

BACK TO THE PLASTIC AGE

GEERT-JAN ROEBERS
MARGOT WESTERMANN
MICHEL SPIJKERS

ALL ABOUT A SOUPY MESS
& YOUNG HEROES

PLASTIC
SOUP
FOUNDATION





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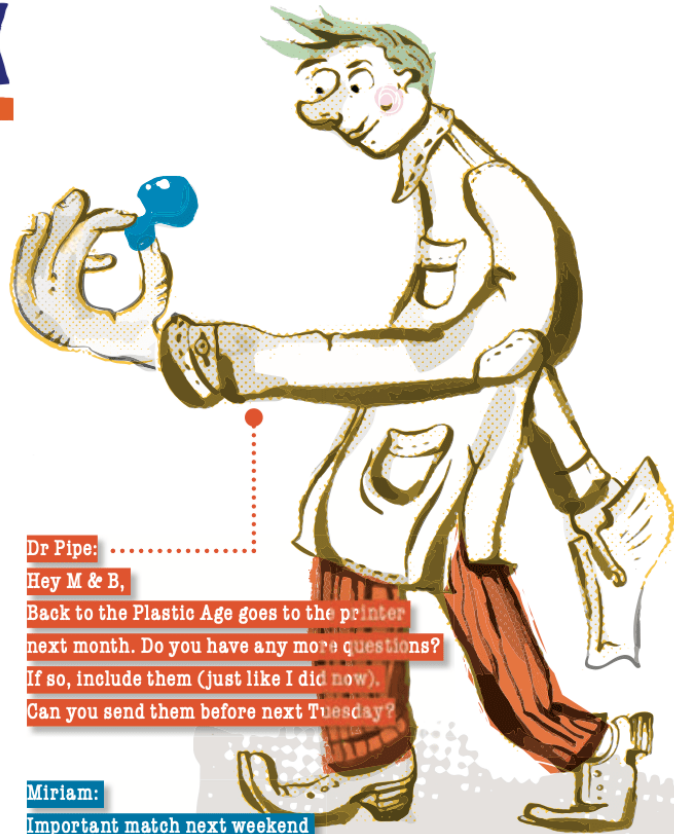
PLASTIC
SOUP

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ABOUT THIS BOOK



Dr Pipe:

Hey M & B,

Back to the Plastic Age goes to the printer next month. Do you have any more questions?

If so, include them (just like I did now).

Can you send them before next Tuesday?

Miriam:

Important match next weekend so have to practise a lot. Will be a day later. Is that okay?

Bram:

Works for me. Can't wait to see it! And I really enjoyed visiting the excavation site!



Dear reader,

I wrote this book for Bram and Miriam. He's 13 and lives next door. She's 14, and they're in the same school class. You could say we created this book together, because without them, it would've been very different.

Let me first tell you something about myself. I'm a 42-year-old historian and archaeologist. The latter means I do excavations and the former means I study the past. In other words, I'm fascinated by history. I specialise in the period between 1950 and 2030. That's what we now call the "Plastic Age".

The end of the Plastic Age is more than a hundred years behind us. It was a time when two important world issues took centre stage: the climate crisis and problems due to the substance this period is named after: plastic. People caused these problems, which also gave them an advantage when it came to solving them. And in the end, they did. So, it was an interesting and informative period.

When Miriam and Bram visited an excavation site where I was working, they had loads of questions for me. This made me realise that today's children know very little about the Plastic Age. That inspired me to write the book you're now reading.

Of course you're familiar with plastic because we're still using this amazingly, handy material. But nowadays it's incomprehensible that it was once thrown away. Especially when you're aware of the problems that it caused.

The Plastic Age wasn't even that long ago – sometimes you still stumble across a plastic bottle cap or lollipop stick – but it's surprising to see how differently people thought back then. Not only about plastic, but also about the world. Fortunately, this has changed. As so often happens, the change started with a handful of people taking action. Especially children. In this book you'll meet the heroes of that time. They came from all over the world, and you may already recognise them from streets that were named after them. Soon you'll know their stories too.

