Gas Mystery Paragraph

In the gas properties lab we did six experiments to display the gas laws and kinetic molecular theory. I will be examining our experiment with a marshmallow in a syringe and a lit candle in water having a flask placed on top of it. When we placed a marshmallow in a sealed syringe and pulled back the plunger the marshmallow expanded quite drastically. This was due to the air pressure in the syringe decreasing as volume increased causing the air pockets in the marshmallow to adjust accordingly which expanded the marshmallow. This was an example of Boyle’s law, which states that at a constant temperature the pressure and volume of a gas have an inverse relationship. Eventually though the air pockets in the marshmallow exploded due to the volume of air inside them expanding to the point that it could no longer be contained by the small pockets. The second experiment that I will examine involved us placing a flask over a lit match in water; the result was when the match went out a portion of the water rushed into the inverted flask. This experiment was an example of Charles’ gas law since as the air cooled down when the match went out the volume of air also went down; then since the air pressure inside was lower in the flask than that of the outside air the water was sucked in to settle the imbalance. Both of these experiments where examples of the gas laws at work in the real world and thus created a great introduction to the topic. The marshmallow experiment involved a closed container meaning the number of molecules where constant; while the flask experiment started off not closed when the actual gas laws came into play there was a seal between the water and flask. Despite me only discussing two of our experiments here all three of the gas laws where demonstrated over the duration of the lab.