

Name _____

Water's Warm Embrace: Understanding Heat Capacity

Multiple Choice Questions

1. What is heat capacity?
 - a) The ability to produce heat
 - b) The ability to resist temperature changes
 - c) The ability to transfer heat
 - d) The ability to generate electricity

2. Why is heat capacity important for maintaining stable conditions on Earth?
 - a) It allows for rapid temperature changes.
 - b) It prevents the Sun from heating the planet.
 - c) It moderates climate and prevents extreme temperature fluctuations.
 - d) It causes scorching hot days and freezing cold nights.

3. What is the specific heat capacity of water compared to other substances?
 - a) Water has one of the lowest specific heat capacities.
 - b) Water has one of the highest specific heat capacities.
 - c) Water's specific heat capacity is the same as air.
 - d) Water's specific heat capacity depends on its temperature.

4. Why does water have a high heat capacity?
 - a) Due to its lack of polarity
 - b) Because it has weak forces between its molecules
 - c) Because it can't absorb heat energy
 - d) Due to hydrogen bonds between its molecules

5. What practical application does water's high heat capacity have in central heating systems?
 - a) It is used for generating electricity.
 - b) It provides a comfortable indoor environment by distributing heat.
 - c) It prevents the Sun from heating buildings.
 - d) It helps cool engines and machinery.

