

**NAME:**

**GRADE & SECTION:**

**WORKSHEET #1: VISCOSITY RACE**

**Reminder:** Watch this video first before you can proceed in conducting the experiment and answering this worksheet.

**Objectives:**

- Determine the viscosity of some liquids; and
- Describe the flow of gas in different liquids.

**Materials:**

- 4 pieces of Cone out of a cardboard, folder, bond paper or etc.

(The shape should be like this.)



Mark the 4 cardboards: A, B, C & D.

- Clear drinking glass.
- Drinking Straw.
- Tray or any flat container where excess fluids will catch sliding from the cone.
- Timer

- 4 liquids:

- Water
- Syrup or Vitamins Syrup, Corn Syrup, Chocolate Syrup or any syrup
- Cooking Oil or Olive Oil
- Honey, if not available you could use (Mayonnaise, Ketchup or Glue)

### Procedure:

1. Before doing this activity, predict which liquid (from the 4 liquids that you chose) take the least amount of time to reach the tray. Which liquid will take the most amount of time?
2. Place the cone marked A, B, C and D on the tray.
3. Pour water on the top of cone A. Record the time it takes for the water to reach the tray.
4. Perform three times for each material or liquid.

NOTE: Use the same amount of material each time.

TABLE 2. Travel time of some liquids.

| LIQUID                                    | Travel time (seconds) |                 |                 |                                                                      |
|-------------------------------------------|-----------------------|-----------------|-----------------|----------------------------------------------------------------------|
|                                           | 1 <sup>ST</sup>       | 2 <sup>ND</sup> | 3 <sup>RD</sup> | Average<br>(1 <sup>st</sup> + 2 <sup>ND</sup> + 3 <sup>RD</sup> / 3) |
| Water                                     |                       |                 |                 |                                                                      |
| Cooking Oil                               |                       |                 |                 |                                                                      |
| Syrup                                     |                       |                 |                 |                                                                      |
| Honey<br>(Mayonnaise,<br>Ketchup or Glue) |                       |                 |                 |                                                                      |

### Guide Questions:

Q1. Is your prediction correct?

Q2. Which liquid is the most viscous? How do you know?

Q3. Which liquid is the least viscous?

Q4. Explain viscosity in your own words.

**Q5. Compare how these liquids flow with how you think lava flows. Why do some types of lava travel faster than others?**

6. Put 100 mL syrup, honey or any liquid that you choose in a clear glass.
7. Using a drinking straw, blow some air from the bottom of the liquid. Observe.
8. Repeat procedure 7 by blowing harder on the liquid. Observe.



**Guide Questions:**

**Q6. Compare the movement of the liquid as the bubbles move on the surface?**

Link of the Video containing the evidences of doing the experiment:

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