Name
Date **Period**

Grade:

Lab 18
HYDROGEN BONDING

PRELAB QUESTIONS

1. For the molecules given, circle those that are nonpolar.
   H_2 CH_4 NH_3 H_2O Cl_2 HF
2. As the molecular masses of the halogens (Group 17) increase, what happens to their melting and boiling points? (Hint: What are the normal physical states of each of the halogens?)
3. In comparing the molecules of two different substances, if the molecules of substance A are more polar than the molecules of substance B, in which substance would you expect to find stronger dipole-dipole attractions?

NAME_____ PERIOD _____
DATE _____ LAB PARTNERS

EXPERIMENT 18
HYDROGEN BONDING

CONCLUSION QUESTIONS

1. For the hydrogen compounds of Group 14 elements, describe any observable trend.

2. For the compounds of Groups 15, 16, and 17, name the compound within each group that appears to be an exception to the general trend.

3. What type of bonding exists between the molecules of the compounds of Group 14?

4. What type of bonding exists between the molecules of the compounds of each of the other groups, that is, Groups 15, 16, and 17?

5. Suggest a possible reason or reasons for the three exceptions.

6. Attach graphs to the lab report

Discussion

Conclusion