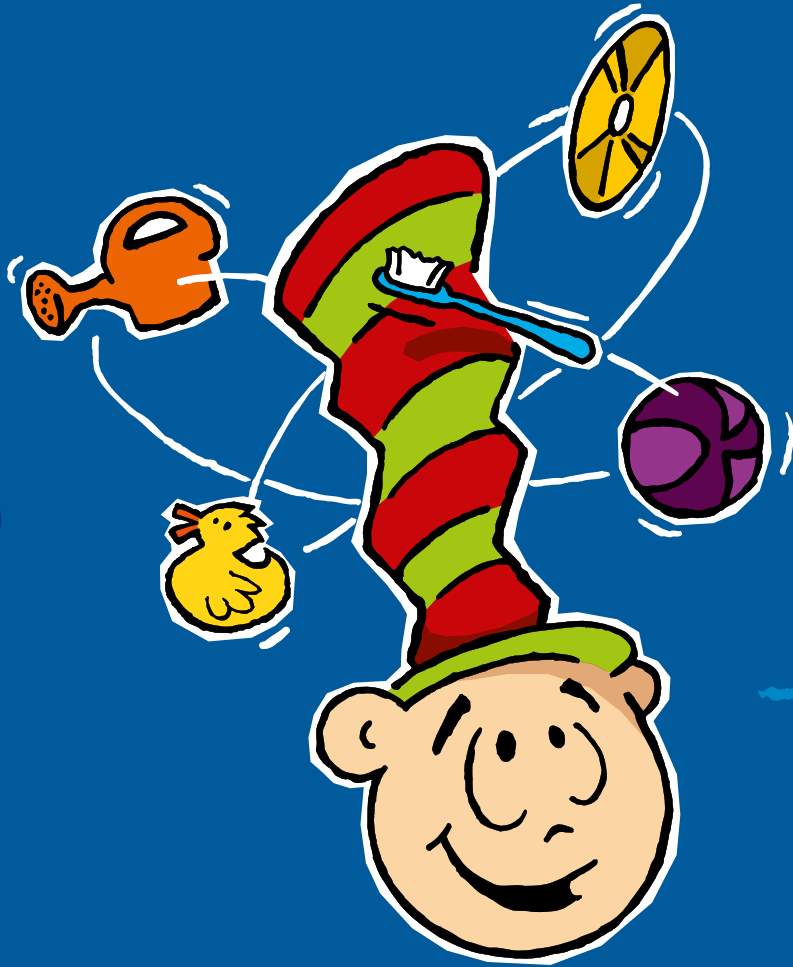




Olly's Cool Box of Plastics

Five simple experiments using a fascinating material

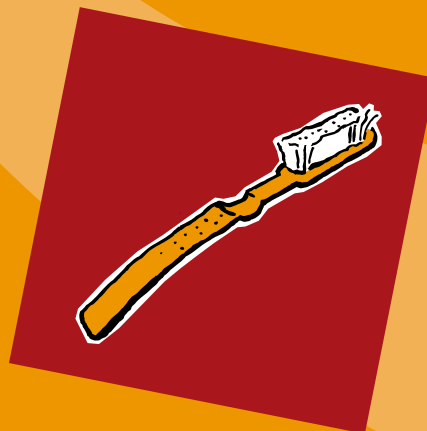
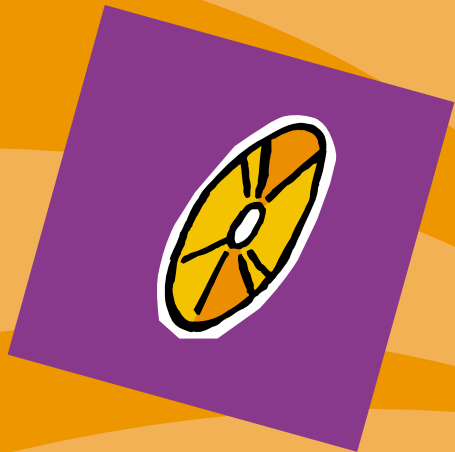


Table of Contents

1

A short introduction to the world of plastics

What are things made of?.....	4
How teeth were brushed in the past.....	6
Where do plastics come from?	8
The raw material crude oil.....	9



