

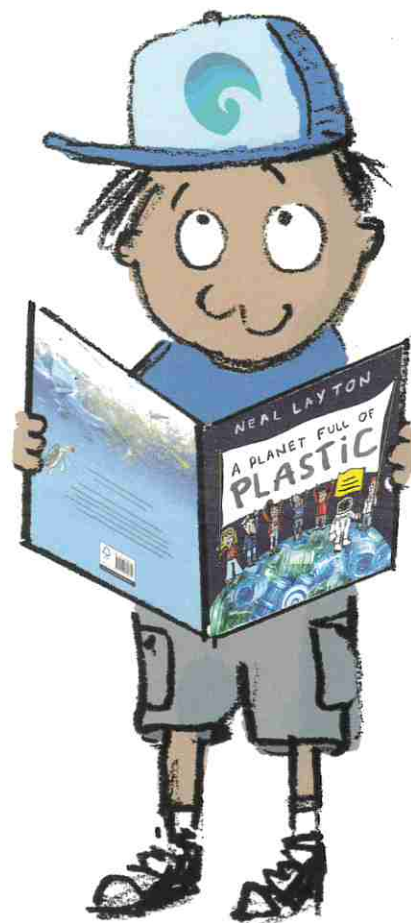
NEAL LAYTON

A PLANET FULL OF PLASTIC



Hello you!

Who, me?



That's right. Quick question: do you ever think about what things are made of?

Because some things are made of paper, like this book. Some things are made of wood. Or metal. Or glass.

But some things, in fact lots of things are made of something called PLASTIC



But some things, in fact lots of things, are made of something called PLASTIC.



you ever think
of paper, like
e of wood.

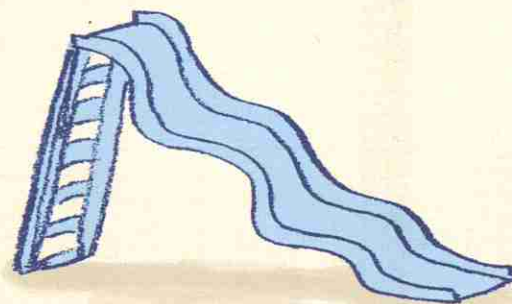
Isn't plastic FANTASTIC! It comes in lots of different shapes, sizes and colours.



Sometimes
it's bendy,



sometimes
it's hard.

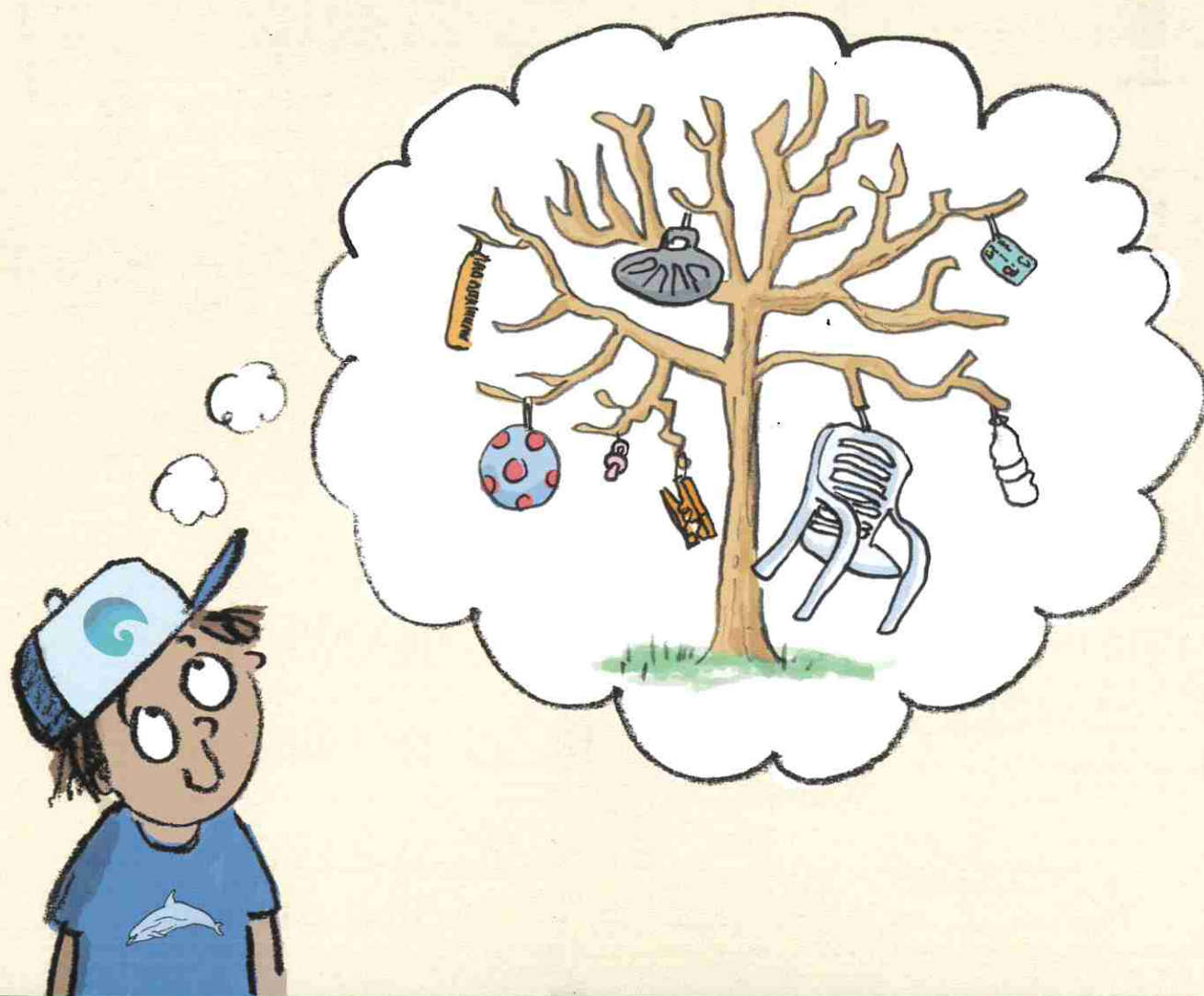


Sometimes
it's big,



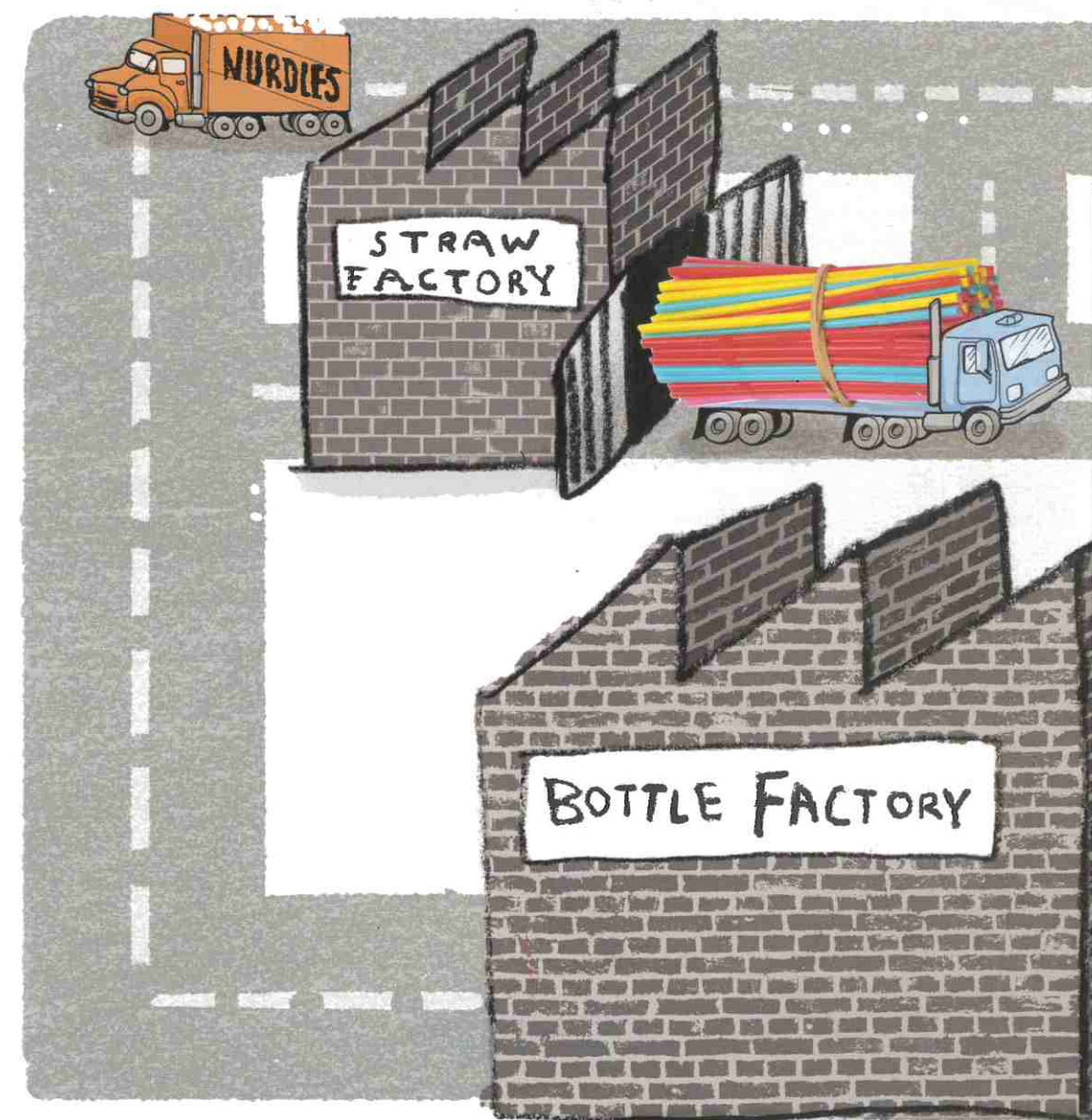
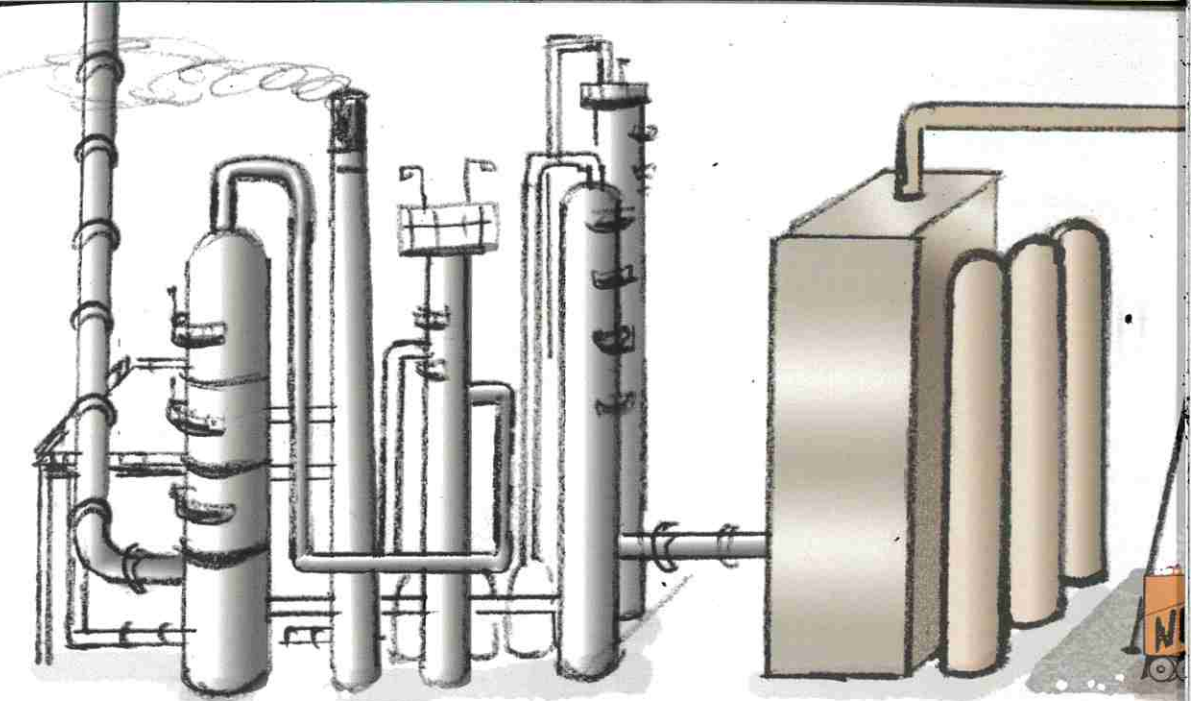
and sometimes
it's really really tiny.

If you look around you, plastic is EVERYWHERE.



But where does all this
plastic come from?

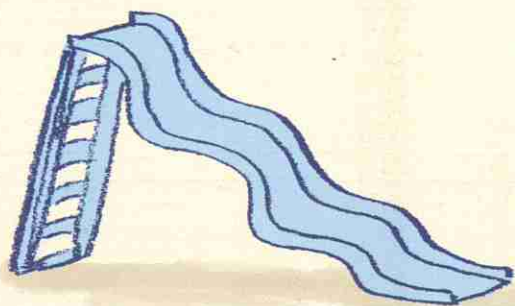
*Hint: It doesn't grow
on trees.*



It comes in lots of different shapes, sizes and colours.



Sometimes it's big.



