*This data table is to help ensure you’re understanding the properties of water. Look on slide three of your “The Importance of Water” Lesson & read pp. 40-41 of your Biology texts. You can then fill out this data table to see how well you retained the information as well as use it for a review before your Unit 1 test.**I’ve left 6 of the 18 data table cells blank. Filling them in will help you learn the material.*

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| |  |  |  | | --- | --- | --- | | **Property** |  |  | | **Description of Property** | **Why water has this property** |
| Strong cohesion |  | Hydrogen bonds between water molecules cause strong attractive forces that hold the molecules together. |
| Low ice density |  | Water molecules form more hydrogen bonds as water changes from liquid to solid form, and these hydrogen bonds result in a regular packing of molecules with many gaps between molecules. In liquid water, this regular packing is absent and molecules can slide into gaps, making liquid more dense. |
| High heat capacity |  | The heat goes to breaking the large number of hydrogen bonds between water molecules, which allows water to absorb a lot of heat without a rise in temperature. |
| Structural support |  | Water molecules pack tightly in the liquid phase as a result of hydrogen bonding between molecules. |
|  | Water can dissolve a wide variety of substances | Water is a dipole with a positive end and a negative end. These partial charges can easily form attractive interactions with other substances that are charged. |
| Strong adhesion | Water tends to creep up on the sides of a container **or** water can hold two pieces of glass or other material together. |  |