

Worksheet

Experiments with Water

Very short answer questions

I. Choose the correct answer to fill in the blanks.

stirring, soap cake, march, sank, dissolve, floating, Dandi, sea water, British, salt, soap case.

- a) Ayesha saw that at first puri _____ to the bottom of the pan; as puffed up, it started _____ on the oil.
- b) The _____ sinks in water while the _____ floats.
- c) When Ayesha put salt in the boiling water; eggs started _____.
- d) On _____ sugar gets quickly dissolved in water.
- e) Oil does not _____ in water.
- f) The _____ made a law that people could not make _____ even for use at home.
- g) Gandhiji undertook a _____ from Ahmedabad to _____ in Gujarat.
- h) The _____ can be used to make salt.

Ans.

- a) Sank, floating
- b) Soap, soap case
- c) Floating
- d) Stirring
- e) Dissolve
- f) British, salt
- g) March, Dandi
- h) Sea water

II. Write 'True' for the correct statement and 'False' for the wrong statement.

- a) A puffed up puri will float in water. []
- b) A steel plate sinks in water. []

- c) A plastic bottle cap floats in water. []
- d) Dead Sea has the saltiest water of all seas. []
- e) Oil can easily mix with water. []
- f) Sugar and salt does not dissolve in water. []
- g) Salt is made from sea water. []
- h) Sugar and salt do not dissolve in hot water. []

Ans.

- a) True
- b) True
- c) True
- d) True
- e) False
- f) False
- g) True
- h) False

III. Tick (✓) the correct answer.

a) When sugar dissolved in water, why is it not visible?

- i) The sugar has evaporated.
- ii) Water makes sugar particles invisible.
- iii) Sugar particles have filled empty spaces between water particles.
- iv) Water particles have filled empty spaces between sugar particles.

b) Which of the following do not dissolve in water?

- i) Sugar ()
- ii) Salt ()
- iii) Colour powder ()
- iv) Mud ()

Ans.

- a) When sugar dissolved in water, why is it not visible?
- iii) Sugar particles have filled empty spaces between water particles.

b) Which of the following do not dissolve in water?

iv) Mud

c) Which of the following dissolves in water?

ii) Jaggery

d) Which of the following floats on water?

ii) A sharpener

e) Which of the following sinks in water?

iv) A nail

1 Mark questions. (Short answer questions)

I. How would you separate

a) salt from water?

b) chalk powder from water?

c) mud from water?

II. Name two factors that help sugar to dissolve in water.

III. Does oil dissolve in water? Why?

Ans.

I. How would you separate

1. boil or evaporate the water

2. evaporation and condensation methods.

3. Decantation, filtration

II. Name two factors that help sugar to dissolve in water.

Stirring and boiling

III. Does oil dissolve in water? Why?

No because it has more density than water.

2 Mark questions. (Long answer questions)

I. Give reasons.

a) Puris float on the oil while frying.

- b) A soap case floats in a bucket of water while a cake of soap sinks.
- c) A nail made of iron sinks in water. A ship made of iron floats on water.

II. Answer the following questions.

- a) What happens on adding salt to the water in which eggs are boiled? Why?
- b) Which of the two will dry faster? a handkerchief kept in the sun (or) a handkerchief kept in the shade. Why?
- c) Why do clothes dry faster on a sunny day than on a cloudy day?
- d) Look at the picture and write how salt can be obtained from sea water.



- e) Mahatma Gandhi was picking up salt in the picture. In which march (or) movement he did it? Why did he undertake this march?



- f) In the given picture a person is floating on water in a lake. What is that lake called? How he can float on water? (or) Why do a person who cannot swim, will not drown in Dead sea?



III. Ayesha put two drops each of groundnut oil, sugar solution and water on a stainless steel plate. She tilted the plate and found that some of the drops slid down quickly while some lagged behind. Now answer the following questions.

i) Which drops slid down faster?

ii) Which are slowest? Why?



IV. Encircle the things that dissolve in water.

Sugar, Lemon juice, Oil, Fruit juice, Pepsi, Salt, Chalk powder, Mud, Ghee, Mishri (sugar lumps), Milk.

V. Group the following objects.

A marble, An eraser, Wood, A pencil, A key, A coin, Cork, Lid of a bottle

| Objects that float | Objects that sink |
|--------------------|-------------------|
| | |
| | |
| | |
| | |

Ans.

1. Puris float on oil as the hot oil makes the puri to rise up and gets filled up with air. The air being lighter than the oil makes the puris to float on oil.

2. As the soap dish is made up of plastic with a density less than water and less is light it floats while the soap cake being denser than the water sinks.

3. The density of nails (as of iron) is much larger than the water. So it sinks easily.

II. Answer the following questions.

1. Because the density of the egg is higher than the density of tap water, so it sinks. But, if you add enough salt to the water, the egg will actually float back up to the surface! Adding salt to the water increases the density of the solution because the salt increases the mass without changing the volume very much.

2. Handkerchief dried in the sun will dry faster as it receives the rays of the sun (heat) which the handkerchief under the shade will not.

3. Clothes dry on a sunny day because the sun evaporates water present inside clothes. On cold day this process is slower because the molecules move slower and find it more difficult to escape from the liquid. On a sunny day, the air is less saturated than a cloudy day, so the clothes dry faster on a hot day than a cool day.

4. Common salt is obtained from sea-water by the process of evaporation. Sea water is trapped in large, shallow pools and allowed to stand there. The sun's heat evaporates the water slowly and common salt is left behind.

5. The British had imposed a tax on salt, the common man's essential item. Dandi march was organized to institute a protest staged so as to force the British Government to withdraw the salt tax.

6. The extremely high concentration of dissolved mineral salts in the water causes the water to be denser than that of plain fresh water. Since our body weight is lighter (less dense) than the density of the water, our body is more buoyant in the Dead Sea, making it easy to float.

III. Ayesha put two drops each of groundnut oil, sugar solution and water on a stainless-steel plate. She tilted the plate and found that some of the drops slid down quickly while some lagged behind. Now answer the following questions.

1. The water drop went ahead. It happens because water does not stick to the tiffin box but the sugar and oil drop sticks.

2.

IV. Encircle the things that dissolve in water.

Sugar, Lemon juice, Fruit juice, Pepsi, Salt, Mishri (sugar lumps), Milk.

V. Group the following objects.

Objects that float: Wood, A Cork, A Pencil, Lid of the bottle

Objects that sink: A Marble, A key, A coin, an Eraser