Water Density

Density is a ratio of Mass and Volume (p=M/V).Water is used as a reference in density.Basically every density is compared to water.When you add salt to water, the density goes up.This is because the mass changed (the salt).

For the experiments, I used :

Materials:

1.Mason Jars
2.Thermometer
3.Scale
4.Salt
5.Sugar
6.Blue Ink
7.Turmeric(later replace by red food coloring)
8.Pizza blade

Experiments:

The first experiment I did was hot water vs cold water.I hypothesized that the hot water would float and the cold water would sink.The variables were the temperature and which was on top or the bottom.The constants were the material (water),the volume,and the mass(485 grams).

In this picture there's the hot water(red) on top of the cold water (blue).

The Hot water was 130 F.The cold water was 54 F.

The next experiment was tap water vs salt water.I hypothesized that the salt water would sink and the tap would float.The variables were the material in one (salt) and flipping it upside down.The constant was the temperature and volume.

The salt water is yellow and the tap is blue.Both have the same volume but have different masses.I added 25 grams of salt and turmeric.

The final experiment was salt water vs sugar water.My hypothesis was that the sugar water would float and the salt would sink.The variables were the materials (Salt and Sugar) and having it upside down.The constants were the temperature,the mass,and volume.

Sugar is Blue and Salt is Red.Same amount of salt and sugar was added.

Eventually they mixed together.

The conclusion for the first experiment was the cold water was more dense.In the second experiment,the salt water was more dense than the tap water.In the third experiment it appeared that the salt water was more dense but then as a surprise they mixed.