



Game interface with an orange border. At the top left are two buttons: "Edit" and "Start". To their right is a red progress bar with the number "100" at the end. Further right is a circular icon containing a question mark. Below the buttons is a large orange box containing the text: "Press Start to begin." and "Press Edit to customize." To the right of this box is a 4x5 grid of empty white cells. At the bottom left is a purple box containing the text: "Time bonus 100", "Score 0", and "Top score 0".

Definitions

Today we will add four new definitions to our list:

Soluble When a solute is able to dissolve in a solvent.

Insoluble When a substance is not able to dissolve in another, specific, substance.

Why do I not define insoluble as:

"When a *solute* is not able to dissolve in another, specific, *solvent*."

Mechanical mixtures do not have a solute or a solvent, as there is no substance dissolving into another substance.

Dilute To weaken the strength of a solution by increasing the amount of solvent.

Saturated The point at which no more solute can be dissolved in a solvent.

The interface features a central area with two targets: a purple spiral target labeled 'True' and a dark green spiral target labeled 'False'. At the top, there are 'Edit' and 'Reset' buttons, and a question mark icon in the top right corner. At the bottom, there are eight buttons with partial text: 'Sugar is s ...', 'To dilute ...', 'If I dilut ...', 'Salt is in ...', 'Pepper is ...', 'Adding ice ...', 'If somethi ...', and 'Flour is i ...'.

Edit

Start

100

?

Press Start to begin.

Press Edit to customize.

Time bonus 100

Score 0

Top score 0

Saturation

Next period we will be performing an experiment. We will use the remaining time today to discuss that experiment, in order to optimize the time we have next period.

The purpose of the experiment is to look at saturation point, specifically, the saturation point of sugar in water.

Today we will read through the experiment sheet in its entirety. I will also take the time to show you how to use the required equipment. If you do not understand a specific step, be sure to clarify today, so that you are prepared next period.

SATURATION

Purpose
The purpose of this experiment is to determine the maximum grams of sugar that can be dissolved in 100 mL of water.

Equipment:
 100 mL beaker
 100 mL graduated cylinder
 100 mL water
 100 g sugar
 Stirring rod
 Spoon
 Weighing scale

Hypothesis:
I think that 100 mL of water will dissolve _____ g of sugar. 100 mL of water will dissolve _____ g of sugar.

Procedure:
1. Pour 100 mL of water into one of the clean beakers.
2. Weigh 100 g of sugar. (100 g of sugar will be dissolved in 100 mL of water.)
3. Slowly add the sugar to the water, stirring with the stirring rod.
4. Continue to add sugar until no more sugar can be dissolved in the water.
5. Record the amount of sugar that was dissolved in the water.
6. Repeat the experiment with 100 mL of water and record the amount of sugar that was dissolved.

Data:
Quantity of water used _____ mL
Mass of sugar and water after experiment _____ g
Mass of sugar and water before experiment _____ g
Amount of sugar dissolved _____ g

CONCLUSION

Conclusion:
1. How much sugar is the maximum amount of sugar that can be dissolved in 100 mL of water?
2. How much sugar is the maximum amount of sugar that can be dissolved in 100 mL of water?
3. How much sugar is the maximum amount of sugar that can be dissolved in 100 mL of water?
4. How much sugar is the maximum amount of sugar that can be dissolved in 100 mL of water?
5. How much sugar is the maximum amount of sugar that can be dissolved in 100 mL of water?
6. How much sugar is the maximum amount of sugar that can be dissolved in 100 mL of water?

Attachments

3-18 Saturation Worksheet.pdf