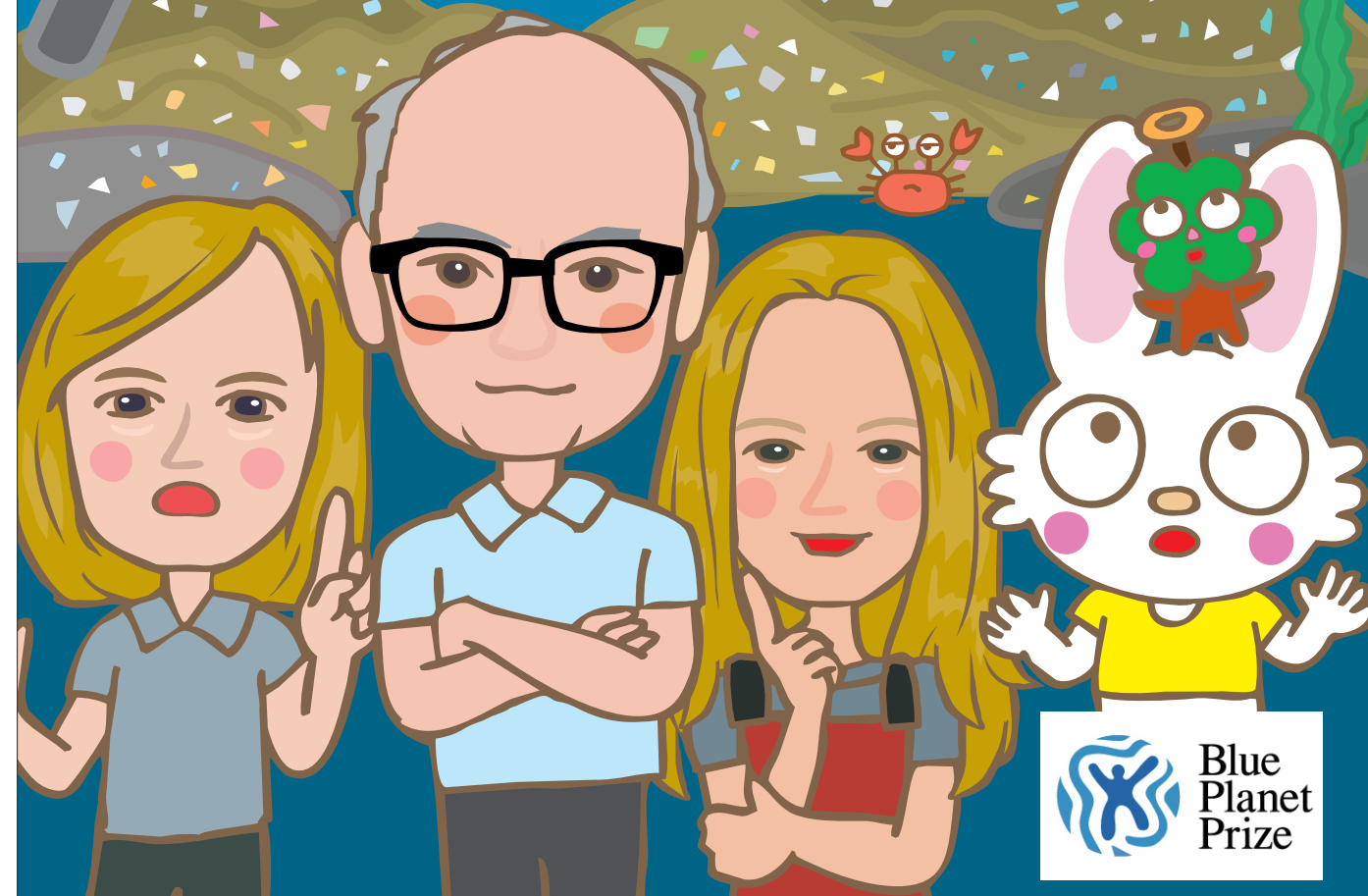


Professors Thompson,
Galloway, and Lindeque's
Fun School

17th issue, August 2024

Tiny Plastic Waste in the Ocean



Gring and Woodin have come to play at the beach today!

Ahh, there's so much trash here.

here's all kinds of trash scattered around.



Gring and Woodin, you picked up some trash over there, didn't you?

Look, there are a group of people picking up trash on the beach.

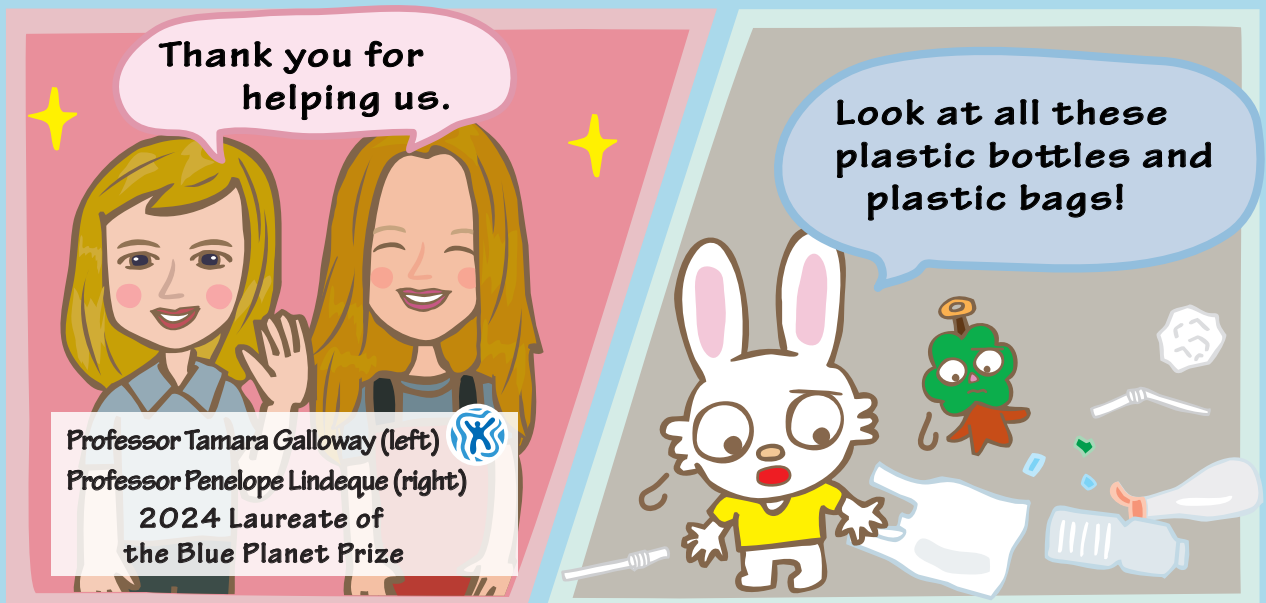
Professor Richard Thompson
2024 Laureate of the Blue Planet Prize



