#### **Lesson 8- Combustion**

Chemistry- Key Stage 3

Energetics

Miss Charlton



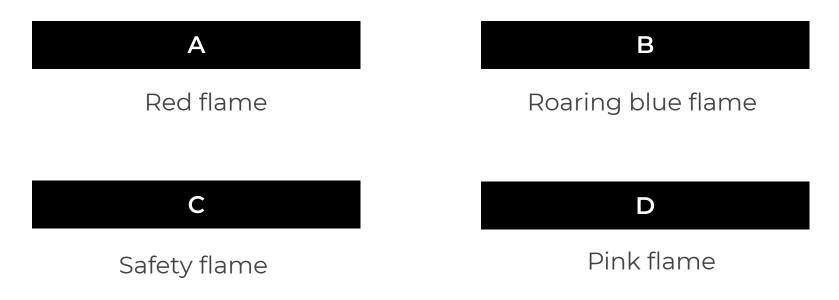
### Which gas is produced during incomplete combustion?



#### Balance the complete combustion equation

 $\begin{array}{cccc} CH_4 & + & O_2 & \rightarrow & CO_2 & + & H_2O \\ \swarrow & & \downarrow & & \downarrow & & \downarrow \\ Hydrocarbon + oxygen \rightarrow carbon & + water \\ (methane) & & & dioxide \end{array}$ 

### Which flame does an open collar on a Bunsen burner produce?





### Which gas is produced during complete combustion?





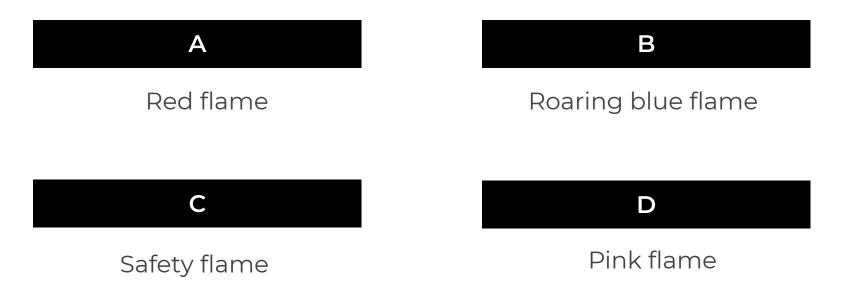
#### **Complete the task**

Describe the test for carbon dioxide

Keywords to use:

- Colourless
- Limewater
- Cloudy
- Bubble

### Which flame does a closed collar on a Bunsen burner produce?



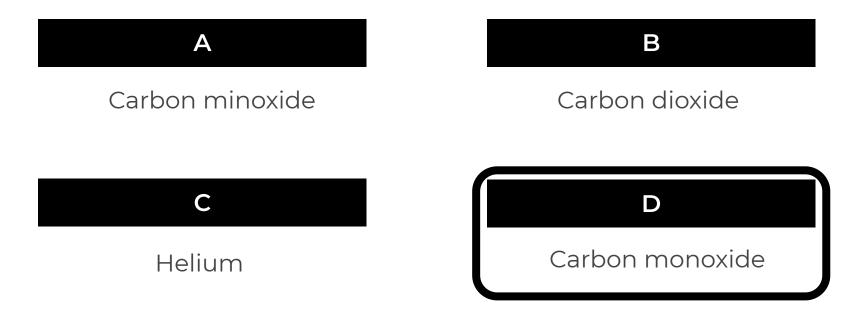


#### **Complete the table**

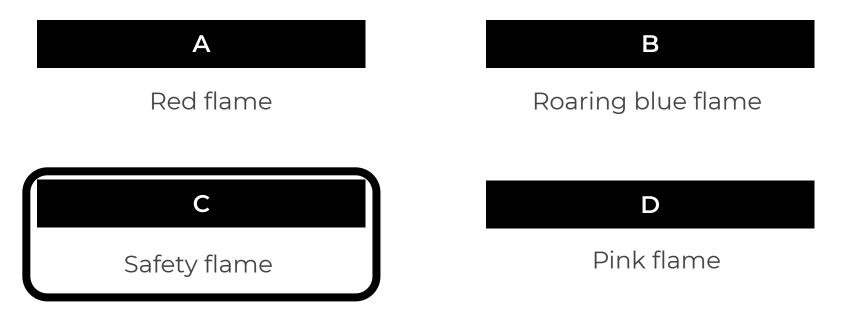
	Complete combustion	Incomplete combustion
Oxygen supply	Good	Poor
Products		
Colour of flame		
Soot produced		
Energy released		

#### Answers

### Which gas is produced during incomplete combustion?



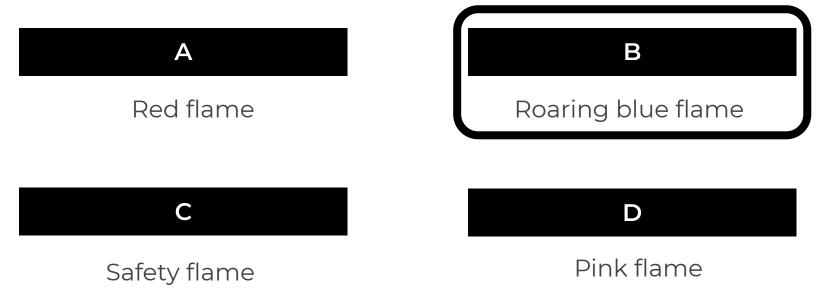
### Which flame does a closed collar on a Bunsen burner produce?



#### **Complete Combustion**

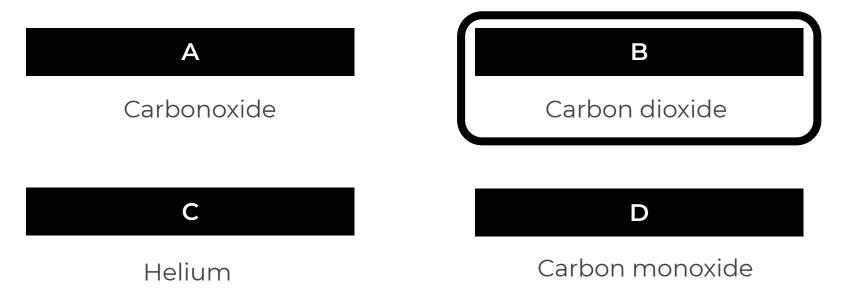
# $\begin{array}{c} CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O \\ \downarrow & \downarrow & \downarrow \\ \end{array}$ Hydrocarbon + oxygen $\rightarrow$ carbon + water (methane) dioxide

## Which flame does an open collar on a Bunsen burner produce?





### Which gas is produced during complete combustion?





#### Test for carbon dioxide

Bubble the gas through colourless limewater, if it goes cloudy then the gas is carbon dioxide

#### **Complete the table**

	Complete combustion	Incomplete combustion
Oxygen supply	Good	Poor
Products	Carbon dioxide and water	Carbon monoxide, carbon and water
Colour of flame	Blue	Orange
Soot produced	No	Yes
Energy released	High	Low