Plastic Takeaway

What have scientists found?

- **Scientists have found a bacteria that can eat some plastics.**
- **It can eat a plastic called polyurethane (PUR).**

Photo: Plastic waste.

Bacteria Found that Eats Plastic

Plastic waste which can't be recycled is a big problem for the world. But, scientists may have made steps towards fixing this big problem.

A team of scientists, from Germany, have found bacteria that could eat some types of plastic.

This might help find a way of getting rid of the huge amount of plastic waste that ends up in the landfills each year.

The new bacteria was found in the soil at a waste site. The scientists noticed that it was able to eat through polyurethane (sometimes called PUR).

PUR is a type of plastic. It is in a lot of different things, from sponges to fridges and, in 2015 alone, it was responsible for 3.5 million tonnes of rubbish across Europe.

This type of plastic does not melt. That makes it hard to recycle. It also releases toxic waste when it is in the landfill.

However, the team found that the new bacteria could break down small parts of PUR. The bacteria can also survive the toxic waste given off by this type of plastic.

Governments and groups want us to reduce the amount of plastic we use. Last month, legislation went through the UK parliament which will ban plastic straws, cotton buds and stirrers in England.

Glossary

bacteria	Microscopic living things that can be found everywhere.
landfill	A place where waste products are left.
toxic	Very harmful, poisonous or unpleasant.
legislation	A law or set of laws that is being created.

Questions

1. Which country were the scientists from?

   - ○ Belgium
   - ○ Germany
   - ○ Italy
   - ○ UK

2. Polyurethane creates a lot of waste. Find and copy one fact that supports this statement.

   _____

   _____

3. Why is polyurethane (PUR) hard to recycle?

   _____

   _____

4. "It is in a lot of different things from sponges to fridges."
   This suggests that... (Tick as many that apply.)

   - ○ Polyurethane can be used in many items.
   - ○ Polyurethane is a material that's used often.
   - ○ Polyurethane is not used often.
   - ○ Polyurethane is only used in a few items.

5. How do you think scientists felt when they found the bacteria? Explain your answer.

   _____

   _____

   _____

6. Summarise of the story in 20 words or fewer.

   _____

   _____

   _____

Answers

1. Which country were the scientists from?

   ○ Belgium
   ✓ **Germany**
   ○ Italy
   ○ UK

2. Polyurethane creates a lot of waste. Find and copy one fact that supports this statement.
   In 2015, it was responsible for 3.5 million tonnes of rubbish across Europe.

3. Why is polyurethane (PUR) hard to recycle?
   Polyurethane is hard to recycle because it can't be melted.

4. "It is in a lot of different things from sponges to fridges."
   This suggests that... (Tick as many that apply.)

   ✓ **Polyurethane can be used in many items.**
   ✓ **Polyurethane is a material that's used often.**
   ○ Polyurethane is not used often.
   ○ Polyurethane is only used in a few items.

5. How do you think scientists felt when they found the bacteria? Explain your answer.
   Accept any reasonable answer relating to their excitement, e.g. I think the scientists would have felt thrilled because it could be the answer to reducing the amount of plastic waste in landfill.

6. Summarise of the story in 20 words or fewer.
   Accept any suitable answer, e.g. Scientists found bacteria in a landfill which can eat through PUR.