

Name \_\_\_\_\_ Block \_\_\_\_\_ Date \_\_\_\_\_

### Water Properties – BIO.2a

Use the terms below to identify each of the following definitions. Each term will be used only once.

Adhesion	Buoyancy	Capillary Action	Cohesion	Heat Capacity	Hydrogen Bonding	Low Density of Solid	Polarity	Surface Tension	Universal Solvent
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- \_\_\_\_\_ - Due to both cohesion and adhesion of water molecules, water can “climb” up thin tubes
- \_\_\_\_\_ - Due mainly to cohesion, water can allow objects and organisms to “rest” on water’s surface
- \_\_\_\_\_ - Ice floats in liquid water
- \_\_\_\_\_ - Individual water molecules have unequal distribution of electrons, leading to positively-charged and negatively-charged ends
- \_\_\_\_\_ - Many objects and organisms can move easily in water because they float
- \_\_\_\_\_ - The polarity of water molecules leads to weak chemical bonds forming between the negatively-charged and positively charged poles of neighboring molecules
- \_\_\_\_\_ - Water can absorb or lose large amounts of heat energy without changing temperature much
- \_\_\_\_\_ - Water molecules are attracted to other water molecules
- \_\_\_\_\_ - Water “sticks” or is attracted to many other substances
- \_\_\_\_\_ - Water will dissolve many substances into a solution

Complete the following sentences by circling the correct term inside each parentheses.

1. When water evaporates, it (absorbs, releases) heat, so when humans perspire, the sweat evaporates and will (cool, heat) the skin.
2. When water freezes, it (expands, shrinks) and can actually crack stone and concrete. This causes weathering and problems such as potholes.
3. Cells are made mostly of (carbohydrates, lipids, nucleic acids, proteins, water).

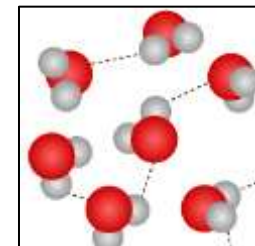
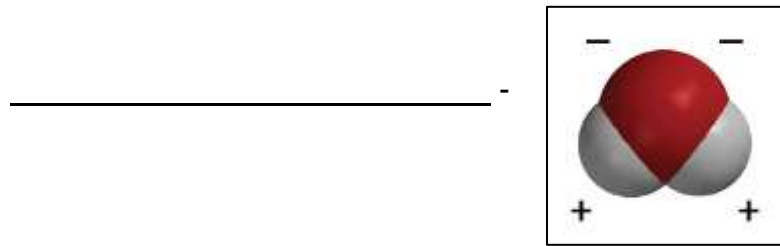
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Complete the following sentences by circling the correct term inside each parentheses.

4. When making aqueous solutions, water acts as a (solute, solvent), while substances such as sugar or salt act as (solutes, solvents).
5. Water (freezes, evaporates) at 0°C and becomes ice; it (freezes, evaporates) at 100°C and becomes water vapor.

Use the terms below to identify each of the following examples. Each term will be used only once.

Adhesion	Buoyancy	Capillary Action	Cohesion	Heat Capacity	Hydrogen Bonding	Low Density of Solid	Polarity	Surface Tension	Universal Solvent
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- \_\_\_\_\_ - Because reactants are in solution, chemical reactions occur easily and quickly inside cells
- \_\_\_\_\_ - On hot summer days, ponds will not heat up too much for aquatic animals and plants; on cold nights, ponds will not become too cold for animals and plants to survive
- \_\_\_\_\_ - Organisms can swim through water using less energy due to their ability to float.
- \_\_\_\_\_ - Plants can transport water from roots to the leaves through the stem due to water's ability to "climb" and overcome gravity in small tubes.
- \_\_\_\_\_ - Water bugs are able to "walk" on water without sinking below the surface.
- \_\_\_\_\_ - Water "sticks" to the sides of thin tube-like cells in the stems of plants
- \_\_\_\_\_ - When water freezes, it floats, insulating the liquid water below it and preventing bodies of water from freezing solid
- \_\_\_\_\_ - Water will form tight droplets, and water molecules will "pull" other neighboring water molecules up the stems of plants