

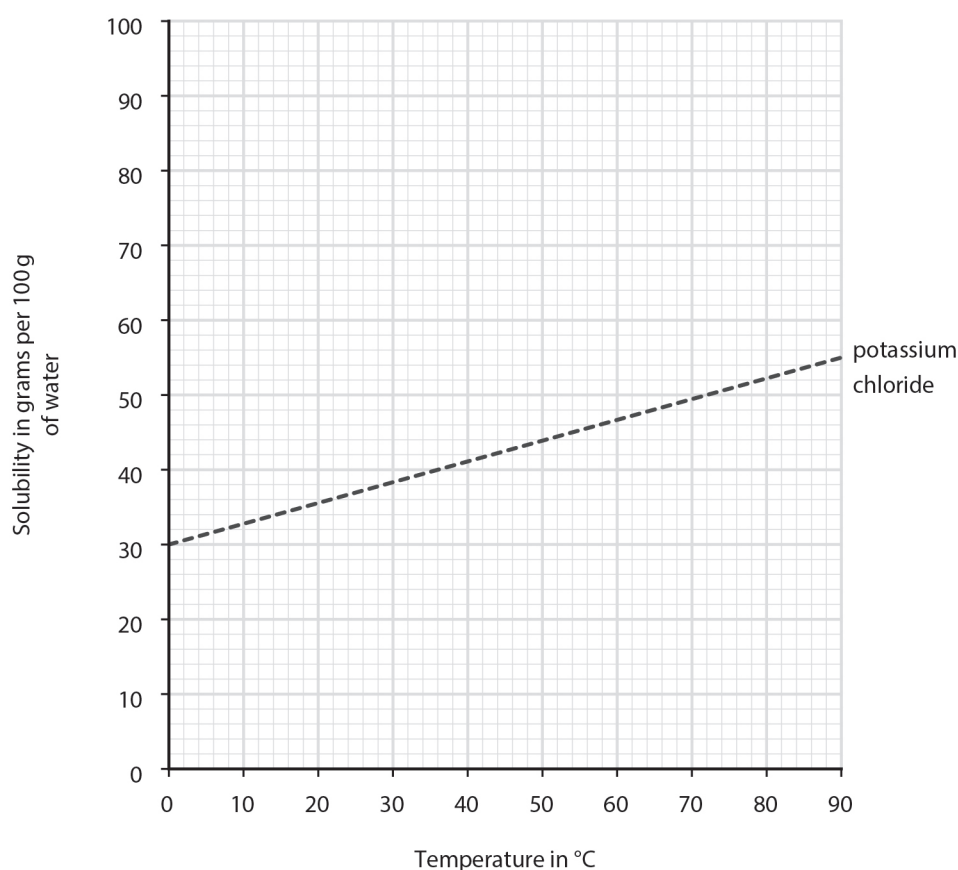
Name _____ Date _____

Worksheet 2.3(i) C

Solubility

The solubility of most solutes increases when the temperature increases. A useful way of showing the different values of the solubility at different temperatures is to plot a graph.

This graph shows the solubility of potassium chloride.



- 1 Plot the data for lead nitrate on the graph on the previous page, so that you can compare the solubility. Join the points in an appropriate way.

Temperature of water in °C	Solubility of lead nitrate in g per 100 g water
10	45
20	54
30	62
40	72
50	82
60	91
70	100

- 2 Plot the data for copper sulfate on the graph on the previous page, so that you can compare the solubilities of the three solutes. Join the points in an appropriate way.

Temperature of water in °C	Solubility of copper sulfate in g per 100 g water
10	18
20	21
30	25
40	30
60	41
70	47
80	55

- 3 What is the solubility of lead nitrate at 40 °C? _____
- 4 What is the solubility of potassium chloride at 20 °C? _____
- 5 Which of the three solutes is the least soluble at 50 °C? _____

- 6 Which of the three solutes is the least soluble at 80 °C? _____
- 7 What is the solubility of both potassium chloride and copper sulfate at 75 °C?
- _____
- 8 Explain why it is important to give the temperature when you give the solubility of one of the solutes.
- _____
- _____
- 9 Explain why the solubility is given in grams per 100 g of water.
- _____
- _____
- 10 Explain how you would find the solubility of a solute.

Name _____ Date _____

Worksheet 2.3(ii)

The results of an investigation

Marcus and Sofia have collected data from an investigation into the solubility of lead nitrate. They measured how much lead nitrate would dissolve in 100 g water at different temperatures. Here are their results.

Temperature	lead nitrate used
20	52
40	72
50	82
30	64
60	84
70	100

1 Display these results neatly and correctly.

2 What pattern is there in these results?

3 What would you advise Sophia and Marcus to do to improve their results?

Name _____ Date _____

Worksheet 2.4C

Vocabulary

Match the words to their meanings.

Cut out the words as a block and stick them in your book.

Then cut out the meanings separately and match them to the words.

Only stick them in when you are sure you have matched them correctly.

Note: There are more meanings than words, so take care.

solution
saturated solution
pure
chromatogram
filtration
solubility
solvent
solute
insoluble
paper chromatography

a substance that is made up of one thing
the sand in dirty water
a solution in which no more solute will dissolve
a mixture formed when a solute dissolves in a solvent
a substance that is made of one thing
a substance dissolved in a liquid
a word to describe a substance that will not dissolve
a measure of how soluble a substance is
a liquid in which other substances will dissolve
separated colours as the result of chromatography
a way of separating a solid from a liquid by passing the mixture through a filter paper
a way of separating coloured substances dissolved in a solution using special paper
a measure of how soluble a substance is
a way of separating coloured substances dissolved in a solution using special paper
a substance dissolved in a liquid