Sometimes it's big,



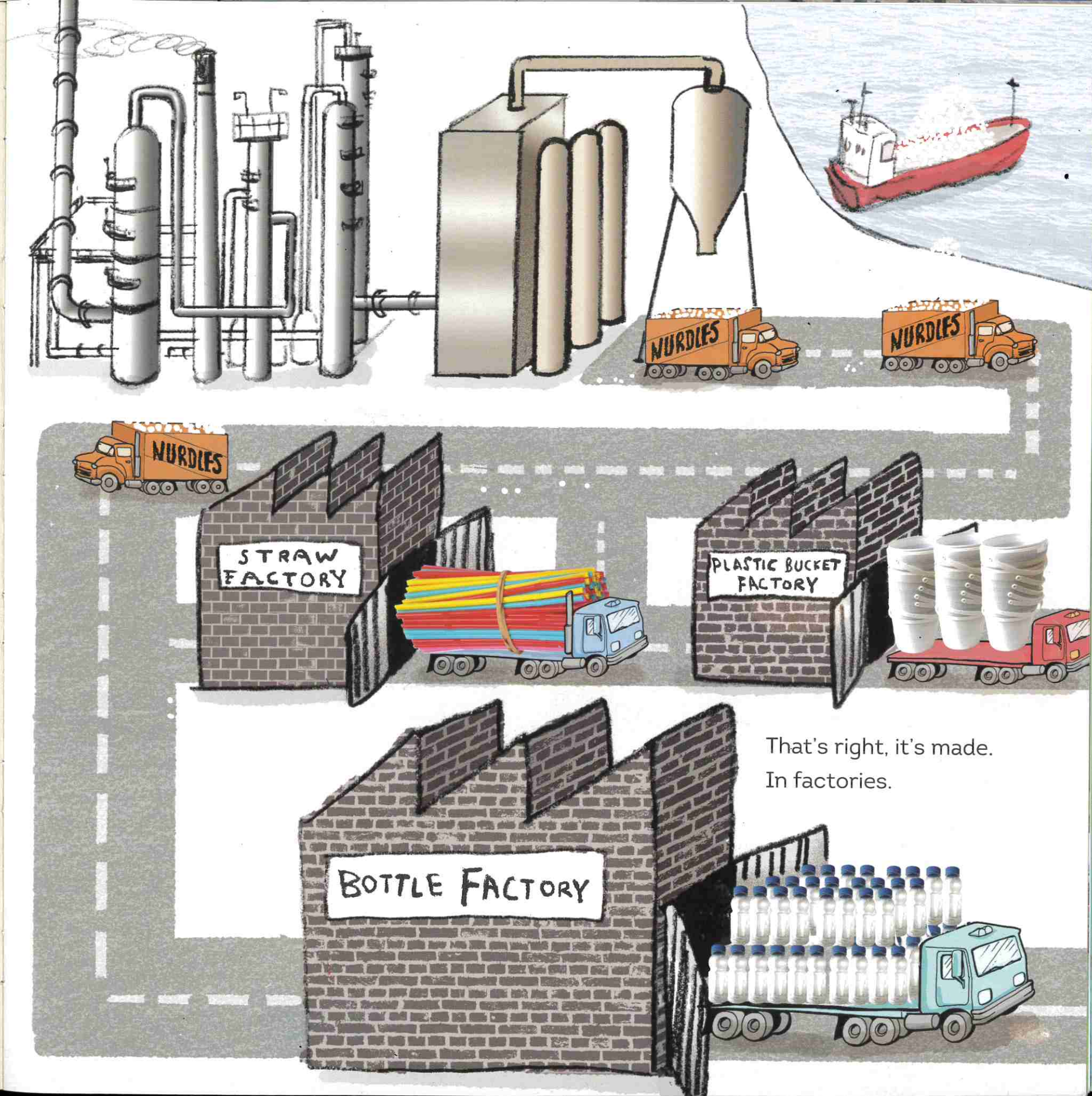
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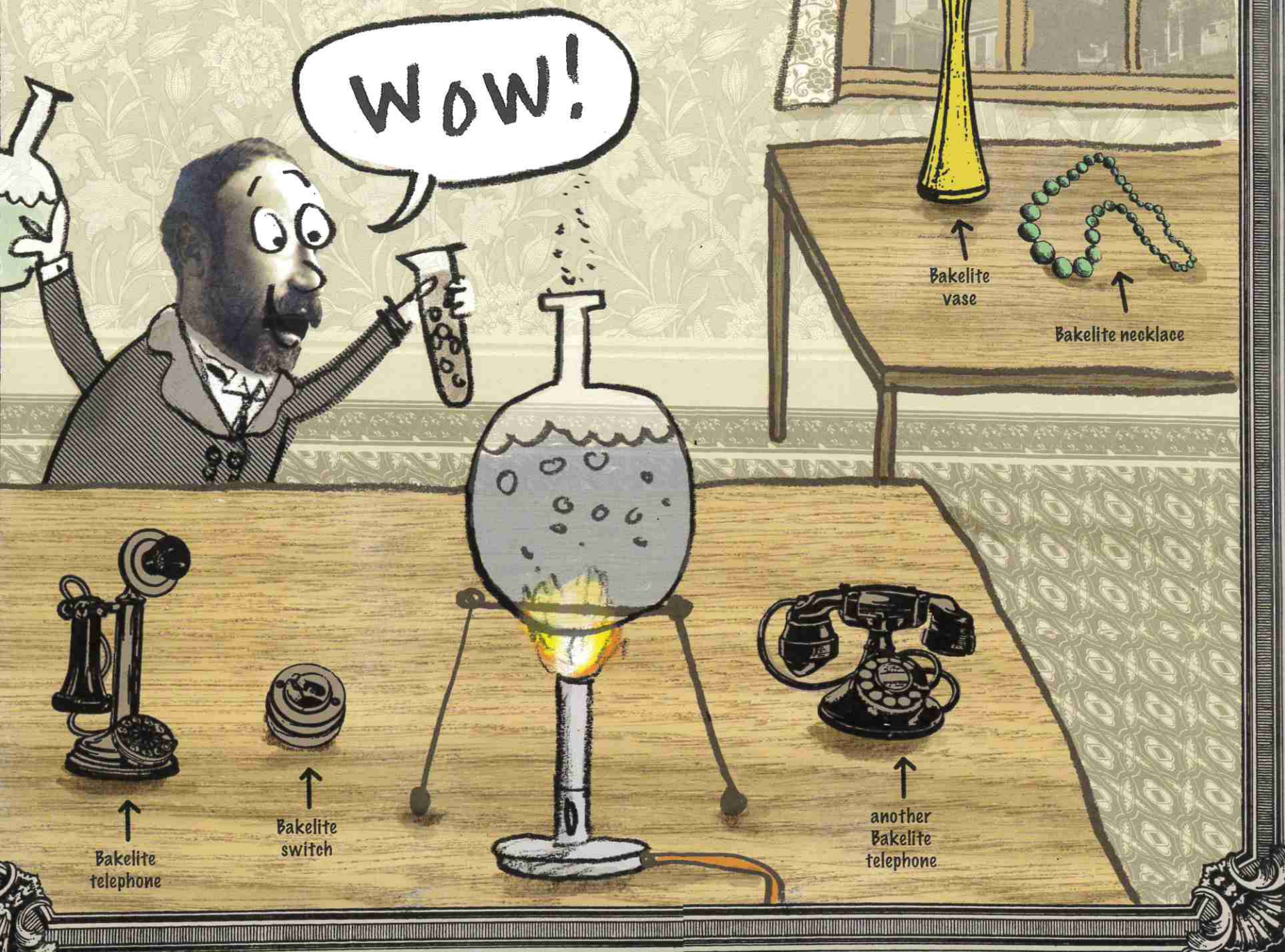
Hint: It doesn't grow on trees.



That's right, it's made.
In factories.

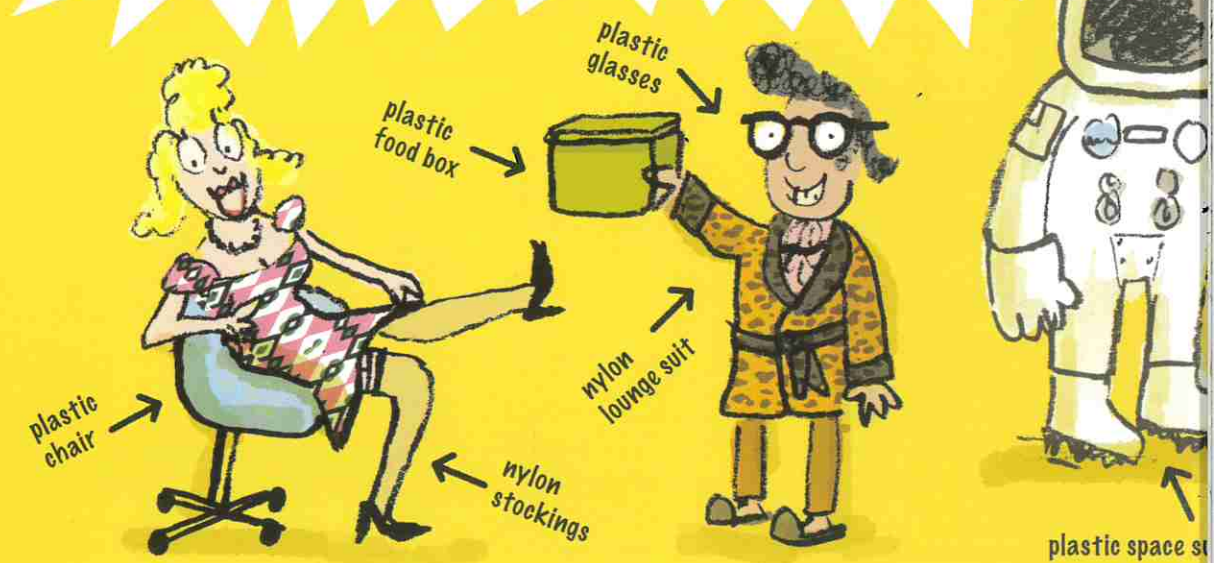
You see, 150 years ago there wasn't any plastic.
Only materials like wood, metal, paper and stone.

And then one day, super-chemist Mr Baekeland
made an incredible discovery...

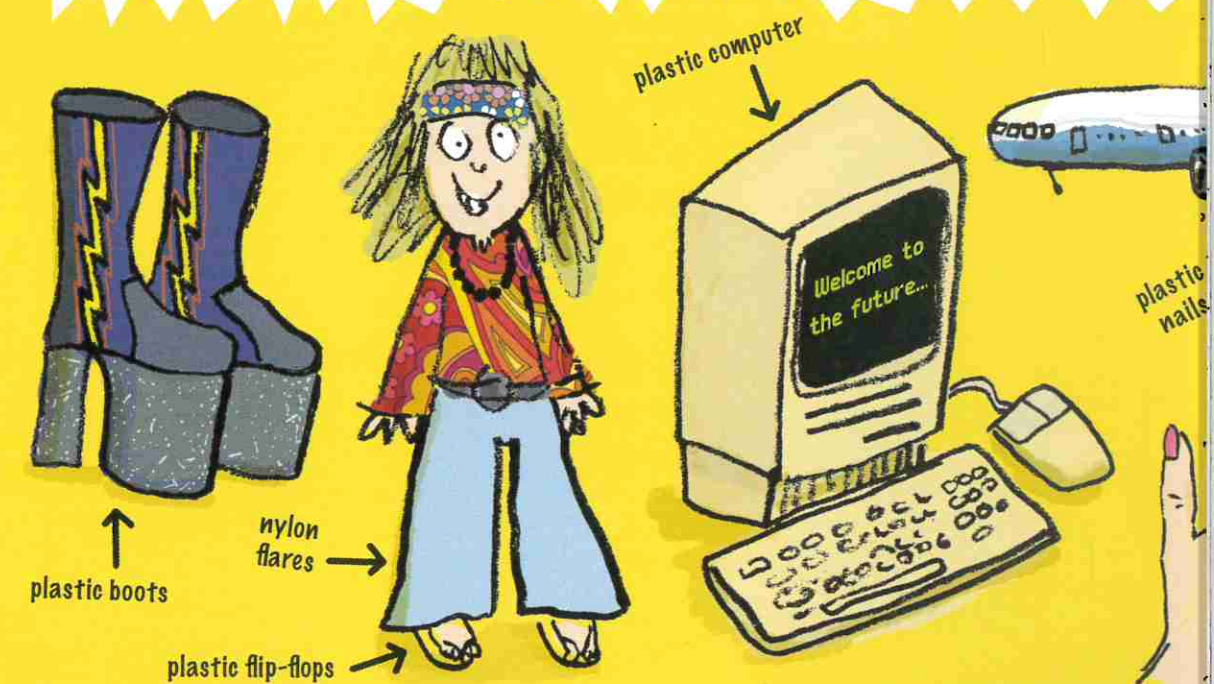


CRAZY! Groovy!

"Plastic is FANTASTIC!" they all said.



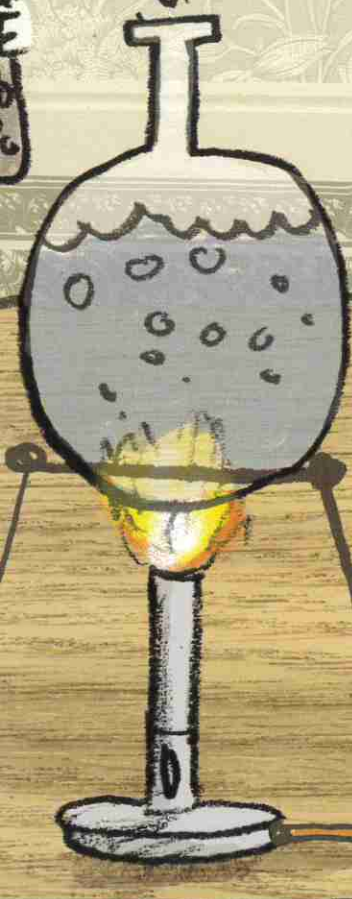
They started making lots of it. And using it for just about everything.



wasn't any plastic.
al, paper and stone.

nist Mr Baekeland

OW!



another
Bakelite
telephone



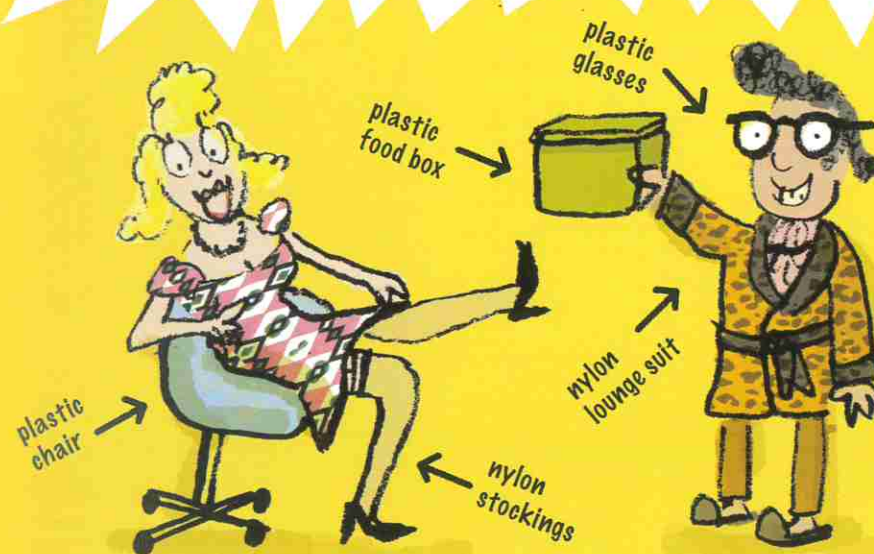
Bakelite
vase



Bakelite necklace

CRAZY! Groovy!

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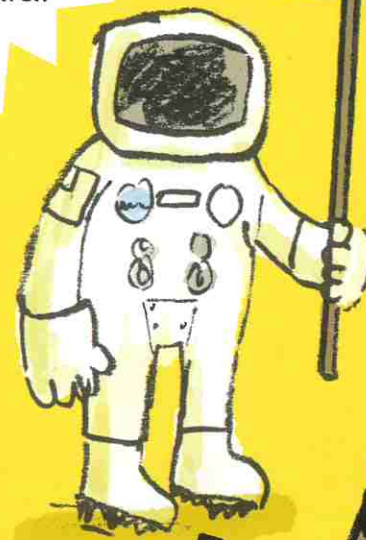
plastic
chair

plastic
food box

plastic
glasses

nylon
lounge suit

nylon
stockings



plastic space suit



plastic-coated cup



plastic carrier bag



unbreakable
plastic plate



plastic drink
bottle

They started making lots of it. And using it for just about everything they could.



plastic boots



nylon
flares

plastic flip-flops



plastic computer



mostly plastic
plane



plastic
nails



Lycra
sportswear

plastic
trainers

But there was a problem.

