Graphs (Junior science for year 8)

1.	A student investigated how the temperature of water affects the time it takes for a sugar cube to dissolve. The student dissolved one sugar cube in 100 mL of water at different temperatures whilst stirring each solution at a constant rate. The time taken for each sugar cube to fully dissolve is recorded and	Temperature (°C) Temperature (°C) Time to Dissolve (s) 142 20 142 25 115 30 93 35 76 40 40 62 45 51 50 43 55 76 60 32 Derature affects the time it takes for the sugar	
	graphed. The data collected is shown on the right in table form		
a.	Identify the : - dependent variable		
	- independent variable		
		50	43
b.	Plot the data on a graph, use the graph paper on the back of this sheet.	55	37
	on the back of this sheet.	60	32
C.	Describe the trend shown in the graph.		
cub	lain why increasing the temperature affects the tile to dissolve. er to particle theory in your answer.	me it takes for th	e sugar

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2. A patient is injected with a radioactive enzyme to monitor how the kidneys perform in removing this chemical from the body.

The radioactive enzyme is measured every 5 minutes for 25 minutes.

The results are shown on the right.

- a. Graph the data on suitable set of axes and draw a line of best fit. Use the graph paper over the page.
- b. Extrapolate the graph to see what the enzyme activity is after 30 minutes.

c. What is the enzyme activity predicted to be after 12 minutes.

Time (minutes)	Enzyme Activity (units)
0	100
5	80
10	64
15	35
20	23
25	8

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