FREE STANDING MATHS QUALIFICATION

Making Sense of Data   Foundation level

Investigating a Change of State: Melting and Freezing points

Three students do an experiment to find the melting point of wax.
The table gives the data they collect.

Student A		Student B		Student C	
Time (mins)	Temp °C	Time (mins)	Temp °C	Time (mins)	Temp °C
0	83	0	62	0	74
2	70	2	55	2	63
4	61	4	52	4	57
6	55	6	51	6	54
8	54	8	50	8	53
10	53	10	48	10	52
12	52	12	47	12	52
14	52	14	47	14	51
16	51	16	46	16	50
18	50	18	44	18	50
20	49	20	43	20	48
22	48	22	42	22	47
24	47	24	40	24	46
26	45	26	38	26	45
28	44	28	37	28	43
30	42	30	38	30	42

- Draw a graph to show these results.
- Use the graph to explain what happened during the experiment.

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Making Sense of Data   Foundation level

Unit   Foundation Level, Making sense of data

Notes on the Activity
The data in this activity was contributed by Margaret Pickersgill of Bradford College.
Margaret's students also studied Physics and were able to carry out the experiment themselves.
They used the data collected to help satisfy the following Coursework Portfolio requirements.

What you need to produce:	You must:
1 Two tables of data that you have drawn up arising from two different situations One of your tables should be drawn using a spreadsheet, the other by hand.	• select which data to put in your table • decide on the table headings to use • complete your table accurately using *all relevant* data • use methods of checking to make sure that you have included all data
3 Two different graphs of data pairs representing two different situations, and a brief written description of each graph. The data pairs you use can be the result of your work towards 1 above, or can be taken from another source. One of your graphs should be of a situation involving direct proportion. One of your graphs should be drawn using a spreadsheet; the other should be drawn by hand.	for each graph: • select the data you need; • present the data in a table; • choose the graph's axes (and scale these if not using a spreadsheet); • plot the points accurately. for each written description explain, if relevant, what : • the intercepts with the graph's axes, • gradients, tell you about the real situation.

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