

Physical Science
Element Worksheet

Name _____
Date _____

Introduction:

An *element* is a substance which cannot be separated into simpler substances by ordinary methods. Use your Periodic Table of the Elements and your prior knowledge concerning elements to answer the questions on this worksheet.

The Names of the Elements:

As you look at your periodic table, you will recognize some of the more common elements, but you will probably also notice that some elements have strange names. Where did all of these names come from? You will find out as you work through the exercises below.

- A. Some elements are named after *places*. Write the name of the element that is named after the place given in each question.

1. The country of France. _____
2. The country of Germany. _____
3. America: _____
4. The country of Poland. _____
5. Scandinavia: _____
6. One of our states. _____
7. The city of Berkeley: _____
8. The continent of Europe. _____

- B. Four of the elements are named after *planets*. Complete the chart below for the elements named after planets.

<u>Element Name</u>	<u>Planet Name</u>
_____	_____
_____	_____
_____	_____
_____	_____

C. Many elements are named after famous scientists. The scientist's last name is used along with the ending "ium". Write the element after each scientist given.

1. Albert Einstein: _____
2. Pierre and Marie Curie: _____
3. Enrico Fermi: _____
4. Alfred Nobel: _____
5. Dmitri Mendeleev: _____
6. Ernest Lawrence: _____

D. Other interesting element names:

1. What element has the same name as one of our coins?
2. The element with the same name as the fictional planet from which Superman came.
3. The element named after Thor, the Scandinavian god of war.

Element Symbols:

An *element symbol* is an abbreviation for the name of an element. A symbol can have one or two letters. The *first* letter of a symbol is *always capitalized*. The second letter (if there is one) is never capitalized. Symbols for the naming of elements are part of an *international* language. Chemists all over the world use the same symbols.

1. Complete the following table by filling in the missing word or symbol.

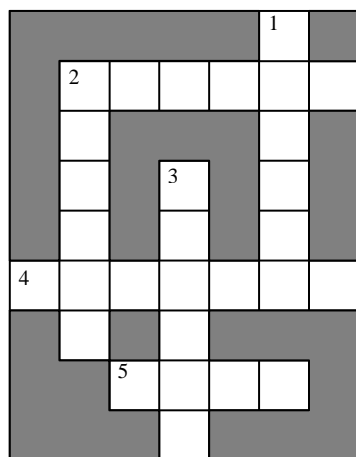
Element	Symbol	Element	Symbol
Carbon	C	Chlorine	Cl
Hydrogen			Cu
Oxygen			Au
Nitrogen			Ag
Sulfur			He
Iodine			Al
Iron			Ca
Lead			Ne
Mercury			K
Phosphorus			Na

2. It's easy to see where some of the symbols came from by looking at the names of the elements. The symbol seems to be a combination of one or two of the beginning letters in the element's name.

The elements in the following table are ones that have symbols that come from their Latin names. See how many Latin names you can get right in this table. Study the element symbol, then pick the Latin names from the list in the last column of the table.

English Name	Symbol	Latin Name	Latin Name Choices
Antimony	Sb		Argentum
Copper	Cu		Aurum
Gold	Au		Cuprum
Iron	Fe		Ferrum
Lead	Pb		Hydrargyrum
Mercury	Hg		Kalium
Potassium	K		Natrium
Silver	Ag		Plumbum
Sodium	Na		Stannum
Tin	Sn		Stibnum
Tungsten	W		Wolfram

Element-ary Crossword Puzzle:



1. Down: a yellow element that stinks when burned
2. Down: a reddish-orange element used for electrical wiring
2. Across: element named after a female scientist
3. Down: an element that is a coin
4. Across: name of an element and the closest planet to the sun
5. Across: an element (gas) used to make colorfully lit advertising signs

Uses of Some of the Elements:

Choose your answers for questions 1-19 from the following list of elements. Each element is used only once. If an element appears twice in the list, use it twice!

aluminum	carbon	copper	hydrogen	iron	mercury	uranium
arsenic	chlorine	copper	iodine	lead	neon	
calcium	chromium	fluorine	iron	magnesium	tungsten	

- _____ 1. What metallic element is sometimes used in flares and flashbulbs because it burns with a bright, white light?
- _____ 2. What element is used to disinfect swimming pools?
- _____ 3. What element is needed for strong bones and teeth?
- _____ 4. What element is found in liver and is needed to prevent anemia or “tired” blood?
- _____ 5. What element is added to toothpaste and city water systems to help tooth decay?
- _____ 6. Which element is used to “paint” the skin to prevent infection from cuts and scratches.
- _____ 7. What element is used in bright, flashing advertising signs?
- _____ 8. What element is a liquid metal used in thermometers?
- _____ 9. Which element is used for the shiny trim on cars?
- _____ 10. Which element is used in light bulbs as a filament?
- _____ 11. Which element is used as rat poison and is found in the title of the murder mystery “_____ and Old Lace”?
- _____ 12. What element is found in the U.S. penny?
- _____ 13. A diamond and your pencil lead (graphite) are made of this same element.
- _____ 14. Steel is formed when a little bit of carbon is added to this element. (The carbon gives strength and hardness to the steel.)
- _____ 15. What element is used as a shield to protect people from radioactive substances?
- _____ 16. What element has the lowest density of all of the elements?
- _____ 17. What element was used to make the first atomic bomb?
- _____ 18. Which element is rolled into a foil found and used in your kitchen?
- _____ 19. What element used to be mined in the Upper Peninsula of Michigan? Several towns in the Upper Peninsula are named after this element, including “_____ Harbor.”