

Properties of Water Continued

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Water has a High Specific Heat

- Specific Heat = amount of heat needed to raise or lower 1 g of a substance 1°C



- H_2O resists temperature change both for heating & cooling
- H_2O can absorb & release heat without changing its own temperature very much (High Specific Heat)
 - Helps stabilize temperatures of large bodies of water

Water has a High Heat of Vaporization

- Heat of Vaporization = Amount of energy to convert 1g of a substance from a liquid to a gas
- In order for water to evaporate, hydrogen bonds must be broken.
- As water evaporates, it removes a lot of heat with it (cooling effect).

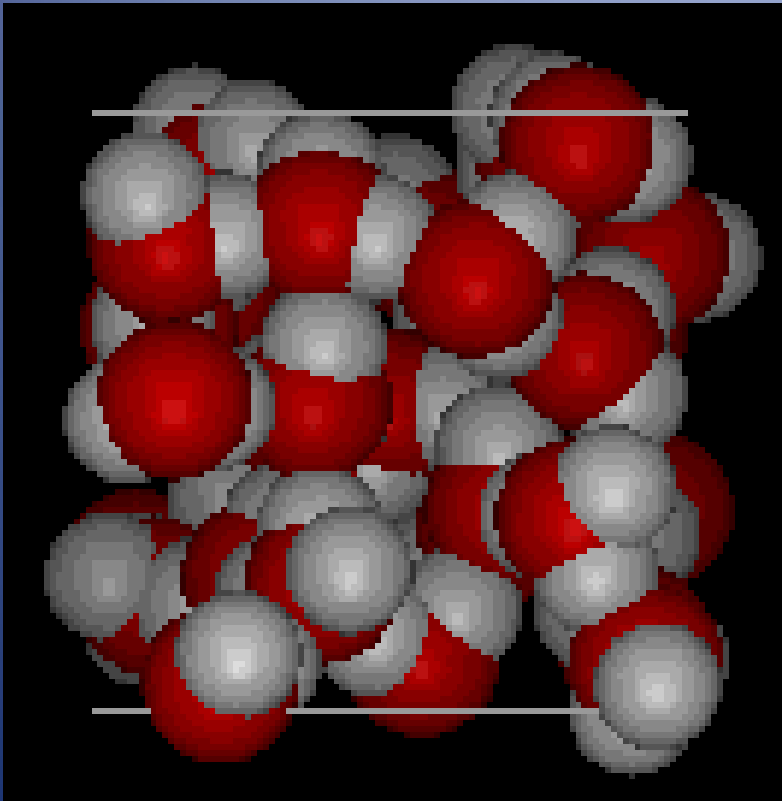
Density of Water

- H_2O is less dense as a solid than liquid
- In ice, a crystalline lattice keeps molecules at a distance
- Liquid H_2O has hydrogen bonds that are always being broken & reformed.
- Ice Floats – preventing oceans & lakes from being frozen solid all year



Water is Less Dense as a Solid

Liquid Water



Ice