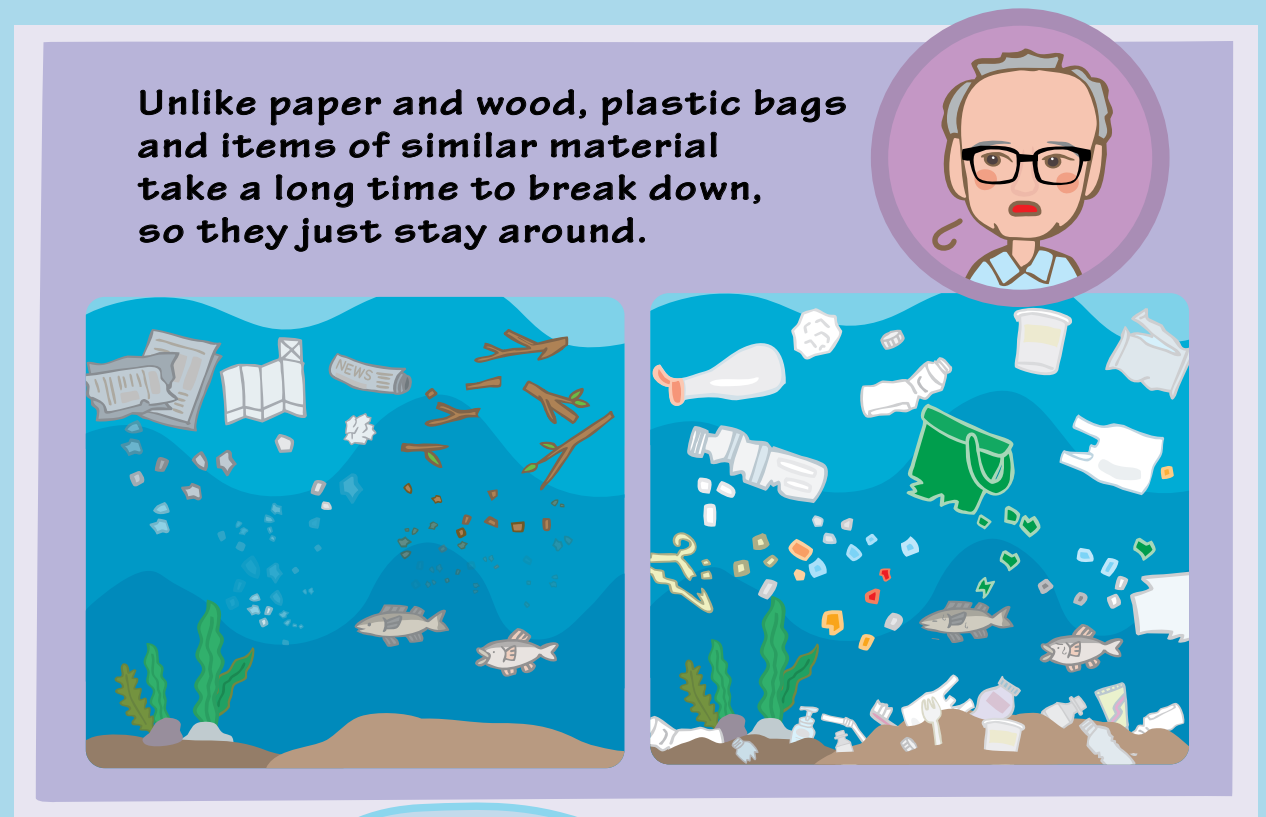
Thank you for helping us.

Look at all these plastic bottles and plastic bags!

