

# The effect of temperature on rate of reaction – inquiry activity

## Task

experiment	volume of gas produced (cm <sup>3</sup> ) after					
	0 minutes	1 minute	2 minutes	3 minutes	4 minutes	5 minutes
W	0	22	31	38	40	40
X	0	16	26	35	40	40
Y	0	8	15	25	32	40
Z	0	4	6	8	10	12

A class of pupils carried out 4 different experiments. They recorded the volume of gas produced at 1 minute intervals and recorded their results.

- ① Use the data to plot 4 different line of best fit on a graph. Label each line with the correct experimental letter. (**Tip:** Do an experiment at a time and allocate a different colour for each experiment to draw the line of best fit in. It should be a curve, not a dot-to-dot).
- ② Using the data show, what was the highest volume of gas produced? \_\_\_\_\_
- ③ Use data to explain why experiment Z was likely to be have been carried out at a lower temperature than experiments W-Y

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- ④ The higher the temperature, the quicker the rate at which a reaction happens. Use data to suggest which experiment was carried out at the highest temperature. Your answer should make reference to data from the table and should ideally make comparisons with other experiments.

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