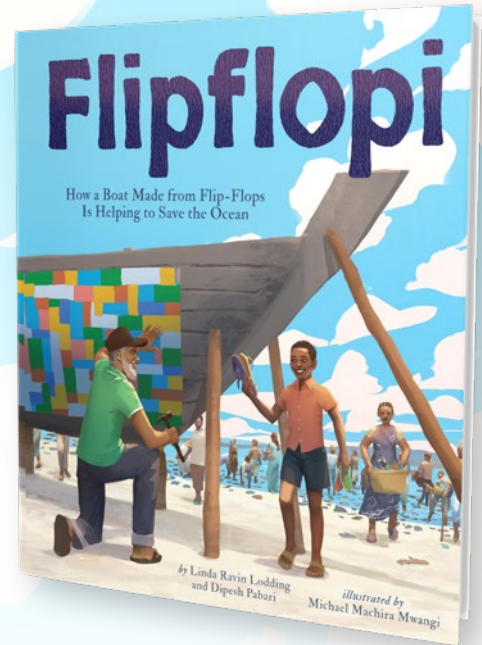


Flipflop: How A Boat Made From Flip-Flops Is Helping To Save The Ocean

Educator's Guide



Introduction

Plastic pollution is when plastic waste ends up in our oceans. This can happen when people litter or when trash is not properly disposed of. Once in the ocean, the plastic can break down into smaller pieces called microplastics. Marine animals can ingest these microplastics and can also absorb toxins from the water around them. This can lead to health problems for the animals and can contaminate the food chain.

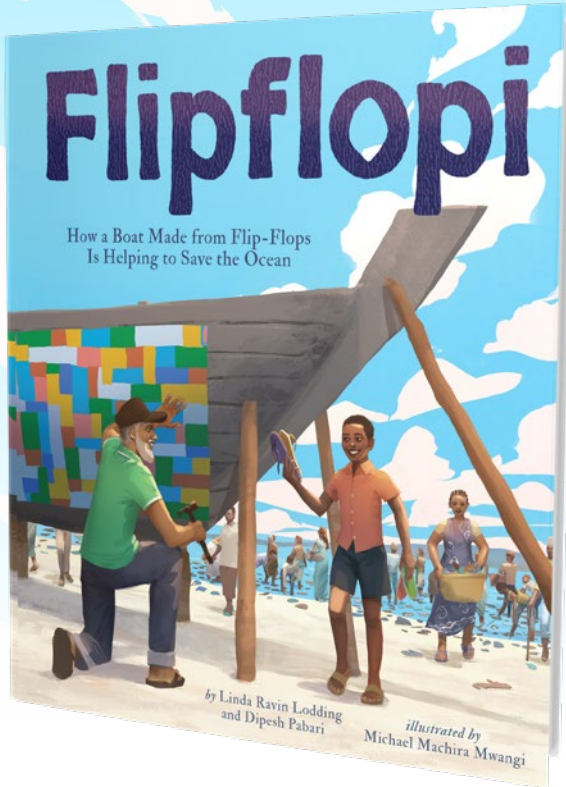
We can all help reduce plastic pollution in our oceans by making small changes in our daily lives. For example, we can carry reusable bags when we go shopping, and we can recycle or reuse plastic items instead of throwing them away—or use non-plastic items instead. We can also spread the word to others about the importance of saving our oceans from plastic pollution!

Whether we live in a large city or close to a sandy beach, we all depend on the oceans. The oceans contain the greatest diversity of life on Earth.

In fact, over 700 million people depend on fishing for their livelihoods, and fish and seafood are the main source of protein for more than a billion of us. But the oceans provide far more than food. They give us oxygen to breathe and, through their role in the water cycle, water to drink. The oceans also absorb greenhouse gas emissions and additional heat.

Yet our seas are under threat. If we carry on as we do now, fish and seafood could be overfished, habitats such as coral reefs will suffer as will the marine life that depends on them, and by 2050 there could be more plastic in the ocean than fish!

By looking at the impact of plastic pollution on the oceans, students can consider what steps we can all take to safeguard these precious waters. It is hoped that, as they build knowledge and understanding, they will become aware of a “bigger picture” and see how seemingly small actions, such as using a plastic drinking straw, can have far-reaching consequences. With a growing awareness of the part they can play in creating a better future for our oceans, students will take a step on the journey to becoming global citizens and sustainability champions.



About the Book

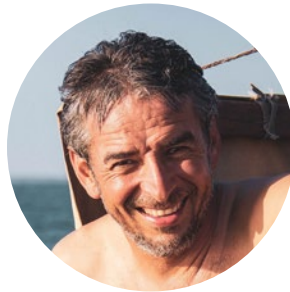
Juma is excited to go fishing with his grandfather, Babu Ali. But when they get to the beach, they find the sand covered in plastic pollution—flip-flops, plastic straws, toothbrushes, bottles, and shopping bags. One of the flip-flops floating in on a wave looks like a boat. That gives Juma and Babu Ali an idea.

Based on the true story of the Kenyan dhow boat Flipflopi, this inspirational tale demonstrates how innovation, art, and determination can transform plastic pollution into something useful. In 2017, 30,000 flip-flops and other plastic waste items, all collected from the Kenyan coast, were melted, shaped, and carved into the dhow named Flipflopi. Weighing in at 7 tons, this boat is a testament to what can happen when awareness is turned into action.

About the Authors and Illustrator



LINDA RAVIN LODDING is an award-winning author of eight picture books, including *Painting Pepette*. When she's not writing, Linda is head of communications for a children's rights organization that focuses on a child's right to a healthy environment. Originally from New York, she now lives in Sweden.



DIPESH PABARI is an eco-leader, educator, waste plastic innovator, and one of the founders of the Flipflopi Expedition. He lives in Kenya.



MICHAEL MACHIRA MWANGI is a self-taught digital artist. He lives in Kenya.

About Plastic

Plastic is a durable material and lasts a very long time. Plastic was invented in the early 1900s, although it wasn't until the 1960s that plastics became more widely used. Since then, plastic has changed the way we live. It's inexpensive and can be used for many different purposes, from lifesaving medical equipment to party balloons.

Today we are surrounded by more plastic than ever before! Plastic production has risen over the past fifty years, from 15 million metric tons in 1964 to 311 million metric tons in 2014, and is expected to double again over the next twenty years.

While plastic can be used responsibly, plastic that ends up in the ocean harms marine life. Animals can become entangled in fishing nets and plastic rings. Plastic is also accidentally eaten by many species, including sea turtles, which may mistake plastic bags for jellyfish.

Microplastics are tiny pieces of plastic that are particularly dangerous. They are often found as microbeads in toothpastes and cosmetics. And when we do our washing, fibers from synthetic clothing can eventually reach the sea. When microplastics are eaten by animals such as plankton, they enter the food chain and can even reach us.

Recycling is important in order to help reduce plastic pollution, but only around 9 percent of plastic is recycled while a huge amount ends up in our oceans. It's been reported that in the middle of the Pacific there's an area of plastic trash twice the size of France!

We all share a responsibility to look after our oceans. There are many simple steps we can all take to reduce our plastic footprint, from making more sustainable shopping choices to recycling our waste and thinking about what we put down our drains.

Adapted from WWF-UK

Check out WWF for additional teacher resources: www.wwf.org.uk/get-involved/schools/oceans-and-plastics

A Few Facts about Plastic Pollution

- **35 BILLION** plastic water bottles are thrown away every year.
- **ONE MILLION** sea birds and **100,000** marine mammals are killed annually from plastic in our oceans.
- Plastic constitutes approximately **90%** of all trash floating on the ocean.
- **50%** of the plastic we use, we use **JUST ONCE** and throw away.

Facts found on EcoWatch.com



We Can All Help! A Few Ideas...

It is estimated that by 2050 there will be more plastic in the oceans than fish! This is a scary thought, especially considering that much of this plastic isn't biodegradable and will remain in the environment for centuries to come.

So what can we do to reduce the amount of plastic pollution in our oceans? One way is to recycle more plastic. It's estimated that only 9 percent of all the plastic ever produced has been recycled, so there's definitely room for improvement!

Every one of us can do something to help reduce plastic pollution. Here are a few ideas that you may like to share with your students:

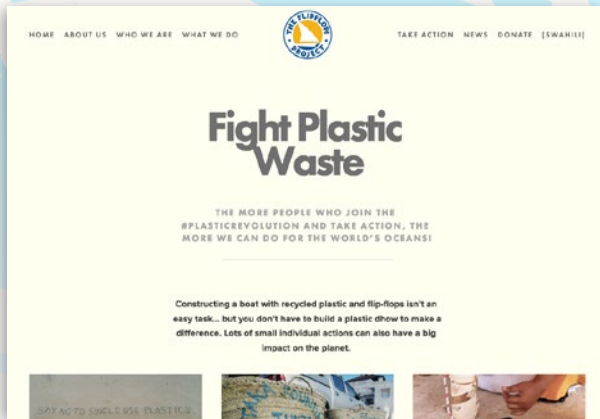
1. Avoid plastic where possible and instead use reusable plastics; 90 percent of the plastic items in our daily lives are used once and then thrown away: plastic bags, plastic wrap, disposable cutlery, and straws. See how often you use these items and try to replace them with reusable versions.
2. Recycle! Contact your local recycling center to find out what types of plastics they accept, or check out Earth911.org's recycling directory.
3. Look for products made from recycled plastic (such as reusable shopping bags).
4. Make your own recycled plastic products (such as jewelry or coasters).
5. Upcycle plastic waste into something new and creative (such as a planter or a pencil case).
6. Try to avoid glitter, or only use eco-friendly glitter in school.
7. Buy secondhand toys and gadgets—new toys and gadgets come with extra packaging and plastic wrap.
8. Never flush plastics down the toilet.
9. Don't decorate with balloons for parties or release balloons into the sky—use more natural materials instead!

Every little bit helps when it comes to reducing plastic pollution in our oceans!



Flipflop Resources

The Flipflop Project has a wonderful collection of resources and activities designed to educate children on plastic recycling and the making of the Flipflop boat. Explore their website (theflipflop.com) or see below:



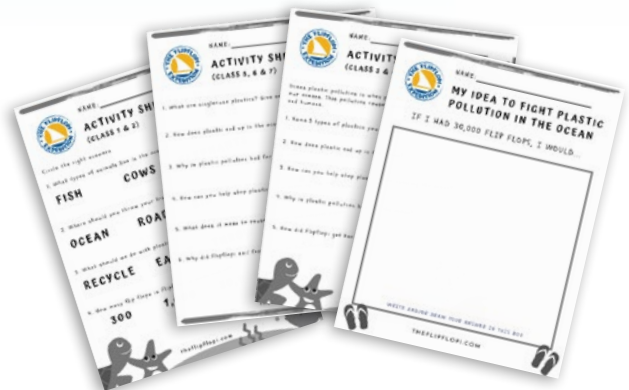
[Fight Plastic Waste](#)



[Boat Building Toolkit: Build a Recycled Plastic Dhow](#)



[Educational Posters](#)



[Flipflop Activity Sheets](#)

Additional Resources for Teachers



[Plastic Pollution Curriculum and Activity Guide](#)



[30 Craft Ideas from Upcycled Materials](#)



[Ocean Pollution for Kids: A Hands-On Activity to Teach Children](#)

Recycling Videos for the Classroom

Disclaimer: These videos are to be used at the discretion of individual teachers. The intention of this list is to provide resources for students to dive deeper into learning about recycling, waste reduction, and waste management. The WasteNot Project does not necessarily endorse any message of any video listed.

All Ages



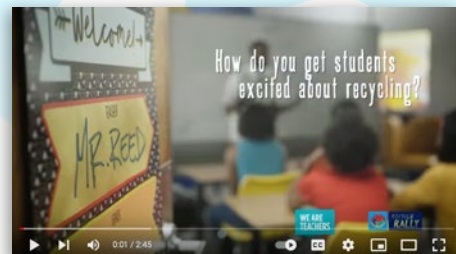
[“For 30 Days I Wore Every Piece of Trash I Created”](#) (4:25 min)

See how one person wore his waste to show how much trash we make!



[Reading Rainbow: How Trash Is Recycled](#) (6:23 min)

LeVar Burton shows us how trash is recycled and the importance of reduce, reuse, and recycle.



[“Recycling with My Friends” Song](#) (2:45 min)



[How Plastic Bottles Are Recycled into Polyester](#) (5:29 min)

Learn how plastic bottles can turn into fleece clothing.



[DIY Recycled Ukelele](#) (1:30 min)

Learn how to make a ukulele from a plastic bottle.



[How Is Plastic Made?](#) (5:14 min)



[How Plastic Hurts the World](#) (4:20 min)

