

# How can we tell a chemical reaction has taken place?

Science

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# Combustion

## Answer the questions:

1. What is the scientific term for burning?
2. What are the products in all combustion reactions?
3. What is a fuel?
4. What are fuels used for?



# Different fuels

**Write a word equation for the combustion of the following fuels:**

1. Wax
2. Petrol
3. Kerosene
4. Diesel



# Fuel investigation

## Match the variable to the definition:

Independent variable

The thing you observe or measure.

Dependent variable

The things you keep the same to make sure it is a fair test.

Control variables

The one thing that you change.



# Fuel investigation

A scientist is investigating three fuels A, B and C. In his investigation he will burn each fuel and see how much the temperature of a beaker of water increases.



# Fuel investigation

Complete the table:

Independent variable	
Dependent variable	
Control variables	



# Interpreting results

Complete the table:

Fuel	Start temperature /°C	End temperature / °C	Temperature change /°C
A	25	32	
B	24	35	
C	25	26	



# Interpreting results

## Answer the questions:

1. Which was the best fuel? Use data to explain why.
2. Which was the worst fuel? Use data to explain why.
3. How do you know that burning fuels is a chemical reaction?
4. What were the products of each combustion reaction?

