

Transpiration

1. Transpiration is the _____ consequence of _____ exchange in a leaf. This is because plants must absorb _____ in order to carry out _____. They also excrete _____, a waste product. _____ exchange requires a large _____ and _____ since the gases need to _____ before they can _____ into cells. Since the surfaces are _____, water _____ from the cell walls, and can leave through the _____ when they are open. The opening and closing is controlled by the _____ cells.

2. How much water is lost is a function of _____, _____ and _____ speed. The rate of _____ can be measured using a _____.

3. To replace the water lost by the _____, water moves up from the _____. This is possible because of the _____ properties of water. Water is _____ because water molecules are _____ to each other.

Draw a labelled diagram of how two water molecules interact:

4. Water molecules also have _____ properties. This allows them to _____ strongly to _____ present in the cell walls. Recall that _____ is a polysaccharide composed of ____-____ glucose molecules, _____ in their orientation, forming _____ chains that have _____ bonds between them which gives a lot of _____ strength.

5. Draw and annotate a diagram of xylem: