Name _____ Date _____

Worksheet: 2.2A

Finding mistakes

Some learners have been heating water and recording the temperatures every minute. They used the same volume of water from the same tap on the same day. Here are their results.

Sofia's results	
Time in minutes	**Temperature in °C**
0	0
1	25
2	32
3	45
4	56
5	63
6	78

Arun's results	
Time in minutes	**Temperature**
0	25
1	36
2	36
3	48
4	59
5	71
6	82

Marcus's results	
Time in minutes	**Temperature in °C**
0	25
1	36
2	47
3	52
4	68
5	79
6	89

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LIVEWORKSHEETS

1 Look carefully at Sofia's results. One of her results does not look quite right. What do you think she has done wrong?

2 Look carefully at Arun's results. He has made two mistakes. What are they?

3 **a** Look carefully at Marcus's results. One of his results does not fit the pattern. Which is it?

b What should Marcus do about this result?

LIVEWORKSHEETS

Name _____ Date _____

Worksheet: 2.2B

Identifying anomalous results

Zara and Arun investigated heating water. The investigations were done on the same day in the same class. They used the same volume of water from the same tap and heated the water for 10 minutes. Here are their results.

Zara's results	
Time in minutes	**Temperature in °C**
0	20
1	25
2	32
3	32
4	48
5	58
6	65
7	70
8	77
9	70
10	86

Arun's results	
Time in minutes	**Temperature in °C**
1	20
2	26
3	35
4	43
5	54
6	65
7	72
8	78
9	85
10	94

LIVEWORKSHEETS

1 Explain which of Zara's readings do not fit the expected pattern. Look carefully at the readings in the table.

2 Suggest what Zara should do about these readings.

3 Arun's results seem to show a pattern, but what mistake has he made?

LIVEWORKSHEETS

Name _____ Date _____

Worksheet: 2.2C

Finding errors in graphs

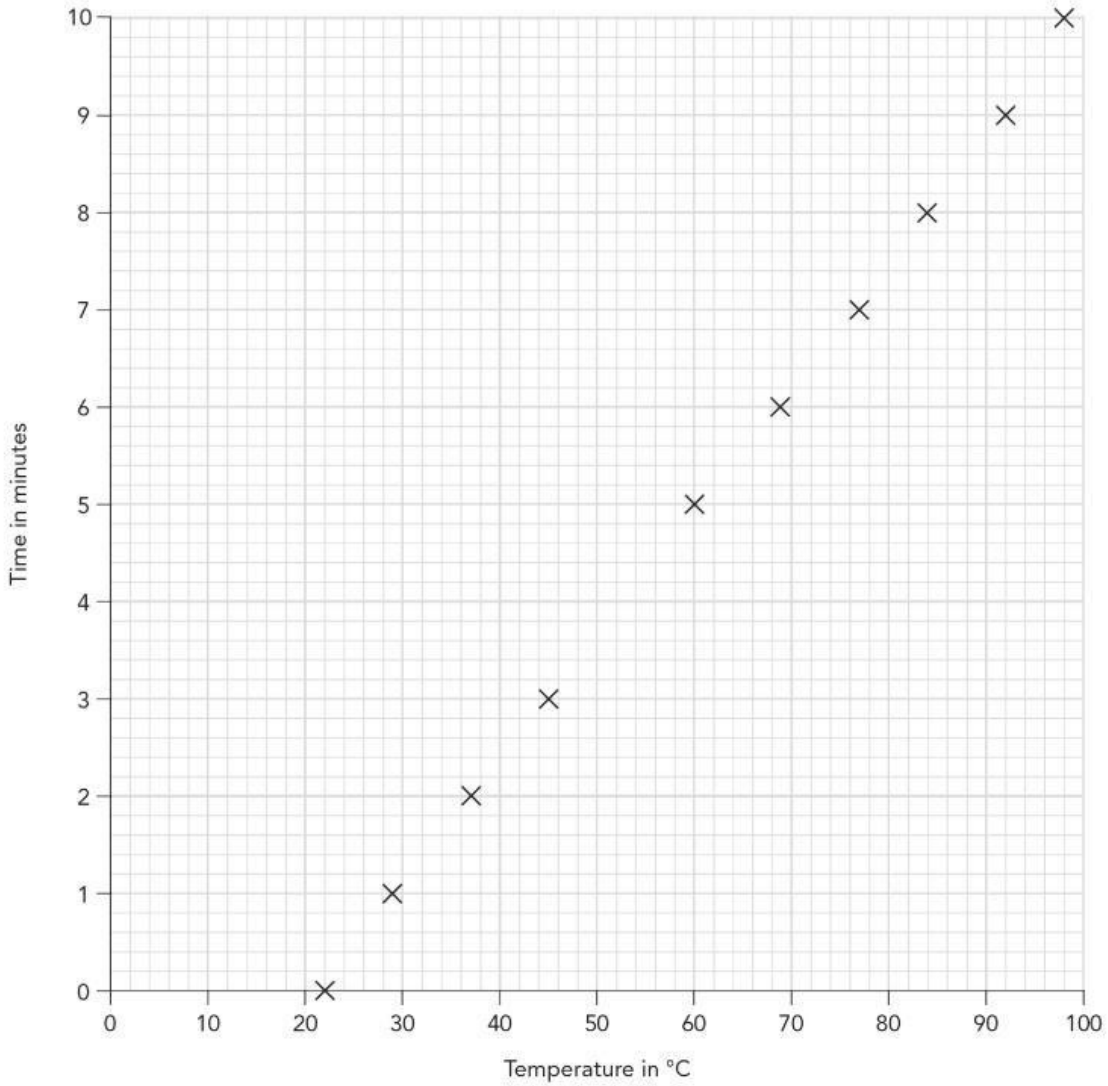
Sofia and Marcus have carried out a water-heating investigation. They did the investigation together, but have plotted their graphs separately.

Here are their results.

Time in minutes	Temperature in °C
0	22
1	29
2	37
3	45
4	52
5	60
6	69
7	77
8	84
9	92
10	98

LIVEWORKSHEETS

Here is Sofia's graph.

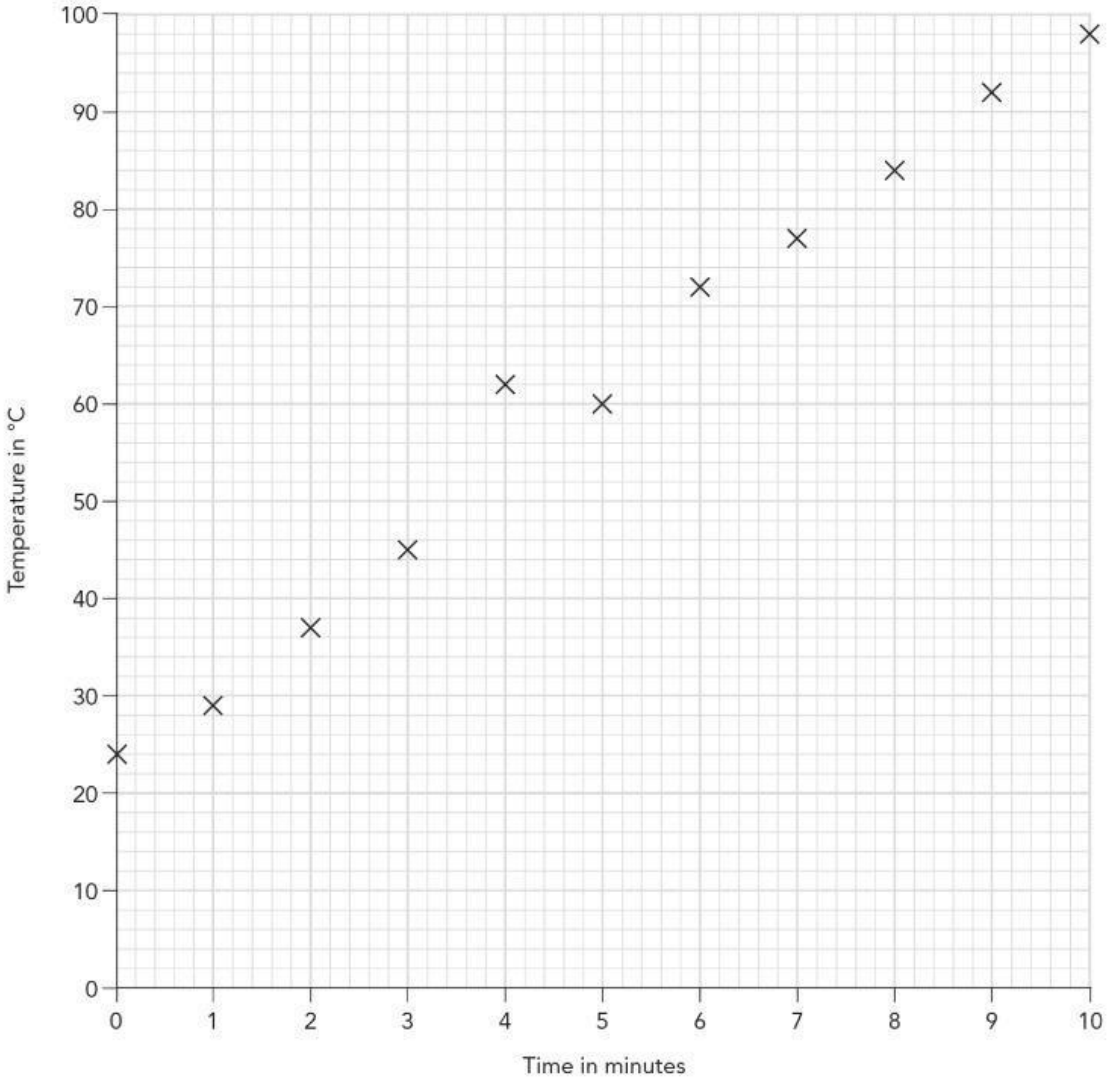


1 What mistakes has Sofia made?

LIVEWORKSHEETS

2 Here is Marcus's graph.

Draw circles round any points on his graph that have been plotted incorrectly.



LIVEWORKSHEETS

Name _____ Date _____

Worksheet: 2.3A

Linking words and meanings

Draw lines to link the words to the explanations.

when a liquid changes to a gas	melting
when a solid changes to a liquid	freezing
when a gas changes to a liquid	evaporation
when a liquid changes to a solid	condensation

LIVEWORKSHEETS

Name _____ Date _____

Worksheet: 2.3B

Making links

1 For each pair of words, write a sentence that links them together.

For example: solid and freeze. If you freeze water it becomes solid ice.

a Liquid and gas.

_____

_____

b Melting and solid.

_____

_____

c Evaporate and gas.

_____

_____

d Heat and vibrations.

_____

_____

e Particles and fixed position.

_____

_____

LIVEWORKSHEETS

2 Explain the meanings of the following terms:

a condense

b change of state

c properties

d vacuum

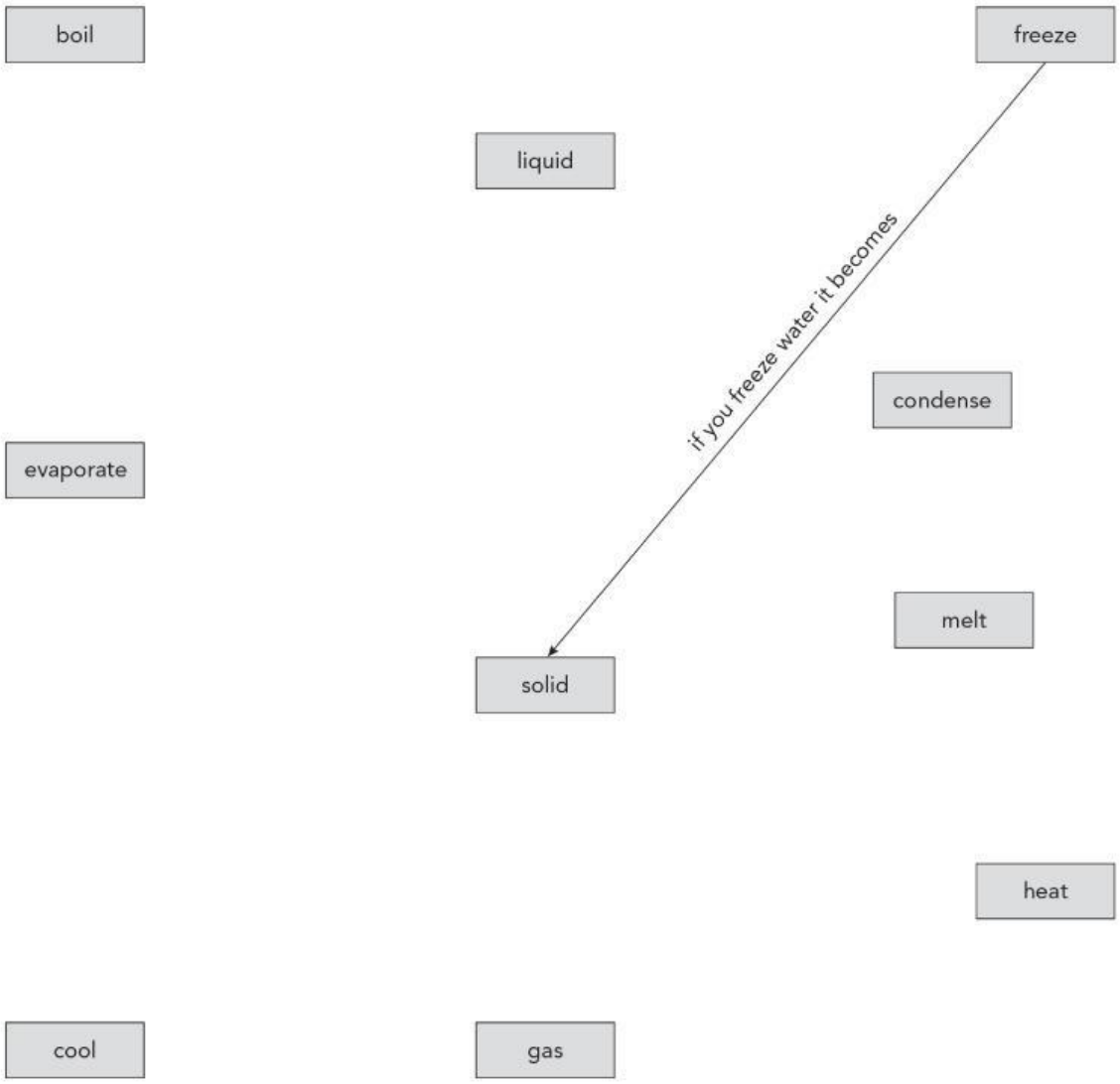
LIVEWORKSHEETS

Name _____ Date _____

Worksheet: 2.3C

Linking ideas

Look at the words in the boxes. Draw lines between them where you can think of a link. Write on them if this makes it clearer. You may link several words. One link has been done for you as an example.



LIVEWORKSHEETS

Name _____ Date _____

Worksheet: 2.4A

Particles in the water cycle

Glaciers are slow moving rivers of ice, snow, rock and sediment found in colder areas of the world.

1 Explain how the particles of water are arranged in a glacier. Draw diagrams if that helps to make it clear.

_____

_____

_____

_____

LIVEWORKSHEETS

Over time the glacier moves forward, very slowly, and pieces break off forming icebergs. The icebergs float in the seas and oceans and, as the temperature increases, the icebergs melt.

2 Explain how the particles of water are arranged in the melting icebergs. Draw diagrams if that helps to make it clear.

LIVEWORKSHEETS

When the temperatures increase, the water particles from the seas and oceans evaporate into the air.

3 Explain how the particles of water are arranged when they evaporate. Draw diagrams if that helps to make it clear.

LIVEWORKSHEETS

Name _____ Date _____

Worksheet: 2.4B

Particles in the water cycle

Glaciers are slow moving rivers of ice, snow, rock and sediment found in colder areas of the world. Over time the glacier moves forward, very slowly, and pieces break off forming icebergs. The icebergs float in the sea and, as the temperature increases, the icebergs melt.

When the temperatures increase, the water particles from the seas and oceans evaporate into the air.

1 Explain how the arrangement of the water particles in glaciers and icebergs change as they melt.

2 What conditions speed up this process and why?

LIVEWORKSHEETS