
The Back to School Plastic Challenge:

Start the school year by breaking
up with single-use plastics.

#CleanSeas
www.cleaneas.org

UN 
environment

 clean
seas
turn the tide
on plastic

Welcome to UN Environment's Back to School Plastic Challenge!

Plastic pollution is one of the most pressing environmental threats of our time and there is one easy way you can help stop it – by cutting the consumption of single-use plastic in your everyday life.

Together with the animation studio Kurzgesagt – In a Nutshell, UN Environment is calling on all schools to start off the new year by reducing plastic use inside the school and in the community. This is your chance to share your ideas and inspire others around the world!

Share your stories to win

We want to know what you are doing. No step is too small – no action is insignificant. Take a camera (video or photo) and a notepad. Record and document your efforts in any creative way. Spread the word and inspire others to do the same.

Post your story online with the hashtag **#CleanSeas** and send us an email at **cleanseas@un.org** - We hope you'll be one of the lucky winners of the Clean Seas School Award. You have until 10 January 2019 to submit your entries. Winners will be announced during the first quarter of 2019.

What's wrong with plastic?

Plastic defines our modern lifestyle – it is a key component of most, if not all, of modern technology. To better explain why this incredibly promising material has turned into a global problem, UN Environment and the German animation studio Kurzgesagt – In a Nutshell co-produced *How Humans Are Turning the World into Plastic* (<https://youtu.be/RS7IzU2VJIQ>), a video animation that tells the story of how, when humans invented plastic, they also created one of the biggest environmental problems of our time.

Another useful resource we have for you is an interactive story on plastic (<https://www.unenvironment.org/interactive/beat-plastic-pollution/>).

The situation is dire, but there is
a solution: **we are the solution.**



Do your part to turn the tide on plastic

Start by changing your behaviour and join the movement to help turn the tide on plastic. To begin, watch the video to learn more about the history of plastic, how it is damaging our oceans and what can we do about it.

Second, think of the ways you can reduce the use of plastics in your daily life at school or in the community. Be creative, be bold!

Third, immortalize your actions through photos, videos, testimonials, or whatever other way you think works best.

Finally, send us an email to cleanseas@un.org describing your actions and linking to all the materials you have produced.

Tell us:

- What single-use plastic item(s) are you using the most?
- How did you stop using these / this single-use plastic item(s)?
- What other actions are you taking to reduce plastic waste?

Please also include the following information:

- Teacher's name/your name
- Name of institution
- Your email
- Title of the project
- Details of the project (about 300 words)
- Impact of the project (about 300 words)

Remember to also share your actions on social media using the hashtag **#CleanSeas**.



What is Clean Seas?

The Clean Seas campaign is UN Environment's global campaign to tackle marine plastic pollution. It brings together governments, the business community and the public to take concrete actions to reduce their plastic footprints. Since the campaign was launched in 2017, more than 50 governments have joined. Many of them have made concrete policy commitments on how to reduce marine plastic pollution and almost 100 000 people worldwide have taken the Clean Seas pledge, promising to reduce their own plastic footprint.

To take the Clean Seas pledge, visit www.cleans seas.org

Let's get started!

The activities presented in this booklet were designed as a guide to help you reduce the use of single-use plastics step by step. You can use them for an extracurricular club or in lessons, or you can create your own. All activities are based on successful curricula developed and tested around the world.

Be creative and adapt them to your local context, then share with us what you have done!

Objectives:

1. Measure and monitor trends in plastic use in schools or communities
2. Create activity-based projects to find ways of reducing the use of disposable plastic in homes, schools or communities
3. Introduce young people and students to ways of researching a case that supports their actions
4. Present your well-researched solution to local decision-makers (for example, students can take their ideas to school managers)





Step 1: What kind of plastic are you using?

Scientists have been warning us since the 1970s that plastics are accumulating in our oceans, waterways, and along our coasts. Great circular patches of plastic have been found floating in virtually every ocean on the planet and islands of plastic waste have been sighted in the Caribbean, the Pacific Ocean, and off the coast of Indonesia.

Plastic is clogging up beaches and rivers. Our 'planetary arteries' are, in many places, literally full of plastic. Single-use plastic is even found in the Mariana Trench, the deepest underwater point on Earth. By creating plastic and then discarding it without considering the consequences, we are causing great harm to our oceans, the marine plants and animals that live there, and to many coastal communities. The good news is that since we are the ones causing the problem, we also have the power to solve it! For a start, we need to know how much single-use plastic we are actually using.

Activity 1: Survey of plastics

Objectives:

Identify what plastics you are using

- Identify other plastics you encounter

Completion time:

- 7 days

Instructions:

1. Go on a plastic journey – Make a note of all the single-use plastic items you use throughout the day that are simply thrown away. You can use these notes to create a tally chart to record the number and types of items.
2. Take a quick look in your bin and see what is in there, or write down items before you throw them away – a tally chart next to the bin may be useful for this.
3. As the week progresses, keep track of the single-use plastic items you use (either on paper or on your phone). You could also tally up the numbers of each item you use.
4. Fancy something a little more challenging? Go one step further and look at the various types of plastic and their uses. For example, a bottle lid and the bottle itself can be made of different types of polyethylene terephthalate, also known as PET. You can also investigate how a piece of plastic gets from your school into the ocean.

