

7<sup>th</sup> Grade Science  
"Keep the Patient Alive!"  
Homeostasis Lab

Name \_\_\_\_\_  
Name \_\_\_\_\_  
Name \_\_\_\_\_  
Name \_\_\_\_\_  
Table Number \_\_\_\_\_ Period \_\_\_\_\_

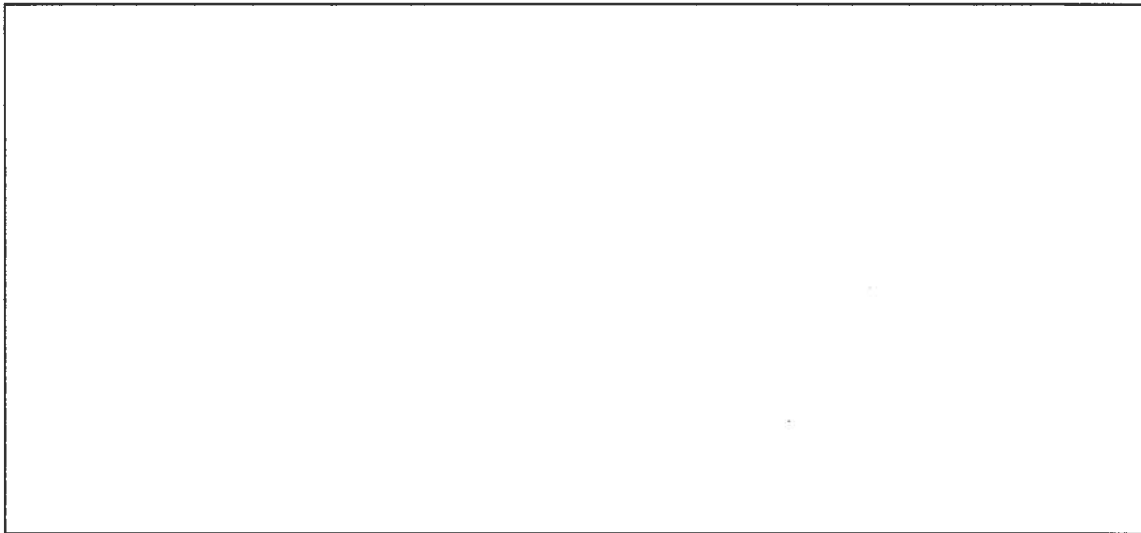
1. What is the definition of homeostasis? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. What does your group think a homeotherm is? (Therm means temperature and use the definition in #1 to help you figure this out) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. The purpose of this experiment is to keep your patient (the beaker with 200 mL of water in it...isn't your patient lovely?) within the correct range to keep them alive, basically 4 degrees *above and below* the normal temperature of 98.6 degrees Fahrenheit. What is 98.6 degrees Fahrenheit in degrees Celsius? \_\_\_\_\_  
What would be the acceptable range for your patient in degrees Celsius? \_\_\_\_\_

4. The procedure: Get 200 mL of water in a 1000 mL beaker. PUT ON YOUR GOGGLES! Heat up the water with a hot plate underneath. Careful, the hotplate can burn you! Alternately use heat or ice to keep the temperature within the range to keep the patient alive. Use the temperature probes and laptops to chart the temperature and print out proof that you were successful for 10 minutes!

5. Draw a labeled sketch of your setup in the area below:



**Turn this sheet over for the rest of the questions**

6. Describe what it was like to keep the temperature of the “patient” (the water in the beaker) nearly equal to the temperature of the human body.

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7. Why do you think it is important to keep the temperature of the human body relatively constant? Please say more than the patient would **die** if the body was too hot or too cold...that is the 2<sup>nd</sup> grader’s answer! Is your team smarter than a 2<sup>nd</sup> grader?

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