

Properties of Water

Open Response

Objective: Properties of Water

Water is a polar molecule. The hydrogen side is slightly positive while the oxygen is slightly negative in charge.

- A. List three properties of water related to polarity.
- B. Choose one of these three properties and discuss two ways it is important for living things.

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Open Response-Teacher Rubric

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Content Scoring Guide

Part A	2 points	Student correctly lists 3 properties of water related to polarity. Example: adhesion, cohesion, surface tension, capillary action, hydrogen bonding, high boiling point, high specific heat, ice less dense than water, high heat of vaporization, high heat of fusion, good solvent for many materials but not all	
	1 point	Student correctly lists 1 or 2 properties of water related to polarity	
	0 points	Incorrect or no answer	
Part B	2 points	Student restates 1 of the 3 properties of water and correctly discusses 2 ways it is important for living things. Example: Adhesion and/or Cohesion-plants get water through xylem against gravity, Adhesion and/or cohesion allows for capillary action which helps transport materials in living things, good solvent: many materials in living things dissolve in water, floats when frozen (ice is less dense than water)-allows living things to survive in cold climates by insulating the water, high specific heat-stabilizes air temperature and/or keeps large bodies of water from changing temperature rapidly, because it does not dissolve everything (only dissolves polar things)it will not dissolve cell membranes, etc.	
	1 point	Student restates 1 of the 3 properties of water and correctly discusses 1 way it is important for living things	
	0 points	Incorrect or no answer	

(This question was and rubric were modified from <http://mpweb1.jefferson.k12.ar.us/OpenResponseBank>)