# Combustion equations

***Education in Chemistry***May 2018[rsc.li/EiC318-airpollution](http://rsc.li/EiC318-airpollution)

**This activity accompanies the above article ‘Taking care of the air’.**

## Answers

**Task A:** Balance the following equations associated with combustion and pollution.

1. **2** C + O2 🡪 **2** CO
2. CH4 + **2** O2 🡪 CO2 + **2** H2O
3. N2 + O2 🡪 **2** NO
4. **2** NO + O2 🡪 **2** NO2
5. CH4 + O2 🡪 C + **2** H2O

**Task B:** Write balanced symbol equations for the following descriptions -

1. The combustion of methane to give a poisonous gas and water

2CH4 + 3O2 🡪 2CO + 4H2O

1. The combustion of sulfur impurities to give an acidic gas

S + O2 🡪 SO2

1. The complete combustion of propane

C3H8 + 5O2 🡪 3CO2 + 4H2O

1. The incomplete combustion of propane to give a solid pollutant and water

3C3H8 + 6O2 🡪 3C + 12H2O

1. The incomplete combustion of solid carbon to give a poisonous gas

2C + O2 🡪 2CO