



## Gellyphant

### What is gelatin?

- Gelatin is a common ingredient in many chewy sweets as well as some shampoos.
- Gelatin is a helpful material to use because it is so flexible.

Illustration: Gellyphant.

# Scientists Make Robot Gellyphant!

Scientists in Austria have created a robot in the shape of an elephant's head that contains **edible** parts.

You wouldn't want to eat the electronics or bits made from wood, but parts of it are made from gelatin.

However, Percy the Gellyphant isn't a snack for humans.

He was made to show off the uses of the technology and then to be a snack for **bacteria**.

The trunk can curve and bend like a real elephant's trunk. It can do this more than 330 000 times before cracking. This is because gelatin is flexible.

Then, when the 'biogel' meets bacteria found in waste water (like in a **landfill**), it begins to **biodegrade**.

This means it could be a step towards more environmentally friendly robotics.

The engineers suggest that the use of 'biogel' could help in other areas too. They

think that it could help in giving medicine to some animals. Edible robots which look like food could be used to get medicines into other animals when eaten.

Also, if a young child's toy were made of the material, it wouldn't matter as much if they nibbled on bits of it.

Although, that might not be such a good idea. As, currently, the sensors and electronics are definitely not edible! Also... there's no mention of what Percy tastes like.

### Glossary

**edible** Something that can be eaten.

**bacteria** Very small organisms.

**landfill** A place where large amounts of rubbish is buried.

**biodegrade** Naturally broken down or decomposed by bacteria.

# Questions

1. What happens to the biogel when it encounters the bacteria in waste water?

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2. In the paragraph beginning “Although, that might not be...”, which word means the same as ‘at the present time’?

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3. Tick to show whether each statement is true or false.

|   | True | False |
|---|------|-------|
| Gelatin is flexible.                          |      |       |
| Percy the Gellyphant is made only of gelatin. |      |       |
| The biogel will biodegrade.                   |      |       |
| It would be safe to eat Percy the Gellyphant. |      |       |

4. Using information from the text, give one example of how the scientists think the technology might be helpful in future.

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

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6. Summarise the key information from the story in 20 words or fewer.

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# Answers

1. What happens to the biogel when it encounters the bacteria in waste water?

**It begins to biodegrade.**

2. In the paragraph beginning “Although, that might not be...”, which word means the same as ‘at the present time’?

**currently**

3. Tick to show whether each statement is true or false.

|   | True | False |
|---|------|-------|
| Gelatin is flexible.                          | ✓    |       |
| Percy the Gellyphant is made only of gelatin. |      | ✓     |
| The biogel will biodegrade.                   | ✓    |       |
| It would be safe to eat Percy the Gellyphant. |      | ✓     |

4. Using information from the text, give one example of how the scientists think the technology might be helpful in future.

**Accept any sensible answer which references facts from the text, such as robots becoming more environmentally friendly, experimenting with other designs, making safer children’s toys, designing an edible robot containing medicine, e.g. I think they might try and make a safe, edible children’s toy.**

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

**Accept any answer that refers to the fact that scientists will be excited to create a robot that can also biodegrade, e.g. I think that scientists will be thrilled that they can create a robot that works but also is not harmful to the environment.**

6. Summarise the key information from the story in 20 words or fewer.

**Accept any sensible summary which includes the key information from the article, e.g. Engineers have built an edible elephant robot head which can biodegrade.**