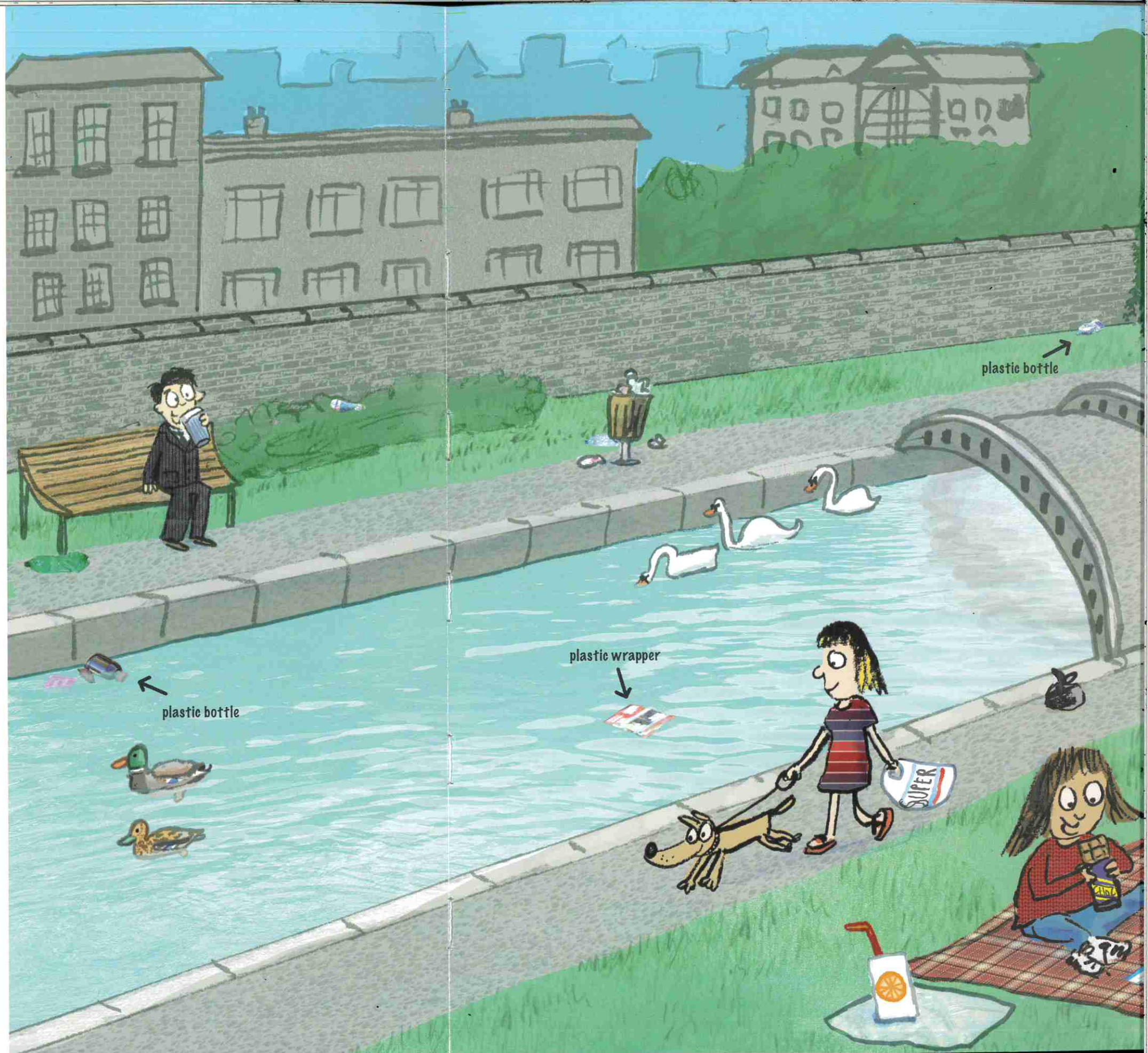
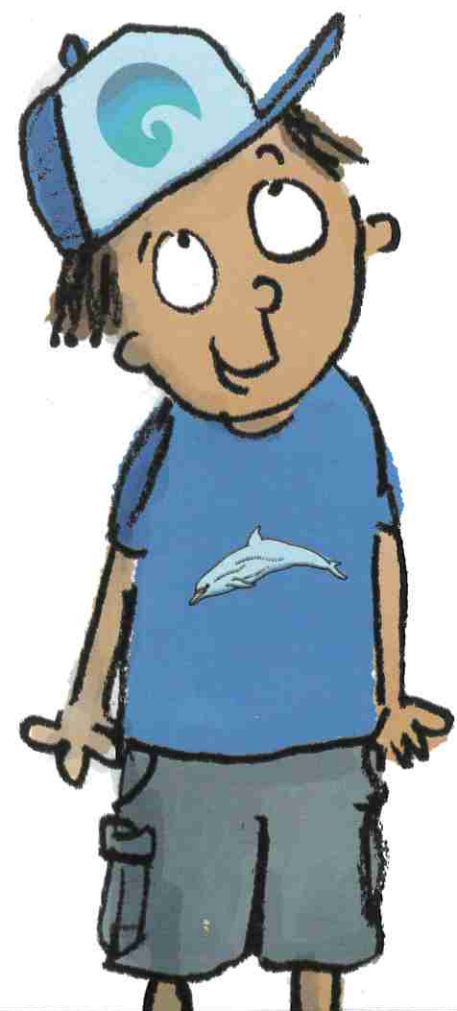
If you look around, you won't just see plastic where it's meant to be.

You'll also see it where it's NOT meant to be. Because one of the most amazing things about plastic is that it doesn't

biodegrade

like natural things.

Oof, that's a big word. What does it mean?



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F meant to be.
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atural things.

that's
word.
t does
an?



Let me explain...

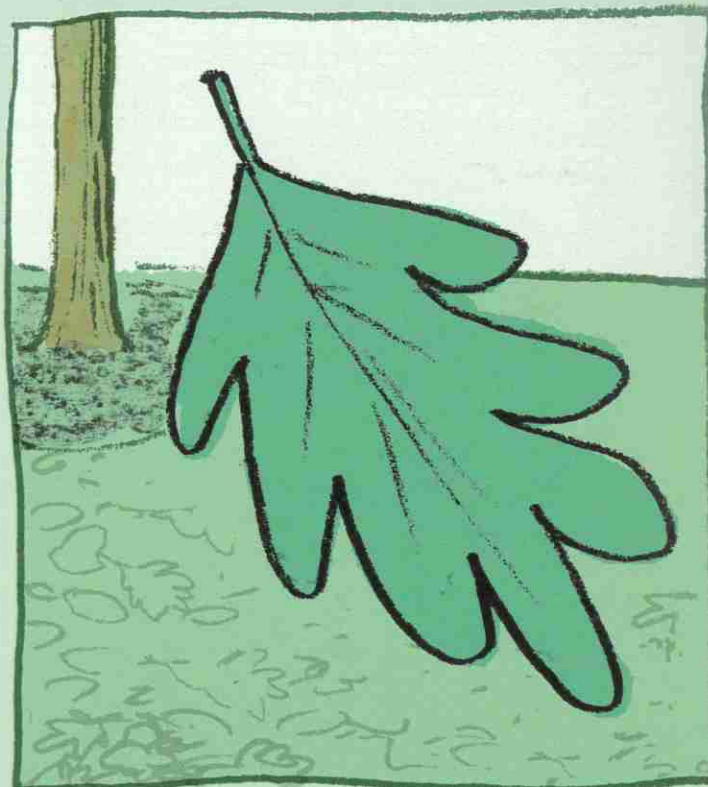
If a leaf drops to the ground, it will go yellow, then brown, and all skinny and thin, until it's just mud and dust.

It takes a few months. You can't see them, but bugs are eating the leaf, breaking it down.

And it's the same with an apple core or any natural thing. This is called biodegrading.



APPLE CORES
TAKE ABOUT
EIGHT WEEKS
TO BIODEGRADE



After about one week



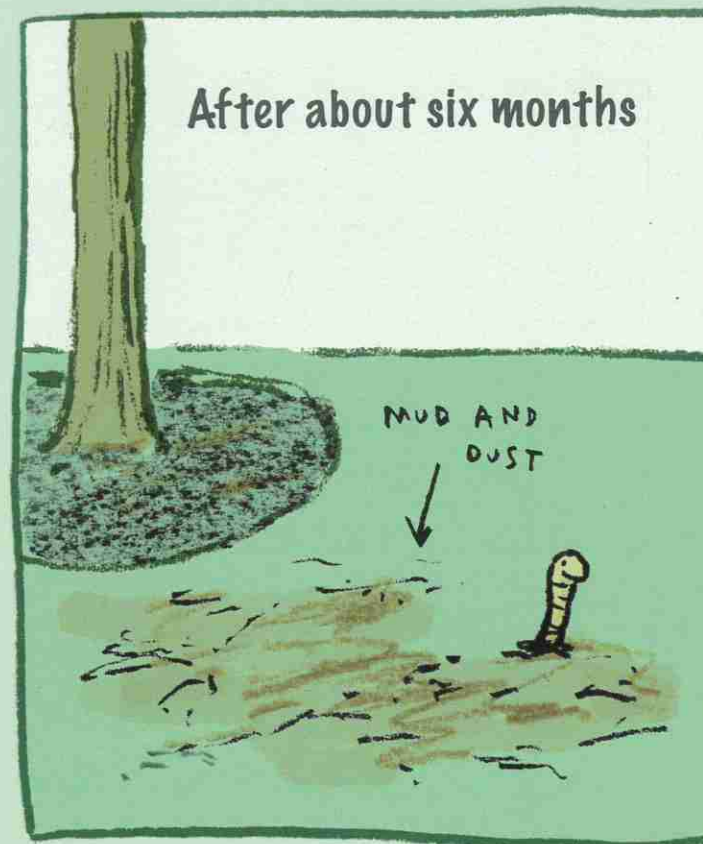
CLOSE-UP OF



After one month



After about six months



How long
to BIODEGRADE

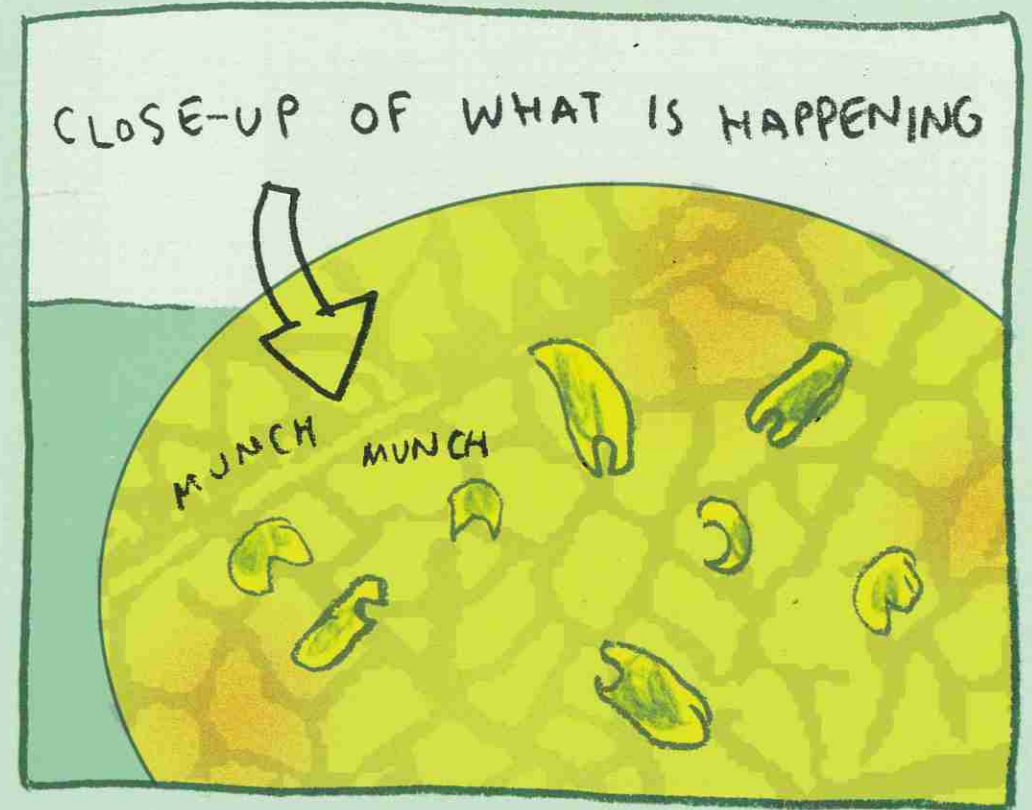
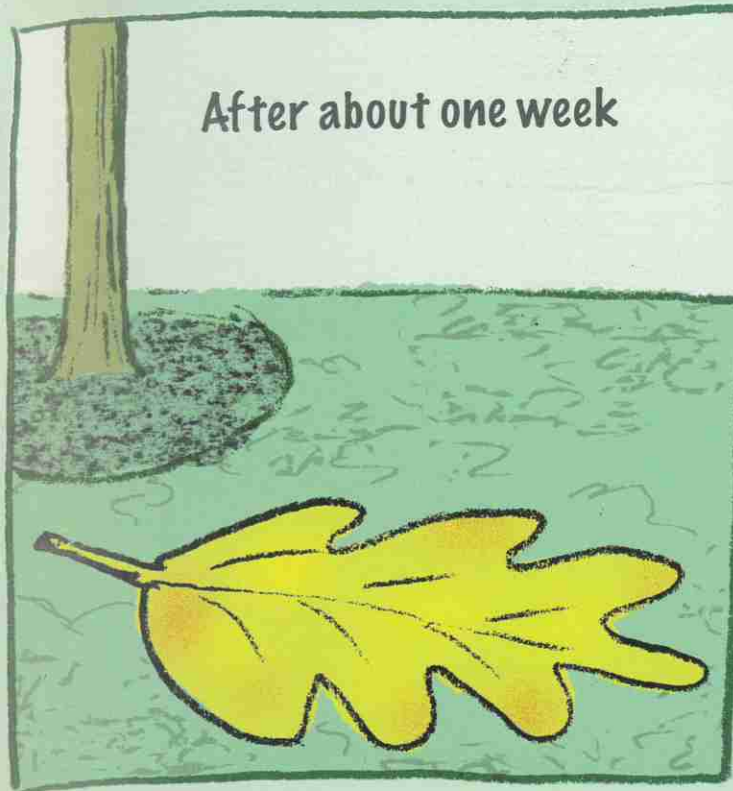
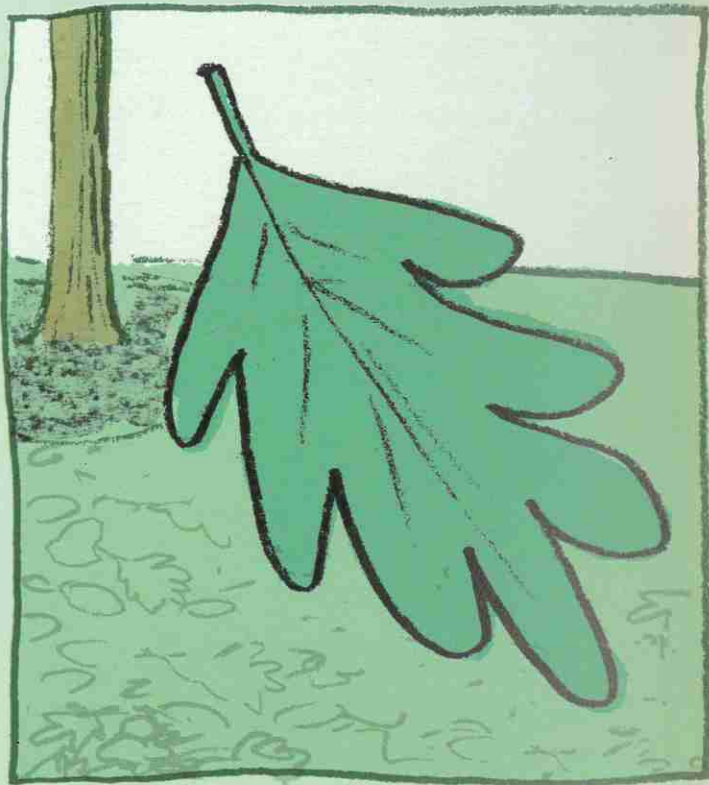


twig - over a year

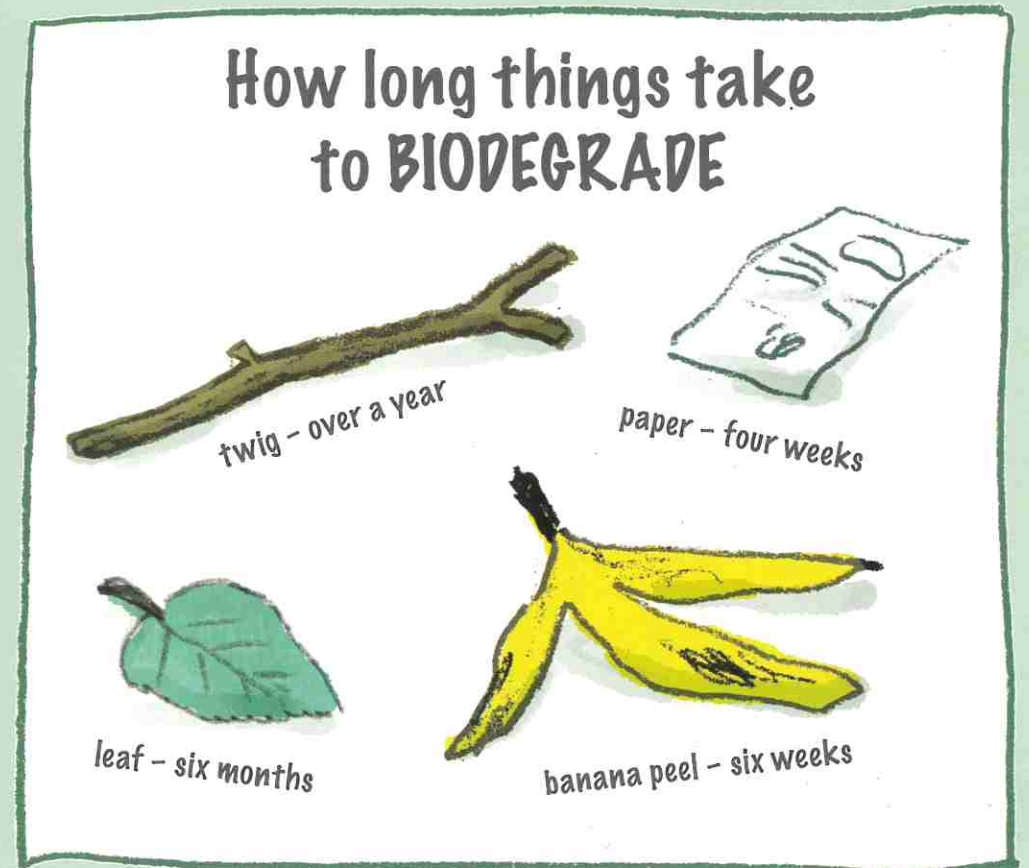
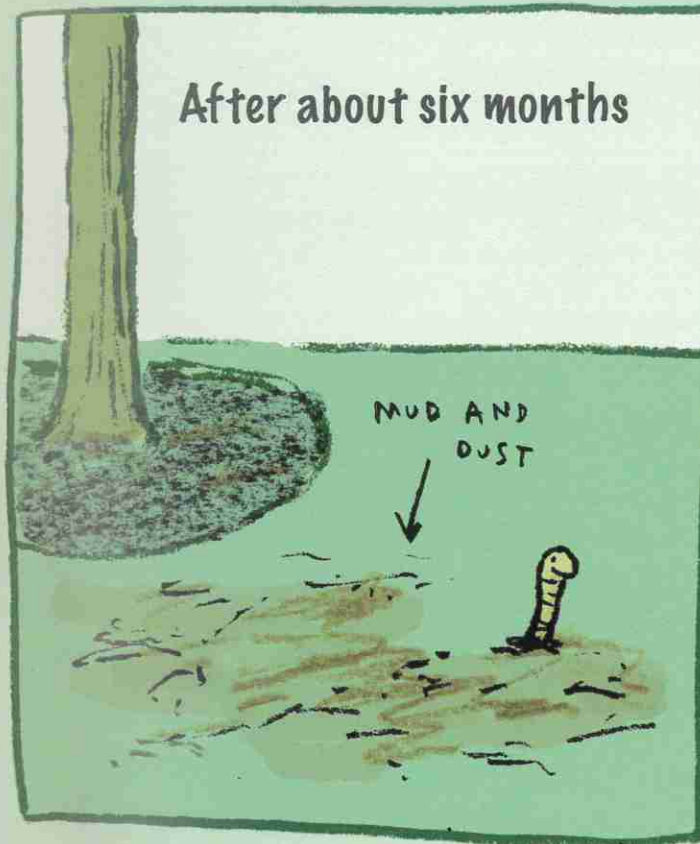


