Topic: Understanding Solutions Better

Date:

Subtopic: Solute, Solvent and Solution / Soluble and Insoluble Substances / Methods of Separation

L2 ANSWER KEY

Science | Grade 4

10 min

1. Fill in the blanks.
   a. Sugar + Water → **Sugar Solution**
   b. Solutes like sand, wood, chalk powder and different types of oil are **insoluble** in water.
   c. Ghee is an example of **immiscible** liquids.
   d. This process of insoluble impurities settling down is called **sedimentation**.
   e. The **filter paper** allows the liquid to pass through, but not the impurities.
2. Give two examples of each of the following.
   a. Liquids that dissolve in water.

      Milk **Juice**

   b. Solids that dissolve in water.

      Salt **Sugar**

   c. Liquids other than water that dissolves substances in it.

      Milk **Honey**

      (Answer may vary)
3. Define the following.
   a. Soluble substance

      A substance that forms a solution by dissolving completely in a liquid is called a soluble substance.

b. Immiscible liquids

Some liquids do not dissolve completely in each other when mixed. These are called immiscible liquids.

c. Evaporation

Soluble substances can be separated from a solution through the process of evaporation.

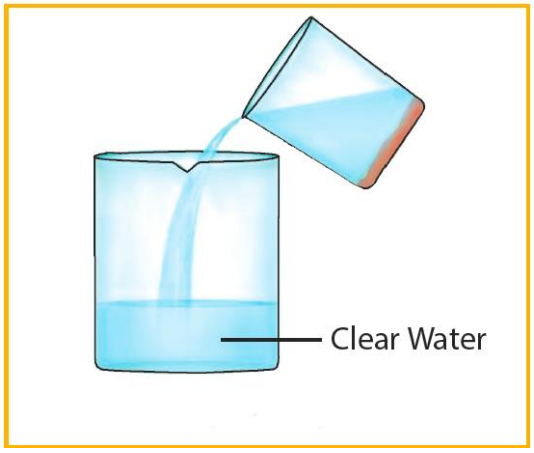
4. Answer the following.

a. Why water is called a universal solvent?

Water is referred to as a 'universal solvent' as a large number of substances dissolve in it.

b. Describe the process of decantation.

After sedimentation, the process by which the liquid is separated is called decantation. Here, the liquid is poured into another container without disturbing the settled impurities at the bottom of the first container.



c. State an example of filtration from your daily life.

A simple example of filtration is seen at home when tea is strained through a strainer.

The tea leaves (the solid impurity) are left behind on the strainer as the tea (the clear or filtered liquid) is strained.

d. Which method of separation is useful in separating salt from seawater?

Evaporation is the method that is used to separate salt from seawater. The seawater is kept in shallow pits and left in the sun. The water evaporates due to the heat rays of the sun and salt is left behind.

e. Can a clear solution be coloured? If yes, give an example.

Yes, a clear solution can be coloured. Example- Rooh-afza solution in water.

(Answer may vary)

f. How is solvent different from solution?

The substance in which the solute dissolves is called a solvent whereas a solution is a mixture of one substance dissolved in another.