Professor Tamara Galloway (left)
Professor Penelope Lindeque (right)
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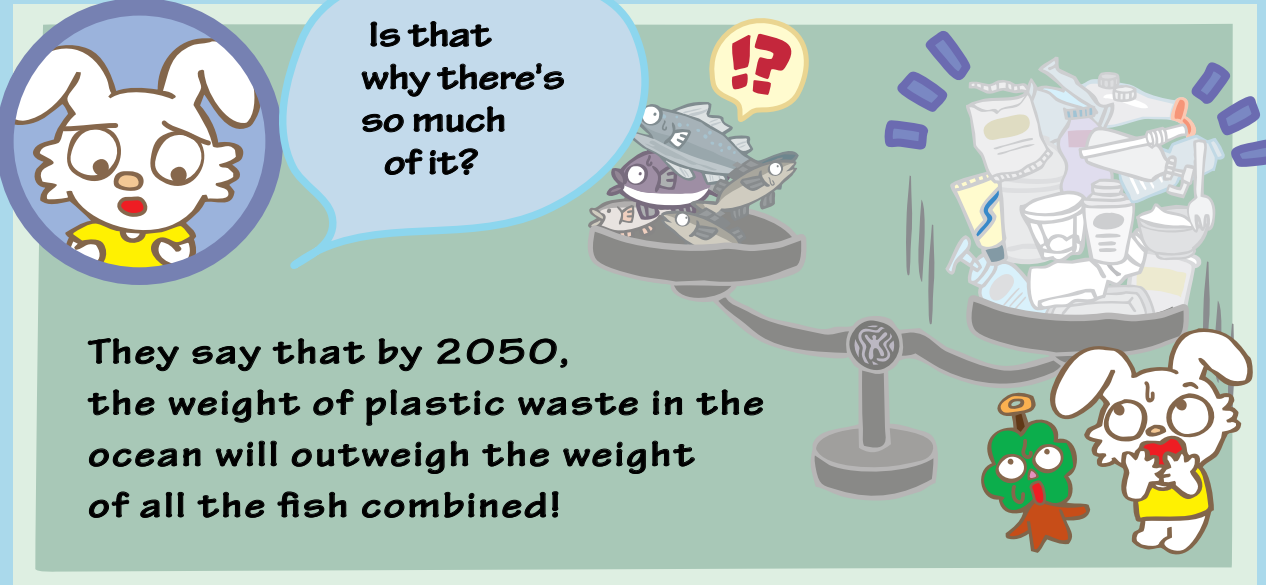


Unlike paper and wood, plastic bags and items of similar material take a long time to break down, so they just stay around.



Is that why there's so much of it?

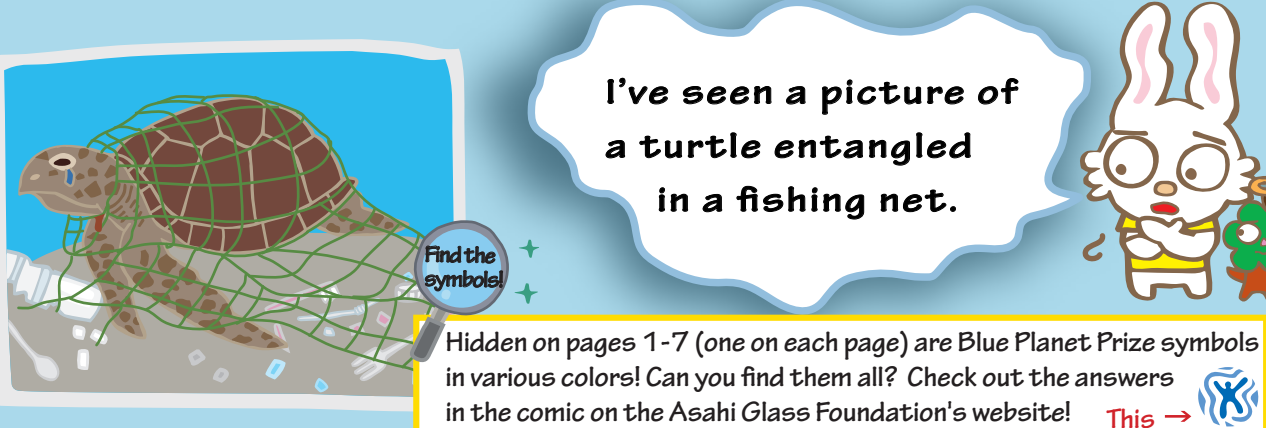
They say that by 2050, the weight of plastic waste in the ocean will outweigh the weight of all the fish combined!



I've seen a picture of a turtle entangled in a fishing net.

Find the symbols!

Hidden on pages 1-7 (one on each page) are Blue Planet Prize symbols in various colors! Can you find them all? Check out the answers in the comic on the Asahi Glass Foundation's website! This →





Turtles and birds sometimes mistake plastic waste for food and eat it, or they get tangled in plastic string and die...



It's so sad...



These are even smaller than grains of sand!



Tiny pieces of plastic less than 5mm are called microplastics. Plastic waste breaks down into smaller and smaller pieces over time as it is battered by waves and exposed to intense sunlight.

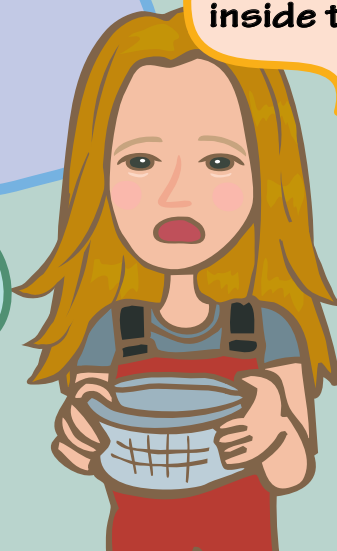
It is worth noting that some cosmetics and facial cleansers contain microplastics as an ingredient.



Plastic waste isn't just about the large items.



What do you mean?



Look what's inside this dish!



Are microplastics harmful?

The effects of microplastics on humans are still not fully understood yet. Take a look through this microscope.

Ta-da!

Fluorescence microscopy





These tiny green particles are microplastics.

munch

munch


Ah, there's some food!

Research reveals that zooplankton consume microplastics, mistaking it for food.

Ah, I'm full!

As a result, they might eat less of their regular food, leading to nutrient deficiencies.