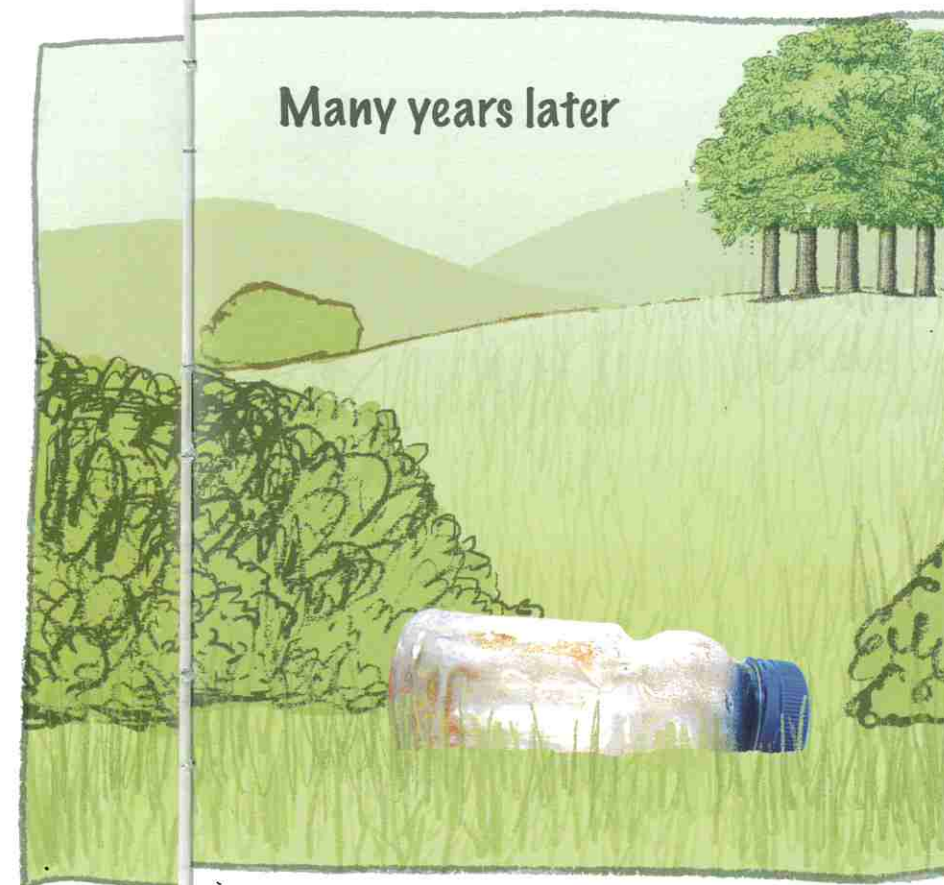
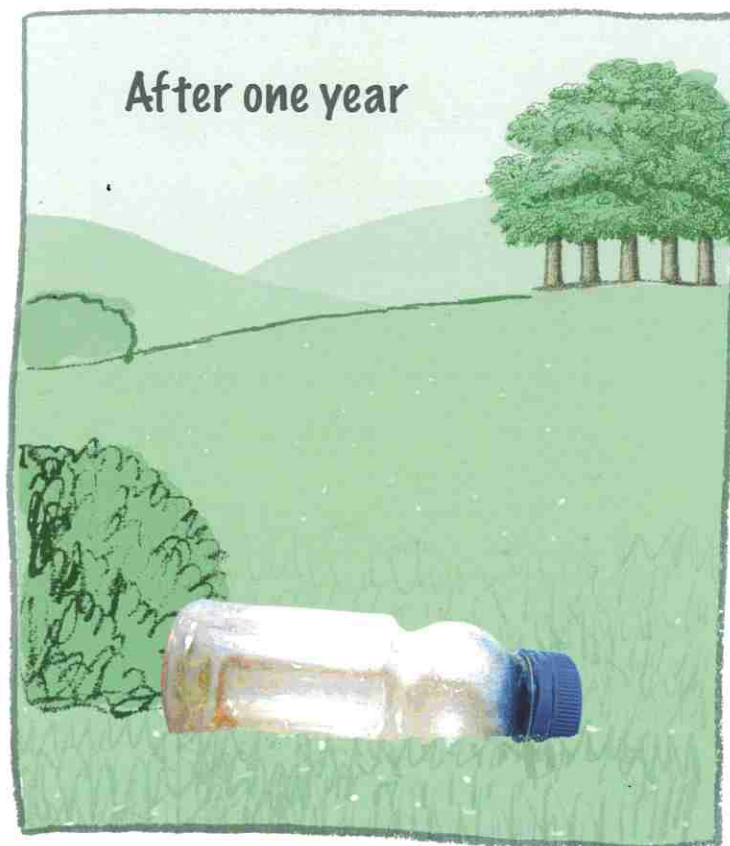
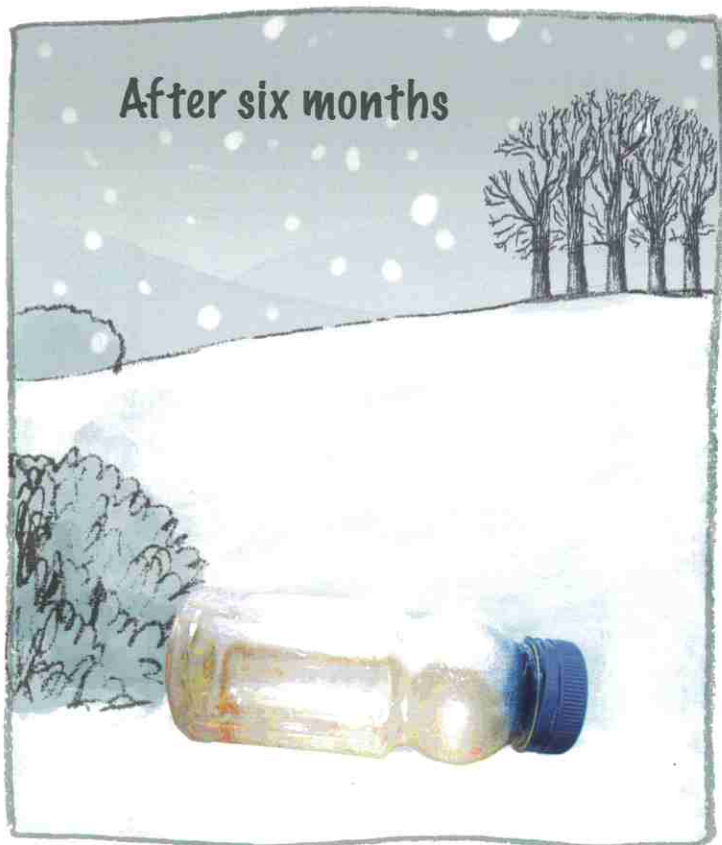
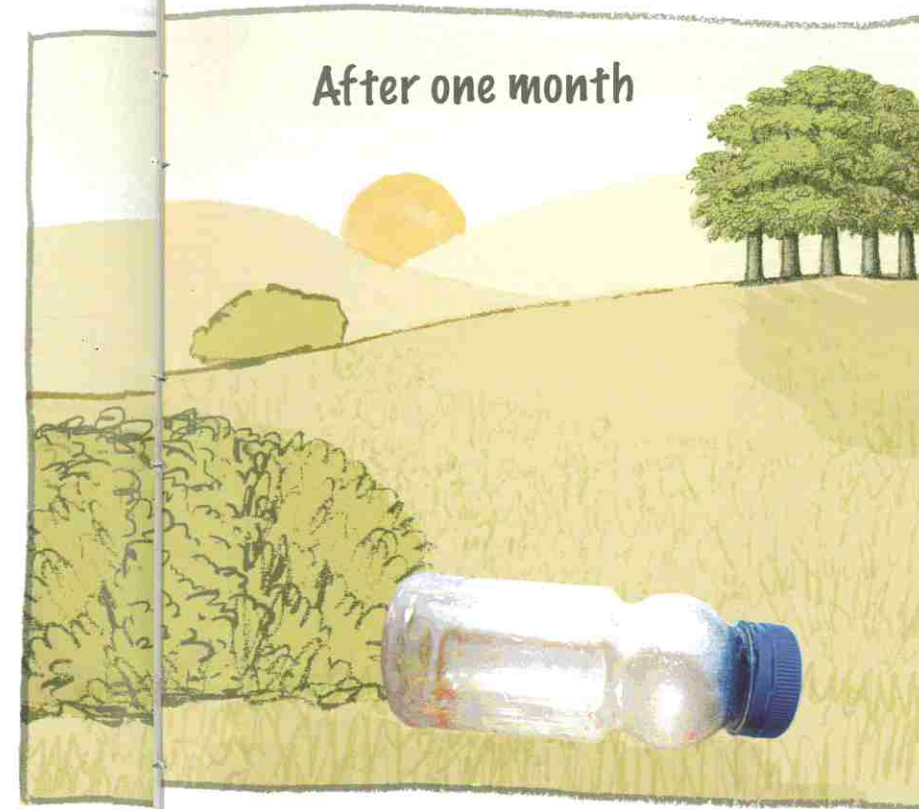
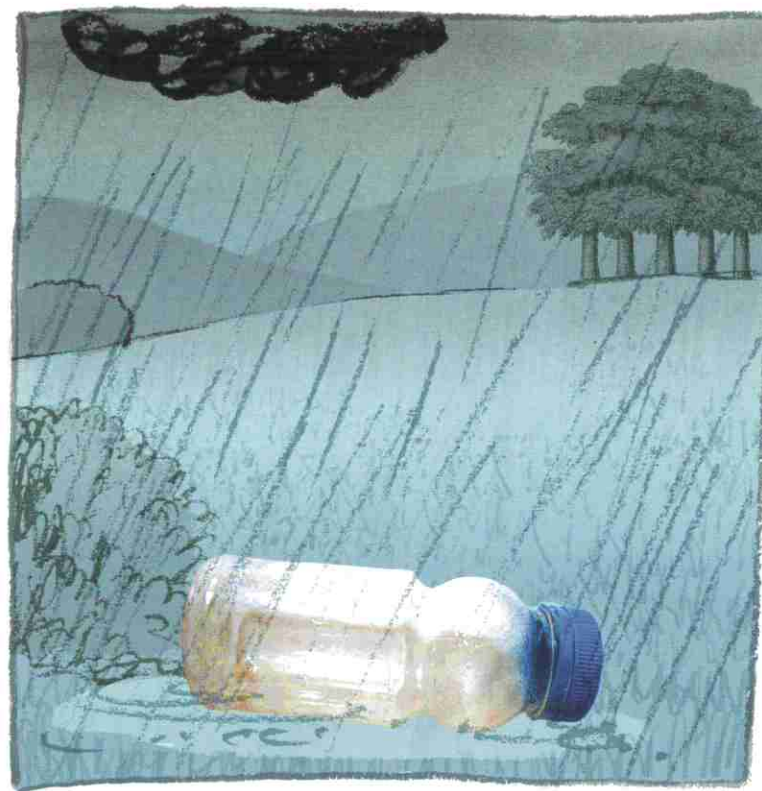
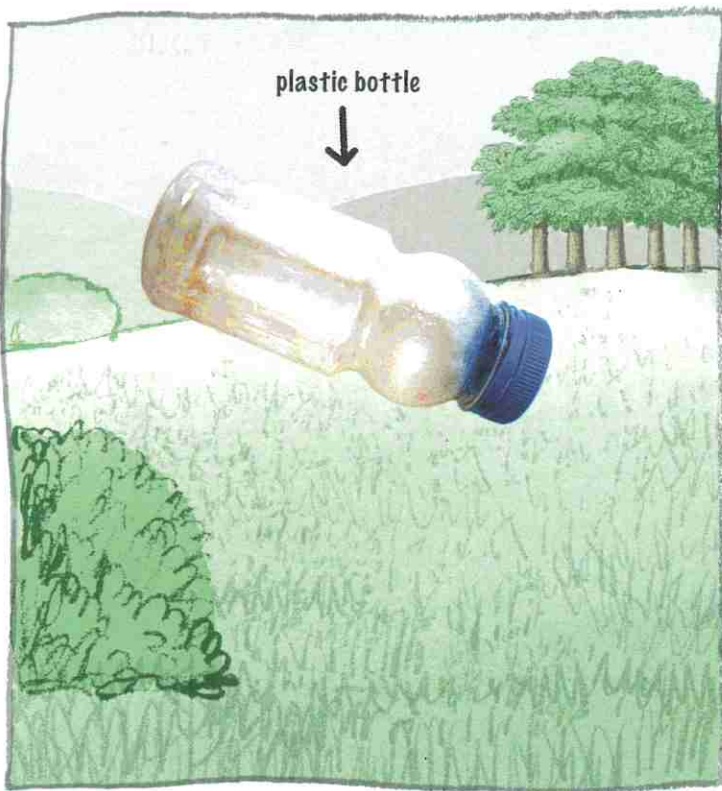
leaf - six months

It will go yellow,
thin, until it's
not see them,
breaking it down.
The core or any
degrading.



APPLE CORES
TAKE ABOUT
EIGHT WEEKS
TO BIODEGRADE





Plastic is different.
it just stays there.