Activity 2: Waste estimator

Objectives:

- Estimate the amount of plastic waste produced
- Consider how this waste could be reduced

Completion time:

- 7 days

Instructions:

1. Get each person in your class to collect their plastic waste for one week. You could have a separate box for plastic waste next to your dustbin at home or at school.
2. Weigh each person's plastic collection and then add up the combined weights to get the total amount of waste generated by your class in one week. Are there any other ways it could be measured? For example, if you do not have information from all the class members, you could calculate the average based on available information and multiply by the number of students in a class.
3. Brainstorm ideas about how the waste you produced could be reduced – not by recycling, but by reducing your use.
4. Fancy something a little more challenging? Design a competition to reduce the amount of waste – a 'Reduce the Use' challenge of your own.

Try using collected plastic to make a sculpture or art competition that makes people aware of the pollution problem or how oceans are being polluted by plastic.





Step 2: Plastic impact

Marine plastic litter varies in size, from large items to fragments smaller than 5 mm in diameter, called microplastics. These are not single-use plastics in the sense of a plastic spoon or bag, but they still find their way into the environment because of our everyday use of plastic – something to look out for and think about. All plastics have ecological, social and economic costs. They are causing health hazards for all living creatures, including humans – a fact that scientists have been reporting for almost 50 years. Birds, turtles and other ocean creatures get caught in plastic bags and snared in abandoned fishing gear. Others die from starvation, their stomach clogged with indigestible plastic. In Norway for instance, scientists found more than 30 plastic bags inside the stomach of a stranded, dying whale.

Some sources of plastic waste are not so obvious. Consider the following sources and your plastic footprint when you think of ways to reduce your plastic use:

- Tyre dust washed into sewers
- Dust from painted surfaces, which accounts for 10% of microplastics in the world's oceans
- Microplastics from products that are thrown away and break down into small pieces
- Synthetic fibers from fleeces and acrylic fabrics that fall off when rubbed together or washed
- Microbeads from scrubs and other cosmetics (although partly banned now)

A word on packaging - why are products packaged the way they are?

To protect products during transportation and from contamination or damage by moisture, humidity, gases, bacteria, insects and light.

To preserve products for longer, which reduces food waste by giving us more time to use or consume them.

To enable transportation over long distances, giving us access to a wide variety of non-local produce and encouraging trade.

To enable products to be stacked, thus saving space and making transportation more efficient.

Source: INCPEN

Activity 1: Resource Use

Objectives:

- Identify all the plastic resources used

Completion time:

- 1-2 days

Instructions:

1. Go around your classroom and look at the plastic resources there are.
2. What do you use that is wrapped in or made of plastic? Think about cosmetics, facial scrubs, food packaging, mobile phones, pens, computers, cars, bottles, plates, cups, etc.
3. Consider how you dispose of them.
4. Find out how the waste is treated.
5. Fancy something a little more challenging? Create a flow diagram from origin to disposal, then see how you can turn that line into a circle. Or create a storyboard or your own animation telling the story of a piece of plastic getting to the ocean from an inland house or school.



Activity 2: What actions would people support to 'reduce the use'?

Objectives:

- Identify people's plastic consumption
- Identify which single-use plastics are necessary, and which we can live without
- Research perceptions of plastic consumption within groups or communities

Completion time:

- 3-5 days

Instructions:

1. Consider the single-use plastics you are using regularly and how they are disposed of. How can you reduce, reuse, recycle or replace them?
2. Taking inspiration from the "Reduce the Use" survey (below), how would you like to reduce your plastic use, and what actions could work? Consider which action people would like to do, which they will do, which they are doing already and which they will not – find out why.
3. Which three actions does your group rate most highly – can you create an order of priority? Which might be easiest to promote? The list below is just a starter. Feel free to add to it!
4. Use the survey to canvas opinions at school or at home.
5. Fancy something a little more challenging? Add to the list of actions.

Check out the [Tunza Facebook page](#) for ideas.





“Reduce the use” - Action list

Action to reduce plastic	Will you do it?	If not, why not?
Buy loose fruit and vegetables rather than pre-packaged one		
Buy washing powder in a cardboard box		
Buy bars of soap rather than liquid soap		
Order drinks that come in glass bottles		
Stop using single-use wipes made of synthetic fiber		
Stop using plastic bottles and plastic cups		
Use a reusable water bottle and cup		
Take reusable bags to the shops		
Cut down on takeaways in plastic boxes		
Stop using plastic straws		
Buy bulk rather than individually wrapped items		
Reuse jars and containers for storing food and leftovers		
Use glass or metal containers for storing and protecting food, rather than plastic food bags, plastic containers and cling film		
Use loose-leaf tea rather than teabags, as these may contain plastic		
Use reusable chopsticks and cutlery		
Avoid facial and body scrubs containing plastic microbeads		

Step 3: What should happen to plastic?