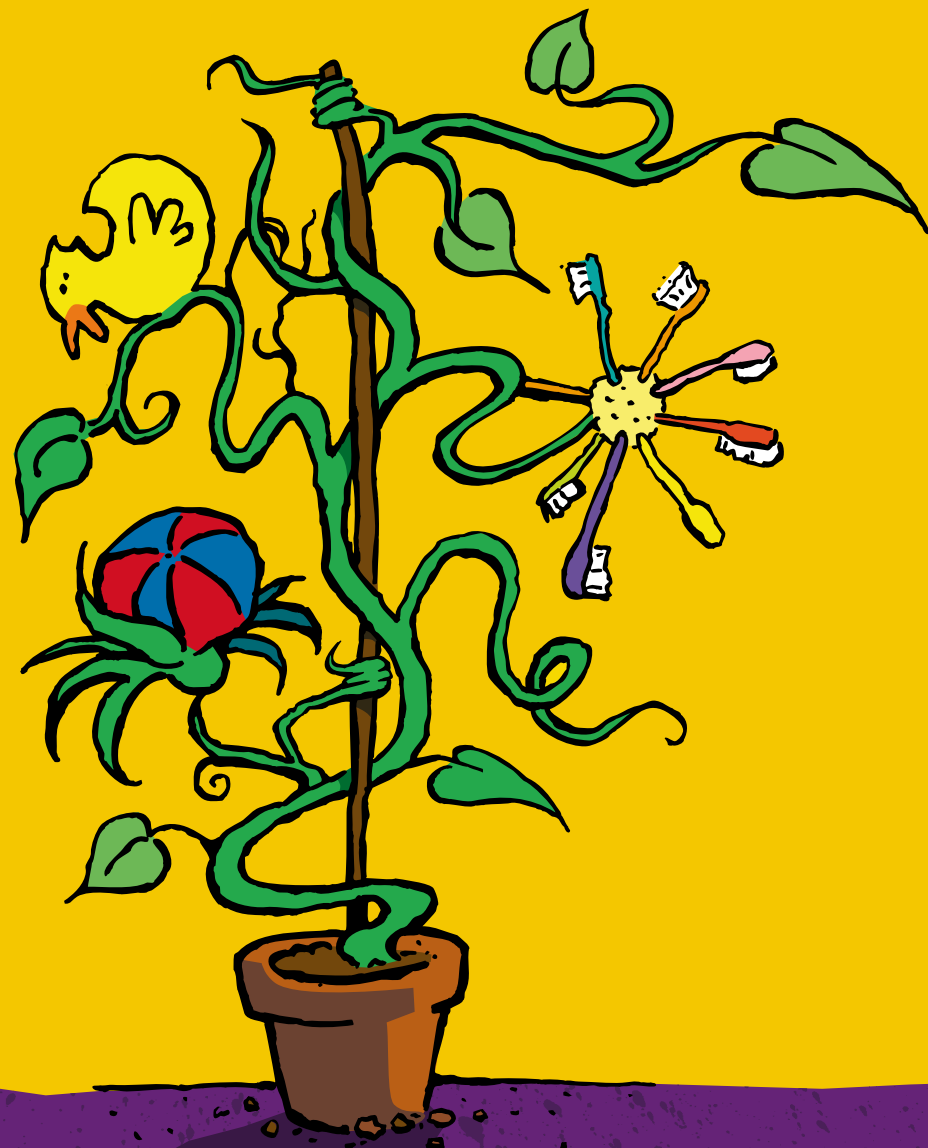
What are things made of?

This is a toothbrush. Of course, that's fairly obvious and you certainly know what it is used for. Every morning and every evening you hold

How people used to brush their teeth in the past

In the past, people did not brush their teeth at all. However, that was a long time ago and besides, they did not eat as many sweets as we do today.

The toothbrush actually started out as a small stick called a toothpick. Across many centuries, our ancestors cleaned their teeth with small, thin wooden sticks they produced from branches or tree roots. But they had to be very careful, as they could easily



Where do plastics come from?

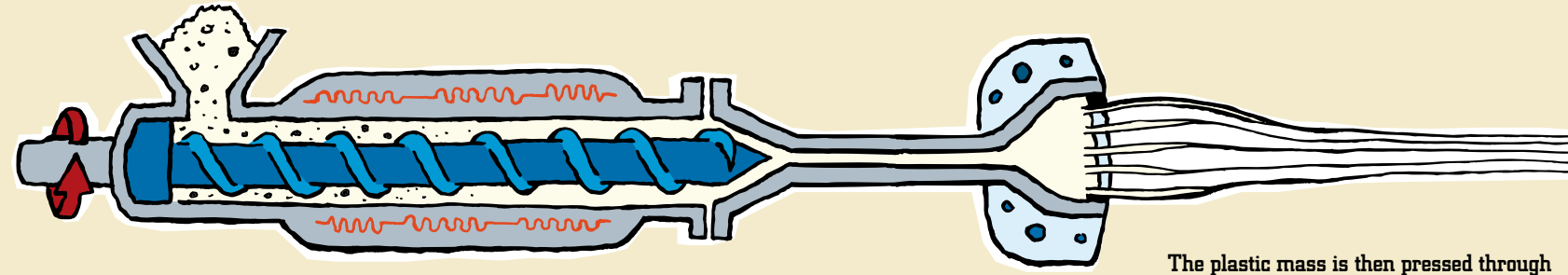
T

From crude oil to plastics

Liquid crude oil is a raw material for toothbrushes, is that right? A toothbrush is rigid, has a solid handle, and the bristles are also not liquid! Right! To produce a plastic from crude oil, it needs to be changed into a solid. This works similarly to what we know from the ingredients when baking a cake. Scientists call it a “chemical reaction”.

