

1. Short answer questions:

i. What is the mass of the solution when 20 g of salt is dissolved in a 100 g of water?

ii. Define a solution and give two examples.

iii. When salt is dissolved in water, which is the solute and which is the solvent?

iv. Give another name for a weak solution.

v. Define a saturated solution.

vi. What is the most plentiful liquid solution on Earth?

vii. Name one common solvent other than water.

viii. What is meant by the solubility of a substance?

2. Long answer questions:

i. A soft drink is described as a solution. Why?

ii. How could you make a concentrated solution weaker?

iii. What effect does warming have on saturated solution?

iv. What is the effect of temperature on the amount of gas that will dissolve in a liquid?

v. If you were given a solution in a test tube, how would you use one or two crystals of the solute to find out whether the solution was unsaturated, saturated, or supersaturated?

vi. What effect does temperature have on the solubility of the substance?

vii. Write uses of solutions.

viii. What is the difference between a solution and suspension? Give three examples of each.

Solution	Suspension

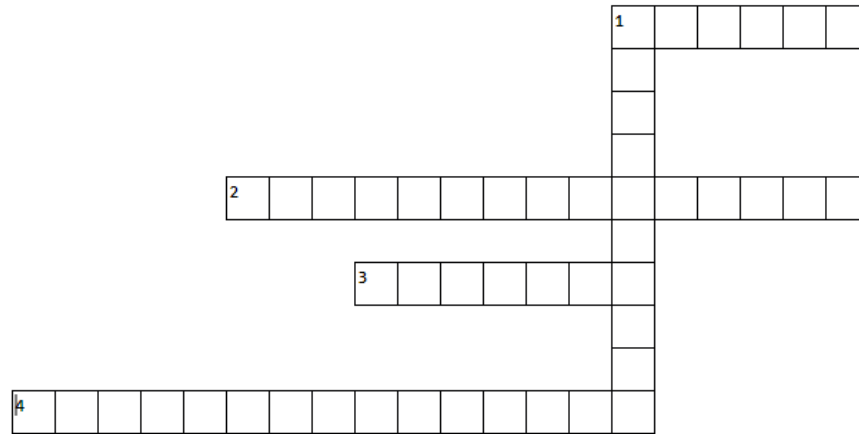
3. Tick the right option.

1. A solution is made by:			
I. Filtration	II. Evaporating	III. Heating it until it melts	IV. Adding a solute to a solvent
2. What type of solution has small amount of solute?			
I. Saturated	II. Dilute	III. Concentrated	IV. supersaturated
3. Which one of the following substances is insoluble in water?			
I. Table salt	II. Oil	III. Sugar	IV. Washing soda
4. The solubility of a solid in a liquid is the amount of solid which can be dissolved in			
I. 100 of liquid	II. 75 g of liquid	III. 50 g of liquid	IV. 25 g of liquid
5. Which of the following is an example of suspension			
I. Salt water	II. Muddy water	III. Sugar	IV. Air

4. Fill ups

- i. Aziz added sugar to his tea until no more would dissolve he made a _____ solution
- ii. Sugar will dissolve in water because it is _____.
- iii. Flour will not dissolve in water because it is _____.
- iv. To produce sugar from a sugar solution you need to allow the water to _____.
- v. The solubility increases with increasing _____.

4. Cross



Across	Down
1. The substance being dissolved in a solution	5. The maximum amount of solute that can dissolve in a solvent at a specific temperature
2. A solution that contains more solute than it would normally dissolve at a specific temperature	
3. A liquid that dissolves a solute to form a solution	
4. The process of turning a solution into a solid by removing the solvent	

6. Jumbled Words

Jumbled words	Arranged words
Sionpensus	
rationpoeva	
Genousmoho	
Genoushetero	
Tilfration	

7. Words Search

Find the following word in the words search.

Solubility	Precipitate	Dilute	Dissolve	Mixture
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S	C	P	T	S	A	L	T	C
D	Y	R	G	E	M	E	V	A
I	T	E	H	A	I	B	E	R
S	O	C	U	R	X	E	N	R
S	P	P	K	H	T	A	T	D
O	M	I	X	T	U	R	E	I
L	A	T	V	E	U	I	I	A
V	S	A	I	N	R	L	C	C
E	M	T	T	U	E	M	L	T
G	U	E	D	I	L	U	T	E

