**Galileo’s Thermometer**

In Science class today, Mr. Smith did two demonstrations.

Diet Coke

In this demonstration, Mr. Smith took a full can of Diet Coke and a full can of Classic Coke and put them in a tank of water. The Diet Coke floated and the Classic Coke sank. This was because Diet Coke has fake sweetener in it that you need very little of to make something very sweet. This decreases the density so that it is less than water. The normal sugar in the Classic Coke made it denser so that it was denser than water.

Galileo’s Thermometer

In this demonstration, Mr. Smith showed us a particular kind of thermometer called Galileo’s Thermometer. The basic idea of this thermometer is that as temperature of air outside the thermometer changes, so does the temperature of the water surrounding the floating bubbles. As the temperature of the water changes, it expands or contracts, which changes its density. At any given density, some bubbles will float and some will sink. The bubble that sinks the most in the group that is still floating indicates the approximate temperature. There is a picture of a Galileo’s Thermometer at the end of this paper.

Things I learned:

* Water has a density of approximately one.
* It only has a density of exactly one when it is pure water, which means it has nothing else in it, such as mineral particles.
* It also has to be exactly 4 degrees Celsius.
* The air pressure has to be standard sea pressure.
* There is a thermometer called Galileo’s Thermometer.
* Gold has big atoms which are packed very closely together so it is very dense.
* The density of ice is .9150.
* Diet Coke has a density less than water.
* Classic Coke has a density more than water.
* If I was worth my weight in gold, I would be worth $704,000.