Microplastics can also absorb toxic chemicals from the surrounding environment.

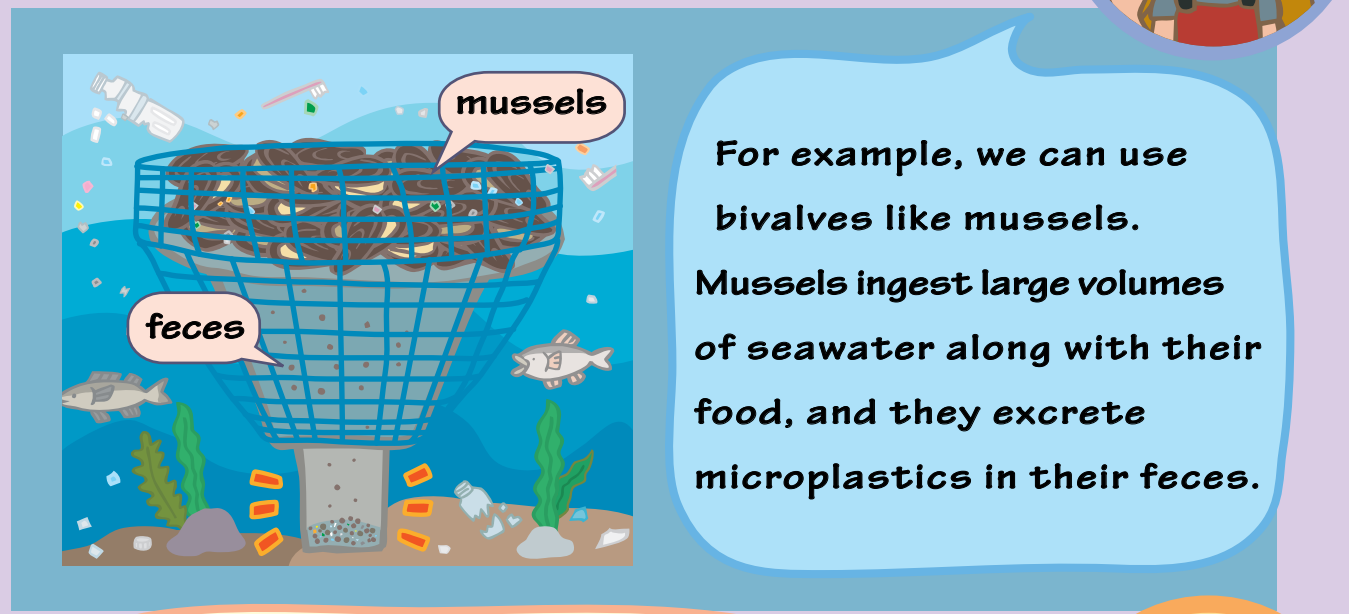



Microplastics are small, but they are frightening.

They're small but not to be underestimated.

Can we get rid of microplastics from the ocean?

???

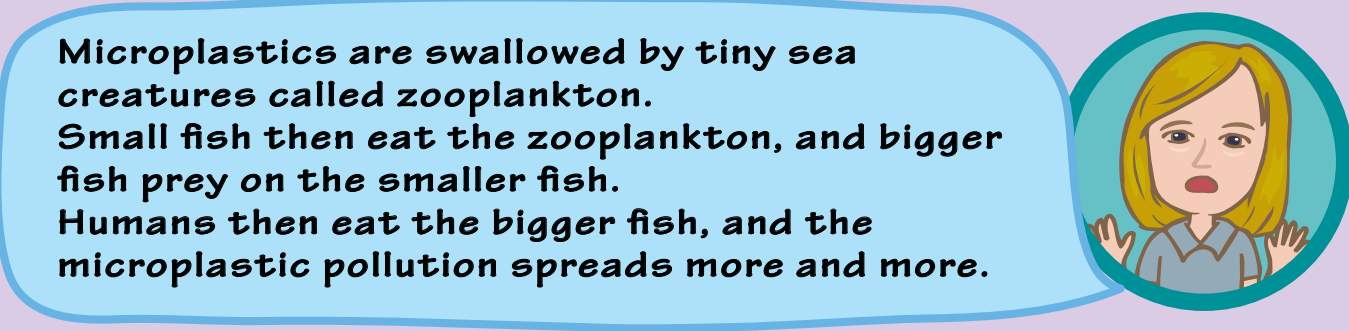


mussels

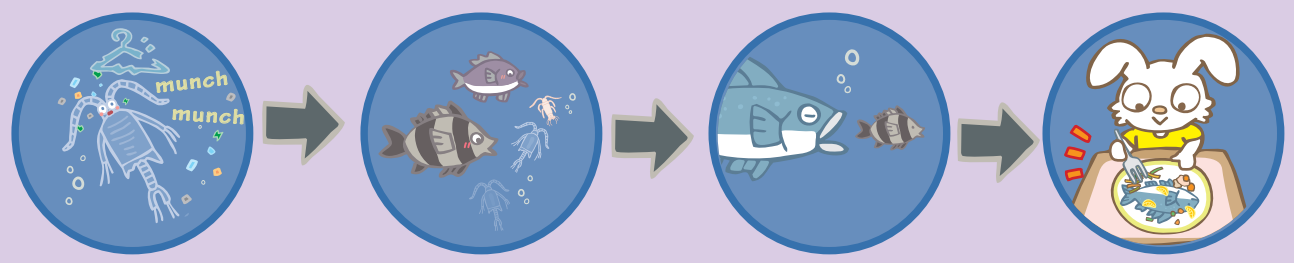
feces

For example, we can use bivalves like mussels. Mussels ingest large volumes of seawater along with their food, and they excrete microplastics in their feces.