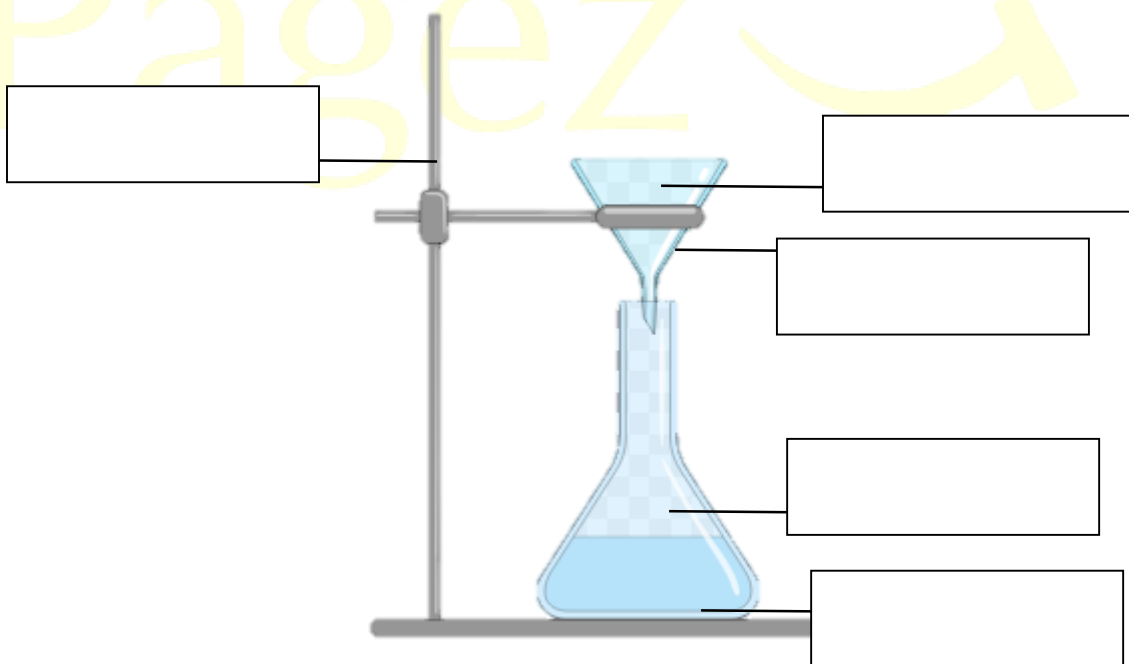
8. Write “T” for the true and “F” for the false statement.

- i. A solution is a homogeneous mixture of two or more substances with variable composition.
- ii. Saturation refers to the maximum amount of solute that can dissolve in a solvent at a specific temperature.
- iii. Filtration is a technique used to separate components of a solution based on their particle size.
- iv. A supersaturated solution contains less solute than it would normally dissolve at a specific temperature.
- v. Adding more solvent to a solution decreases its concentration.

9. Columns

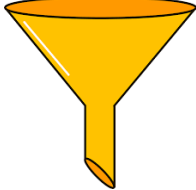
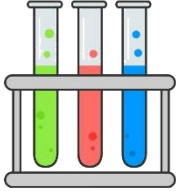
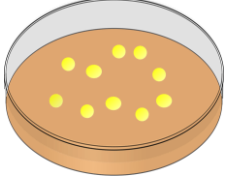


A	B
Filtration	Mixture with uniform composition
Solubility	Solid that forms when a solution becomes too concentrated
Homogenous	Separation technique based on particle size
Heterogeneous	The ability of a substance to dissolve in a solvent
Precipitate	Mixture with uneven distribution of components

11. Label the diagram.



10. Drag and Drop

Look at the pictures and write their names in the relevant column.

				
Funnel	Test tube	Petri dish	Burette	Bunsen Burner

Apparatus	Function

11. Comprehension

Answer the following questions after reading the paragraph and observe the picture carefully.



Solutions are homogeneous mixtures formed when a solute dissolves in a solvent, creating a uniform blend at the molecular level. The solute, often a solid, breaks down into tiny particles and spreads evenly throughout the solvent. Saturation is reached when the solvent can no longer dissolve more solute, resulting in a stable mixture. Dilution, on the other hand, involves adding more solvent to decrease the concentration of the solution. Scientists use various techniques like filtration to separate solid particles, evaporation to concentrate solutions by removing the solvent, and crystallization to form solid crystals. The behavior of solutions is influenced by factors such as temperature, pressure, and the nature of the solute and solvent.

I. **What are solutions?**

I. **Which techniques are used by scientists?**

II. **What are the factors by which behavior of a solution is influenced?**
