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

**Homeostasis Webquest – Ben’s Bad day!**

Homeostasis is the ability to maintain a constant internal environment in response to environmental changes. **All the systems of the body work together to maintain homeostasis.**

The nervous and endocrine systems control homeostasis in the body through feedback mechanisms involving various organs and organ systems. Examples of homeostatic processes in the body include temperature control, pH balance, water and electrolyte balance, blood pressure, and respiration.

You are going to follow Ben through his day his to determine why he is responding to his environment the way he is. Go to <https://ats.doit.wisc.edu/biology/ap/ho/t1.htm>? Your task is to use this information to help restore Ben's homeostasis at critical times during his day. **Of course, homeostasis in the real Ben is automatic, but imagine that you are in control!**

1. Why did Ben feel dizzy and faint when he jumped out of his chair?

2. List the steps Ben’s body must go through to maintain homeostasis. Be sure to identify the parts of the body involved and what they did.

3. What stimulus did Ben’s body have to deal with at 8:30?

4. List the steps Ben’s body must go thru to maintain homeostasis. Be sure to identify the parts of the body involved and what they did.

5. What did Ben’s muscles produce when he ran after his paper at 11:50 am?

6. What impact did this have on the pH of his blood?

7. Which organ did Ben’s nervous system stimulate to help maintain homeostasis? How was pH balanced

restored.

8. During his Biology test, Ben’s brain needs more glucose, what do the adrenal glands release and where do they go to help increase Ben’s glucose level.

9. At 8:30 Ben eats some pretzels. What does this do to his blood chemistry? What does this mean?

10. What happened next in Ben’s body’s attempt to restore homeostasis?

11. What organ was stimulated by the above action by Ben’s body? What was its response?

12. What did Ben do to increase his glucose level?

13. How does Ben’s body respond to the increased glucose level?

14. Which part of Ben’s body is stimulated to take up the excess glucose?

15 What other parts of Ben’s body work to maintain homeostasis in the above situation?

16. What part DOES NOT assist in this process and why?