Microplastics are swallowed by tiny sea creatures called zooplankton. Small fish then eat the zooplankton, and bigger fish prey on the smaller fish. Humans then eat the bigger fish, and the microplastic pollution spreads more and more.

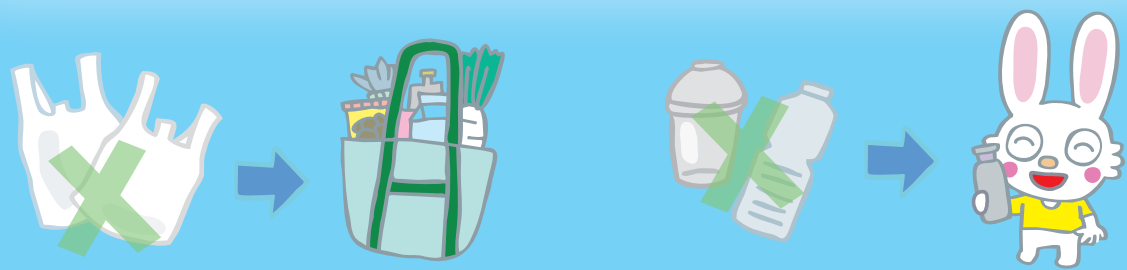


Reducing plastic consumption requires the development of alternative materials. We're now developing materials that degrade easily in the natural environment, utilizing fibers extracted from banana peels.



Refusing plastic bags and using reusable bags when shopping. Carrying a personal water bottle. It's essential to make a conscious effort to avoid using single-use plastics in our daily lives. If each of us takes responsibility, we can significantly reduce plastic waste.



Did you find all the symbols?
Here are the answers!



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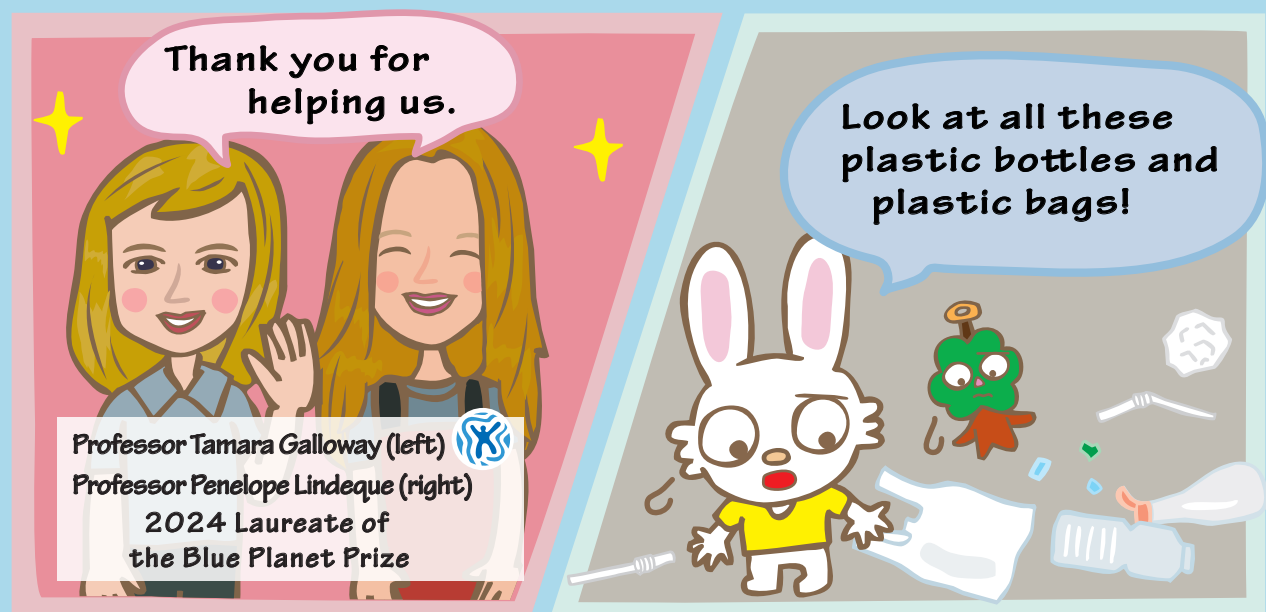
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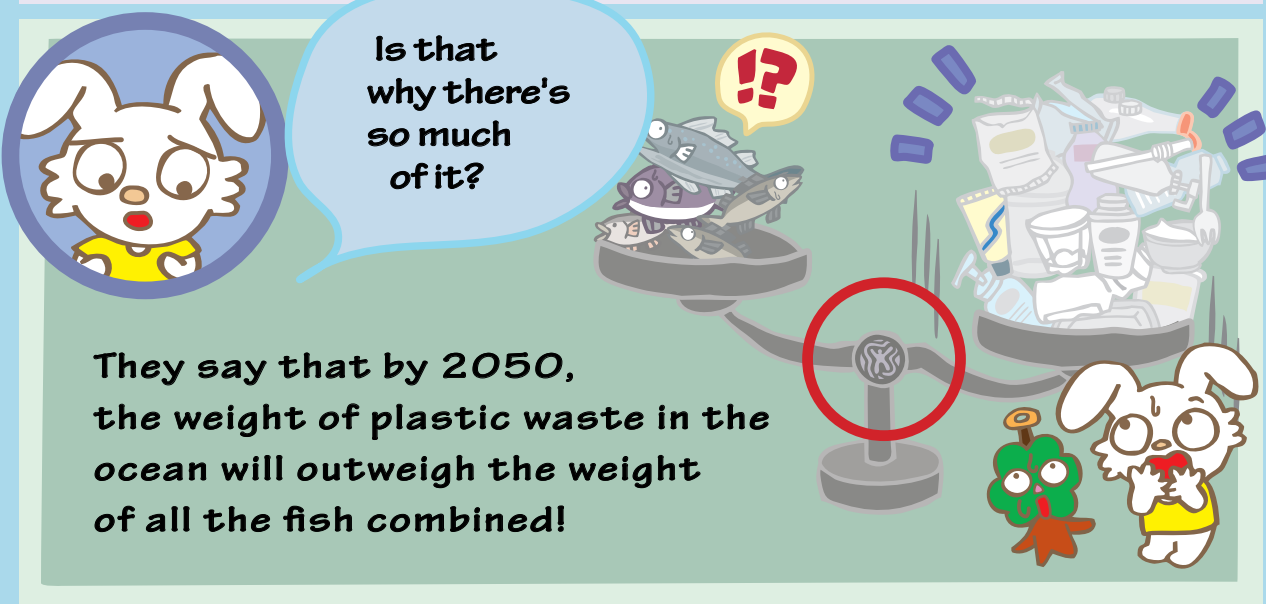


