Name: _____

Period: ____

ISOTOPES OF PENNIES PRE-LAB

PURPOSE:
To demonstrate that:

- ✓ Isotopes of an element have different masses
- ✓ Isotopes are atoms of the same element that have different numbers of neutrons
- ✓ Atomic mass is the weighted average of the naturally occurring isotopes of an element.

INTRODUCTION:
In 1982, the United States government changed the way it minted pennies. Before 1982, pennies were made of 95% copper and 5% tin. But copper was getting increasingly expensive…to the point that the amount of copper needed to make one penny was worth more than one cent! Now they are made of zinc *coated* with copper. Because they have different masses, we can consider them *isotopes* of pennies, just like isotopes of an element.

PRELAB:
Before beginning the lab exercise, answer the following PreLab questions.

1. What is an *isotope*?

2. What is *atomic mass*?

3. What do the two kinds of pennies represent in this lab?

4. How do the pennies differ? How do isotopes differ?

5. What do the pennies have in common? What do isotopes have in common?