

**Symmetry in Nature**  
**Applications of Symmetry**

**Homework Assignment #1**

**Due date: Thursday, Week 2 at the beginning of class. Late work is not accepted.**

1. Define the following terms and give two examples of each.
  - matter
  - pure substance
  - mixture
  - element
  - compound
  - atom
  - molecule
  - homogenous mixture
  - heterogeneous mixture
2. Learn the element symbols for the following elements (given the name, provide the symbol and given the symbol, provide the name)

hydrogen	<b>H</b>	phosphorus	<b>P</b>	barium	<b>Ba</b>
helium	<b>He</b>	sulfur	<b>S</b>	platinum	<b>Pt</b>
lithium	<b>Li</b>	chlorine	<b>Cl</b>	mercury	<b>Hg</b>
beryllium	<b>Be</b>	argon	<b>Ar</b>	lead	<b>Pb</b>
boron	<b>B</b>	potassium	<b>K</b>	iodine	<b>I</b>
carbon	<b>C</b>	calcium	<b>Ca</b>	uranium	<b>U</b>
nitrogen	<b>N</b>	iron	<b>Fe</b>	chromium	<b>Cr</b>
oxygen	<b>O</b>	copper	<b>Cu</b>	lithium	<b>Li</b>
fluorine	<b>F</b>	nickel	<b>Ni</b>	zinc	<b>Zn</b>
neon	<b>Ne</b>	bromine	<b>Br</b>	strontium	<b>Sr</b>
sodium	<b>Na</b>	krypton	<b>Kr</b>	cadmium	<b>Cd</b>
magnesium	<b>Mg</b>	tin	<b>Sn</b>	manganese	<b>Mn</b>
aluminum	<b>Al</b>	gold	<b>Au</b>	xenon	<b>Xe</b>
silicon	<b>Si</b>	silver	<b>Ag</b>	arsenic	<b>As</b>