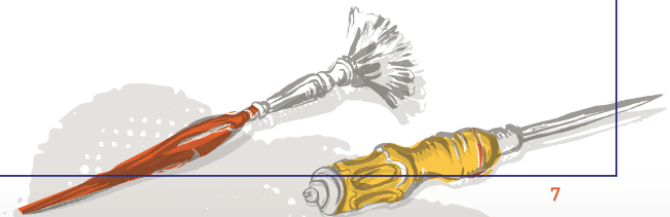
Oh yes, throughout the book you'll see **TEXT MESSAGES LIKE THESE**: comments, questions, and answers that Bram, Miriam, and I shared. We placed these in the book before it was printed: when they were reading it on the computer. I initially wanted to remove our messages, but they thought it made things clearer. So, we left it as is – making this book even more of a collaboration.

Quickly turn the page to start reading a great story about perhaps the most amazing period of our history.

Welcome to the Plastic Age!

Dr Peter V. C. Pipe, Ph.D

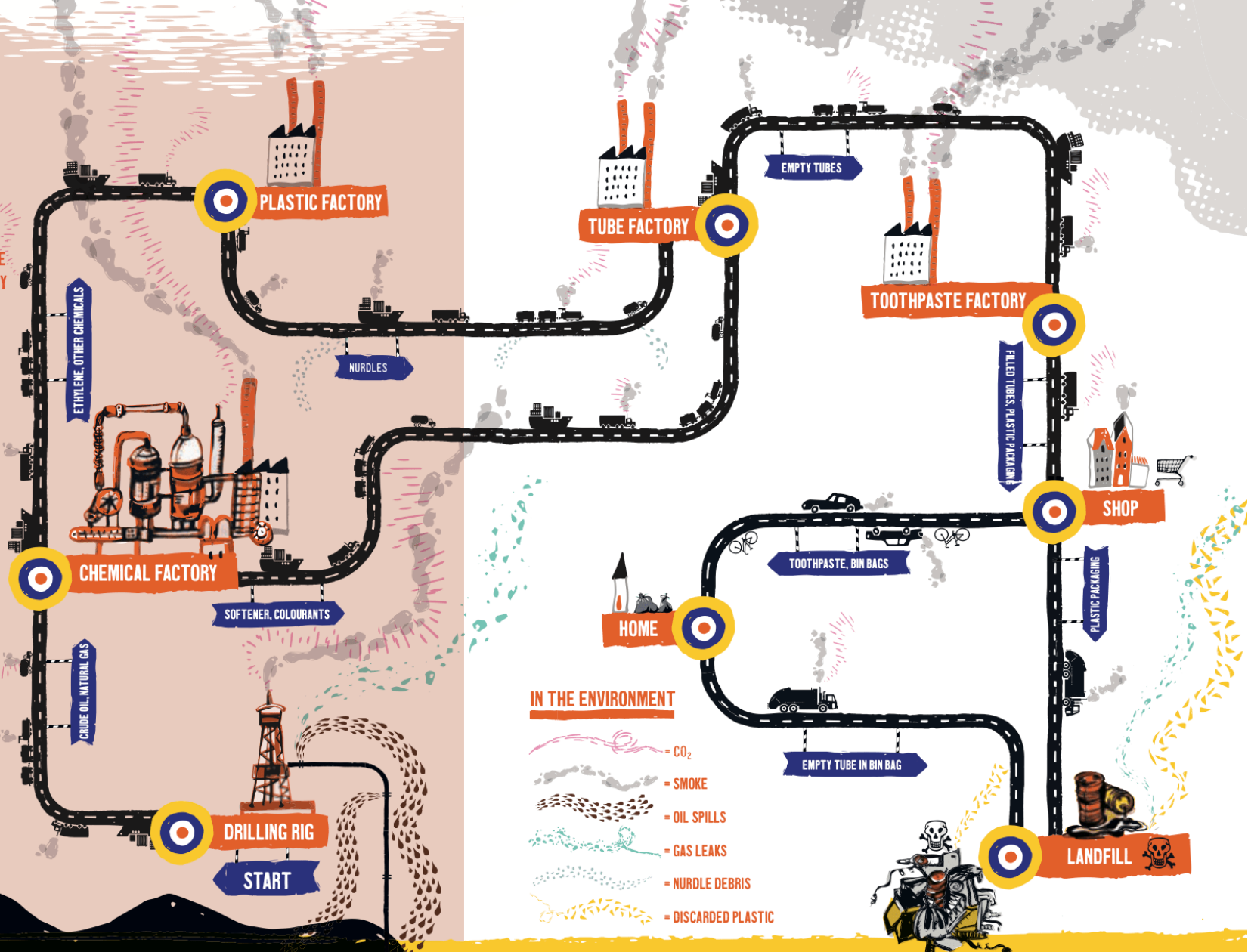
16 June 2132



HERE YOU SEE HOW PLASTIC WAS MADE, USED AND DUMPED IN THE PLASTIC AGE. AND THAT SMELLY FUMES, SPRAYS AND SPILLS WERE THE ORDER OF THE DAY. FOLLOW THE TOOTHPASTE TUBE FROM ITS SYRUPY START TO ITS SMOKY END.

PLASTIC PELLETS

During the Plastic Age, most plastic stuff was made from meltable plastic (thermoplastics). This happened in two different factories. The first was the real plastic factory. It made plastic pellets from chemicals, each smaller than a pea and