Name:

Period:

The Isotopes Scavenger Hunt

**Introduction**: Isotopes are the different types of atoms of the same element. The number of protons, or positively charged particles in the nucleus of the atom, does not change. Therefore the thing that does change is the number of NEUTRONS, the subatomic particles with no charge. In this activity you are going to be identifying different element isotopes with the information given.

**Directions**: Read each question carefully, and decide from the information given what element is present, and how many protons and neutrons the element has.

**Remember**: When writing the notation for these isotopes, the mass number (protons + neutrons) is the top number and the atomic number (protons) is the bottom number next to the element symbol.

***Example Question****: I am a mystery element. My atomic number is 40 and my mass number is 82. What element am I? How many protons do I have? How many neutrons do I have? Correct notation?*

1. I am carbon-14. What is my mass number? Atomic number? Correct notation?
2. I am chlorine 35. What is my mass number? Atomic number? Correct notation?
3. I am element 15, and I have 14 neutrons. How many protons do I have? What is my mass number? Correct notation?
4. I am element 42, and I have 39 neutrons. How many protons do I have? What is my mass number? Correct notation?
5. I am element 86, and I have 92 neutrons. How many protons do I have? What is my mass number? Correct notation?
6. I am sodium and my mass number is 23. How many protons do I have? Neutrons? Correct notation?
7. I am helium and my mass number is 5. How many protons do I have? Neutrons? Correct notation?
8. My element symbol is Ti. Which element am I? How many protons do I have? According to the periodic table, what is my mass number?
9. My element symbol is N. Which element am I? How many protons do I have? According to the periodic table, what is my mass number?
10. The correct notation for me is 131I. Which element am I? What is my mass number? What is my atomic number?
11. The correct notation for me is 40K. Which element am I? What is my mass number? What is my atomic number?
12. What does the mass number represent?
13. What does the atomic number represent?
14. For isotopes, which subatomic particle is the one that changes?
15. Where are the protons and neutrons located in an atom?
16. I am a mystery element. My atomic number is 60 and my mass number is 124. What element am I? How many protons do I have? Neutrons? Correct notation?
17. I am a mystery element. My mass number is 26 and my atomic number is half of that. What element am I? What is my element symbol? How many protons do I have? Correct notation?
18. I am a mystery element. You need me to breathe. According to the Periodic Table, what is my atomic number? What is my mass number? According to this number, approximately how many neutrons do I have?