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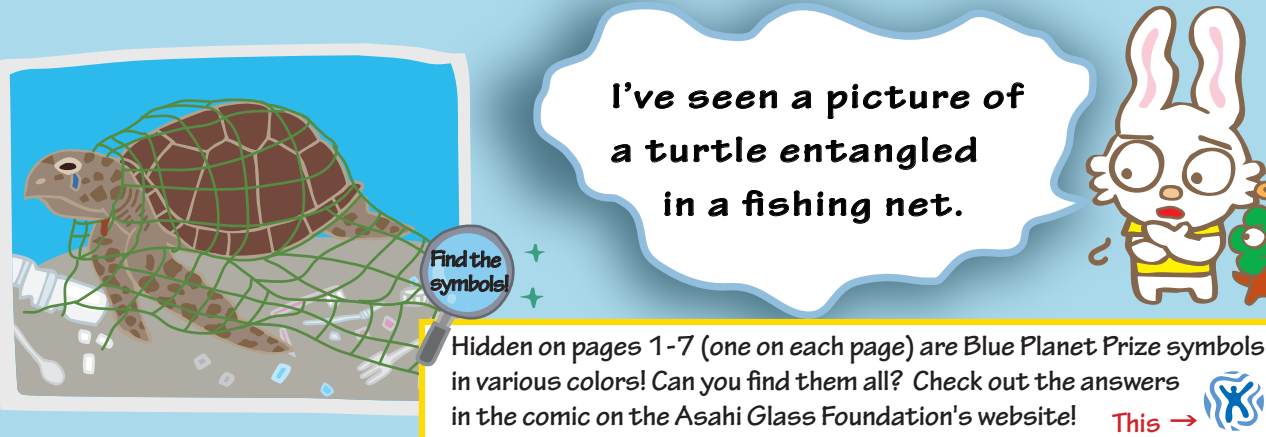
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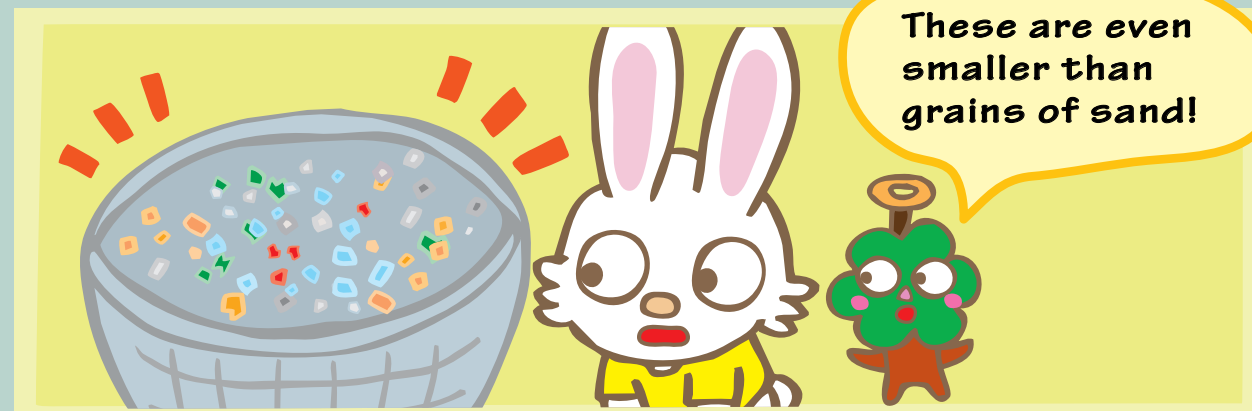




