TIPS SCIENCE-MIDDLE GRADES

Student's Name_____ Date_____

TIPS: ON YOUR MARK, GET SET, GO!

Dear Family Partner,
In science we are studying the phases of matter. This activity focuses on liquids to help build skills in observing, recording, and drawing conclusions. I hope you enjoy this activity with me.
This activity is due_____.

Sincerely,

_____
Student's signature

OBJECTIVE: To understand **viscosity**—a liquid's resistance to **flow**

MATERIALS: ONE TEASPOON of **3-5** liquids that have different thicknesses—such as catsup, mustard, water, syrup, honey, milk, or others that your family partner will allow you to use.
Also, baking pan, teaspoon, clock with second hand or count seconds.

PROCEDURE:

1. Explain the following to a family partner to share what we are learning in class:
   Who is working with you? _____
   Some liquids are thicker and **more viscous** than others. They **flow slowly**.
   Some liquids are think and **less viscous** than others. They **flow quickly**.

2. With your family partner decide: **Which 3-5 liquids will you test?**
   a._____ **d.**_____
   b._____ **e.**_____
   c._____

3. Tilt the pan and prop it up against something like a phone book so that it is at an angle (between 45° - 60°). At about what angle is your pan tilted?_____

   One of you will put each liquid in the pan and identify the finish line. The other will serve as the timer. You can check each other to get an accurate observation.

   Start each teaspoon of a new liquid at the same level at the top of the pan at least one inch away from the previous liquid. Make sure the pan remains tilted at the same angle for each test. When you are ready with all of the materials, do these steps:
   a. **Place one teaspoon of liquid at the top of your pan.**
   b. **Time the seconds it takes for the liquid to reach the "finish line" at the bottom of the pan.**
   c. **Record the information on the Data Chart.**
   d. **Continue until you have tested each teaspoon of liquid.**

DATA CHART

LIQUID	SECONDS TO "FINISH" LINE	OBSERVATION HOW VISCOUS IS IT?
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

CONCLUSIONS:

1. Which liquid finished
   first (fastest) _____
   midway _____
   last (slowest) _____
2. Which liquid has **high viscosity?** _____
3. Which liquid has **low viscosity?** _____
4. Why was it important that your pan remained at the same angle for each test?

_____

FAMILY SURVEY:

ASK: Can you think of any foods or other products that use viscosity (how fast or slow the flow) as part of the advertising to get you to buy it?

Family member's idea _____

My idea _____

Why is **high viscosity** (slow flow) a good feature (or a bad feature) of a product you use?

_____

_____

Why is **low viscosity** (quick flow) a good feature (or a bad feature) of a product you use?

_____

_____

HOME TO SCHOOL COMMUNICATION:

Dear Parent/Family Partner,

Please give me your reactions to your child's work on this activity.

Write YES or NO for each statement.

____My child understood the homework and was able to discuss it.

____My child and I enjoyed the activity.

____This assignment helped me know what my child is learning in science.

Any other comments: _____

Parent's signature: _____

Epstein, J.L., Salinas, K.C., Jackson, V., & Van Voorhis, F.E. (revised 2000). Teachers Involve Parents in Schoolwork (TIPS) Interactive Homework for the Middle Grades. Baltimore: Center on School, Family, and Community Partnerships, Johns Hopkins University.