What parts of the atom are electrically charged?

Be able to identify an isotope from pictures of the nucleus of atoms.

Be able to identify an isotope from number of protons, neutrons, and electrons.

How many protons, neutrons, and electrons does an element have if it has an atomic number of 25 and an atomic mass of 50.

Protons-

Neutrons-

Electrons-

What are the three isotopes of Hydrogen.

- 1.
- 2.
- 3.

What happens during fusion?

What process powers the sun? \_\_\_\_\_

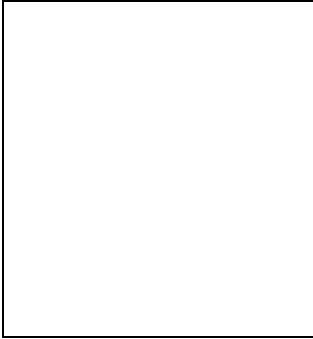
What can stop each type of radiation?

- Gamma rays:
- Neutrons:
- Alpha particles:
- Beta particles:

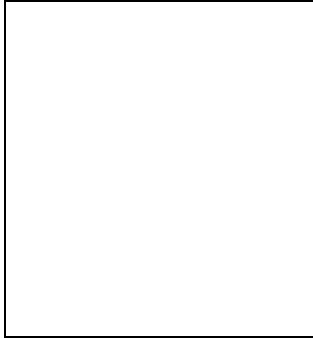
What type of interaction converts one element into a different element?

Draw a diagram of each type of radiation:

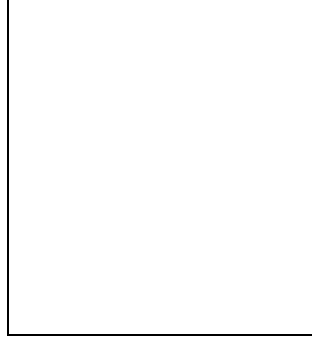
Alpha



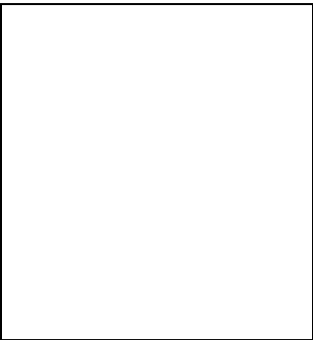
Beta



Gamma



Fusion



Fission



Describe nuclear fission.

What type of radiation is similar to light? \_\_\_\_\_

Be able to find what element an atom will become if it undergoes alpha decay. For example: suppose Uranium (atomic number 92) undergoes alpha decay. What is the new element formed?

What is a beta particle? \_\_\_\_\_

Be able to find what element an atom will become if it undergoes beta decay. For example: Sodium (atomic number 11) undergoes beta decay. The new nucleus is now what element?