

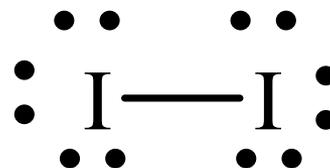
Making Secondary Science Real with Lab Notebooks & Whiteboards

2012 Teachers' Convention
Nashville, TN
August 6, 2012

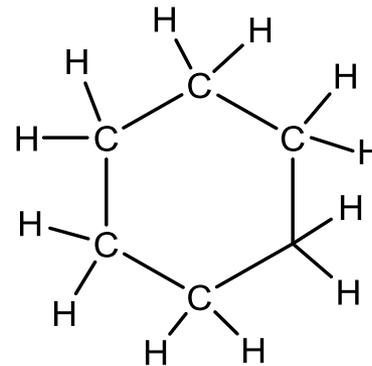
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The Disk Challenge

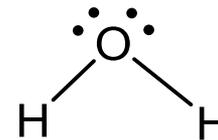
Iodine—polar or
nonpolar?



Cyclohexane—
polar or nonpolar?

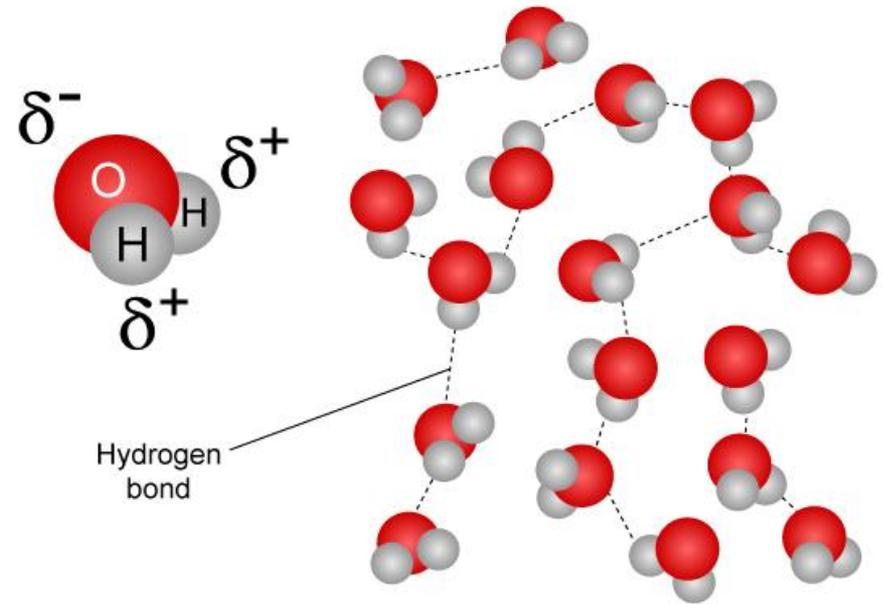


Water—polar or
nonpolar?



Hydrogen Bond

- An attractive force between molecules found when a hydrogen atom is bonded to nitrogen, oxygen, or fluorine

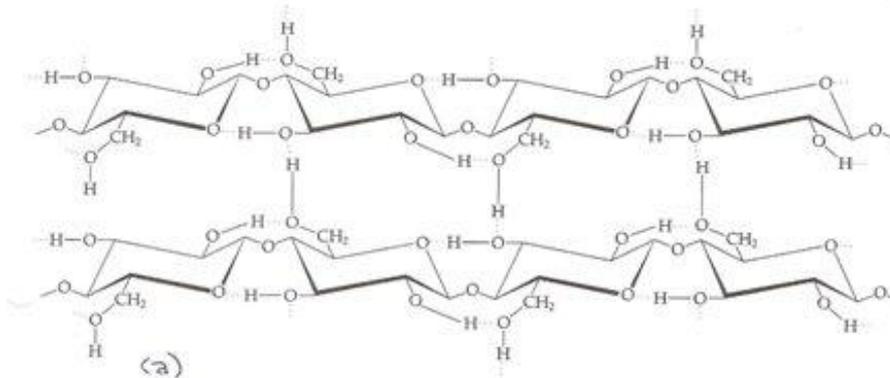


(length appears different for perspective (3D))

Dept. Biol. Penn State ©2002

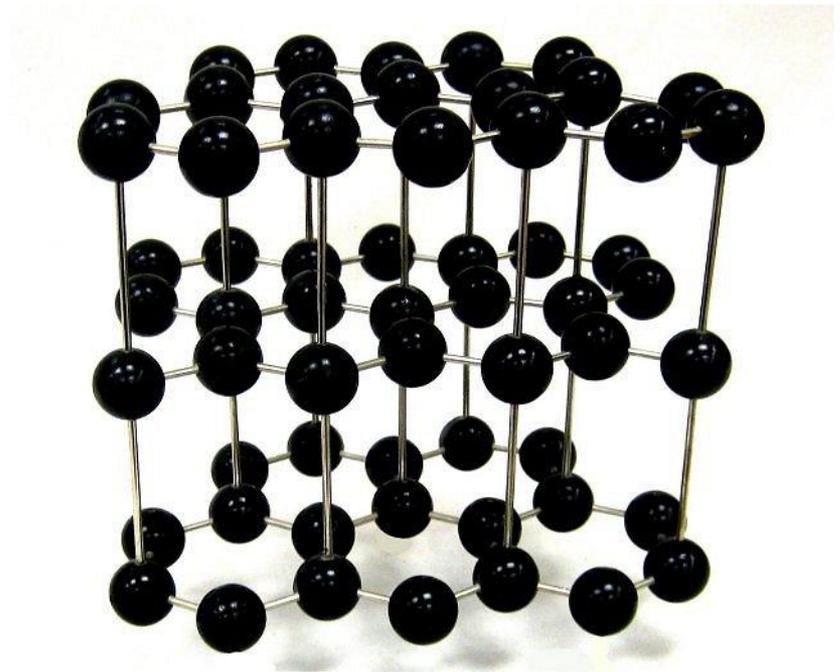
Paper

- Paper is made from plant fiber (usually wood)
- Primary component is cellulose, a polymer containing hundreds of glucose units
- Polar or nonpolar? Can it form hydrogen bonds?



Pencil Lead

- Pencil lead is not lead (Pb), but graphite (C)
- Polar or nonpolar?



Dichloromethane—
polar or nonpolar?

Capable of forming
hydrogen bonds?