usually transparent. These 'nurdles' were then transported by ship, train or truck to factories that made plastic things out of them. There the nurdles were melted, mixed with colourants and sometimes other chemicals, and then poured or pressed into moulds.

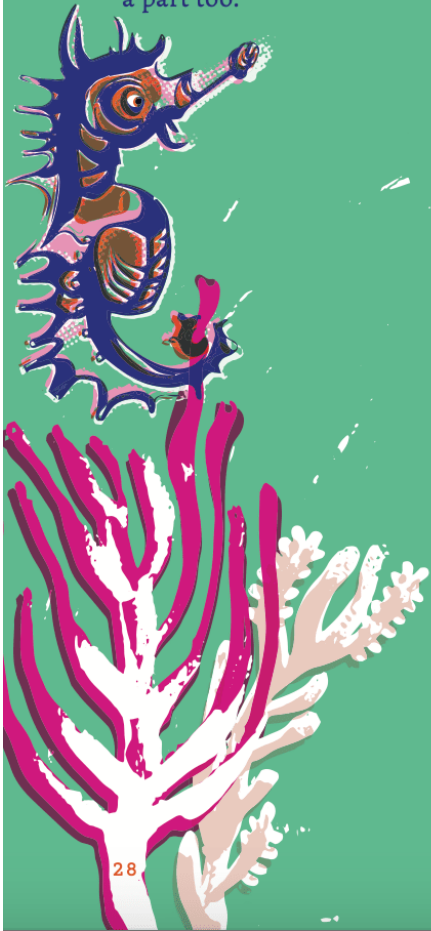


FROM CRUDE OIL...

...TO WASTE

SEAHORSES

Seahorses are strange fish. They're not fast, but they're very cute. They had a tough time during the Plastic Age. This was mainly due to climate change, but plastic played a part too.



UNHURRIED HUNTER

It sounds strange for such slow swimmers, but seahorses are hunters. They hunt small sea creatures. Not by swimming quickly after them, but by waiting patiently. If a tiny shrimp darts past its snout, the seahorse will swallow it at lightning speed. Sometimes they accidentally do the same with a piece of microplastic.



CURLY TAILS

There are about 50 known species of seahorses. The largest is the size of a cucumber, the smallest is smaller than a sugar cube. They have a prehensile tail which they use to hold on to a branch of coral or a clump of seaweed.



DYING CORAL

Many seahorses live on coral reefs. Some species even look exactly the same as the coral they live on. They don't stand out on the coral reef, but they do elsewhere. Between 2000 and 2050, coral reefs deteriorated. Climate change made the seawater too warm for the coral. And plastic became entangled in it, causing the coral to die.

SHOPPING BAGS

SLOPPY SHOPPERS

In 1950, the Plastic Age was just beginning. Plastic bags did not exist yet; everyone had a cloth shopping bag at home. You always took your bag with you when you went shopping. This lasted a decade or more.

The Plastic Age was at its peak in 2000. Hardly anyone had cloth bags anymore. Shops gave away plastic bags for free: good advertising for the shops with their name printed on the side. At the market, all groceries were put into a thin bag. Made of plastic, of course.

From 2004, things changed. In more and more countries, free bags were no longer allowed. The thin white flimsy bags were the first to be banned. And eventually people felt embarrassed carrying plastic shopping bags around. By 2030, almost everyone had a sturdy bag at home again. Or sometimes three. Because you couldn't go shopping any more if you didn't take your own cloth bag.

BAG BAN

After 2004, thin plastic bags were banned in more countries. It started in Africa and southern Asia. In the Netherlands, plastic bags were no longer free from 2016 onwards. But for a small amount, you could still buy a plastic bag.

LITTLE BAG PROBLEMS

A thin bag weighs almost nothing. But once on the street or in the countryside, the wind quickly got hold of it. So it ended up stuck in the grass, a prickly bush, the water or wherever. Sometimes this just looked a mess, but other times, the bag caused big problems. It could clog up a drain, sewer pipe or a donkey's intestine. Or it formed a pool of rainwater where malaria mosquito larvae could grow.

Miriam:

When were plastic bags banned completely in the Netherlands?

Dr Pipe:

Funny you should ask that: never. People and shops just stopped using them. After 2030, plastic bags were very rare (I have never found one).

THICK & THIN

These are the bags that were most commonly used in the Plastic Age.

1: THE TAKEAWAY BAG

Very thin. Used mostly at markets, takeaway restaurants and the fishmonger. Was usually thrown away as soon as you got home.

2: THE CARRIER BAG

Glossy thick plastic printed with the shop name. Available for free or almost free at the checkout. Was often kept at home for reuse (and then forgotten). Lasted a few days or weeks.

3: THE BAG FOR LIFE

Woven plastic fabric with a flat bottom. Not very expensive. Bought by people who wanted to reuse their bags. At home, they often had three of these bags too. Lasted a few months, sometimes more than a year.



EARLY RETIREMENT

There were some plastic objects that lasted a very long time. Others were only used for a short period. And certain things were thrown away in no time.

WHITE PATIO CHAIR
6 YEARS



YEARS

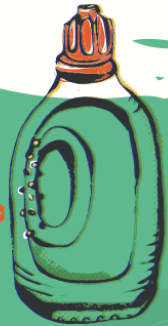
CLOTHES PEG
4 YEARS



FLIP-FLOP
2 YEARS



MONTHS



LAUNDRY DETERGENT BOTTLE
1 MONTH



PARTY HORNS
1 DAY

DAYS



LARGE MILK BOTTLE
3 DAYS



MEDICAL GLOVES
1 HOUR



HOURS

FRENCH FRIES CONTAINER
10 MINUTES



MINUTES

SECONDS



COFFEE STIRRERS
10 SECONDS

FIVE ASIAN HEROES

Name: Sainath and Sai Sahana Manikandan
Country: United Arab Emirates
Year of birth: 2007 and 2009

NAVIGATING CLEAN-UP ROBOT

When Sainath was 10, he saw a film about plastic waste in the oceans. He wanted to do something about it. Every day after school he disappeared into his craft shed and after two months it was ready: Sainath's plastic catcher, a navigating robot that removes plastic rubbish from the sea. Sainath was invited to show his model at a meeting in Abu Dhabi, where adults were going to talk about the pollution problem in their country. From then on, Sainath was unstoppable, and his younger sister Sai Sahana also joined his efforts. They came up with a school action plan against single-use plastic and with the help of hundreds of school children and adults, they collected plastic waste for recycling.



Name: Nina Azzahra Aqilani
Country: Indonesia
Year of birth: 2007

“DEAR MR TRUMP, ...”

Nina loved swimming, but there was no pool where she lived. There was a river, but it was full of plastic rubbish. Most of the plastic waste in her city came from America and Europe. At that time, many Western countries had their discarded plastic shipped to Indonesia. They paid Indonesian companies to recycle the plastic yet were well aware of what would happen next: most of it stayed where it landed, blew away, and ended up in rivers. Nina decided to first send a letter to the city's mayor. Then she wrote to Donald Trump because he was the president of the United States. She asked the mayor to stop taking plastic from other countries. And she asked President Trump to keep his plastic waste. Trump did nothing, but Nina had more success with Germany's leader Angela Merkel. She promised that Germany would no longer send its plastic waste abroad.

Name: Vihaan and Nav Agarwal
Country: India
Year of birth: 2004 and 2007

DIRTY SMOKE

The brothers Vihaan and Nav Agarwal lived in the big city of Delhi, but they liked to spend time in the countryside. They noticed that they had trouble breathing in the city. When they saw rubbish being burnt in Delhi, they understood why. It was because of the black plastic smoke. In 2018, they decided to do something about it. The brothers raised money to have the rubbish collected and separated. They started off with 15 houses and soon got money for more. Three years later, rubbish was collected from more than a thousand homes, offices and schools.



THE BATHROOM

WET SHAMPOO

Between 2025 and 2030, plastic shampoo bottles disappeared. They were no longer needed because people realised that shampoo bars (solid blocks) are just as good for your hair.

Miriam:
Why did they prefer liquid shampoo?

Dr Pipe:
Strange indeed because bottled shampoo contained mostly water. But until 2016, you basically couldn't buy shampoo bars anywhere. I know this from studying advertising flyers from those days. And - what's also strange - until 2025 shampoo bars were more expensive than the shampoo that came in plastic bottles.

GLITTERY BOTTLES

For the shower and bath, there were many different kinds of soap. Almost all of them were sold in wet form. And like almost all fluid things in the Plastic Age, shampoos and gels came in plastic bottles and tubes. Each brand and each soap were sold in its own plastic packaging, and they came in different colours: purple, orange, gold, sometimes even with glittery. Totally unrecyclable, but the soap makers were only interested in their bottles or tubes standing out from the others on the shop shelf.

PLASTIC DOWN THE DRAIN

Around 2010, almost all manufacturers of liquid bath soap and shampoo added microplastic to their products. This made the stuff a bit thicker, and it cost almost nothing. Even toothpaste and lipstick were primarily made of spreadable plastic.

Bram: So then that plastic washed away into the sewer system. And nobody did anything?

Dr Pipe:
No, it was madness. Only after 2026, did more and more countries begin to ban these products.

MESSY BRUSHING

A lot of plastic was used for cleaning teeth. Even toothpaste was often full of nanoplastic - to make it thicker - and microplastic as an abrasive powder. By the end of the Plastic Age, more and more people were choosing plastic-free brushing.



LIVING IN PLASTIC

In the Plastic Age, people often had a lot more plastic in their homes than they realised.



PUR FOAM FOR INSULATION



PLASTIC WINDOW FRAMES



BUYING AND SCRAPPING

People often used the plastic in furniture and in the home for a long time. But eventually it all became waste at some point. When people bought a new chair or sofa, the old one usually went to the dump. And walls and floors were demolished during a renovation, the rubble, wood and plastic went into the landfill.

Bram:

Why did people throw away old chairs? Surely you can repair them and sell them?

Dr Pipe:

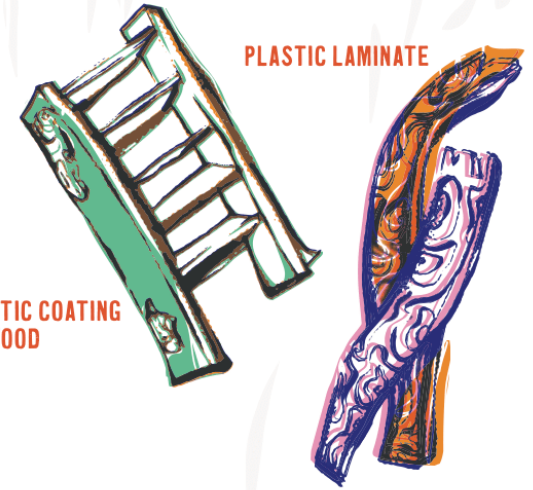
In the Plastic Age, it was cheaper and easier to buy new furniture than to repair old ones. That was because furniture made of plastic and other materials cost so little back then. And it was almost free to produce waste.



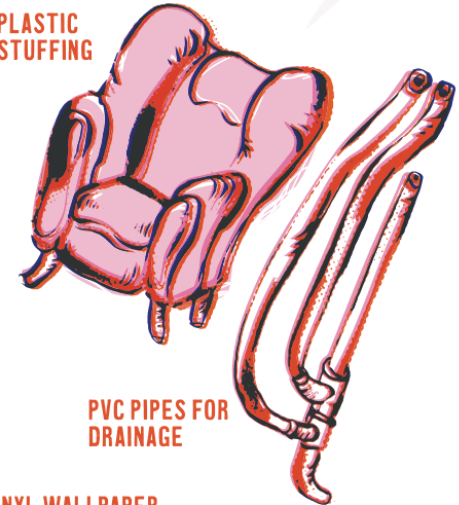
PLASTIC INSULATION FOR POWER CABLES



PLASTIC COATING ON WOOD



PLASTIC STUFFING



PVC PIPES FOR DRAINAGE

VINYL WALLPAPER



DEAR YOUNG READER FROM THE PLASTIC AGE,

If only it were the year 2132! The time when plastic pollution is a thing of the past. Unfortunately, the Plastic Soup Foundation team can only dream of that.

Until we reach this point, we'll keep working hard to eliminate the plastic problem as quickly as possible. To give you an example, we're doing research into plastic waste in the sea and on land. Not just the big pieces of plastic, but also the tiny pieces that you can't even see with the naked eye.


We ask scientists to help us do this, and we tell the whole world what we have discovered. This is how we can learn more and more about the consequences of all that plastic for the environment, for animals and for human health. Our team is putting a lot of effort into finding solutions for the plastic problem, like developing materials that decompose rapidly in nature without leaving a trace.

But we have a message for the manufacturers of all that plastic: we are not happy. We don't think it's okay that they keep making single-use plastic and don't care about the massive pollution that it leaves behind. We think every government in the world should make strict rules that the plastic factories have to stick to. And if they don't, they should be penalised.

Fortunately, you can also do something to help! Buy and use less plastic because the plastic soup starts on your own doorstep. Children often set a good example. You have a clearer vision than adults, and you understand that we can't go on like this any longer. Things have to change. That's why children are the real heroes of this story.

Here's to a clean and healthy future for you all!!

THE TEAM OF PLASTIC SOUP FOUNDATION



Future generations will be amazed at the times we live in today: the Plastic Age. They'll be astonished that people threw plastic cutlery away after a party, that plastic waste caused lots of problems for animals, and that manufacturers put microplastics in toothpaste.

In **BACK TO THE PLASTIC AGE**, let Plastic Age expert Dr Pipe take you on an expedition to the Plastic Age. He'll tell you all about the plastic problem: what sorts of plastics there were, what problems it created and how young heroes around the world tackled the plastic problem.

This book is an initiative of Plastic Soup Foundation.



**PLASTIC
SOUP**
FOUNDATION

