

## PICK AN ELEMENT, ANY ELEMENT

Name: \_\_\_\_\_

Choose an element on the periodic table and answer the questions that follow. Some research may be required to complete the assignment, so utilize any resources necessary (Wolfram|Alpha, textbook, etc).

- 1.) What is the name of the element?
  - 2.) What is the atomic symbol of the element?
  - 3.) What is the atomic number?
  - 4.) What is the atomic weight (including units)?
- 
- 5.) What period and what group is this element found?
    - a. Period:
    - b. Group:
  - 6.) Name two facts/properties that you learned about this element?
    - a.
    - b.
  - 7.) What is this element used for? Applications?
  - 8.) Compare your 2 favorite elements. What did you learn?

*Phone or Laptop*  
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Group 1

Group 2

Period 1

Period 2

" 3

" 4

" 5

" 6

" 7

18

13

14

15

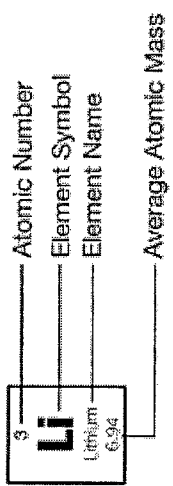
16

17

18

Group 13 Group 14 Group 15 Group 16 Group 17

# The Periodic Table of the Elements



|                                   |                                     |                                 |                                  |                                    |                                  |                                    |                                  |                                    |                                       |                                      |                                     |                                       |                                   |                                      |                                   |                                      |                                     |                                      |                                      |                                     |                                      |                                       |                                  |                                    |                                    |                                    |                                  |                                     |                                       |                                     |                                      |                                     |                                     |                                      |                                       |                                    |                                       |                                     |  |                                       |  |                                      |  |                                     |                                      |                                     |                                  |                                       |  |                                    |                                    |                                     |                                     |  |                                     |   |  |  |                                       |                                       |   |                                      |   |                                      |                                     |                                      |  |                                       |                                      |                                       |                                      |                                      |                                     |                                      |                                       |                                   |                                      |                                       |                                  |                                      |                                      |                                      |                                   |                                      |                                    |                                      |                                      |   |                                     |                                       |                                       |                                       |                                    |                                       |   |   |                                      |  |                                       |   |
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| 1<br><b>H</b><br>Hydrogen<br>1.01 | 2<br><b>He</b><br>Helium<br>4.00    |                                 |                                  |                                    |                                  |                                    |                                  |                                    |                                       |                                      |                                     |                                       |                                   |                                      |                                   |                                      |                                     |                                      |                                      |                                     |                                      |                                       |                                  |                                    |                                    |                                    |                                  |                                     |                                       |                                     |                                      |                                     |                                     |                                      |                                       |                                    |                                       |                                     |  |                                       |  |                                      |  |                                     |                                      |                                     |                                  |                                       |  |                                    |                                    |                                     |                                     |  |                                     |   |  |  |                                       |                                       |   |                                      |   |                                      |                                     |                                      |  |                                       |                                      |                                       |                                      |                                      |                                     |                                      |                                       |                                   |                                      |                                       |                                  |                                      |                                      |                                      |                                   |                                      |                                    |                                      |                                      |   |                                     |                                       |                                       |                                       |                                    |                                       |   |   |                                      |  |                                       |   |
| 3<br><b>Li</b><br>Lithium<br>6.94 | 4<br><b>Be</b><br>Beryllium<br>9.01 | 5<br><b>B</b><br>Boron<br>10.81 | 6<br><b>C</b><br>Carbon<br>12.01 | 7<br><b>N</b><br>Nitrogen<br>14.01 | 8<br><b>O</b><br>Oxygen<br>16.00 | 9<br><b>F</b><br>Fluorine<br>19.00 | 10<br><b>Ne</b><br>Neon<br>20.18 | 11<br><b>Na</b><br>Sodium<br>22.99 | 12<br><b>Mg</b><br>Magnesium<br>24.31 | 13<br><b>Al</b><br>Aluminum<br>26.98 | 14<br><b>Si</b><br>Silicon<br>28.09 | 15<br><b>P</b><br>Phosphorus<br>30.97 | 16<br><b>S</b><br>Sulfur<br>32.07 | 17<br><b>Cl</b><br>Chlorine<br>35.45 | 18<br><b>Ar</b><br>Argon<br>39.95 | 19<br><b>K</b><br>Potassium<br>39.10 | 20<br><b>Ca</b><br>Calcium<br>40.08 | 21<br><b>Sc</b><br>Scandium<br>44.96 | 22<br><b>Ti</b><br>Titanium<br>47.87 | 23<br><b>V</b><br>Vanadium<br>50.94 | 24<br><b>Cr</b><br>Chromium<br>52.00 | 25<br><b>Mn</b><br>Manganese<br>54.94 | 26<br><b>Fe</b><br>Iron<br>55.85 | 27<br><b>Co</b><br>Cobalt<br>58.93 | 28<br><b>Ni</b><br>Nickel<br>58.69 | 29<br><b>Cu</b><br>Copper<br>63.55 | 30<br><b>Zn</b><br>Zinc<br>65.39 | 31<br><b>Ga</b><br>Gallium<br>69.72 | 32<br><b>Ge</b><br>Germanium<br>72.61 | 33<br><b>As</b><br>Arsenic<br>74.92 | 34<br><b>Se</b><br>Selenium<br>78.96 | 35<br><b>Br</b><br>Bromine<br>79.90 | 36<br><b>Kr</b><br>Krypton<br>83.80 | 37<br><b>Rb</b><br>Rubidium<br>85.47 | 38<br><b>Sr</b><br>Strontium<br>87.62 | 39<br><b>Y</b><br>Yttrium<br>88.91 | 40<br><b>Zr</b><br>Zirconium<br>91.22 | 41<br><b>Nb</b><br>Niobium<br>92.91 | 42<br><b>Mo</b><br>Molybdenum<br>95.94 | 43<br><b>Tc</b><br>Technetium<br>[98] | 44<br><b>Ru</b><br>Ruthenium<br>101.07 | 45<br><b>Rh</b><br>Rhodium<br>102.91 | 46<br><b>Pd</b><br>Palladium<br>106.42 | 47<br><b>Ag</b><br>Silver<br>107.87 | 48<br><b>Cd</b><br>Cadmium<br>112.41 | 49<br><b>In</b><br>Indium<br>114.82 | 50<br><b>Sn</b><br>Tin<br>118.71 | 51<br><b>Sb</b><br>Antimony<br>121.76 | 52<br><b>Te</b><br>Tellurium<br>127.60 | 53<br><b>I</b><br>Iodine<br>126.90 | 54<br><b>Xe</b><br>Xenon<br>131.29 | 55<br><b>Cs</b><br>Cesium<br>132.91 | 56<br><b>Ba</b><br>Barium<br>137.33 | 57<br><b>La</b><br>Lanthanum<br>138.91 | 58<br><b>Ce</b><br>Cerium<br>140.12 | 59<br><b>Pr</b><br>Praseodymium<br>140.91 | 60<br><b>Nd</b><br>Neodymium<br>144.24 | 61<br><b>Pm</b><br>Promethium<br>[145] | 62<br><b>Sm</b><br>Samarium<br>150.36 | 63<br><b>Eu</b><br>Europium<br>151.96 | 64<br><b>Gd</b><br>Gadolinium<br>157.25 | 65<br><b>Tb</b><br>Terbium<br>158.93 | 66<br><b>Dy</b><br>Dysprosium<br>162.50 | 67<br><b>Ho</b><br>Holmium<br>164.93 | 68<br><b>Er</b><br>Erbium<br>167.26 | 69<br><b>Tm</b><br>Thulium<br>168.93 | 70<br><b>Yb</b><br>Ytterbium<br>173.04 | 71<br><b>Lu</b><br>Lutetium<br>174.97 | 72<br><b>Hf</b><br>Hafnium<br>178.49 | 73<br><b>Ta</b><br>Tantalum<br>180.95 | 74<br><b>W</b><br>Tungsten<br>183.84 | 75<br><b>Re</b><br>Rhenium<br>186.21 | 76<br><b>Os</b><br>Osmium<br>190.23 | 77<br><b>Ir</b><br>Iridium<br>192.22 | 78<br><b>Pt</b><br>Platinum<br>195.08 | 79<br><b>Au</b><br>Gold<br>196.97 | 80<br><b>Hg</b><br>Mercury<br>200.59 | 81<br><b>Tl</b><br>Thallium<br>204.38 | 82<br><b>Pb</b><br>Lead<br>207.2 | 83<br><b>Bi</b><br>Bismuth<br>208.98 | 84<br><b>Po</b><br>Polonium<br>(209) | 85<br><b>At</b><br>Astatine<br>(210) | 86<br><b>Rn</b><br>Radon<br>(222) | 87<br><b>Fr</b><br>Francium<br>(223) | 88<br><b>Ra</b><br>Radium<br>(226) | 89<br><b>Ac</b><br>Actinium<br>(227) | 90<br><b>Th</b><br>Thorium<br>232.04 | 91<br><b>Pa</b><br>Protactinium<br>231.04 | 92<br><b>U</b><br>Uranium<br>238.03 | 93<br><b>Np</b><br>Neptunium<br>(237) | 94<br><b>Pu</b><br>Plutonium<br>(244) | 95<br><b>Am</b><br>Americium<br>(243) | 96<br><b>Cm</b><br>Curium<br>(247) | 97<br><b>Bk</b><br>Berkelium<br>(247) | 98<br><b>Cf</b><br>Californium<br>(251) | 99<br><b>Es</b><br>Einsteinium<br>(252) | 100<br><b>Fm</b><br>Fermium<br>(257) | 101<br><b>Md</b><br>Mendelevium<br>(258) | 102<br><b>No</b><br>Nobelium<br>(259) | 103<br><b>Lr</b><br>Lawrencium<br>(262) |