To understand what exactly happens during this reaction, imagine a giant magn

At the start of their life plastics are produced in small pellets or granules.





Now, you've already got many examples of the use of plastics. However, there are some applications of plastics that are less well known, e.g. cars.

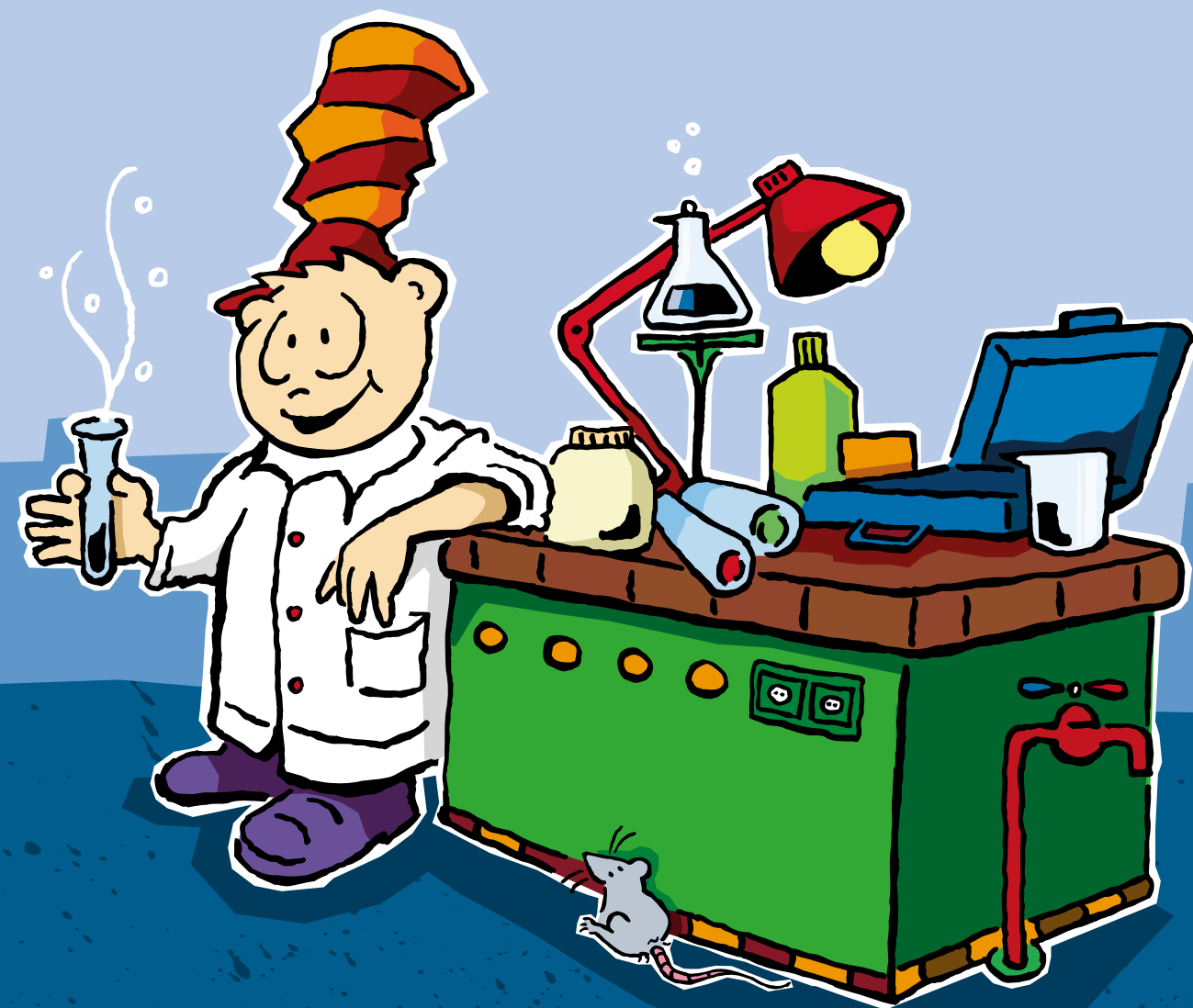
Did you know that...

... a car consists of about 5,000 parts? About 1,5

How do we get rid of plastic waste?

The time eventually comes when many objects reach the end of their life and become waste – even your yoghurt pot. There are two things you can do with waste: you could bring it to a landfill, which requires a lot of space, or you can recycle the waste to reuse the material if possible. You can do this with glass, paper, metal and also with plastics. For plastics and paper, if you cannot recycle them there is a third solution, which is to use them to produce electricity and heat.

Plastic waste can then be used to produce new plastic. But first, you need to sort, clean



Max Borax, the funny fellow from the box



That's it!
I hope you enjoyed my
experiments!
And now, I've got a fairy tale
for you, and at the very end, a
contest with many great prizes.



Editor:

PlasticsEurope
Association of Plastics Manufacturers

BPF
British Plastics Federation

PlasticsEurope UK
6 Bath Place
Rivington Street
London
EC2A 3JE