

Copper is a metal which reacts with the oxygen in the air when it is heated strongly. This experiment will help you to check that you understand what happens when something reacts with oxygen.

Prediction

- 1 What do you think will happen to the mass of a piece of copper metal when it is heated? Explain your prediction.

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Apparatus

- Bunsen burner
- Heatproof mat
- Tongs
- Copper foil
- Ruler
- Eye protection



Wear eye protection.

Method

- 1 Collect a piece of copper foil, measure it and find its mass accurately on a top pan balance. Record the mass and size of the piece of copper.
- 2 Look carefully at the surface of the piece of copper and record your observations.
- 3 Hold the piece of metal in a pair of metal tongs, and heat it strongly in the flame of a Bunsen burner for about 3 minutes.
- 4 After 3 minutes, place the piece of copper onto the heat-proof mat and let it cool down (be careful that none of the copper or any other chemical falls off!).
- 5 When it is cool, find its mass again, re-examine the surface and record your observations.

Considering your results

- 2 What has happened to the mass of the piece of metal?
- 3 Was this what you expected? Why do you think you got this result?
- 4 Collect the results from other groups in your class. Have they found the same thing has happened? Did anyone get a different result? Why do you think this was?
- 5 Did everybody have the same sized piece of copper to start with? Was this fair? Does it matter if all the pieces are not the same size?

Evaluation

- 6 If you tried burning a different metal, would you carry out the experiment in the same way as you did for the copper, or is there anything you would like to change? If so, what would you change and why?

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predicting, observing, considering, evaluating