Element Worksheet

**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. 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.**

Some elements are named after *places*. Write the name of the element that is named after the place given .

1. France \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Germany \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. America \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Poland \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Scandinavia \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. One of our states \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Berkeley \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. Europe \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

|  |  |
| --- | --- |
| **Element Name** | **Planet Name** |
|  |  |
|  |  |
|  |  |
|  |  |

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. Marie Curie \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Enrico Fermi \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Alfred Nobel \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Dimitri Mendeleev \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Ernest Lawrence \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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.

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. 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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | | | | 1 |  |
|  | 2 |  |  |  |  |  |
|  |  | | |  |  |
|  |  | 3 |  |  |
|  |  |  |
| 4 |  |  |  |  |  |  |
|  |  |  |  |  | | |
|  | | 5 |  |  |  |  |
|  | | |  |  | | |

* 1. Down: a reddish-orange element used for electrical wiring

1. Across: element named after a female scientist
2. Down: an element that is a coin
3. Across: name of an element and the closest planet to the sun
4. 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.”