

# Decoding the Elements

Each element is represented in a box on the periodic table. Each box gives information about the element. Use the terms in the word box to label the diagram. Then match each term to its definition.

element name      element symbol      atomic number      atomic mass

6. \_\_\_\_\_ ①  
**C** \_\_\_\_\_ ②  
**Carbon** \_\_\_\_\_ ③  
**12.01115** \_\_\_\_\_ ④

- ⑤ \_\_\_\_\_ This represents the element. While the English name sometimes matches, the Latin name was sometimes used to create this.
- ⑥ \_\_\_\_\_ This is the most commonly used word for the element.
- ⑦ \_\_\_\_\_ Designated by the number of protons in the nucleus, this determines horizontal placement on the table.
- ⑧ \_\_\_\_\_ This is determined by the weight of an atom.

# Properties of Metals and Nonmetals

The elements on the periodic table are grouped by metals and nonmetals. Each group has distinct physical and chemical properties. Classify the phrases in the word box to complete the chart.

|  |                  |                  |
|--|------------------|------------------|
| malleable                                  | lustrous         | thallium         |
| gaseous at room temperature                | ductile          | brittle          |
| forms negative ions                        | conductor        | nonconductor     |
| only forms positive ions                   | helium           | titanium         |
| receives electrons in chemical reactions   | covalent bonding | metallic bonding |
| phosphorus                                 | zinc             | boron            |
| selenium                                   | nickel           | gold             |
| gives away electrons in chemical reactions | argon            |                  |

| Properties of Metal Elements | Properties of Nonmetal Elements |
|------------------------------|---------------------------------|
| _____                        | _____                           |
| _____                        | _____                           |
| _____                        | _____                           |
| _____                        | _____                           |
| _____                        | _____                           |
| _____                        | _____                           |
| _____                        | _____                           |
| Examples                     | Examples                        |
| _____                        | _____                           |
| _____                        | _____                           |
| _____                        | _____                           |
| _____                        | _____                           |
| _____                        | _____                           |