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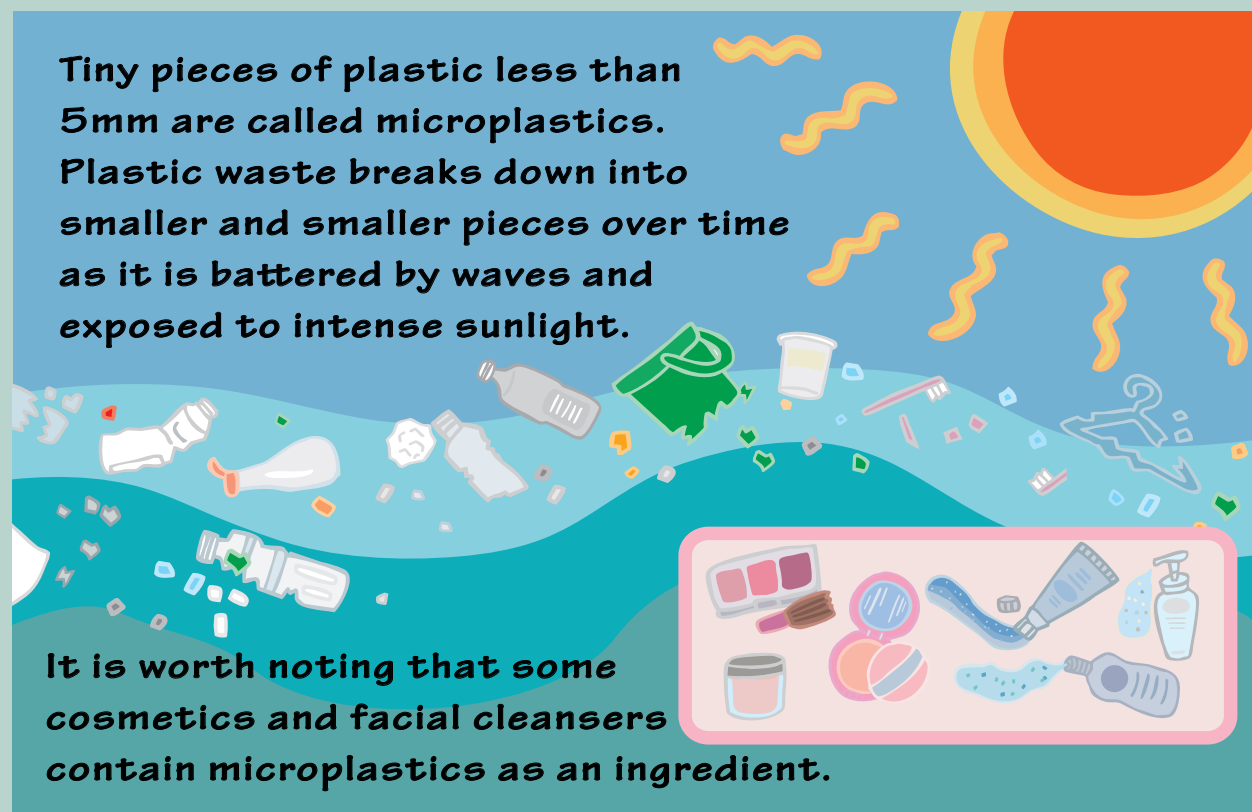


