



Scientists Make Plastic from Plant Sugars

What is plastic pollution?

- According to the United Nations, 300 million tonnes of plastic is created each year. Half of it is only used once before being thrown away.
- Some plastic can take hundreds of years to decompose in landfills.

Scientists may have come up with a clever way of tackling the problem of plastic pollution. Their unique idea involves using plants.

A **biochemicals** company in the Netherlands says that they made plastic from sugars within certain plants! They currently make 5000 tonnes of plastic every year from the sugars of corn, wheat or beets. They call this special type of plastic PEF.

The owner of the company, Tom van Atken, said the PEF bottles were "100% plant-based, 100% **recyclable** plastic."

The company also said that the bottles can **decompose** within a year if they're put in a **composter**. They explained how they think these bottles could hugely reduce waste in landfills. This is because some plastics can take hundreds of years to decompose.

The company did, however, say that this is only the start. The scientists still have further tests to carry out. If they are successful, they hope the new PEF bottles will be hitting our shelves by 2023.

People are worried about the effects of plastic pollution, especially on the world's oceans. Wildlife experts say that plastic pollution affects marine animals. This includes these creatures often mistaking plastic for food.

WWF, a wildlife charity, says that 100,000 marine mammals are killed and a million



Photo: Plastic bottles.

seabirds die every year from plastic waste.

However, groups are trying to find a solution. According to the government, the UK uses nearly five billion plastic straws and nearly two billion plastic cotton buds each year!

The UK government plans to mostly ban plastic straws, cotton buds and drink stirrers in October.

Glossary

biochemicals	Chemical processes that occur in living beings.
recyclable	Converting waste materials into new materials and objects.
decompose	To rot or decay.
composter	Device used to create compost which is used to help plants grow.

Questions

1. How quickly could the PEF plastic decompose with a composter?

2. Find three crops sugars have been used from to make PEF.

1.

2.

3.

3. "... they hope the new bottles will be hitting our shelves by 2023." This suggests that...

- ☐ The scientists are taking a break.
- ☐ The technology will take a while to test.
- ☐ The year 2023 is a good year.
- ☐ A bottle takes three years to create.

4. How do you think scientists feel about this news?

5. "Their unique solution is certainly food for thought". Tick the word that is closest to "unique" in this sentence.

- ☐ regular
- ☐ usual
- ☐ antique
- ☐ unusual

6. Summarise the key information in the story in 15 words or fewer.

Answers

1. How quickly could the PEF plastic decompose with a composter?

Within a year

2. Find three crops sugars have been used from to make PEF.

Accept beet, wheat and corn.

3. "... they hope the new bottles will be hitting our shelves by 2023." This suggests that...

- ☐ The scientists are taking a break.
- ☒ **The technology will take a while to test.**
- ☐ The year 2023 is a good year.
- ☐ A bottle takes three years to create.

4. How do you think scientists feel about this news?

Accept any reasonable answer, e.g. I think scientists will be excited to have created a plastic bottle that can be recycled.

5. "Their unique solution is certainly food for thought". Tick the word that is closest to "unique" in this sentence.

- ☐ regular
- ☐ usual
- ☐ antique
- ☒ **unusual**

6. Summarise the key information in the story in 15 words or fewer.

Accept any reasonable answer which refers to the story in 15 or fewer words, e.g. A company says they've made a plant-based plastic that can decompose within a year.