

CONCEPT: PROPERTIES OF WATER: COHESION & ADHESION

- **Cohesion**: ability for water molecules to 'stick' _____.
- **Adhesion**: ability for water molecules to 'stick' to _____ molecules that are _____ water.
- **Surface** _____: measure of difficulty in *breaking* the surface of a liquid with force.

Cohesion & Adhesion of Water	Surface Tension of Water
Water adheres to _____ or charged _____ objects.	

EXAMPLE: Cohesion, surface tension and adhesion are properties of water molecules that _____.

- a) Increases with temperature.
- b) Increases with pH.
- c) Are a result of non-polar covalent bonding.
- d) Are a result of hydrogen bonding.

PRACTICE: Which of the following effects can occur because of the high surface tension of water?

- a) Lakes cannot freeze solid in winter even with extremely low temperatures.
- b) A spider can walk across the surface of a small pond.
- c) Organisms can resist temperature changes, although they give off heat due to chemical reactions.
- d) Sweat can evaporate from the skin, helping to keep people from overheating.

PRACTICE: Cohesive forces in liquid water occur when:

- a) The H atoms on molecules of H₂O hydrogen bond to O atoms on adjacent molecules of H₂O.
- b) The H atoms on molecules of H₂O hydrogen bond to other H atoms on adjacent molecules of H₂O.
- c) The atoms on molecules of H₂O hydrogen bond to other O atoms on adjacent molecules of H₂O.
- d) None of the above are correct.