

A student set up an experiment to investigate the relationship between the temperature of an acid and the rate of carbon dioxide production when reacted with a base. In each trial the student timed how long in seconds it took to produce 100 mL of carbon dioxide in a gas syringe. The results are shown below.

Temperature of acid (°C)	Time taken to produce 100 mL of carbon dioxide (s)
30	91
40	65
50	64
60	21

6. Which of the following is an appropriate hypothesis for this investigation?
- (a) How does temperature affect the rate of carbon dioxide production?
 - (b) If 100 mL of carbon dioxide is produced, then the acid is at a low temperature.
 - (c) Increasing the temperature of the acid will decrease the time taken to produce 100 mL of carbon dioxide.
 - (d) Decreased volumes of carbon dioxide will be produced if the acid temperature is increased.