

**Chemistry**  
**Unit 1 Warm-ups**

**Name:** \_\_\_\_\_  
**Period:** \_\_\_\_\_

	Date	Warm-up Question
1		Your friend says that heat makes metal expand because the atoms in the metal absorb heat and swell up in size. Bigger atoms, he says, leads to a bigger piece of metal. Why is he wrong?
2		When you place some dye into warm water, the color spreads quickly. In cold water, it takes a long time. Why do you think that is?
3		If "Type A" plastic floats in water, but "Type B" sinks, how do their densities compare? What does that mean about the arrangement of atoms in Type A vs. Type B, if they're both made out of the same atoms?
4		How is the pressure of a gas different than the temperature of a gas? Even though they're different, how do you think they're related?

	Date	Warm-up Question
5		In your own words, define the terms <i>directly proportional</i> and <i>inversely proportional</i> .
6		If you have a sample of gas in a sealed container, and you double its temperature while also doubling its volume, what will happen to its pressure?
7		How much higher is the average kinetic energy of particles in 227 °C gas than in -23 °C gas? (Hint: Maybe Celsius isn't the best unit to use)