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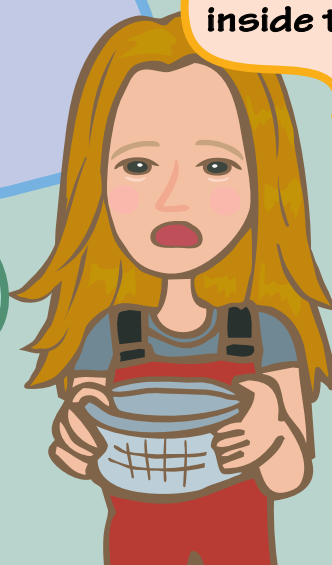
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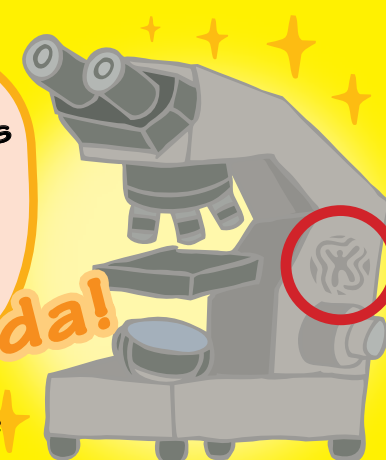
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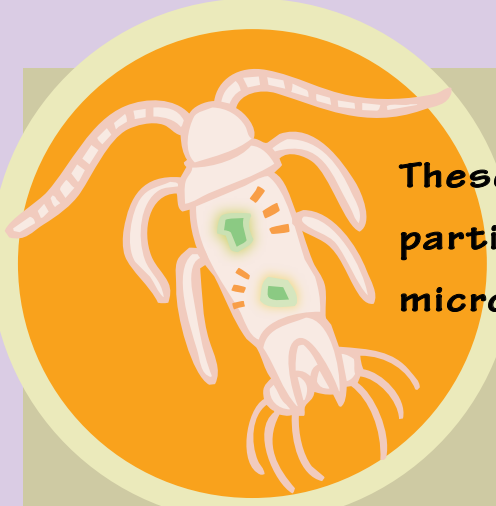
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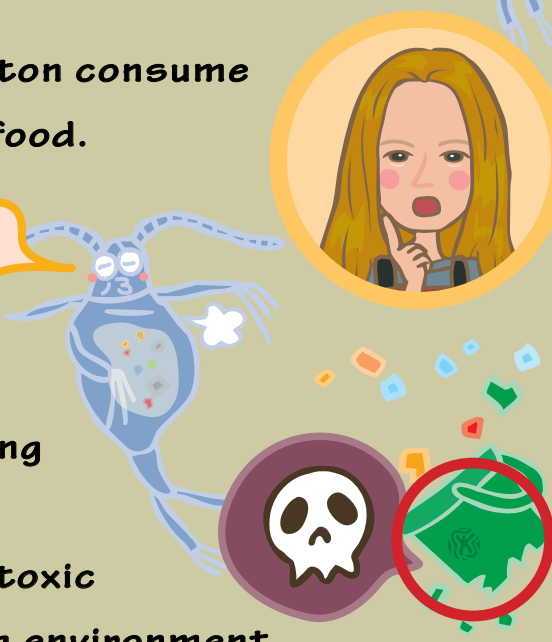
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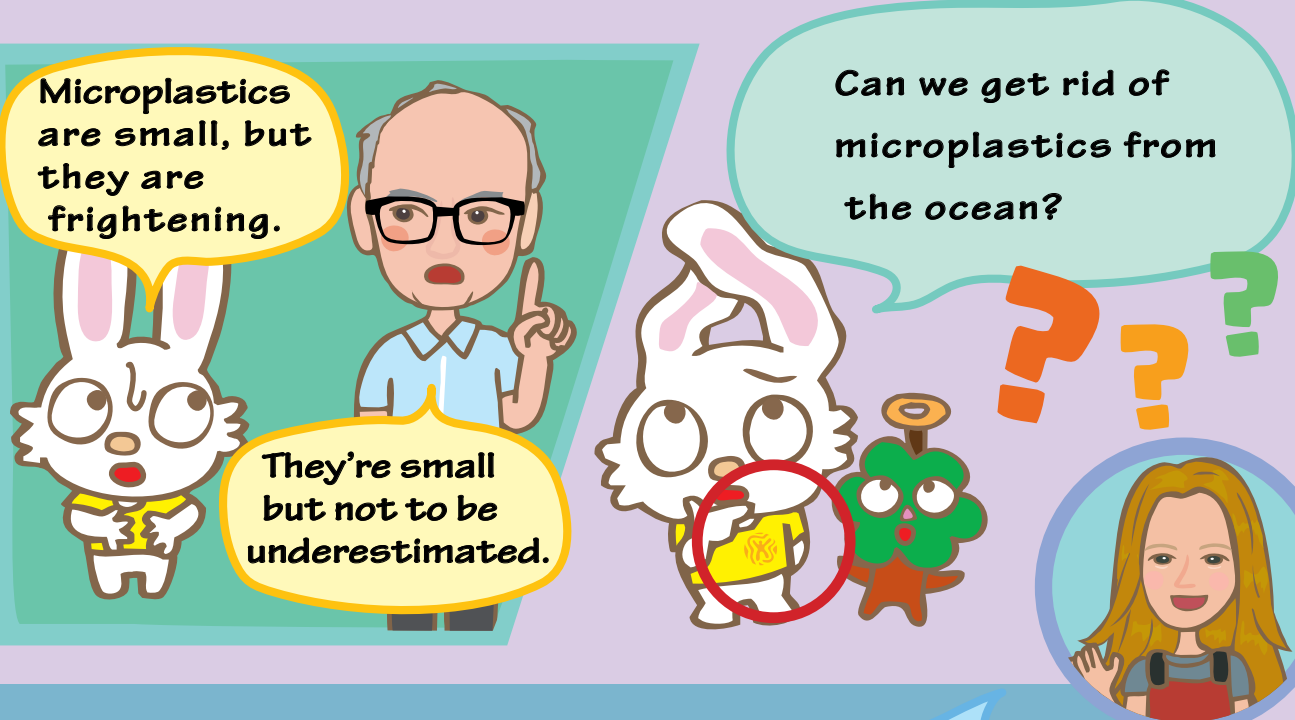
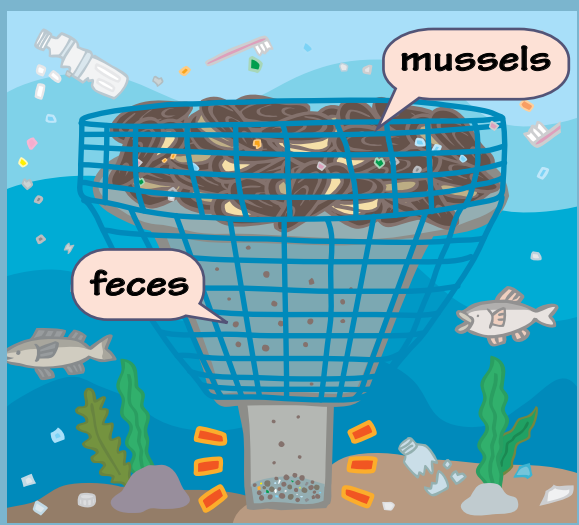
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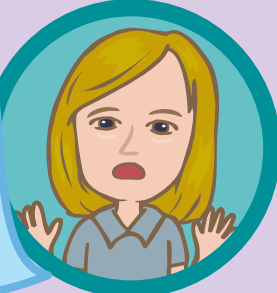
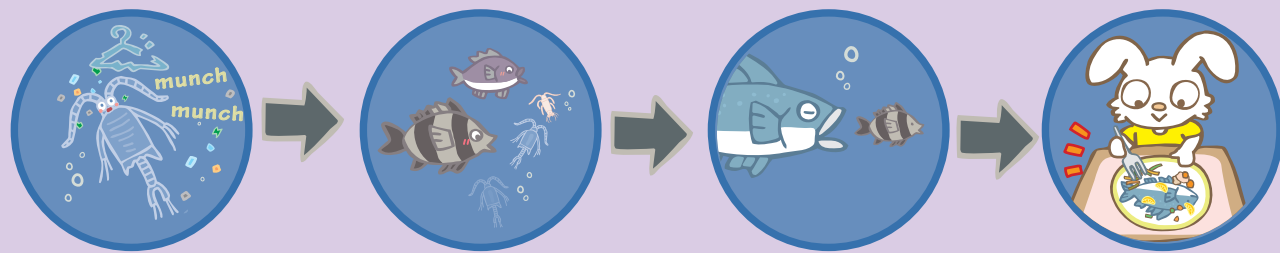



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