For years

And y

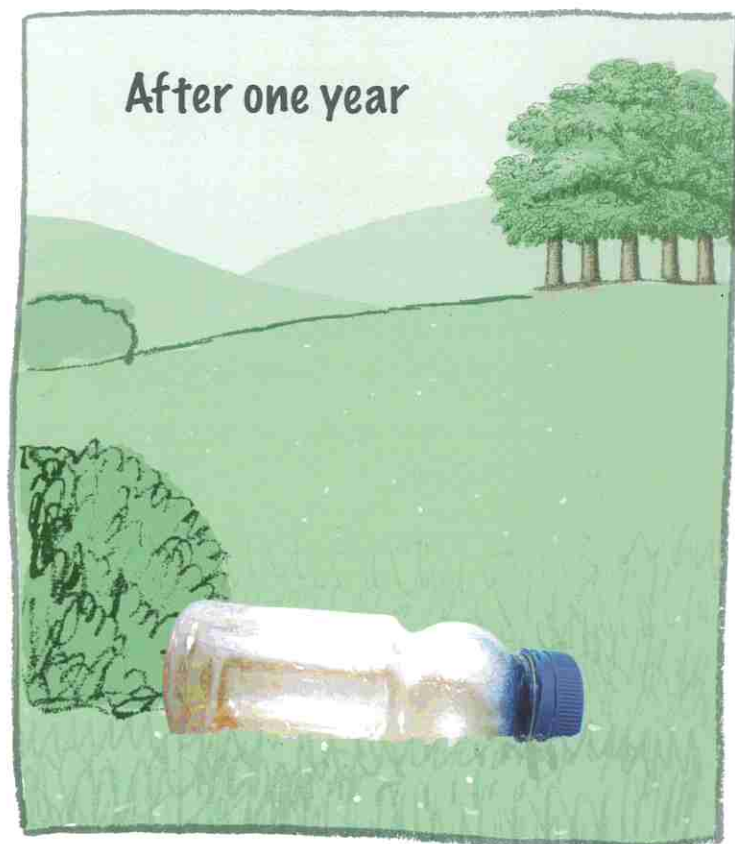
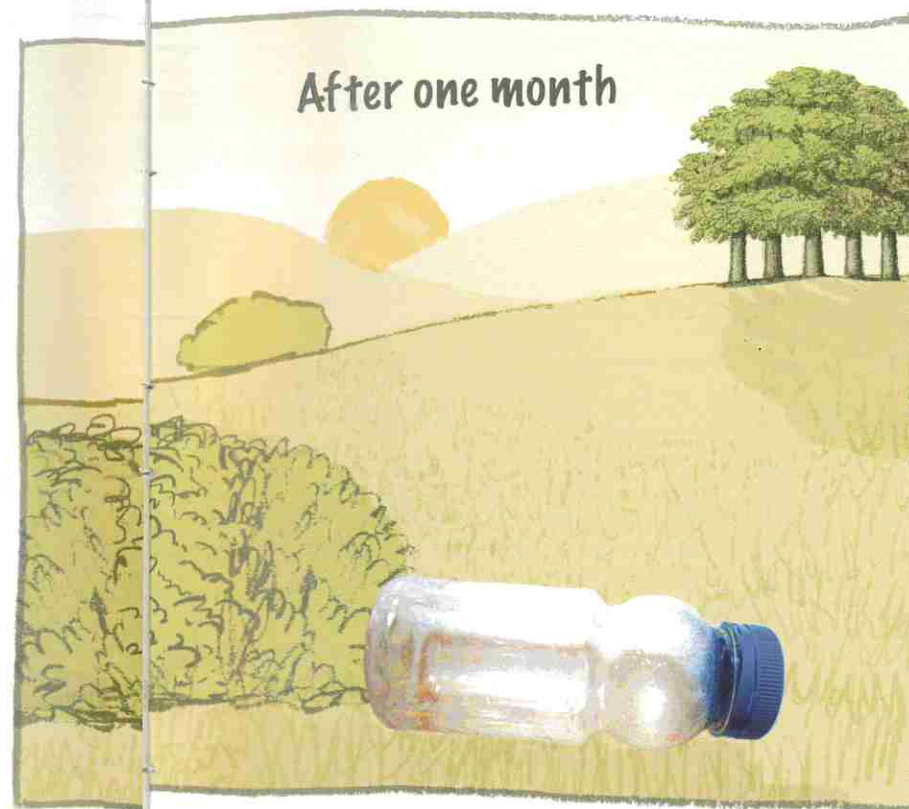
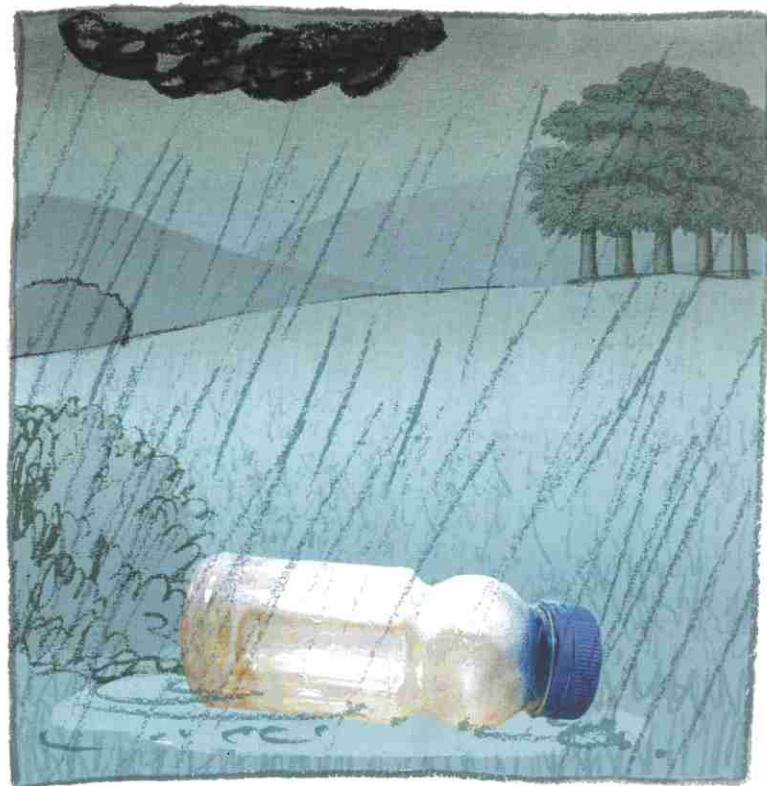
And

It doesn't biodegrade

Yes, really.

This makes plastic
super-useful, because
it lasts a long time.

But it also creates
a problem.



Plastic is different. If it drops to the ground, it just stays there.

For years.

And years.

And years.

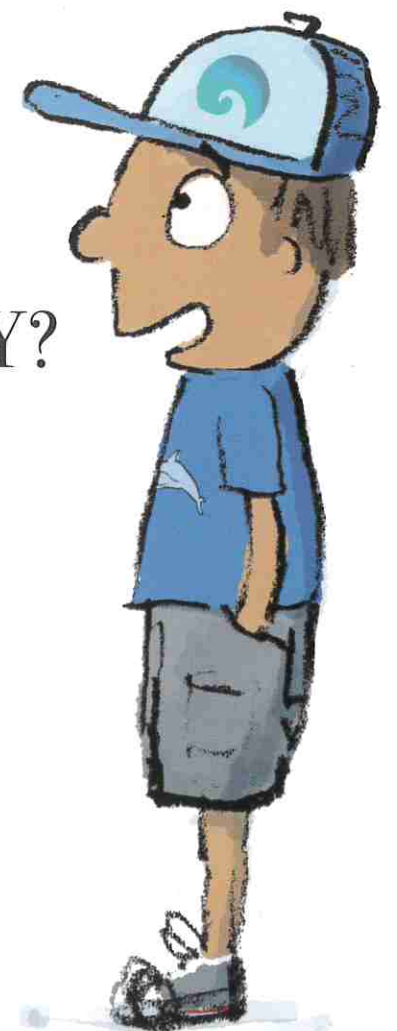
It doesn't biodegrade.

REALLY?

Yes, really.

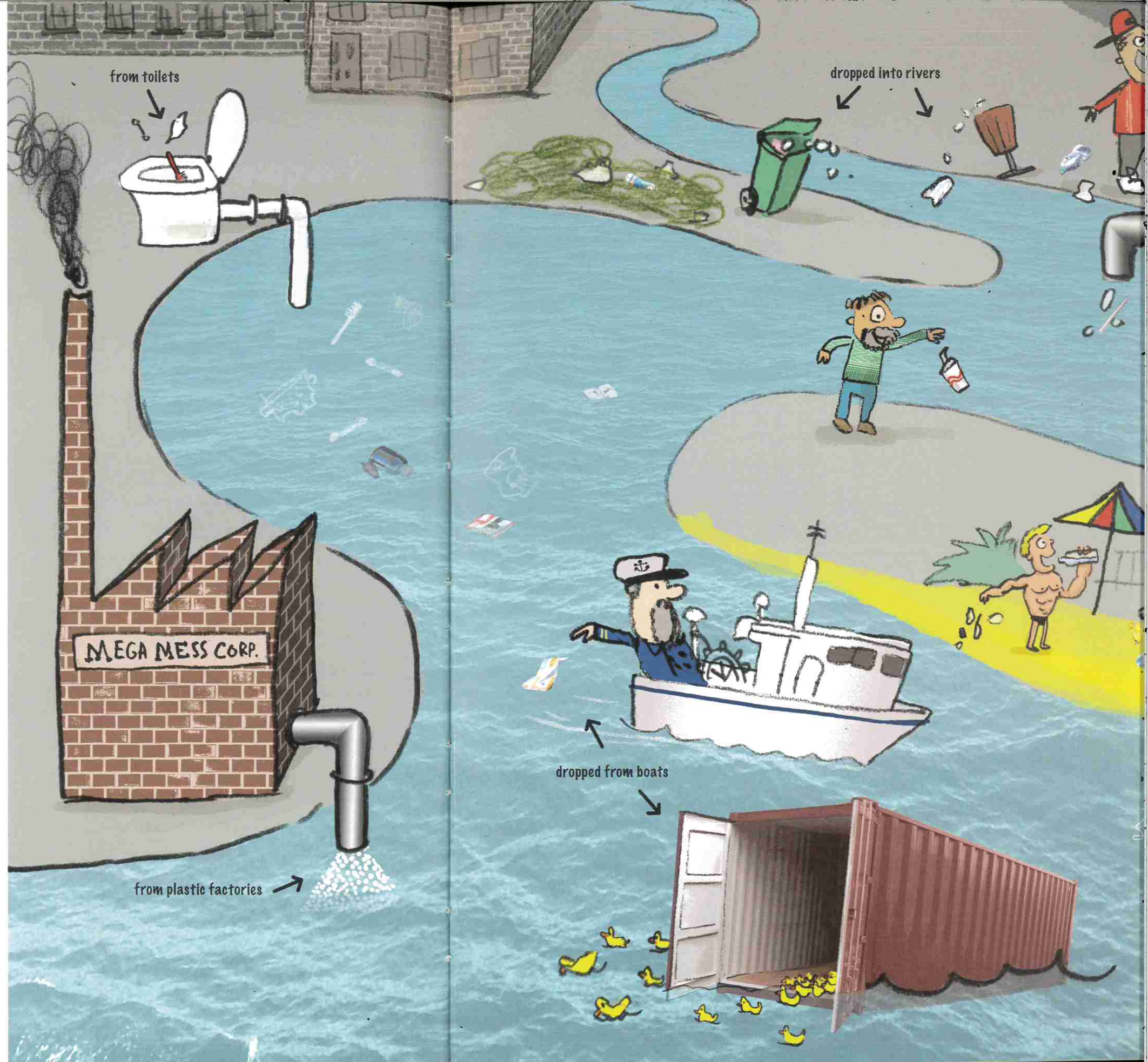
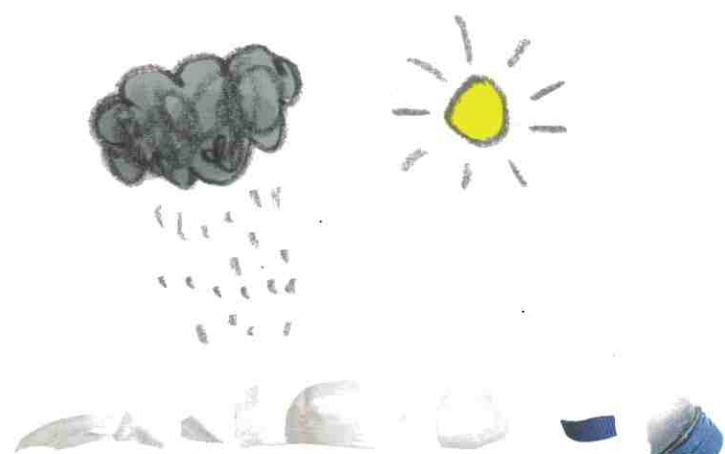
This makes plastic super-useful, because it lasts a long time.

But it also creates a problem.



If plastic ends up where it's not meant to be, it will stay there for years and years. Until eventually the weather breaks it down into smaller and smaller pieces. Of plastic.

A huge amount of this plastic eventually ends up in the ocean.



ot meant to be,
years. Until
it down into
plastic.

eventually



An underwater scene showing various pieces of trash floating near the surface. A large blue plastic bag is prominent, along with a red toothbrush, a yellow plastic bottle, and some green seaweed. Several small fish are swimming around the debris.

Some of it floats to the top of the ocean and stays there.

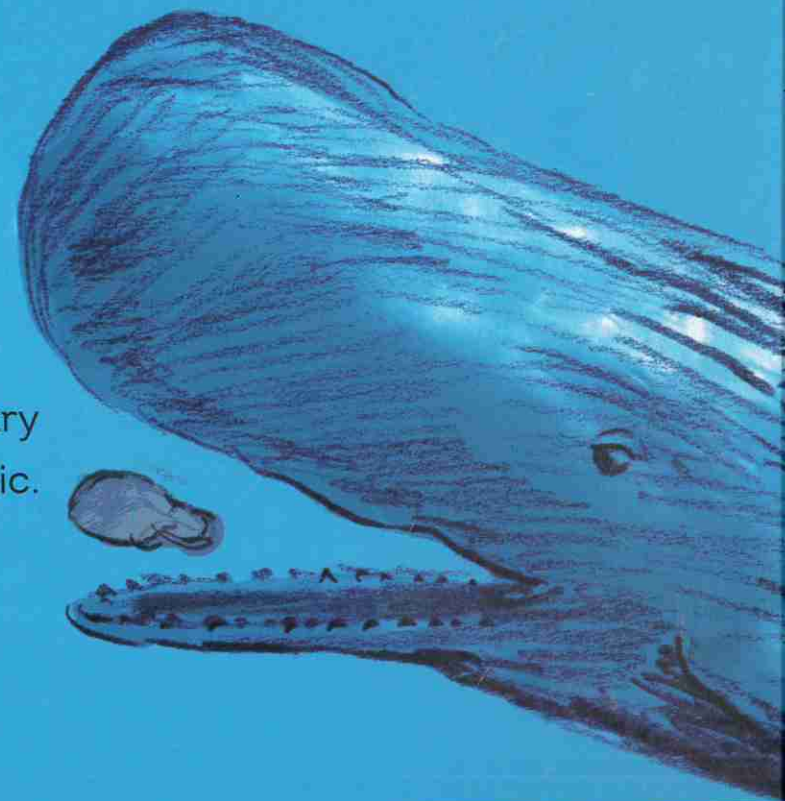
And some of it sinks to the bottom of the ocean and stays there.

All of this is a really big problem for animals.

An underwater scene showing a large, tangled mass of green seaweed and brown sticks. A yellow plastic bottle and a green plastic spoon are visible among the debris. Several small fish are swimming nearby.

Some of them get tied up in it.

Some of them try
to eat the plastic.





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All of this is a really big problem for animals.

Some of them get tied up in it.



Some of them try
to eat the plastic.



Because of circular currents in the oceans, the bits of plastic have collected together, creating five enormous garbage patches full of plastic.

The most famous is called the North Pacific Garbage Patch. It is currently THREE TIMES the size of France.



Most of the plastic is broken up into tiny bits you can hardly see. It is any piece smaller than a credit card.

These are everywhere. Animals that eat them. The plastic stays in their tummies, leaving them sick and sometimes dead.