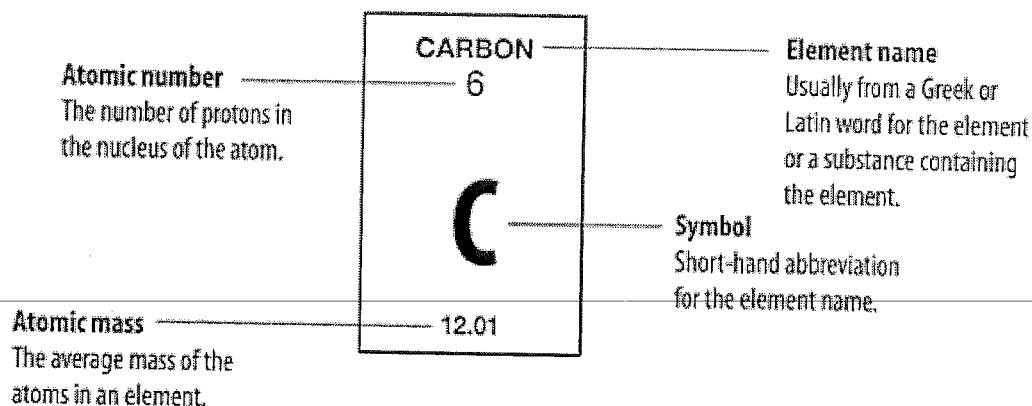
Activity Sheet  
Chapter 4, Lesson 2  
The Periodic Table

Name \_\_\_\_\_

Date \_\_\_\_\_

Your group will receive a set of cards with information that describes a particular atom. Your job is to figure out which atom the card describes and to place it in the area in your classroom for that atom.

You will use the Periodic Table, Elements 1–20 chart to help you determine what atom your card describes. The diagram and information below will help you match your cards to the correct atoms.



### Parts of an Atom

#### Proton

Positively charged particle in the nucleus of the atom.

The number of protons in an atom's nucleus is the atomic number.

#### Electron

Negatively charged particle surrounding the nucleus of the atom.

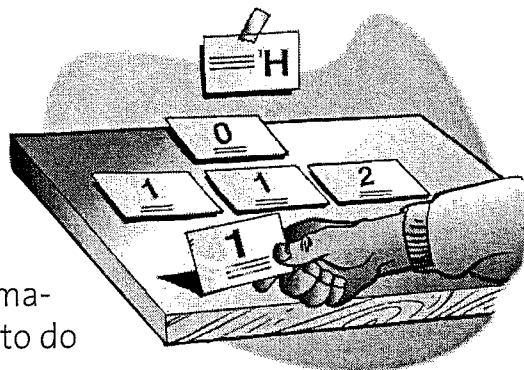
The number of electrons surrounding the nucleus of an atom is equal to the number of protons in the atom's nucleus.

#### Neutron

Particle in the nucleus that has about the same mass as a proton but has no charge. For the atoms of the first 20 elements, the number of neutrons is either equal to or slightly greater than the number of protons.

## Placing your cards

Once you know what the information in each box on your periodic table stands for and you know the parts of the atom, you will be able to correctly place most of your cards with the atoms they describe. You will need to know the following additional information in order to answer any question having to do with neutrons.



To match the number of neutrons listed on your card to the correct element, look for an element on the periodic table so that if you add the number of neutrons on your card to the protons of the element, you will get close to the atomic mass for that element.

For example, you may have a card that says, “The atom you are looking for has 5 neutrons.” Look at the periodic table to find an atom that you could add 5 to its number of protons that would give you a sum close to the atomic mass given for that element. The answer is beryllium (Be), which has 4 protons and an atomic mass of 9.01.