



## Scientists Create Glowing Plants

### What is bioluminescence?

- **Bioluminescence is when living things give off their own light.**
- **Fireflies, glow-worms, anglerfish and many types of mushroom are bioluminescent.**

### We have all been taught what plants need in order to grow; however, what do they need in order to glow?

Glowing plants and trees are a common sight in films and video games. These plants, though, might soon be seen more regularly in people's homes.

After doing some experiments, a team of scientists thinks they have found a way to grow plants that glow.

This isn't the first time scientists have tried to create glowing plants. On this occasion, though, the researchers believe they have made a **breakthrough**.

When previous experiments have been attempted, the plants needed to be fed with chemicals. They also didn't glow for a long period of time.

This time, the scientists combined bioluminescent **fungi** with a plant and achieved a much better result.

After **splicing** them together, the scientists observed that the plants glowed more brightly than in earlier attempts and the plants weren't harmed.

Glowing plants may be a fun way to bring a little colour into the home. However, the scientists wrote that these plants could also be a way of studying a plant's "responses to **environmental** conditions".

This means that it could help scientists to understand how plants react to a range of problems, such as root damage or a lack of



Illustration: Scientists create a glowing plant.

water. For example, the scientists observed that when they placed a banana skin nearby, the plants glowed more brightly.

You may now be imagining all the glowing plants that you would like to see. Would you like to buy a self-illuminating Christmas tree or use a cactus as a night light?

You'll need to be patient — glowing houseplants are still some years off. Interestingly, the researchers also wrote that, with further study, "luminescence could also be enabled in animals."

### Glossary

<b>breakthrough</b>	A sudden, important discovery.
<b>fungi</b>	Plants that have no flowers, leaves or green colouring, such as mushrooms.
<b>splicing</b>	Joining or connecting together.
<b>environmental</b>	The conditions in which a thing lives.

# Questions

1. What does 'bioluminescence' mean?

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2. 'You'll need to be patient — glowing houseplants are still some years off.' This suggests that...

- Scientists are having a break.
- Houseplants can not grow in the dark.
- More tests are needed.
- Scientists won't share their secrets.

3. 'For example, the scientists observed that when they placed a banana skin nearby, the plants glowed more brightly.' Which of the following words would **not** be a suitable synonym for 'observed' in the above sentence.

- saw
- noticed
- spotted
- overlooked

4. Tick whether the following statements are true or false according to the article.

	True	False
Anglerfish are bioluminescent.		
The plants responded when a banana skin was placed nearby.		
Plants that glow are already available to buy.		
Past attempts were more successful at creating glowing plants.		

5. Find one piece of evidence that shows that this experiment has been more successful than previous attempts.

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6. What might the scientists do next?

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# Answers

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4. Tick whether the following statements are true or false according to the article.

	True	False
Anglerfish are bioluminescent.	✓	
The plants responded when a banana skin was placed nearby.	✓	
Plants that glow are already available to buy.		✓
Past attempts were more successful at creating glowing plants.		✓

5. Find one piece of evidence that shows that this experiment has been more successful than previous attempts.

**Accept any answer referring to the story such as: they glowed more brightly; the experiment did not harm the plants.**

6. What might the scientists do next?

**Accept any reasonable answer that refers to the story, such as: I think scientists will make glowing houseplants for people to buy; I think they will experiment on different plants; I think they will do experiments to produce a glowing animal.**