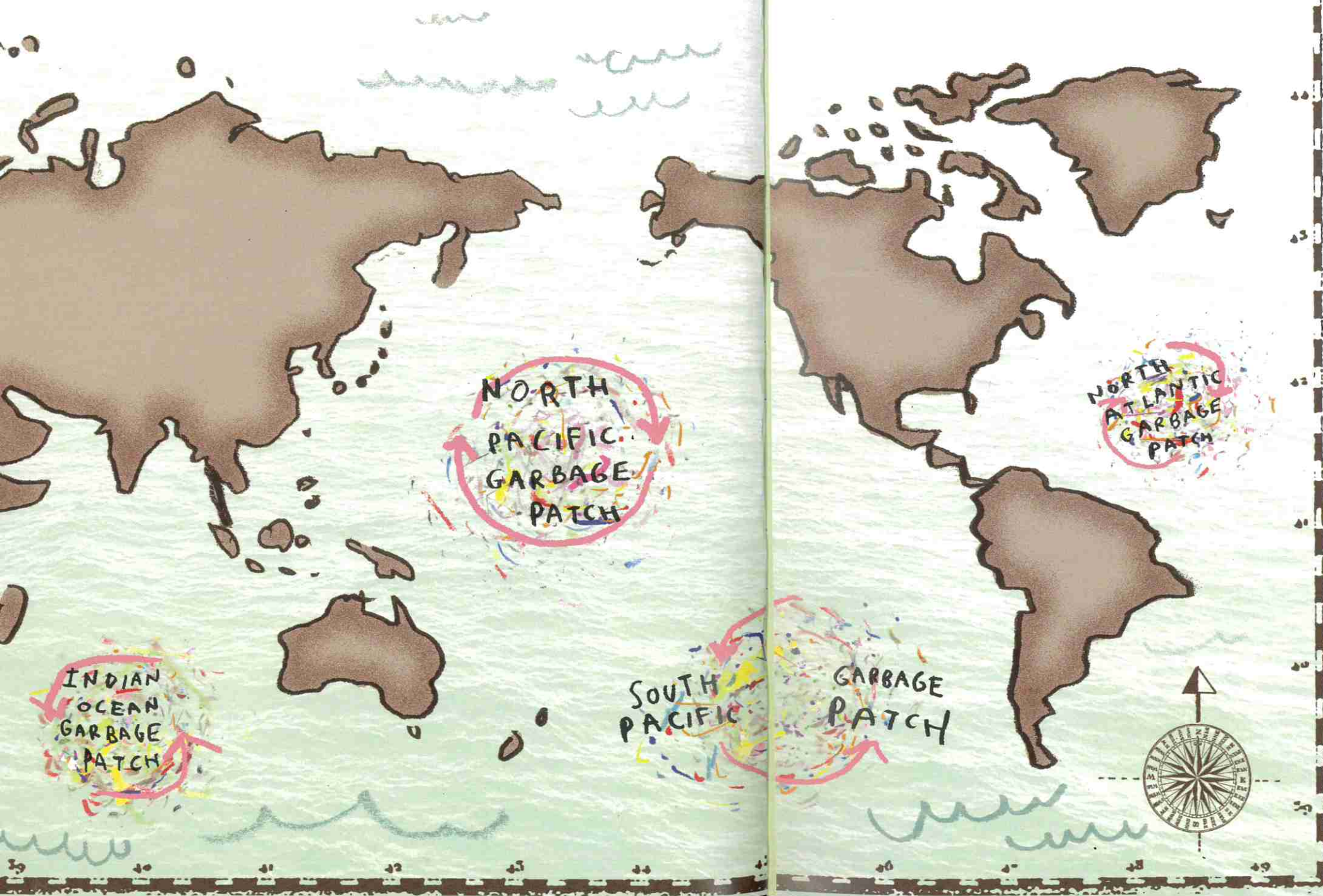
And the plastic has nasty toxins, so it can be poisonous to fish that eat it. And then all the toxins go up the food chain.



Some scientists say there is more plastic in the oceans than there is fish.

in the oceans, the bits of plastic have
five enormous garbage patches full of plastic.

the North Pacific Garbage Patch.
the size of France.

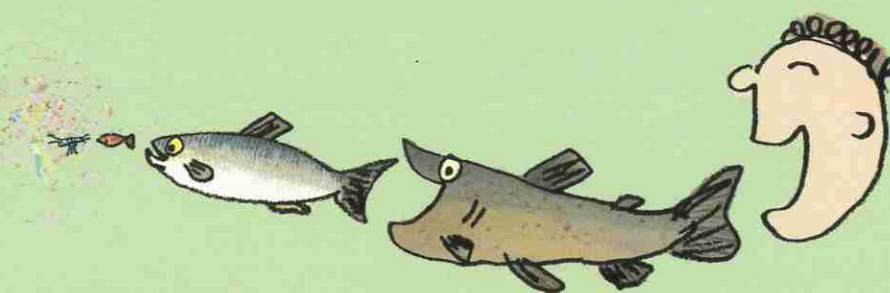


Most of the plastic in these patches has
broken up into pieces that are so small
you can hardly see them. A microplastic
is any piece smaller than this



These are even more of a problem than big
bits. Animals think they are food, so they
eat them. The microplastics fill up their
tummies, leaving no room for proper food.

And the plastics often carry and contain
nasty toxins, so if a small fish eats them,
it can be poisoned. And so might a bigger
fish that eats the small fish for dinner.
And then all the way up the food chain!

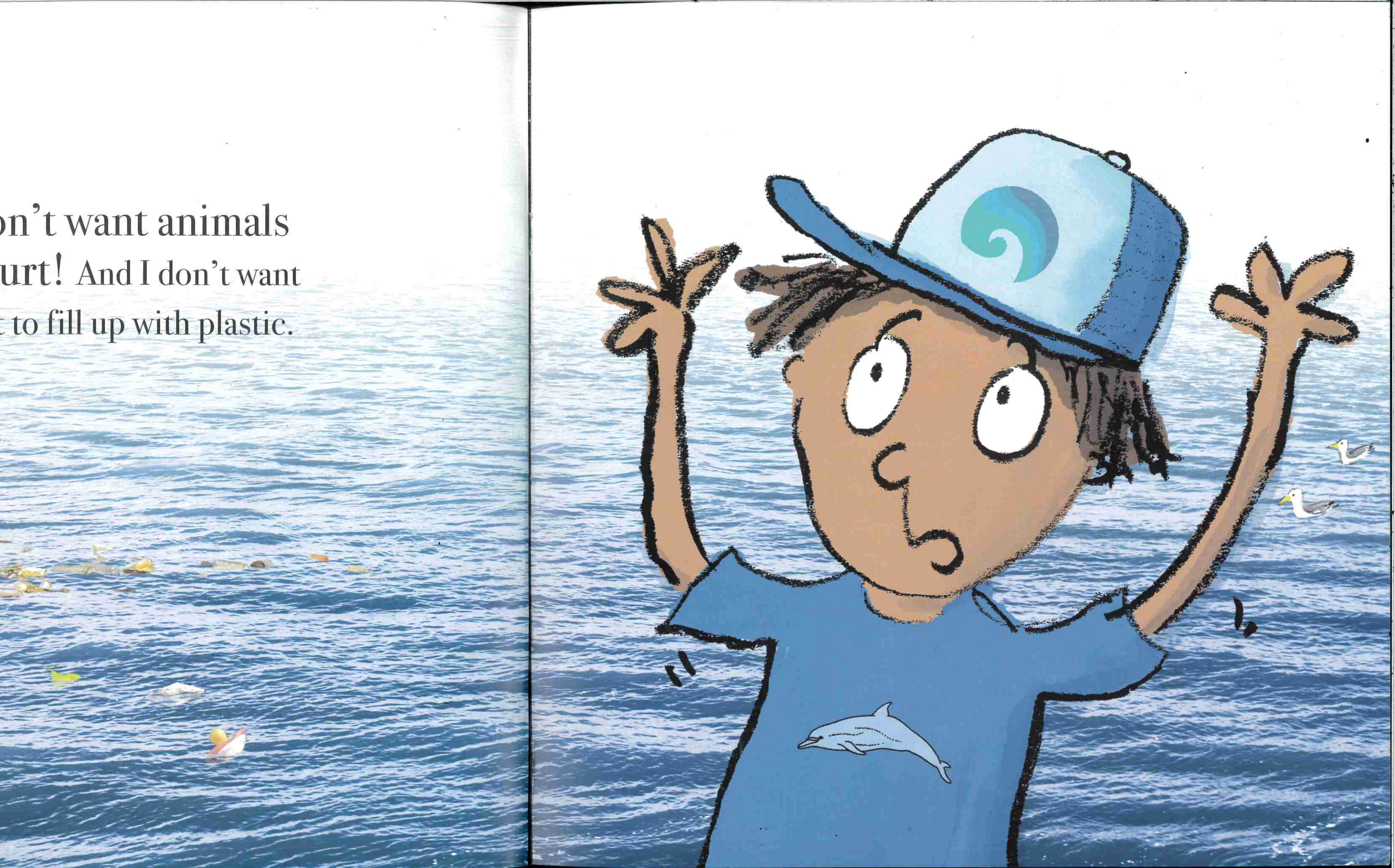


Some scientists think there will soon be
more plastic than fish in the sea.

But I don't want animals
to get hurt! And I don't want
our planet to fill up with plastic.



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hurt! And I don't want
to fill up with plastic.



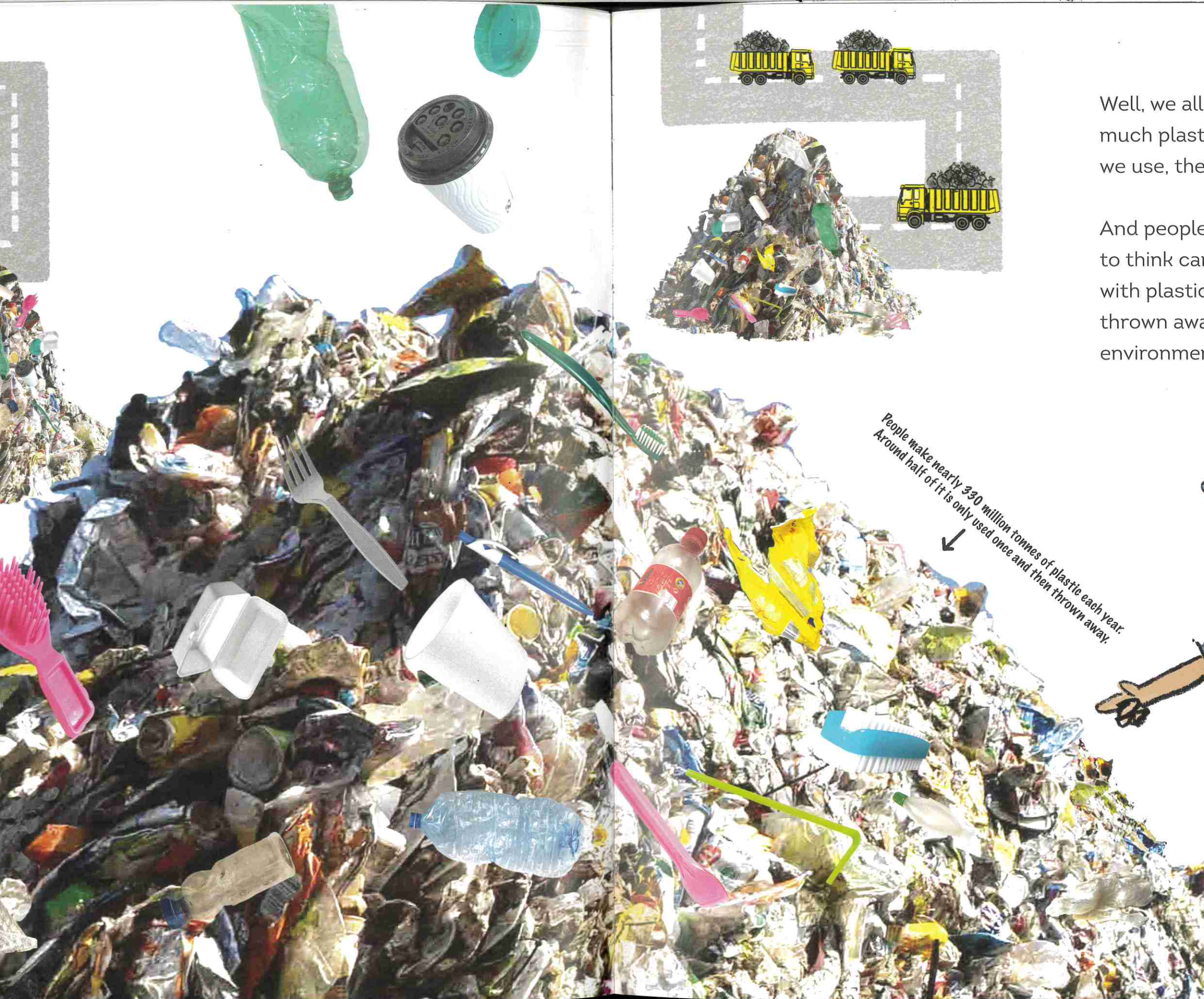


Well, we all need
much plastic we
we use, the less v

And people who r
to think carefully
with plastic. Crea
thrown away in m
environment for

People make nearly 330 million tonnes of plastic each year.
Around half of it is only used once and then thrown away.





Well, we all need to try to reduce how much plastic we use every day. The less we use, the less we have to clean up!

And people who make stuff for us need to think carefully about what they do with plastic. Creating things that will be thrown away in minutes, but stay in the environment for ever, isn't right.

People make nearly 330 million tonnes of plastic each year.
Around half of it is only used once and then thrown away.



Lots of plastic things are meant to be reused over and over again.
Let's make sure we do!



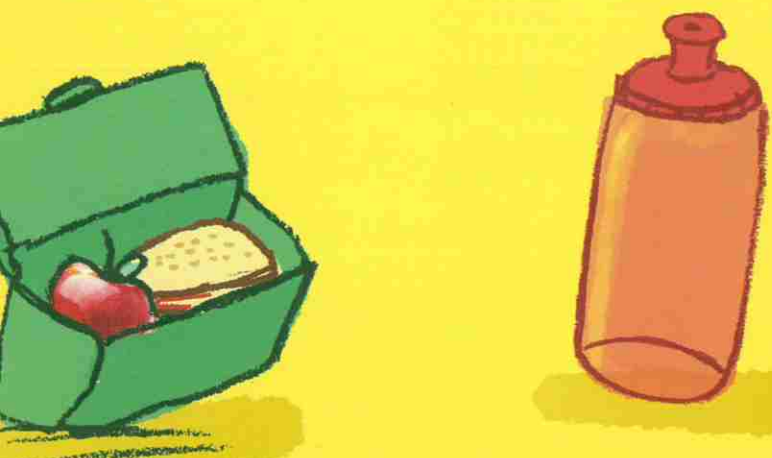
And if we have finished using a plastic thing, perhaps we can pass it to someone else.



When the plastic stuff has been reused lots of times, it should be recycled so it can be turned into new plastic things, not just thrown away.



