

Name \_\_\_\_\_

## Density of Liquids

**Purpose:**

1. To learn how to find the density of liquids and to compare several liquids.
2. To collect data by observing and measuring
3. To analyze and interpret information to construct reasonable explanations from direct and indirect evidence
4. To communicate valid conclusions

**Materials:**

|           |                    |         |             |
|-----------|--------------------|---------|-------------|
| 5 liquids | graduated cylinder | balance | calculators |
|-----------|--------------------|---------|-------------|

**Procedure:**

1. Use the triple beam balance to find the mass your graduated cylinder. (empty) Record.
2. Add 25 ml of the first liquid.
3. Find the mass of the graduated cylinder + the liquid. Record.
4. Subtract. The mass of the graduated cylinder from the mass of the graduated cylinder + the liquid. Record.
5. Calculate density.  $D = M/V$
6. Repeat for all liquids.

**Prediction:** Predict the density of the liquids from least to greatest

---



---

**Group Data:**

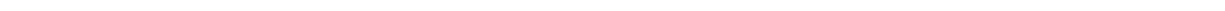
| <i>Liquid</i>     | <i>Mass of graduated cylinder</i> | <i>Mass of graduated cylinder + liquid</i> | <i>Mass of Liquid</i> | <i>Volume</i> | <i>Density</i> |
|-------------------|-----------------------------------|--|-----------------------|---------------|----------------|
| <i>Salt water</i> |                                   |  |                       |               |                |
| <i>Corn syrup</i> |                                   |  |                       |               |                |
| <i>Alcohol</i>    |                                   |  |                       |               |                |
| <i>Water</i>      |                                   |  |                       |               |                |
| <i>Oil</i>        |                                   |  |                       |               |                |

**Class Data:**

| <b>Liquid</b>     | <b>Group 1</b> | <b>Group 2</b> | <b>Group 3</b> | <b>Group 4</b> | <b>Group 5</b> | <b>Group 6</b> | <b>Group 7</b> | <b>Group 8</b> | <b>Average Density</b> |
|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------------|
| <b>Salt water</b> |                |                |                |                |                |                |                |                |                        |
| <b>Corn syrup</b> |                |                |                |                |                |                |                |                |                        |
| <b>Alcohol</b>    |                |                |                |                |                |                |                |                |                        |
| <b>Water</b>      |                |                |                |                |                |                |                |                |                        |
| <b>Oil</b>        |                |                |                |                |                |                |                |                |                        |

**Data Analysis:**

Graph your data using bar graph. Remember TAILS & DRY MIX. Why is a bar graph most appropriate?



|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**Conclusion:**

