

# Useful and harmful reactions

The boxes below give some examples of chemical reactions. Think about which ones are useful and which are harmful, and *why* you think each reaction is useful or harmful. In a few cases, the same reaction can be both helpful *and* harmful. In these cases, there are two separate statements.

When you have done this, you will need to think about how to report your work. You might:

- draw up a table with the headings 'helpful' and 'harmful' and write each reaction in the correct column with your reasons for putting it there.
- have two pages in your book, one for useful and one for harmful reactions, and illustrate each page. Remember to say why you think each reaction is useful or harmful.
- use a computer with 'clip-art' to produce a mini-poster of useful and harmful reactions, and the reasons you think they are useful or harmful.

1 You burn natural gas in a boiler.

2 Parts of a car start to go rusty.

3 You cook some chips in the oven.

4 Petrol is used in a car engine.

5 Petrol used in a car engine gives off exhaust fumes.

6 You use a 'catalytic converter' to reduce the pollution from car exhausts.

7 Acid rain corrodes a limestone building.

8 Chemicals in an anti-spot cream react with a silver necklace, turning it black.

9 'Perming lotion' is used to make hair curlier or straighter.

10 Ozone in the upper atmosphere absorbs ultra-violet rays and changes into normal oxygen.