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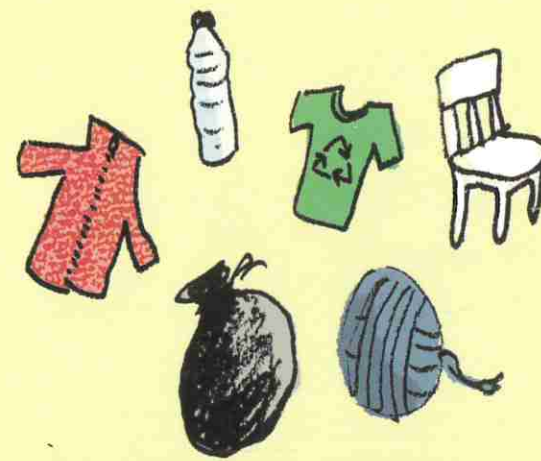
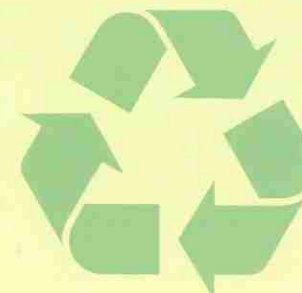
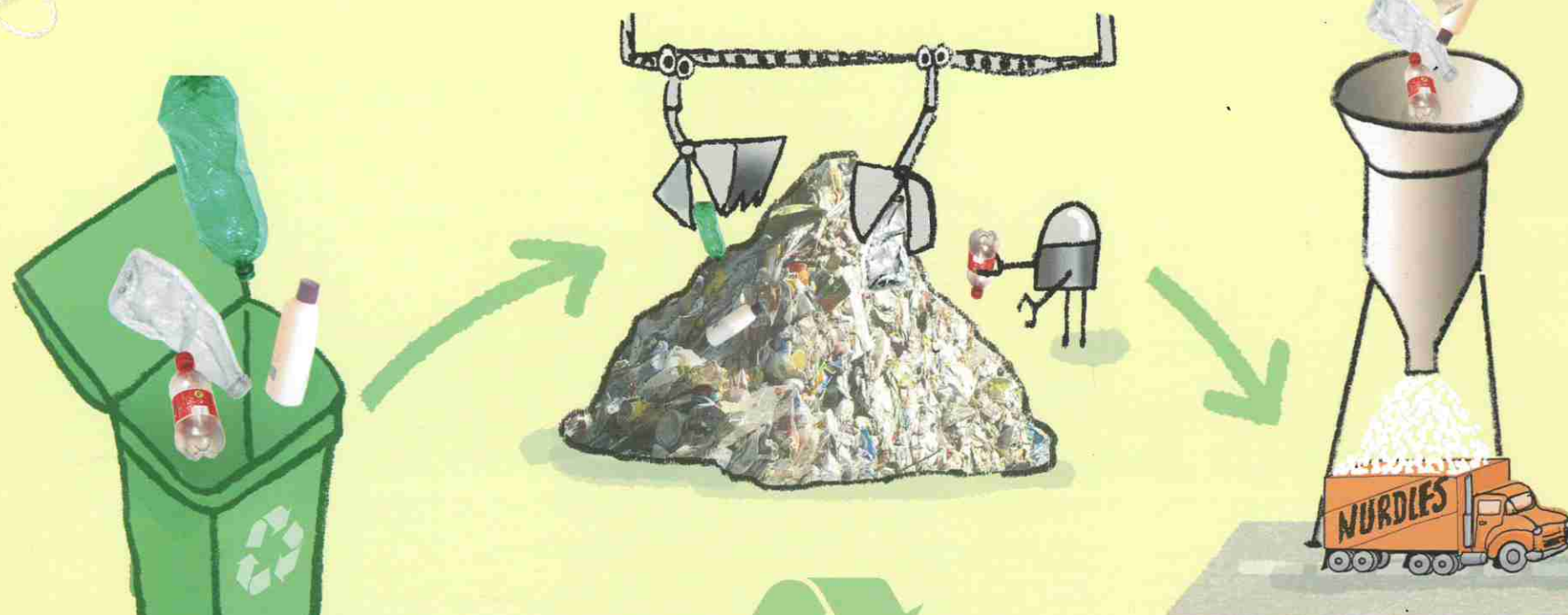
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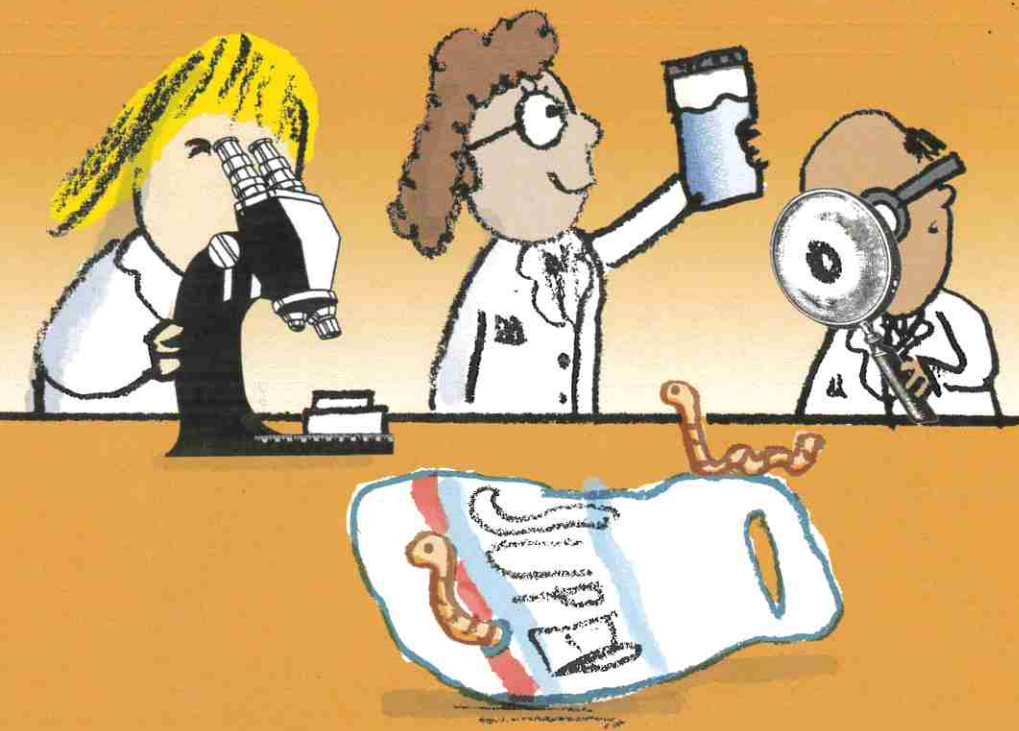


Reuse



When the plastic stuff has been reused lots of times, it should be recycled so it can be turned into new plastic things, not just thrown away.





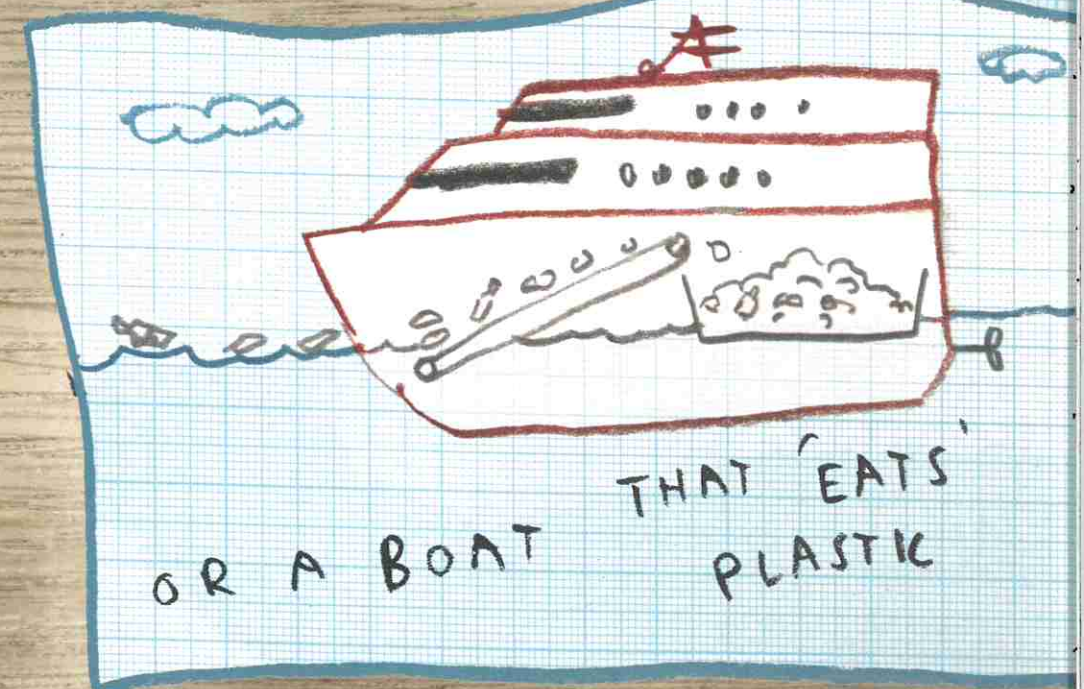
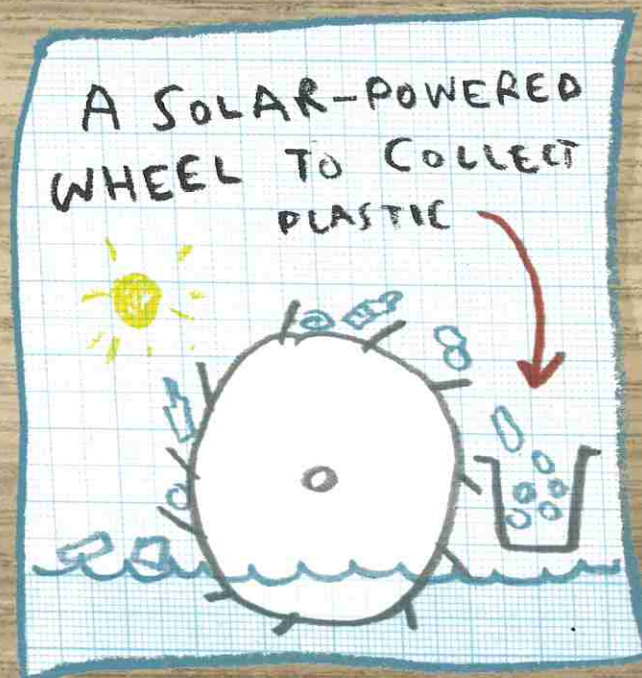
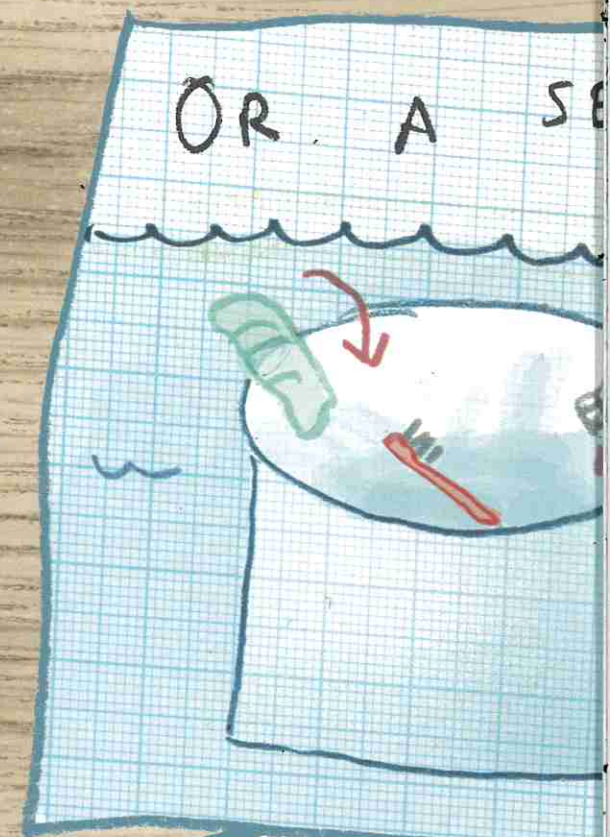
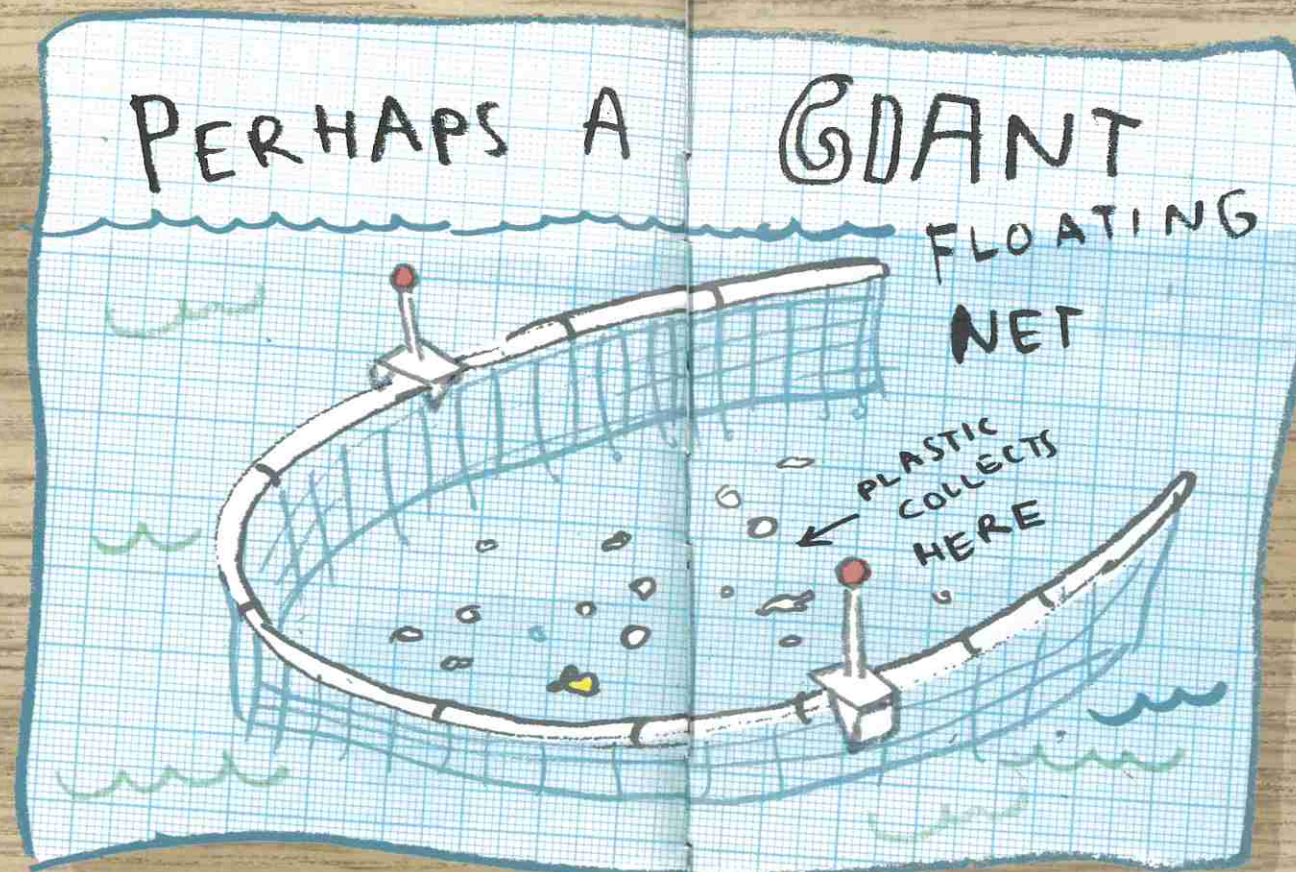
But plastic can only be recycled a few times before it stops being useful, and not all plastic can be recycled.

So environmentalists are teaching people about the problem, because everyone needs to help fix it.

