

Review

Solutions are mixtures that are blended evenly throughout, they can be solids, liquids, or gases. Air is a solution, (an evenly blended mixture), of gases. Air is approximately 78% nitrogen (N₂), 21% oxygen (O₂), with small amounts of carbon dioxide (CO₂) and other gases mixed in it. Club soda is water with carbon dioxide (CO₂) gas mixed in it. A substance is soluble if it will dissolve in another substance. For example, salt will dissolve in water, salt is soluble in water. A substance that will not dissolve in another is insoluble. For example, sugar will not dissolve in oil, sugar is insoluble in oil.

Vocabulary:

Solute - a substance dissolved in another substance

Solvent - a substance in which other substances are dissolved, often a liquid.

Soluble - able to be dissolved in another substance.

Insoluble - incapable of being dissolved in a liquid

water insoluble solute solvent soluble

insoluble CO₂ solute insoluble insoluble

1. The _____ in a salt water solution is salt.
2. A substance is said to be _____ if it is able to dissolve.
3. In a solution of club soda, _____ is the solvent.
4. Concrete is _____ in water.
5. The part of a solution in which the solute dissolves is the _____.
6. Sugar is _____ in oil.
7. The part of a solution that dissolves is called the _____.
8. When a substance does not dissolve in another substance, it is said to be _____.
9. In a club soda solution, _____ is the solute.
10. Sand is _____ in water.

Skill Challenge

Skills: identifying, synthesizing

Identify the solute and solvent in each of the following solutions.

Solution	Solute	Solvent
1. Sea water		
2. Coffee		
3. Club soda		
4. Air		
5. Hot chocolate		