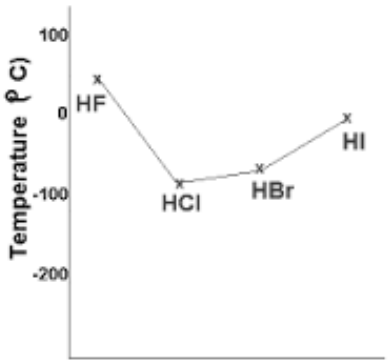
POST LAB QUESTIONS

1) Begin only after completing the lab and getting your clean up stamp
2) Answer all questions with the lab in mind – what did you learn and/or see?
3) Make sure to relate everything back to Intermolecular Forces! (IMFs)
4) You will work together to answer these questions, but everyone turns in their own copy. I will randomly call on people to answer select questions so make sure you are understanding and not just copying…

TASK #1 — Boiling Point

1) Rank the liquids in order from lowest to highest boiling point.
2) Rank the liquids in order from lowest to highest amounts of IMFs.
3) Explain your ranking of #2 – why did you choose that ranking? How does it relate to your answer to #1?
4) Using the graph below, explain the boiling point difference between HF and HCl by relating it to the type and strength of IMFs they each have.
5) Explain why HI has a higher boiling point than HBr, HCl, but NOT HF



TASK #2 — Melting Point

1) Which compound melted first?
2) Explain why it melted first by relating it to IMFs
3) Why didn't the other one melt? What was special about the type of bonds and IMFs present in that substance?

TASK #3 — Surface Tension

1) Rank the substances from lowest to highest surface tension.
2) Why did you rank them that way? What data supports this ranking?
3) Explain why they are ranked that way by relating it to the intermolecular forces present in each substance.

TASK #4 — Polarity

1) What was created when you rubbed the balloon on your hair? The answer is not a messed up hair-do… Think about the electrons.
2) What happened when you moved the balloon closer to each substance?
3) Explain why some substances were more attracted to the charged balloon than others. Relate it to the polarity of the molecules in each substance.
4) Research online to find two very polar molecules and two very non-polar molecules that were not used in this lab. Draw their structures and explain why each is either polar or non-polar.

TASK #5 — Viscosity

1) Rank the three substances used in the video in order from least to most viscous.
2) Rank the three substances used in the video in order from least to most amounts of IMFs
3) Draw the structures of the molecules used in the video.
4) What type of IMFs are present in those three molecules?
5) Explain how the quantity or strengths of IMFs change the viscosity.

INTERMOLECULAR FORCES AND PHASES

Watch the following Crash Course video and explain how intermolecular forces relate to the phases of matter (solids, liquids, gases)

www.tinyurl.com/CrashCourseLiquids

SUM IT UP WITH A "TWEET"

Haha! See, I'm trying to relate to you teenagers! I'm not that old yet! ☺

Write a summary sentence of the most important aspects of IMFs. It must only be 140 characters long.