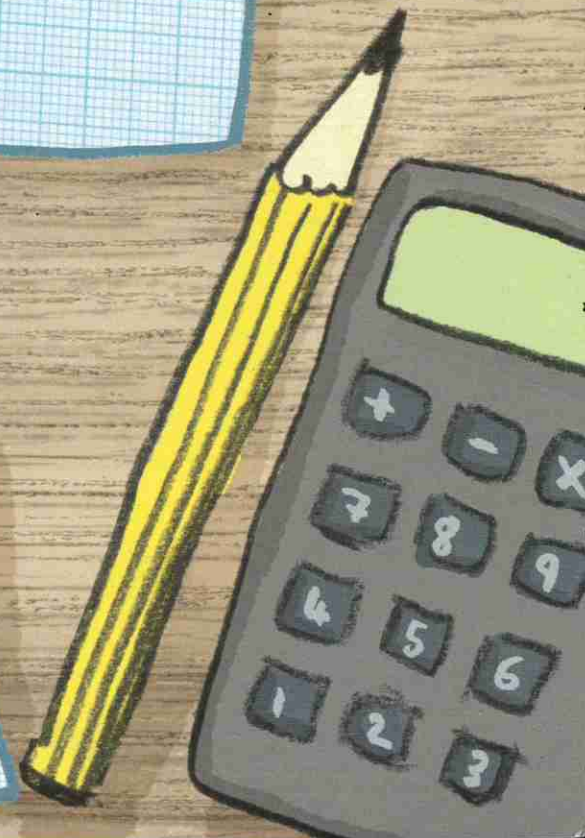
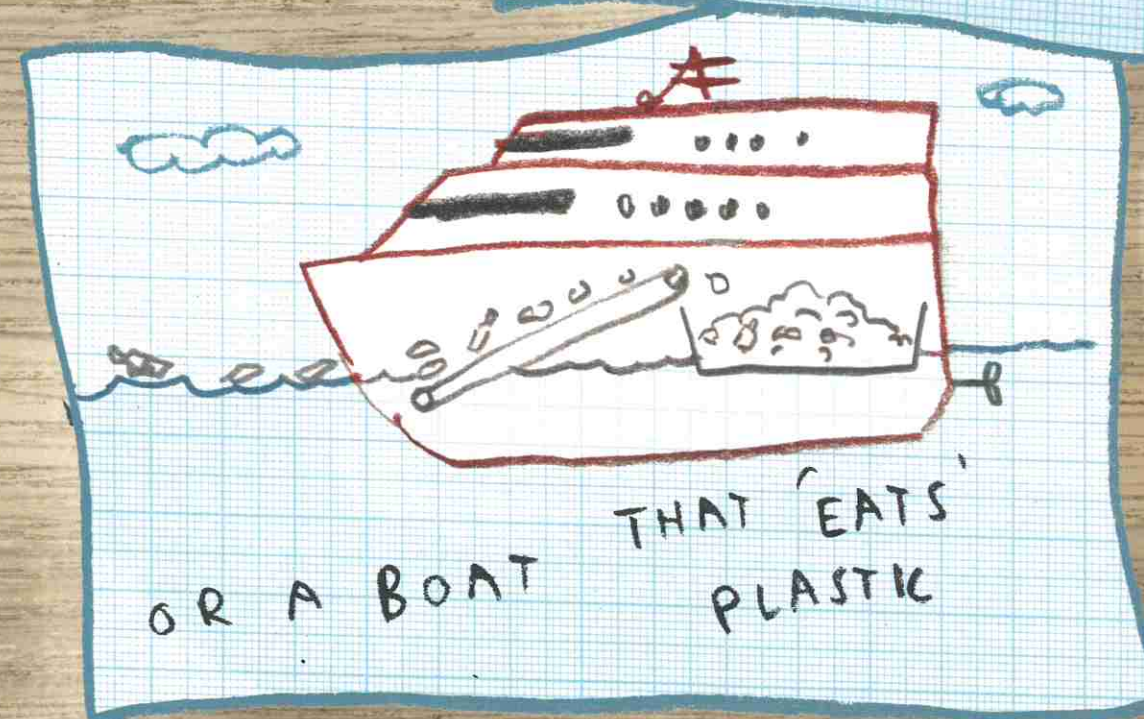
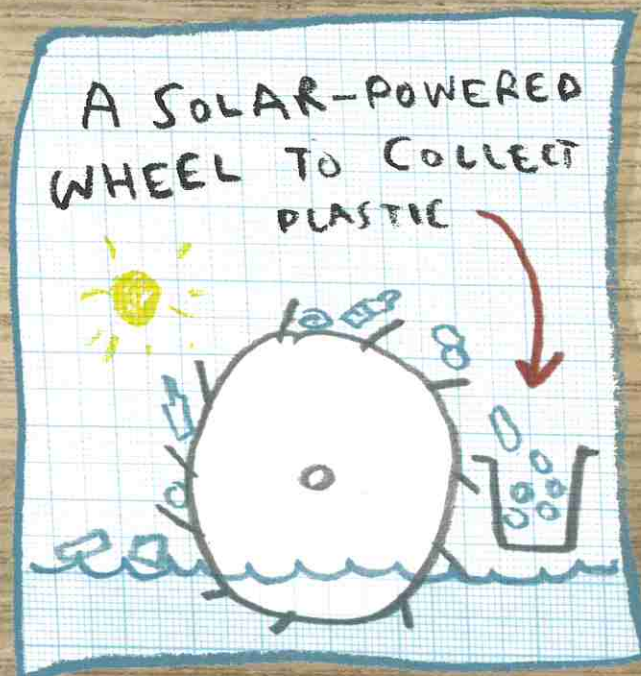
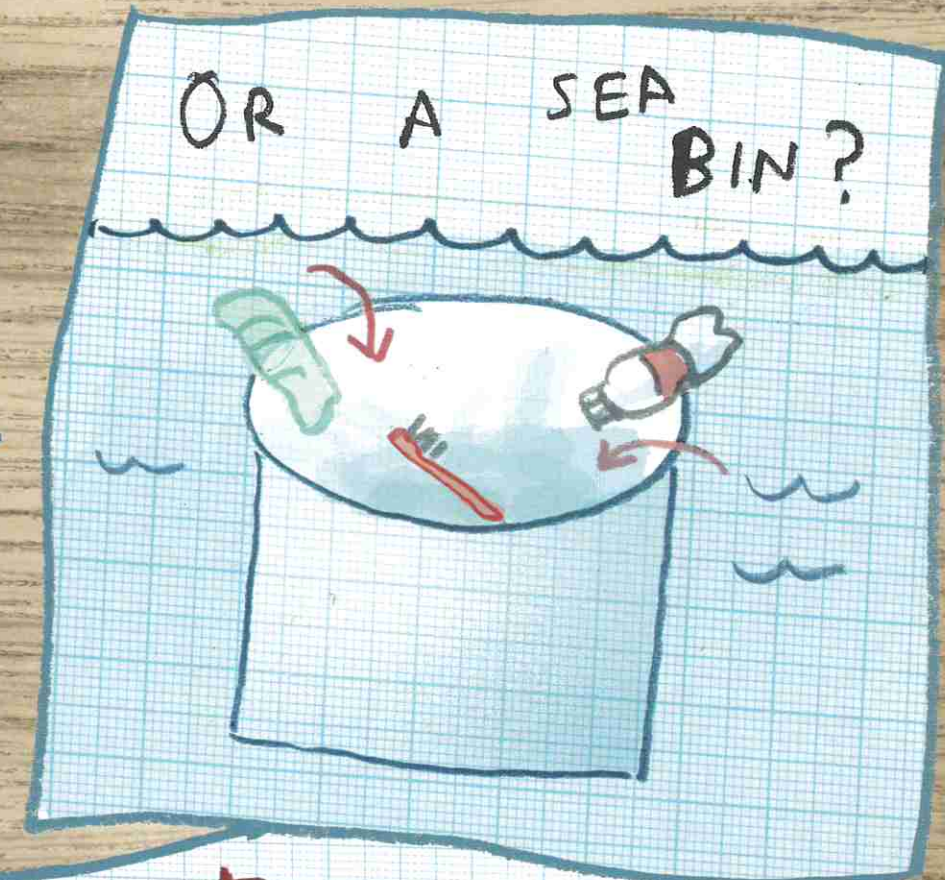
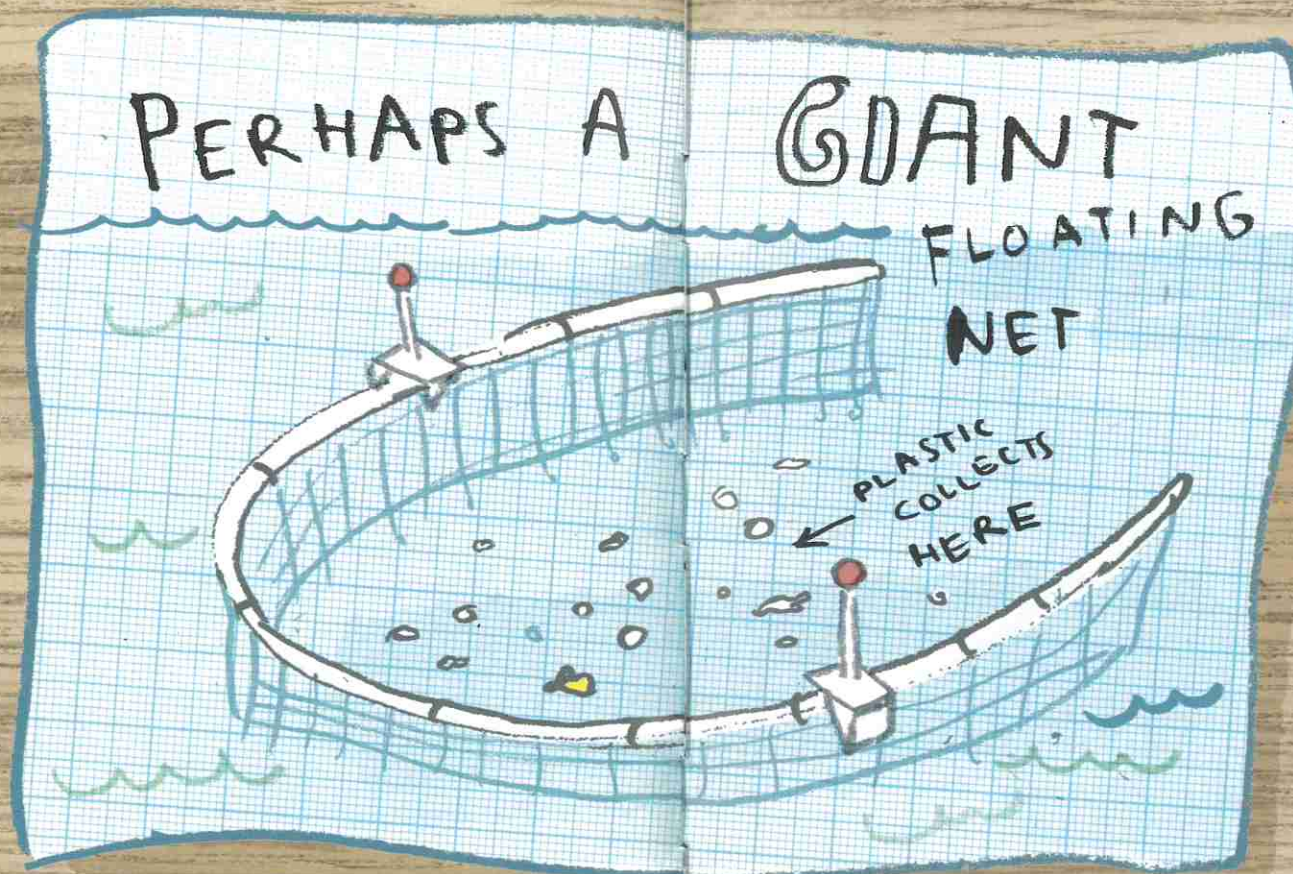


Scientists are coming up with clever ideas too, experimenting with special bugs which might help plastics biodegrade, and finding new materials for us to use.

And engineers are looking at ways we can clean up plastic in the ocean.



And engineers are looking at ways we can clear up the mess.



It'll take each and every person working together
to stop the planet filling up with plastic.

It's a big job, but I reckon we can do it.

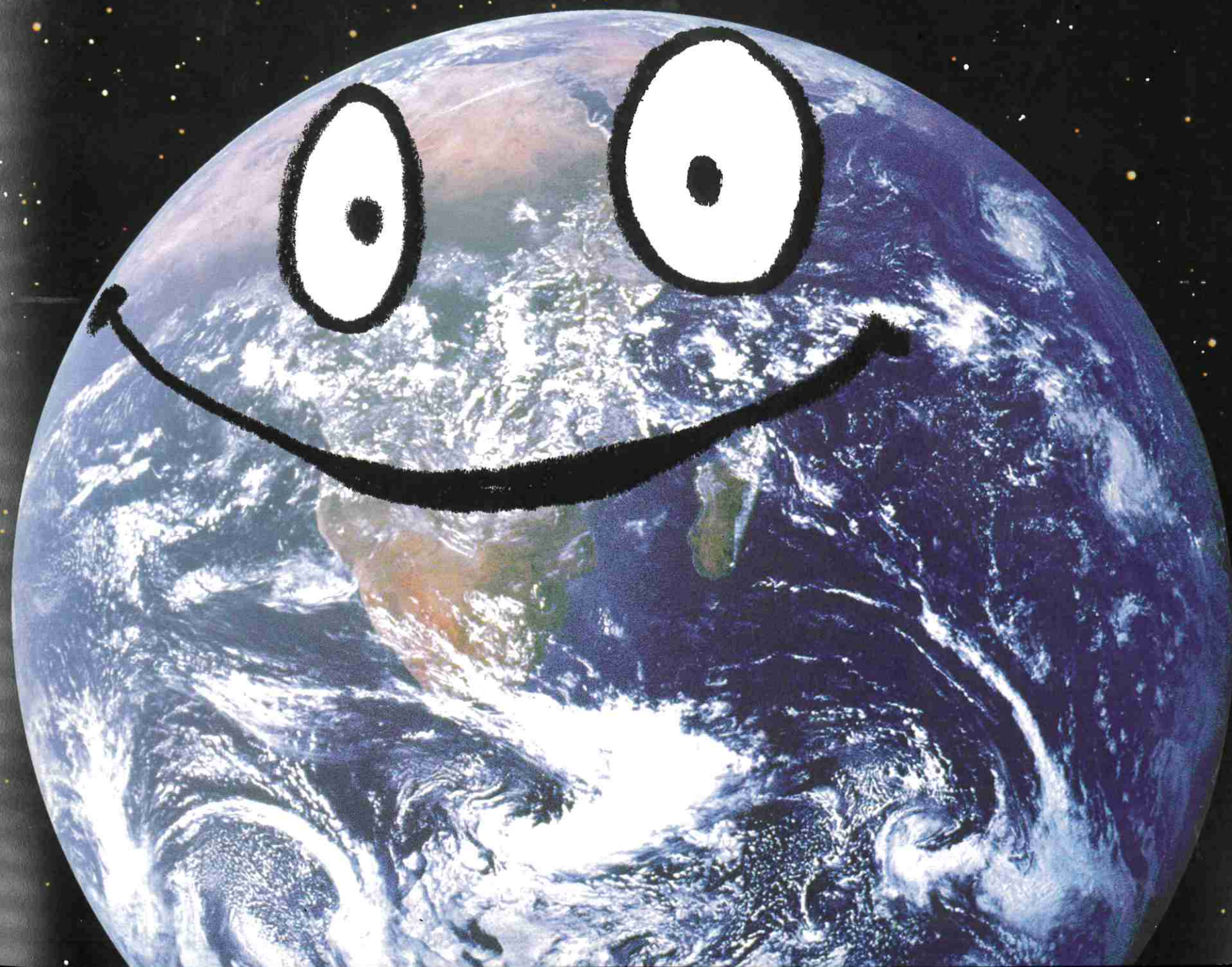
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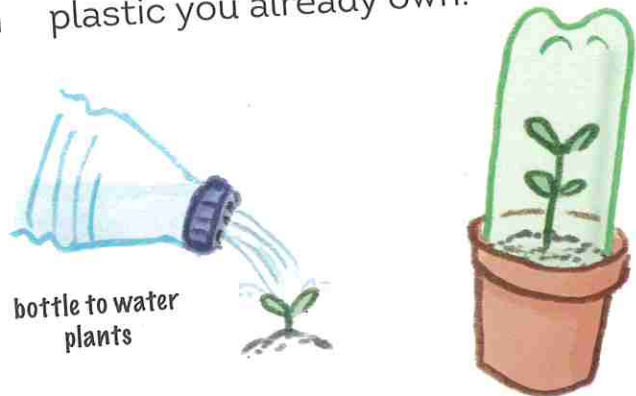
hanks for listening.



How you can help

There are loads of ways to help solve the plastic problem! You could...

- 1 Get creative and reuse the plastic you already own!



plastic bottle as a mini greenhouse



plastic trays make great paint palettes



pen pot made from tub

- 2 Ask your family to replace anything made from or packaged in plastic with more eco-friendly options.

- 3 Grab some gloves and take part in a clean-up near you - whether it's on a beach, in a park or on the street. You could do it for 2 minutes or 20!



Ask a grown-up to visit <http://beachclean.net> for some tips!

And you know, it's not just grown-ups who have BIG ideas...

HANNAH TESTA

knew that more people needed to learn about the plastic problem. By the time she was 14, she had created Plastic Pollution Awareness Day!

BOYAN SLAT

was just 16 when he realised how much plastic filled our oceans. Since then, he's invented a system called Ocean Cleanup, which gathers up plastic to be recycled.

Researching and writing this book changed my life. My hope is that reading it might change yours too. So, can you think of a big idea to help save the planet?



MY BIG IDEA

?

GLOSSARY

Bakelite	The first human-made plastic, named after Leo Baekeland.
Microplastic	Small, barely visible pieces of plastic that pollute the environment.
Nylon	A type of plastic often used for making clothes, rope and more.

How you can help

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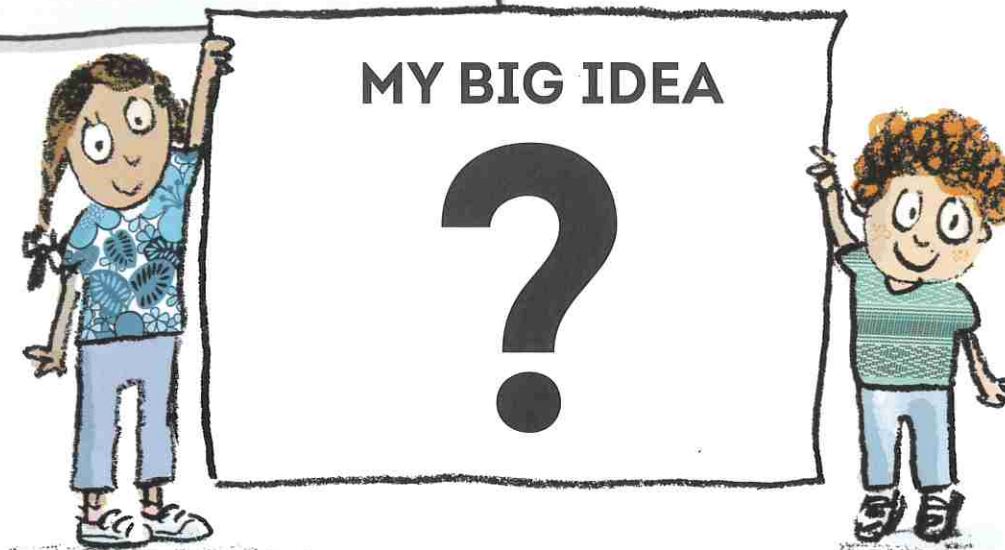
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MELATI AND ISABEL WIJSEN started campaigning against plastic bags in their home country of Indonesia when they were aged 10 and 12. Their campaign, Bye Bye Plastic Bags, has gone global.

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GLOSSARY

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