

# Periodic Elements Need to Knows Worksheet

**Directions:** Use your periodic table to find the Symbol, atomic number & atomic mass (round the atomic mass to the nearest whole number). Determine if the element is a metal, nonmetal or metalloid and if it is a solid, liquid or a gas at room temperature.

1. Knowing that the atomic number tells us the number of protons, fill in the “# protons” column.
2. Since the # of electrons is equal to the number of protons in a neutral atom, now fill in the “# electrons” column.
3. Knowing the atomic mass = the # of protons + the # of neutrons, simply subtract the atomic mass from the # of protons to determine the number of Neutrons. Now fill in the “# neutron” column with this number you have just calculated.

| Element    | Symbol | Atomic Number | Atomic Mass | - # Protons | = # Neutrons | # Electrons | Solid<br>Liquid<br>Gas | Metal<br>Metalloid<br>Nonmetal |
|------------|--------|---------------|-------------|-------------|--------------|-------------|------------------------|--------------------------------|
| Hydrogen   |        |               |             |             |              |             |                        |                                |
| Oxygen     |        |               |             |             |              |             |                        |                                |
| Carbon     |        |               |             |             |              |             |                        |                                |
| Nitrogen   |        |               |             |             |              |             |                        |                                |
| Calcium    |        |               |             |             |              |             |                        |                                |
| Phosphorus |        |               |             |             |              |             |                        |                                |
| Sulfur     |        |               |             |             |              |             |                        |                                |
| Helium     |        |               |             |             |              |             |                        |                                |
| Sodium     |        |               |             |             |              |             |                        |                                |
| Chlorine   |        |               |             |             |              |             |                        |                                |
| Aluminum   |        |               |             |             |              |             |                        |                                |
| Potassium  |        |               |             |             |              |             |                        |                                |



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| Element    | Symbol | Atomic Number | Atomic Mass | # Protons | # Neutrons | # Electrons | Solid<br>Liquid<br>Gas | Metal<br>Metalloid<br>Nonmetal |
|------------|--------|---------------|-------------|-----------|------------|-------------|------------------------|--------------------------------|
| Hydrogen   | H      | 1             | 1           | 1         | 0          | 1           | G                      | NM                             |
| Oxygen     | O      | 8             | 16          | 8         | 8          | 8           | G                      | NM                             |
| Carbon     | C      | 6             | 12          | 6         | 6          | 6           | S                      | NM                             |
| Nitrogen   | N      | 7             | 14          | 7         | 7          | 7           | G                      | NM                             |
| Calcium    | Ca     | 20            | 40          | 20        | 20         | 20          | S                      | M                              |
| Phosphorus | P      | 15            | 31          | 15        | 16         | 15          | S                      | NM                             |
| Sulfur     | S      | 16            | 32          | 16        | 16         | 16          | S                      | NM                             |
| Helium     | He     | 2             | 4           | 2         | 2          | 2           | G                      | NM                             |
| Sodium     | Na     | 11            | 23          | 11        | 12         | 11          | S                      | M                              |
| Chlorine   | Cl     | 17            | 35          | 17        | 18         | 17          | G                      | NM                             |
| Aluminum   | Al     | 13            | 27          | 13        | 14         | 13          | S                      | M                              |
| Potassium  | K      | 19            | 39          | 19        | 20         | 19          | S                      | M                              |

