4.7 Matching graphs

Briefing sheet

For this activity your group will be given one set of cards with graphs drawn on them, and another set with captions, or for Physics, cards with *x*-axis and *y*-axis variables on them.

1 In your group, discuss the cards and match each graph to the correct caption (or *x* and *y*-axis variable).

2 Agree and write down an explanation of the shape of each graph and how you came to your decision about which caption went with each graph.

3 Write down appropriate labels and units for both axes on each graph.

4 Compare your answers for Question 2 and Question 3 with those of another group. Agree which would be the best answers for each question.

5 Back in your original group, allocate one graph to each student. Prepare a scientific explanation for your graph's shape, and suggest other variables that would produce a similar shape.

6 Present your explanation to the rest of your group. Discuss any new ideas you have learned during this activity and make a note of these.

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Chemistry resource 1

10 g of marble chips were added to 1M hydrochloric acid. The progress of the reaction was followed by measuring the amount of carbon dioxide gas produced over time.

Acid was added to an alkaline solution and the change in pH was monitored using a pH probe.

For an exothermic reaction, a graph can be used to show the variation in enthalpy as the reaction proceeds from reactants to products.

The Earth's population only experienced relatively small changes until the advent of modern medicine and agricultural methods.

Enzymes function most efficiently at a particular temperature.

The solubility of salts in water varies with the temperature of the water.

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Chemistry resource 2