

SBI4U

BIOCHEMISTRY

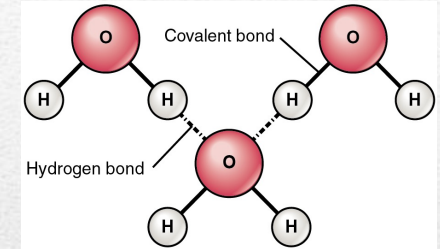
Properties of Water



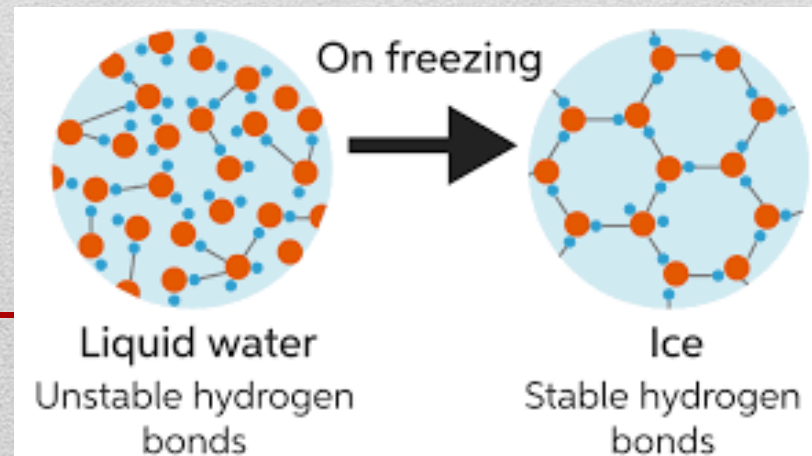
5 Unique Properties of Water

- Due to polarity water exhibits:
 1. Cohesion (sticks to self)
 2. Adhesion (sticks to other things)
 3. High specific heat capacity / high vaporization
 4. Universal solvent
 5. Less dense as a solid
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Unique Properties of Water & How Polarity is Involved



1. Cohesion – **H-bonds**
2. Adhesion – **H-bonds / dipole attractions**
3. High specific heat capacity / high vaporization – **H bonds**
4. Universal solvent - **Polarity**
5. Less dense as a solid – **H bonds & bent shape**



Which property?

1. Water comes out of the tap in a stream **cohesion**
 2. Humans sweat to cool their core body temperature **High heat cap.**
 3. Water boils at 100°C & methane (CH₄) at -161 °C **High heat vap.**
 4. Water “climbs” up pant legs on a rainy day **Adhesion**
 5. Lakes freeze from the top to the bottom **Less dense as solid**
 6. Sugar is a solute in Coke & Pepsi **Universal solvent**
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Show how

1. Water comes of of the tap in a stream
2. Sugar (sucrose) is a solute in Coke

