

# Topic: Measurement and Graphing

## 2. Temperature

As temperature increases, the density of a substance decreases because the energized molecules spread farther apart.

Hot air/liquid rises because it is less dense than the surrounding air/liquid.

**Aim:**

What factors affect density?

## 1. Pressure

As pressure increases, the density of a substance increases because the molecules get pushed closer together.

## 3. Phase Change

Most substances are most dense as solids ... except for water which is most dense as a liquid at 4°C.

ice floats because it is less dense than water  
(10% above water line and 90% below)

**Important Fact about the Density of a Uniform Substance:**

Different sizes and shapes of the same material have the same density.

(Remember the Density Lab – the aluminum bar and cube had the same accepted density.

Also, the wood bar and cube were made of the same type of wood and therefore had the same density value.)