# Water & Transpiration: Discussion Questions

AP Biology

1. How are ‘cohesion’ and ‘adhesion’ used in colloquial (everyday) language? How are these definitions consistent with the molecular definitions?

2. Another feature of water is that it resists temperature change; this is described as having a high specific heat. How is this important to organisms?

3. Describe three adaptations of organisms that take advantage of the properties of water.

4. Rank water, 70% isopropyl alcohol, oil, and salt (NaCl) in terms of their relative polarity/charge.

5. If you observe plants after a rain you’ll see water beaded up on the leaves. What does this tell you about the polarity of the surface of the leaves? Infer why based on the function of leaves.

6. For what purpose(s) does all this water move through a plant?

7. Summarize the conflict inherent in a plant’s need to conserve water and to take in CO2.

8. Stomates are typically found only on the underside of leaves – hypothesize why.

9. If a plant has a need for a continuous inflow of water, then why is flooding the soil (like in a pot with no drain hole) problematic for the plant?

10. What makes a plain wilt?

11. Relate the movement of water via transpiration to osmosis, the diffusion of water from areas of higher concentration to areas of lower concentration.