THE CREATIVE THINKING OF
BOYAN SLAT

NETHERLANDS

The blue sea sparkled in the Greek sunshine. Sixteen-year-old Boyan Slat was on his summer holidays and having a great time. He adjusted his diving mask, gave his oxygen tank one last check and jumped off the boat with a loud splash. He was looking forward to exploring the underwater world. Maybe he'd be lucky and spot an octopus.

Twenty minutes later, Boyan was not enjoying himself as much as he had expected. Yes, there were some lovely fish swimming around but mostly there were old carrier bags and plastic bottles – hundreds of them, floating in the sea after they had been thrown away. Boyan felt himself getting angry. Why were people dumping so much plastic into the oceans? What would happen to all the sea creatures if this carried on?

When he returned home to the Netherlands, Boyan decided to find out what was being done about this problem. He soon realized. Nothing. No one was trying to get the rubbish out of the sea.
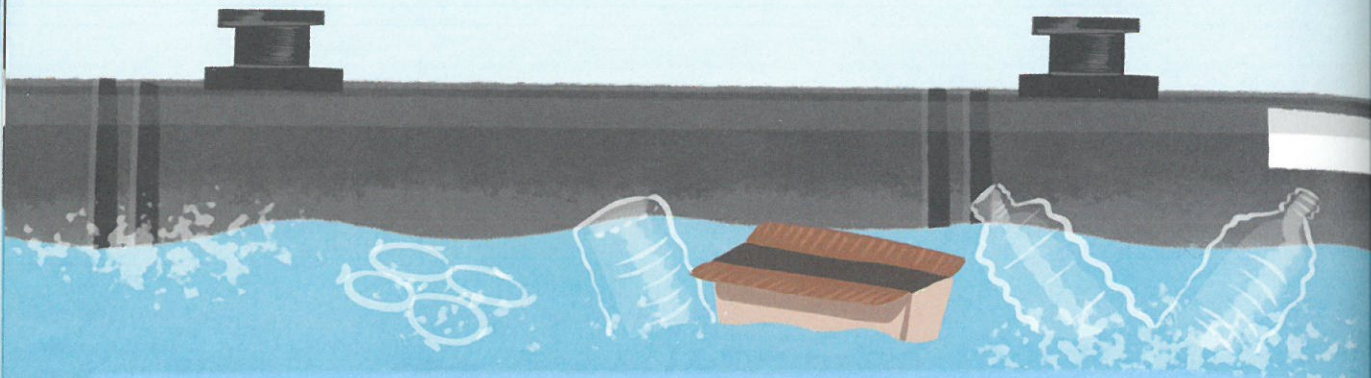
Boyan knew that if he didn't do something, the oceans would one day be completely filled with plastic. He'd always been good at coming up with solutions to problems, but this was a huge challenge. Boyan thought about all the different ways of getting the plastic out of the sea.

Nets would catch sea creatures as well as plastic, so they were no good. Machines would damage the environment through using fuel.

THEN IT CAME TO HIM. WHY NOT USE THE POWER OF THE SEA ITSELF?

Excitedly, Boyan began sketching a design, something that would collect the plastic without harming the environment. He came up with a brilliant invention, which he called The Ocean Cleanup.

It is a system of floating tube-like barriers with a huge skirt that catches all the plastic floating near the surface of the water. The skirt is specially anchored so that it
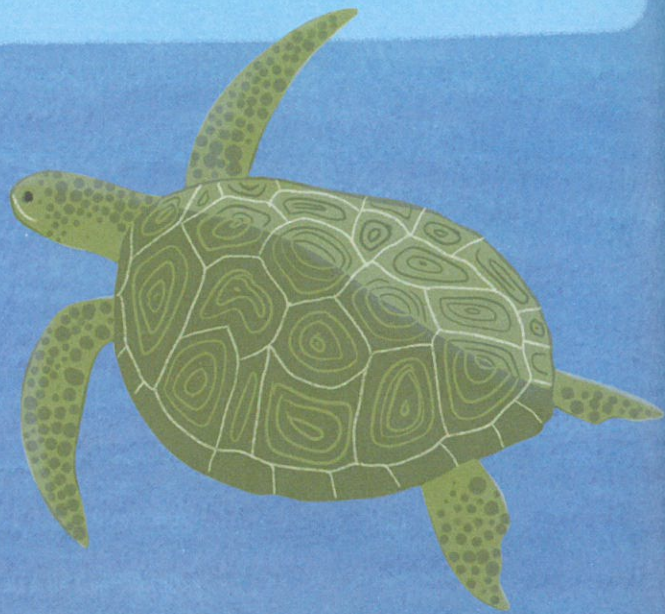
moves along with the sea currents, but more slowly than the pieces of plastic. This ensures it catches more rubbish. Sea creatures can swim safely underneath it. When full, the plastic can be collected and recycled.

Boyan raised money through a crowdfunding campaign to get his invention off the ground. It has taken years of hard work but Boyan has worked tirelessly to protect the ocean. His dream is that in just five years his invention might be able to get rid of almost half the Great Pacific Garbage Patch. This is a huge area of rubbish, mostly plastic, in the Pacific Ocean between Hawaii and California – it is double the size of Texas.

Boyan's idea generated huge excitement and it was selected as one of the top 25 best inventions of 2015 by *Time* magazine. Boyan also received the Champions of the Earth award from the United Nations Environment Programme. He has gone on to win many more awards – but for Boyan, the most important thing has always been to get rid of the plastic. And with his bright idea, it could be sooner than we think.

FOR BOYAN, THE MOST IMPORTANT THING HAS ALWAYS BEEN TO GET RID OF THE PLASTIC.

THE PLASTIC PROBLEM

- Every year about eight million tonnes of plastic enters our oceans.

- Some pieces float on the surface of the sea, preventing sunlight from reaching the plankton and algae below. If these plants die, so will the sea creatures that eat them.

- Plastics release harmful chemicals as they break down in the water. These can be absorbed by animals and by humans.

- Many sea creatures, such as turtles and whales, swallow plastic bags because they mistake them for food. A whale found in Indonesia had over 1,000 pieces of plastic in its stomach, weighing almost six kilograms. It had eaten more than 100 plastic cups and even a pair of flip-flops.

YOU CAN HELP!

Here are some simple things we can all do to help solve the plastic problem:

- Don't buy drinks in throwaway plastic bottles – get a reusable drinks bottle and refill it instead.

- Don't use plastic drinking straws.

- Avoid plastic carrier bags – take a reusable bag when shopping.

- Keep food in reusable lunch boxes instead of plastic sandwich bags.

- If you see plastic littering a beach, pick it up and put it in the bin.

- Never throw rubbish into the sea or rivers.