

The FRAME Routine

Key Topic
Properties of Water

is about...

☐ Main idea

Polarity

☐ Main idea

Covalent bonds

☐ Main idea

Hydrogen bonds

Structure (draw & label)

☐ Main idea

Cohesion/Adhesion

☐ Main idea

Ability to Moderate
Temperature

☐ Main idea

Expansion Upon Freezing

☐ Main idea

Versatility as a
Solvent

So What? (What's important to understand about this?)

Properties of Water Review
(Extension)

| Properties | Examples of the property of water supporting life | |
|--------------------------|---|--|
| Polarity | | |
| Hydrogen Bonding | | |
| Expansion upon Freezing | | |
| Cohesive Behavior | Surface Tension allows insects to walk on top of water. | |
| Ability to Moderate Temp | | |
| Versatility of a Solvent | | |

The FRAME Routine

Key Topic Properties of Water

is about...

how it's unique properties support life on Earth.

Main idea

Polarity

Oxygen is slightly Negative ☐ -

Hydrogen is slightly Positive ☐ +

Main idea

Covalent bonds

Sharing of electrons ☐

Occurs within a water molecule ☐

Main idea

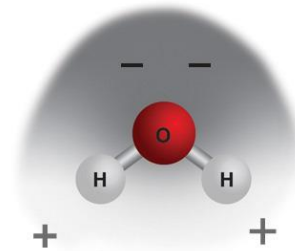
Hydrogen bonds

Opposites attract ☐

Negative Hydrogen is attracted to positive Oxygen ☐

Cause of unique properties ☐

Structure



Main idea

Cohesion/Adhesion

Cohesion=attraction of water to itself ☐

Adhesion=attraction of water to other materials ☐

Capillary Action= C +A (straw) ☐

Surface Tension = C (Penny) ☐

Main idea

Ability to Moderate Temperature

High Specific Heat ☐

Resist Temp Change ☐

Regulates Coastal Temp ☐

Main idea

Expansion Upon Freezing

Structure Change=molecules farther apart ☐

Less Dense ☐

Ice Floats ☐

Main idea

Versatility as a Solvent

Like dissolves like ☐

Polar/Nonpolar ☐

Oil and Water ☐

So What? (What's important to understand about this?)

Life would not exist on this planet without water. Understanding water's polar nature explains how all these properties are possible.