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**CHAPTER 7
ASSESSMENT****Subatomic Particles****BLM 7-5**

Goal • Demonstrate your knowledge of subatomic particles from working on Chapter 7.

What to Do

1. Complete the chart below to show the location and properties of the three subatomic particles.

Particle	Location	Charge	Relative Mass
electron			
proton			
neutron			

2. Complete the following chart to show the composition of various atoms.

Element Symbol	Atomic Number	Mass Number	Number of Electrons	Number of Protons	Number of Neutrons
$_{\quad} \text{Cu}$		64		29	
$^{24}_{12} \text{Mg}$					
$_{\quad} \text{H}$					2
$_{\quad} \text{Ag}$					61
	7	14			

Masses of Atoms

Goal • Demonstrate your knowledge of atomic mass.

What to Do

Use the questions below to check what you know about atomic mass.

Questions

Part A: Vocabulary Check

Use one of the terms below to complete the statements about atomic mass. Terms may be used more than once.
number, standard, neutron(s), proton(s), mass

- The electron has very little mass compared to the _____ or _____.
- The mass of the atom depends on the nucleus and how many _____ and _____ it has.
- The sum of the protons and neutrons is the mass _____ of an atom.
- The number of neutrons in an atom can be found by subtracting the atomic number from the _____ number.
- The mass of the atom is so small that there is a measure called the atomic _____ unit with a symbol of "u."

Part B: Concept Check

Use the terms below to complete the following paragraphs about isotopes. Terms may be used more than once.
many, mixture, protons, neutrons, between, number, element, one, isotopes, six protons, electrons

- The nuclei of all atoms of a given element always have the same number of _____. They will also have the same number of _____ around the nucleus.
- Some atoms may have more or fewer _____ than other atoms of the same element. Atoms of the same element with different numbers of neutrons are called _____.
- Hydrogen has three isotopes. A hydrogen atom may contain zero, one, or two _____.
- Every atom of carbon must contain _____, but some contain six neutrons and others have eight neutrons.
- Some elements have only _____ natural isotope; however, other elements may have _____ isotopes.
- One way of noting the difference between isotopes of an element is to put the mass _____ after the name of the element. The second way of noting an isotope is to write the mass number and the atomic number with the symbol of the _____.
- In nature, most elements are a _____ of isotopes.
- Chlorine gas mostly consists of two isotopes. The average mass of chlorine lies _____ the mass of these two isotopes.

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Chapter 6**VOCABULARY CHECK****BLM 6-23****Symbols for the Elements**

Goal • Check your knowledge and understanding of the periodic table.

What to Do

The left-hand column in the chart below contains a statement about the elements. In the appropriate columns, write the name and symbol for the element each statement refers to. Use the periodic table on page 563 of *SCIENCEPOWER*TM 9 if you need help.

Description of Element	Name of Element	Element's Symbol
It is the only gas in Group 1.		
This inert gas is in Period 3.		
There is no heavier member of Group 2.		
Of the halogens, this element is the lightest.		
The lightest of the coinage metals.		
Group 16 contains this reactive non-metal gas.		
The atomic mass of this metal is about 56.		
Period 6 contains this Group 2 metal.		
The only liquid halogen.		
A metallic element that is liquid at room temperature.		
Photosynthesis produces this element.		
The lightest element in Period 2.		
Wolfram is another name for this element.		
Teeth and bones contain this element.		

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Chapter 6
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Symbols for the Elements

(continued)

When burned, this element produces a green flame.		
Plumbers are named after this element.		
This yellowish metal is an excellent conductor, very malleable, and used in jewellery.		
Computer chips contain this metalloid.		
Balloons float when inflated with this inert gas.		