

Name _____

Date _____

Transpiration Lab Simulation

⇒ Go to: http://www.phschool.com/science/biology_place/labbench/lab9/intro.html

1. What property of water accounts for the fact that molecules of water "grab" the walls of the thin xylem vessels? (1 pt)
2. Water molecules pull each other like beads on a string; as one molecule is evaporated through a stoma, another is pulled up. What property of water is demonstrated here? (1 pt)
3. Place the following in order (list the letters), from highest water potential to lowest water potential, under normal conditions: (1 pt)
(a.) Mesophyll of leaves (b.) Outside air around leaf (c.) Spaces around roots (d.) Inside the xylem vessels

Factors That Affect the Rate of Transpiration: (1 pt each)

1. Which condition would result in the higher rate of transpiration: light or dark?
2. Which condition would result in the higher rate of transpiration: humid environment or dry environment?
3. Which condition would result in the higher rate of transpiration: breezy conditions or still air?
4. Which condition would result in the higher rate of transpiration: hot environment or warm environment?

⇒ Stop at "Design of the Experiment", which shows a picture of a potometer, and go to http://www.mhhe.com/biosci/genbio/virtual_labs/BL_10/BL_10.html