***DevilPhysics***

***AP Physics***

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period: \_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Baddest Class on Campus***

**GIANCOLI READING ACTIVITY**

**Sections 10-11 to 10-12**Read sections 10-10 to 10-13 in your textbook.

1. Write a definition for each of the terms listed below:
   1. viscosity
   2. coefficient of viscosity
   3. velocity gradient
   4. Poiseuille’s equation
   5. poise
   6. volume rate of flow
2. Answer the following questions:
   1. What causes viscosity between fluids? In gases?
   2. What are the SI and cgs units for viscosity? Also give the formal name for the cgs unit.
   3. What happens to the viscosity of motor oil as the temperature increases?
   4. The rate of flow of fluid in a round tube is dependent on what three things?
   5. Poiseuille’s equation applies during  flow.
   6. What is the difference in mass flow rates between two pipes if one has ¼ the radius of the other one, assuming the pressure differential remains the same?
   7. How does the body control the mass flow of blood?
   8. What must happen to maintain the same blood-flow rate when arterial radii are decreased with arteriosclerosis and cholesterol buildup? How is this accomplished?
3. This assignment may be typed or neatly printed. Drawings may be freehand, but try to make use of the ‘Shapes’ or ‘Insert Clipart” functions of MS Word. If you submit this assignment electronically, the filename must be in the following format, “LastnameFirstinitialPerXReadActX-X”. You ***do not*** need include a copy of these instructions with the assignment you hand in.