**Bringing the gasses together;**

**They can’t mix if they are not together**

**Buoyancy (natural draft)**

Water

FA

ND

The heat of the fire forces the gas molecules further apart lowering the gas density and weight. This weight difference creates a pressure difference similar to the balloon. Unlike the balloon the flame does not move, but rather the gasses flowing up through the flame is what moves.

The weight of the water creates pressure which is equal at all points of the same depth. This pressure acts in all directions and is greater than the weight of the air-filled balloon, and so pushes it upward. This is the buoyant force.

The outside air and wood gas inside the stove are brought together when the buoyant force pushes air into the stove.

A forced air stove uses an electric fan to enhance this such that natural draft and forced air work together. Forced air may enhance or overcome natural draft, but does not eliminate it.