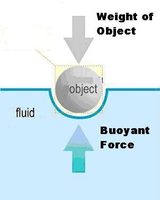
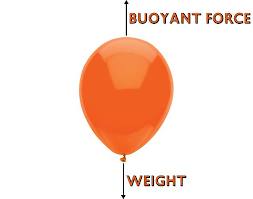
**Buoyancy Lab**





**Objective:**

* Define buoyant force
* Predict whether the buoyant force (in water) will be greater than the gravity force (weight) of two objects.
* Connect the buoyancy of objects in water to the buoyancy of objects in the air.

**Define:**

* Use the following websites to help define what is meant by buoyant force. Then, write a definition In your own words
  + <http://www.merriam-webster.com/dictionary/buoyant%20force>
  + <https://simple.wikipedia.org/wiki/Buoyancy>

**Buoyant Force** (in your own words) -

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**Measure:**

* Use the electronic scale to measure the weight, in grams, of a Ping-Pong ball and a golf ball. Enter your results in the table below.

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| --- | --- | --- | --- | --- |
| **Object** | **Volume (ml)** | **Weight (grams)** | **Greater Force (Gravity or Buoyancy?)** | **Float or Sink?** |
| Water | 40 | 40 | ------ | ----- |
| Ping-Pong Ball | 40 |  |  |  |
| Golf Ball | 40 |  |  |  |
| Water Balloon | 40 | 40 |  |  |

**Predict:**

* Based on the weight of the balls as compared to the weight of water, which is greater for the object, the **buoyant force, or gravity force**? (Answer in the table above)
* Predict whether each ball will **float or sink**. (Table)

**Experiment:**

* Place each ball in a glass of water. Observe the results.

**Conclusion:**

* **Explain why one ball floats, while the other sinks.**

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* **How does this experiment in water relate to hot air balloons in the air?**

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