

Soluble or Insoluble?

Some solids dissolve in water and some do not. Let's find out which is which!



1 Draw a line to match each science word to what it means.

4 marks

- | | | |
|--------------------|---|---|
| dissolve | • | • you can see through it |
| soluble | • | • it can dissolve in water |
| insoluble | • | • a solid spreads through a liquid and seems to disappear |
| transparent | • | • it cannot dissolve in water |

2 Draw a ring around the **two** solids that dissolve in water.

2 marks

sugar

sand

salt

pebbles

rice

chalk

3 Tick (✓) **true** or **false** for each sentence.

4 marks

	true	false
When sugar dissolves, it is still in the water.	☐	☐
Sand dissolves in water.	☐	☐
You can see the salt grains after salt dissolves.	☐	☐
Sugar water can be transparent.	☐	☐

4 Fill in the gaps. Use the words in the box.

2 marks

soluble · insoluble

Sugar is _____ in water.

Sand is _____ in water.

5

Sort these solids into the table.

3 marks

sugar · salt · sand · rice · pebbles · chalk

Soluble	Insoluble

6

Amina stirs a spoon of salt into a glass of water. After one minute she cannot see the salt. Where has the salt gone?

2 marks

7

Marcus says, "The sugar has disappeared, so it is not there any more." Do you agree? Explain how you could show that the sugar is still there.

2 marks

8

Kofi wants the sugar in his tea to dissolve quickly. Write **one** thing he could do.

1 mark

9

Draw a ring around the word that makes the sentence true.

1 mark

When salt dissolves in water, the water looks

cloudy

clear

10

Nia stirs a spoon of sand into a glass of water. Then she waits for 5 minutes. Draw what the glass looks like now.

2 marks



11

Is chalk soluble or insoluble? Describe how you could test it.

2 marks

12

Write a question you could investigate about dissolving.

1 mark

13

Zawadi has a mixture of sand and salt. How could she use water to get the sand and the salt apart? Write the steps.

3 marks

Did you know?

The sea is salty because rain slowly dissolves tiny bits of salt from rocks. Rivers carry the salt all the way to the sea.

How did I do?

Easy



Okay



Tricky

/ 29

Soluble or Insoluble? Answers

Answers and marks for every question.

- 1 dissolve → a solid spreads through a liquid and seems to disappear; soluble → it can dissolve in water; insoluble → it cannot dissolve in water; transparent → you can see through it 4
- 2 sugar and salt 2
- 3 true, false, false, true 4
- 4 Sugar is soluble. Sand is insoluble. 2
- 5 Soluble: sugar, salt. Insoluble: sand, rice, pebbles, chalk. (3 marks: all six right; 2 marks: four or five; 1 mark: two or three) 3
- 6 It has dissolved (1). It is still in the water, in pieces too small to see (1). 2
- 7 No, the sugar is still in the water (1). Leave the sugar water in a warm, sunny place: when the water dries up, the sugar is left behind (or: it still tastes sweet, but only taste with an adult in a clean kitchen) (1). 2
- 8 Stir it; or use hot tea; or use smaller grains of sugar instead of a cube. Any one. 1
- 9 clear 1
- 10 The sand has sunk to the bottom (1) and the water above it is clear or nearly clear (1). 2
- 11 Insoluble (1). Crush a little chalk, stir it into water and look: the chalk does not disappear; it sinks or makes the water cloudy (1). 2
- 12 Any testable question, e.g. Does sugar dissolve faster in warm water than in cold water? Which liquids will salt dissolve in? 1
- 13 Add water and stir: the salt dissolves but the sand does not (1). Pour the mixture through a filter (paper or a clean cloth): the sand stays in the filter (1). Leave the salty water in a warm place: the water dries up and the salt is left (1). 3