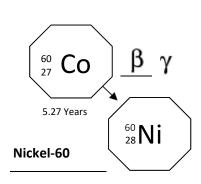
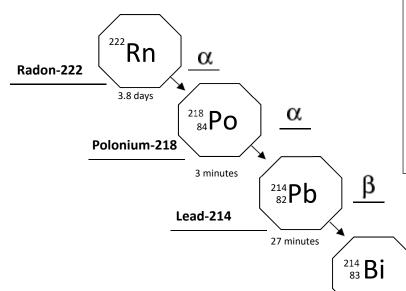
## **Decay Chain Worksheet-Teacher Answer Key**

Examine each decay chain and identify the element. Then indicate whether each transformation is due to the emission of an alpha or beta particle by writing in the corresponding symbol. Sometimes gamma rays are released but because the release of gamma rays does not affect atomic mass or atomic number the exercise is focused on alpha and beta emissions.





## Key

Alpha particle:  $\alpha$ 

Beta particle: **B** 

Gamma ray: γ



In the example, Rn is the atomic symbol for the element Radon. The number 222 indicates the atomic mass of the element (or isotope). The number 86 represents the element's atomic number.



Bismuth-214

α

<sup>206</sup><sub>82</sub>Pb

20 minutes

Polonium-210

<sup>210</sup> Po

.0002 seconds

Lead-206