Innovations and actions: Introduction

There is no silver bullet to deal with the plastic pollution epidemic. Over the past 20 years, entrepreneurs, companies and researchers have created a huge variety of biodegradable and/or compostable plastic substitutes. Any online search pulls up a wealth of interesting ideas:

- A brewery in the United States has created edible six pack rings made from barley and wheat from the brewing process. The rings are 100 percent biodegradable and can safely be eaten by animals.
- Cambridge University is using the fully compostable Vegware and there's the edible cutlery that emerged last year in India. It's made of sorghum blended with rice and wheat, and comes in three flavours – plain, sweet or savoury.
- In Egypt, scientists are working on a polymer derived from the organic compound chitin (found in the shells of shrimp, crabs and lobsters), to make grocery bags.
- In Japan, scientists have recently discovered plastic-eating bugs.

The UN Environment '**Biodegradable Plastics**' report suggests that some people are attracted to "technological solutions as an alternative to changing behaviour". Everyone needs to work together, from policymakers, to industry, to individuals, but we must make sure behaviours help drive change. This includes doing our part to reduce, reuse, recycle, repair and redesign.

Types of plastic treatment

Mechanical recycling – chopping and creating new plastic from the pellets. This is what people usually think of when they think of recycling.

Chemical recycling – plastic is broken down into its constituent parts. These technologies are still being developed.

Prevention – plastic packaging is lighter than it used to be, meaning fewer raw materials are used. The industry has also signed an agreement, known as the **Courtauld Commitment**, to work towards reducing packaging and waste.

Reuse – many types of plastic packaging are long-life artefacts. For example, returnable crates have lifespans of over 25 years and reusable bags are playing a greater role in responsible retailing.

Another option is **energy generation from waste**.

Activity 1: The role of plastic in our lives

Objectives:

- Identify people's ideas about plastic consumption
- Identify how to reduce single-use plastics use
- Identify perceptions of plastic consumption within groups or communities

Completion time:

- 5 days

Instructions:

1. Are you aware of the different sources of plastic in your life? Which are necessary and which can be replaced?
 - Which plastic items do you feel make your life better?
 - Why do you feel they improve your life?
 - Which items could you easily replace?
 - Which items could be reduced in number?
 - How often do you recycle unwanted items?
 - How often do you sort and recycle plastic?
 - What alternatives are there to plastic items?
 - What can you do to make recycling easier?
2. How are plastic products currently disposed of on your campus or at your school?
3. Is there litter? Are there ways to clean up plastic waste in your area? (See our guide on how to beat plastic pollution here).
4. Fancy something a little more challenging? Try researching alternatives to plastic. Or can you find a way to recycle your plastics?





Activity 2: Setting targets

Objectives:

- Identify targets for reducing plastic consumption in your group
- Identify how to reduce single-use plastics use

Completion time:

- 7 days

Instructions:

1. How can you prevent plastic from entering the oceans? Think about your “Reduce the Use” survey actions and ideas.

Design a grid of actions for different types of plastic:

- Reduce
 - Replace
 - Recycle
 - Collect and clean
2. Look at the results of your surveys and write down the key points and actions.
 3. Group the actions into:
 - Actions that are easy to do
 - Actions that are somewhat easy to do
 - Actions that will take longer to complete
 4. Choose the top three and start implementing them, e.g. a waste-free snacks day. Discuss incentives such as displaying results and targets in a public place.
 5. Write up an action plan starting with the easy actions, then move on to the harder ones. Afterwards, present your ideas to decision-makers at your school.
 6. Ask your teacher to help arrange a meeting with the head teacher or your governor. Can you get their support by presenting a plan setting out what you would like to achieve? For example, you could start with a “Reduce the Use” day, with events like waste-free meals or clean-up campaigns. Create a poster to display at school or in your neighbourhood to convince others to change their behaviour and adopt the top three actions on your list.

Step 4: Share and inspire

Now is the time to step back and look at everything you've done.

Take a video or photo camera and a notepad and start recording, interviewing, writing... document all your efforts in any creative way you can to spread to word and inspire others to do the same.

Post your story online with the hashtag **#CleanSeas** and send us an email at **cleanseas@un.org** for a chance to become one of the winners of the **Clean Seas School Award**.

You have until **10 January 2019** to submit your entries.

Good luck!



Plastic Action Journey - Guide to different plastics

Get to know the different plastics. This can be done using the Resin Identification Code, which is the number printed on most plastic bottles and food containers. It indicates what kind of plastic resin the product is made from.

Can you use your plastic resin audit with your tally chart to see which plastics you are using the most?

Resin Identification Code	Examples	Items you use
 Polyethylene terephthalate (PET)	Bottles for soft drinks, water, juice and mouthwash	
 High-density polyethylene (PE-HD)	Bottles for milk, water, juice, cleaning products and shampoo bags and cereal box liners	
 Polyvinyl chloride (PVC)	Bags, cling film and plastic toys	
 Low-density polyethylene (PE-LD)	Bags for bread, frozen foods, component of paper milk cartons and disposable cups	
 Polypropylene (PP)	Yoghurt cartons	
 Polystyrene (PS)	Cups, plates, bowls, takeaway containers and meat trays	
 Other	Products made from other plastic resin not listed above	

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