

DART exercise

Education in Chemistry

May 2018

rsc.li/EiC318-airpollution



This exercise accompanies the above article 'Taking care of the air'

1. Using the article and your own knowledge, give three reasons why air pollution in Delhi (India's capital) is particularly severe.

- *Outside the city, farmers burn waste straw*
- *Inside their houses people burn wood and cow dung.*
- *More people are using fossil fuel burning cars*

2. Give two reasons why sulfur dioxide used to be one of the pollutants that environment agencies paid particular attention to.

- *SO₂ creates acid rain (which damages trees and buildings)*
- *SO₂ reacts to create smog*

3. Give three ways that particulate matter is formed.

- *Released during burning (eg in car engines)*
- *From dusty materials on the surface of roads*
- *Chemical reactions in the air*

4. Why does Delhi have a greater problem with particulate matter than London?

Delhi is an inland city. Delhi has lots of pollution sources. The government in India is less receptive to discussions with external groups about environmental controls.

5. Why did Oxford Street show the highest NO₂ levels in the world in 2013?

Lots of buses and taxis go through Oxford Street. The street is poorly ventilated. Tall buildings either side of the street mean pollutants don't escape and can build up.

6. What changes have caused a reduction in NO₂ level in the most polluted streets?

Diesel powered buses and taxis have been replaced with electric models.

7. What kind of weather conditions help keep pollution down?

Wet and windy conditions keep pollution down. Rain dissolves and washes gases and particulate matter out of the air.