TIPS SCIENCE-MIDDLE GRADES

Name: _____ Date: _____ Class: _____

ON YOUR MARK, GET SET, GO!

Dear Parent or Guardian:

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,

_____

OBJECTIVE To understand **viscosity** -- a liquid's resistance to **flow**.

MATERIALS ONE TEASPOON of **4 liquids** that have different thicknesses -- such as ketchup, mustard, water, syrup, honey, milk, or others that your family partner will allow you to use, baking pan, teaspoon, a clock that shows the seconds or someone to 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 thin and **less viscous** than others. They **flow quickly**.

2. With your family partner decide: **Which 4 liquids will you test?**
   a. _____ c. _____
   b. _____ d. _____

3. Tilt the pan and prop it up against something like a phone book or against another pan 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. When you are ready with all of the materials, do these steps:

   a. Place one teaspoon of liquid at the “starting line” 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 in the Data Chart.
   d. Continue until you have tested each teaspoon of liquid. Make sure that you start each liquid at the same level at the very top of the pan, but at least one inch away from the previous liquid. Make sure the pan remains tilted at the same angle for each test.

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 partner'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 or Guardian,

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

Write YES or NO for each statement.

_____ 1. My child understood the homework and was able to discuss it.
_____ 2. My child and I enjoyed the activity.
_____ 3. This assignment helped me know what my child is learning in science.

Any other comments: _____

_____

Signature: _____