

Isotopes Activity

Name _____

Purpose: To examine models of isotopes and understand the makeup of isotopes.

Date _____

Key: Yellow Beads = protons Red Beads = neutrons

Period _____

PROCEDURE:

The eggs represent the nuclei of ten atomic isotopes. Each egg is numbered. Take one of the eggs, open it carefully and count the subatomic particles inside (be careful not to lose the beads on the floor). Record the information in the data table below. Carefully replace the beads and return the egg to the basket. Repeat the above instructions until you have examined all ten eggs. Answer the questions that follow.

Egg #	# protons	# neutrons	Atomic #	Mass #	Name of Isotope
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

ANALYSIS and CONCLUSION QUESTIONS:

- Write the isotope symbol for isotope (egg) #3. Include the element symbol, atomic #, and mass #. (Refer to p. 111) _____
 - What is the other way to name this isotope? _____
- There are three isotopes of the same element among the ten isotopes. Which egg numbers are they? _____
 - How can you tell they are the same element? _____
 - What element do they represent? _____
- Which two eggs numbers have the same number of neutrons? _____
 - Do these represent the same element? _____ Explain. _____
 - Write the symbols for these isotopes. _____
- You want to make an egg which represents an isotope of aluminum.
 - How many yellow beads will it contain? _____
 - How many electrons would a neutral atom contain? _____
 - How many red beads could it contain? _____
- What element is isotope #2? _____
 - Do you think that egg #2 represents the most common isotope of the element? _____
 - How can you tell? _____