

Due Friday, 10/2/2020 –

For your Science Fair Project

Materials

Directions: Write down all the materials you will need for your science fair project. You can write them on your own sheet of paper, or type them. Upload to Archie. Remember that all final drafts must be typed.

In this section you will list exactly what materials are needed to do your experiment.

You should include:

- Amount or quantity of each item
- Brand/type of items
- Size of items
- Enough materials for all 3 trials

Example of Materials

- One egg
- One gallon of water
- One measuring cup (that measures 1 cup)
- Large container, such as a large bowl or pitcher that can hold 2 liters
- One half cup of table salt
- Five cups that hold at least 16 ounces each
- Permanent marker (if you are using plastic cups) or masking tape and a pen (to label non-disposable cups)
- Three spoons for mixing salty solutions (tablespoon)
- Soup spoon for egg transfers

Procedures – also due Friday, 10/2/2020

The procedures section lists every step or action taken to do the experiment. It needs to include as much detail as possible about what was done, so that someone else can repeat the experiment.

You should include

- Every step taken is listed
- Includes sizes, amounts, brands, etc.
- Includes steps for all 3 trials

Example of Procedures

Preparation (done before class)

- Take the egg out of the refrigerator and allow it to warm to room temperature. Be sure to always wash your hands after handling uncooked eggs because they may carry salmonella.
- Pour one and one half cups of water into your large container.
- Add one half cup of salt to the large container and stir to dissolve some of the salt (it will not all dissolve yet).
- Add one more cup of water to the large container (making two and one half cups total) and stir to dissolve the remaining salt. The salt should be completely dissolved before you go on to the next step. It may take several (five to 10) minutes of stirring, so you may need to be patient. *Why do you think it's important to start out with a solution that has such a high concentration of salt?*
- Arrange the five cups on a surface, going in a line from left to right. Label the cups 1 to 5. If you are using plastic cups, you can use a permanent marker to label them. If you are using nondisposable cups, you can use masking tape and a pen to label them.

Procedures

- Add three quarters cup of the salty solution you prepared to cup 1.
- Add three quarters cup of plain tap water to cups 2 through 5. (Cup 5 will be plain tap water.)
- Add three quarters cup of the salty solution you prepared to cup 2 and mix it. *What is the salt concentration in cup two compared with cup one?*
- Add three quarters cup of the salt solution from cup 2 to cup 3 and mix it. *What is the salt concentration in cup 3 compared with cups 1 and 2?*
- Add three quarters cup of the salt solution from cup 3 to cup 4 and mix it. *What is the salt concentration in cup 4 compared with the other cups?*
- Use a soup spoon to place an egg in cup 5. *Does the egg float?*
- Use the spoon to take the egg out and place it in cup 4. *Does the egg float?*
- Repeat this process with cups 3, 2 and then 1.
- *Collect data to answer the following questions: In which cup does the egg first float? If the egg floated in more than one cup, did you notice any difference in how it floated? What does this tell you about the density of the egg?*