

Study Guide 2.2 Properties of Water

KEY CONCEPT: WATER'S UNIQUE PROPERTIES ALLOW LIFE TO EXIST ON EARTH.

VOCABULARY

hydrogen bond	solution	acid
cohesion	solvent	base
adhesion	solute	pH

MAIN IDEA: Life depends on hydrogen bonds in water.

1. What is a polar molecule?

2. Explain why water is a polar molecule.

3. What is a hydrogen bond?

4. Describe where a hydrogen bond can form among water molecules.

Complete the table by writing short descriptions about the properties of water.

Property	Description
High specific heat	5.
Cohesion	6.
Adhesion	7.

MAIN IDEA: Many compounds dissolve in water.

8. What is the difference between a solvent and a solute?

9. What types of substances dissolve easily in water?

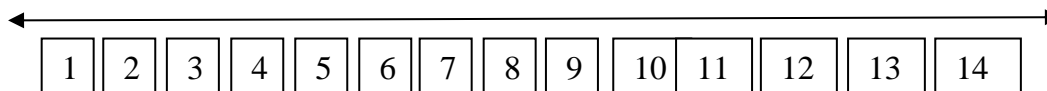
10. What types of substances do not dissolve easily in water?

MAIN IDEA: Some compounds form acids or bases.

11. Take notes about the characteristics of acids and bases in the table below.

Characteristic	Acid	Base
Effect on H ⁺ concentration in a solution		
Effect on pH		

12. In the pH table below, add labels to show which side of the table shows pHs that are more acidic, and which side shows pHs that are more basic. Then add a label to show which pH is neutral.



Vocabulary Check

13. In the space below, sketch a solution using the Visual Vocab in Section 2 as a reference. Label the solution, solvent, and solute. Next to these labels, write brief definitions for the terms.