

Science _____
Density Lab

Name _____
Date _____

Can Eggs Float?

We have all seen helium balloons floating up in the sky. Helium floats because it is less **dense** than air...there are fewer particles in the same amount of space in helium than there are in air. Today, we are going to try to add so many particles of salt to water that an egg will be less dense than water, and will therefore "float".

Problem: How much salt does it take to get an egg to float on water?

***Before you can hypothesize about this, you need to find out how much a gram of salt is. Take a piece of loose-leaf paper and find its mass on the triple beam balance. Record the mass here. _____ g

Leave the paper on the scale and add salt on the paper until you have put an additional gram on the scale. Don't forget that the paper also has a mass. When you have one gram of salt, take a look at how much salt there is, and use that information to answer your hypothesis.

Hypothesis: IF I add _____ grams of salt to fresh water, THEN I will be able to float an egg BECAUSE _____

VARIABLE: _____

Materials: Salt
Triple beam balance
One sheet of loose-leaf paper
500 ml beaker
300 ml water
Egg

Procedure:

1. Fill beaker to 300 ml mark with water.
2. Add salt ONE GRAM at a time.
3. After each addition of salt, put the egg in the beaker to see if it floats. Remove the egg before adding more salt.
4. When the egg floats record the number of grams required for your egg to float.
5. If you have additional time, complete another trial following the same steps.

See side two

Data: Total grams of salt required to float an egg: _____
(Did you add units?)

Trial two (if applicable): _____

Conclusions:

1. How many grams of salt were required to float an egg on top of fresh water?

2. Why did adding salt to water make the egg float? _____

3. Will people floating in an ocean find it easier or harder to float compared to fresh water? _____ Why? _____

4. Was your hypothesis right or wrong? _____