Name _____

PLANT TRANSPORT SYSTEMS

http://bcs.whfreeman.com/thelifewire/content/chp36/36020.html

1. Name the vessels through which plants transport sugars and amino acids. What is this process called? In what direction are these substances transported and what is the guaranteed origin and destination of these substances?

2. What is meant by "source" cells and by "sink"cells?

SELECT THE ANIMATION TAB, THEN PRESSURE FLOW IN A PLANT, AND STEP-THROUGH THE ANIMATION

3. Distinguish between the transport through the xylem and phloem vessels in plants.

4. Describe the primary force moving water upwards in plants.

5. Provide specific examples of "source" cells and "sink" cells in plants.

6. How does the fluid in phloem vessels begin to flow—is this energy requiring or energy releasing? Be sure to explain the difference in the manner that solutes like sugars and amino acids enter phloem tubes and the manner that water enters phloem tubes.

7. As water moves into phloem tubes, what happens to turgors pressure and how does this result into phlow (do you see what I did there?) to "sink" cells?

8. The animation does not do a great job here (slide 8), I, of course, will do a great job. Are sugars and and amino acids actively or passively transported into sink cells (think about the resulting differences in the rate of transport).

9. As sugars and amino acids are transported into sink cells, what happens to pressure inside the phloem tubes and how does this action complete the system by which the fluid in phloem tubes is transported from source to sink?