Homework sheet

Name Class Date

**1** A Bunsen burner burns natural gas. Natural gas is a mixture of methane (CH4) and other hydrocarbons. Complete the table by placing a tick (✓) in one box in each row to describe what happens when a Bunsen burner is used.

|  |  |  |
| --- | --- | --- |
|  | Complete combustion | Incomplete combustion |
| Blue flame |  |  |
| Luminous orange flame |  |  |
| Hottest flame |  |  |
| Air hole closed |  |  |

**2 a** Name the products formed during the **complete combustion** of methane.

**b** Write a word equation for the complete combustion of methane.

**c** Describe two ways in which energy is transferred to the surroundings during the **combustion** of methane.

**1**

**2**

**3** The **incomplete combustion** of petrol produces carbon and **carbon monoxide**.

**a** Describe how incomplete combustion of petrol, rather than complete combustion, can happen.

**b** Describe two ways you can tell that carbon is released during the incomplete combustion of petrol.

**1**

**2**

**c** Describe two problems caused by carbon released during incomplete combustion.

**1**

**2**

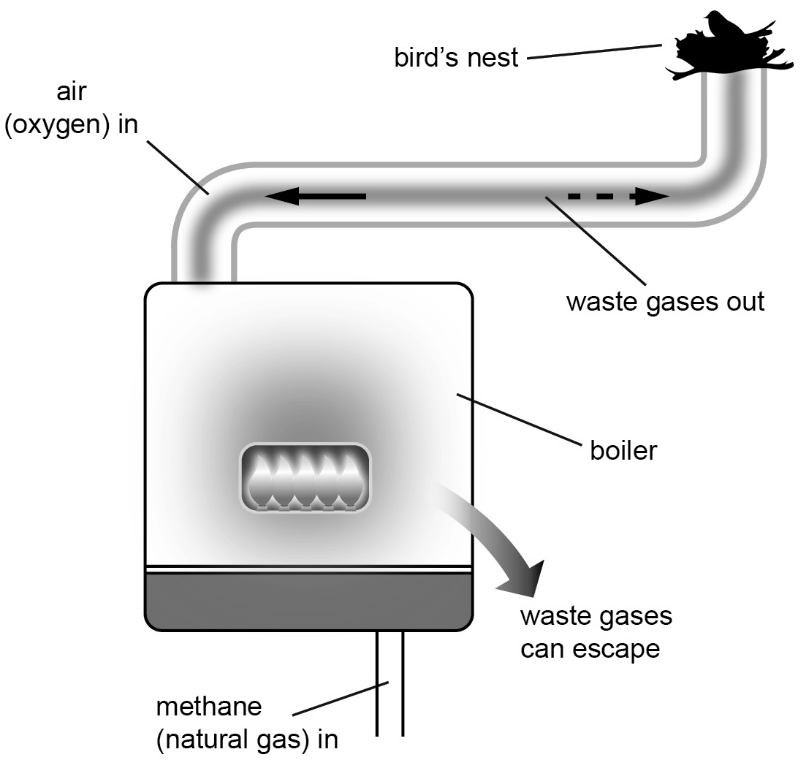
**d** Explain why the incomplete combustion of petrol produces carbon monoxide.

**4** Carbon monoxide is a colourless and odourless **toxic** gas.

**a** Explain why electronic carbon monoxide detectors are used near to gas appliances.

**b** Explain how carbon monoxide behaves as a toxic gas. You do not need to describe any symptoms of carbon monoxide poisoning in your answer.

**5** The diagram shows a central heating boiler. The flue pipe lets air in and takes waste gases outside. Birds have built a nest on this pipe. Explain the problems this may cause to people living inside the house.



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