Hort & Temp – Home Gardening & Hort C. Kohn, Waterford WI

Name: Hour Date:

Date Assignment is due: *Upon completion of PPT* Why late?
 Day of Week Date If your project was late, describe why

1. What does it mean that the membranes of plants are selectively permeable?
2. What structures enable plants to be selectively permeable?
3. Define osmolarity:

	1. What is osmolarity based on?
4. What is osmosis?

	1. Water always goes from a solution of osm to osm
	2. Water always follows
5. What is turgor pressure?
6. What is the turgor pressure inside the plant cell?
7. What will happen to a plant cell in pure, hypotonic water?
8. What will happen to a plant cell is salt water?
9. Why does lettuce get soggy if you put dressing on too soon?
10. Define plasmolysis:
11. Define deplasmolysis:
12. What is the difference between hypertonic, isotonic, and hypotonic?
13. Draw the response of a plant cell to each condition below:


14. What is the function of the plant’s vacuole?
15. How much space does the vacuole take up inside the plant cell?
16. What structure surrounds the vacuole?
17. What is cell sap?
18. List and describe the five functions of the vacuole:

1

2

3

4

5

1. Describe the impact a light frost will have on the cells of a regular plant:

1

2

3

4

5

1. List the 7 steps of plant death via cold weather:

1

2

3

4

5

6

7

1. Define Acclimation:
2. Define Deacclimation:
3. What is the difference between acclimation and deacclimation?
4. Describe what would cause a normally cold-tolerant plant to suffer frost damage after a lengthy spring thaw:
5. High osmolarity the freezing and boiling temperatures
6. Why is it that pure water may not freeze at temperatures between 32O and -40o F?
7. Define nucleator:
8. Briefly describe the plant adaptation of Osmotic Alteration:
9. Why do snap peas taste sweeter if they are exposed to a frost?
10. What is a phospholipid bilayer?
11. What is the difference between a saturated and an unsaturated fat?

	1. Which kind ‘kinks’ and why?
	2. Give an example of a saturated and an unsaturated fat:
	3. How does this help a plant prevent frost damage?

1. What is cutin wax?
2. How does cutin prevent frost damage?

1. In the space below, provide a brief summary of the 5 ways plants can avoid or tolerate cold stress: