

Plastic and the Environment -

A resource booklet by PHSG's eco team



Contents -

What is World Oceans Day?
Plastic pollution in our oceans.
Ways to reduce plastic pollution.
What Eco Team is hoping to do in September.
Further reading.

Hi everyone!

In these very challenging and unusual times, we wanted to continue to raise awareness about the environment and how our actions can affect it.

In honour of World Oceans Day on June 8th, we have put together a booklet about plastics and the ocean and what you can do help!

We hope you can take some time out of your day to have a quick read.



What is World Oceans Day and Why is it Important?

The 2020 theme for World Oceans day is 30x30 - a call on world leaders to protect 30% of our blue planet by 2030. It is also a celebration of the blue planet and aims to get people working together to protect and restore the ocean.

World Oceans Day is supported by companies like P&G and Sea Life and their network extends across the globe, from Plymouth Marine Laboratory to Adelaide Zoo in Australia and the New York Aquarium, amongst hundreds of others.

The ocean is a fountain of life. It provides us with food, ingredients for medicines and the plants in the ocean provide 50% of the world's oxygen and stores 50x more carbon than the atmosphere.

Every year, 8 million metric tons of plastics enter our ocean on top of the estimated 150 million metric tons that currently circulate our marine environments - that's 8 billion kilograms per year!

It is a terrifying reality that every minute, 15,000 kg of plastic (more than the weight of two elephants) ends up in the world's oceans. Perhaps even more concerning is that 236,000,000kg of micro plastics make their way to the ocean every year.

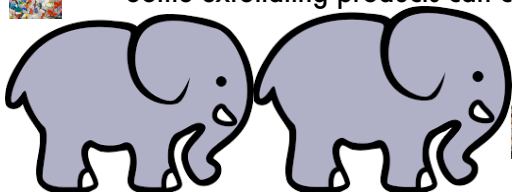
Micro plastics are any type of plastic fragment that is less than 5mm in length and they have infiltrated the food webs of our waters worldwide. Animals high up in the food chain consume plastics ingested by their prey - meaning even we may have eaten them ourselves.

Plastics contain harmful substances and additives which have been known to act like hormones and these can be very dangerous to both humans and animals and these could have large impacts on our eco systems in the future.

We may not even realise that we are polluting our oceans with everyday activities:

- In one wash, a washing machine may release up to 750,000 microfibres which may not be caught by filters
- When we drive down a road, the tyres wear away, leaving behind synthetic rubber which gets washed away
- Some exfoliating products can contain up to 3 million microbes in one tube which will end up in our oceans

- Eloise Geoffrey



What You Can Do To Help:

1. Biodegradable Plastics

These are becoming more and more popular as more people are refusing single use plastic. Made by extracting polylactic acid from cornstarch and fermenting it, it becomes a biopolymer. Despite being biodegradable, they still take a very long time and the right conditions to actually decompose - and not in the oceans.

Unfortunately, large chain companies like Costa and Starbucks are still lacking in their provision of biodegradable drinks containers, but they are taking steps to improve this.

2. Buying from companies who use eco friendly packaging

With 13.2 million kg of plastic packaging being made each year, many types of this packaging can be substituted for cardboards or paper bags, or even plant based packaging. Often, this packaging is much easier to recycle and also releases less pollution during manufacturing.

Many companies are now switching to packaging made from recycled plastic but in many cases they can go one better. For example, Lush sell shampoo and conditioner bars with no plastic packaging, which is the same for many of their other products.

3. Recycling and reusing plastics

In Plymouth, most plastics can be recycled - if in doubt, put it in the green bin!

4. Campaign for systemic law change

It is very easy to write to your MPs about the problems with plastic pollution and demand change (find your MP at www.theyworkforyou.com). The EU has adopted the single use plastics directive to create laws banning single use plastics and they aim to have a 90% collection target for plastic bottles by 2030. This is a start. However, more needs to be done to save our oceans and our planet from the deadly impact of plastics.

5. Donate to or raise awareness for trusted charities

There are many local and national charities which work to clean up our coasts and seas, including Surfers Against Sewage and the Marine Conservation Society. Donations can help further vital research and go towards equipment. If you cannot donate, even spreading awareness for these charities can achieve something!

What Eco Team is hoping to do in September

Whilst there is still much uncertainty over the return of students to schools in September, we hope to set out to achieve some of our aims:

- Complete the Eco Club notice board in the science corridor, detailing lots of different ways you can help the environment and raise awareness.
- Continue our work with the eco bricks and how they could be implemented within the school to reduce the amount of plastic that is sent to landfill.

We started the year with many plans to help the environment in and around school but unfortunately we haven't been able to achieve them. We hope that in the Autumn term we will be able to continue our aim of making the school more eco friendly.

Further Reading and People to Follow:

Dr Imogen Napper on Twitter: @Imogennapper
Surfers against Sewage on Instagram: @surfersagainstsewage

www.plymouthbeachclean.co.uk
www.worldoceansday.org

NOTE: This booklet was prepared and written by students at Plymouth High. All information in this booklet was gathered by students of the PHSG Eco Team. All information was correct at time of access. Any opinions expressed in this booklet are from the students.