

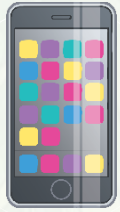
# Pong Power

Could the World's Smelliest  
Fruit Charge a Phone?



twinkl





# Daily News

13<sup>th</sup> July 2020

Science  World News 

## Pong Power



Illustration: Durians.

- [What is the durian?](#)
- [What are electrical conductors and insulators?](#)
- [What is a complete circuit?](#)

Have you ever been on an app and then your phone runs out of battery? Scientists say you could use material from a durian to charge it.

It's famous for having a really bad smell. Some people say it smells like cheese. Others say it's like a gym sock. There is a ban on eating durians in [public](#) places in Singapore.

So what did the scientists do? Professor Vincent Gomes bought durians at a market. He also bought jackfruits, which are similar to durians. His team then removed the core of the durians. The scientists then heated the fruits in water and then dried the waste product.

Not everything went to plan, though! People had to leave a library when it wafted over from the [laboratory](#).

The team found that durian waste could store a lot of energy and [conducts](#) electricity. If everything goes to plan, today's news shows that the durian's bad smell may conceal a hidden power.

Read the full article online [here](#).



60-Second Read  
Call to Action text  
is written here.



## Full Article from the website

Have you ever been on an app and then your phone runs out of battery? Well, in the future, you could use the world's smelliest fruit to charge it!

That's according to a scientist in Australia. The fruit is called the durian. It comes from Southeast Asia and is grown in a variety of places, including Indonesia and Malaysia.

You may think people are exaggerating about the smell. It seems, though, that people really do think it's terrible.

It's said that the fruit smells like a "gym sock". There is a ban on eating durian in public places in Singapore.

So what did the scientists do? Professor Vincent Gomes bought durians and jackfruits from a market.

His team then removed the core of the durians. The scientists then heated the fruits in water and then dried the waste product.

This was then turned into a material called an aerogel. Next, they used the aerogels to make **electrodes**, which can **conduct** electricity.

Not everything went to plan, though! The smell during the experiment was really off-putting.

People had to **abandon** a library when the smell wafted over from the lab.

Despite this, the team found that durian waste could store a lot of energy.

The team claim this because they are "**porous**". Professor Gomes says that people will now need to look at other natural sources for energy. The scientists say this could even be better for the environment.

So, how could we be using the durians in the future? Professor Gomes says durian waste could be "a green, low-cost energy solution for charging phones, laptops and tablets."





## What Is the Durian?

The durian is a **fruit** that is grown in Southeast Asia.



The durian is related to other fruits, such as the jackfruit and the breadfruit.



The smell is said to be an **extremely** strong smell. It has even been compared to cheese.

The **strength** of the smell is so bad people aren't allowed to eat it in public places in Singapore.

It has a shell that is covered in spines and is eaten by many animals in the local habitats, such as orangutans.



fruit  
extremely  
strength



[Find out more about where food comes from here.](#)



Find three facts about durians in the text.







# What Are Electrical Conductors and Insulators?

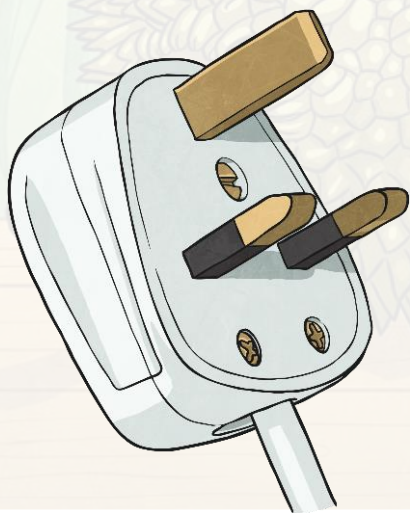
materials  
through  
opposite



Electrical conductors are **materials** that allow electricity to flow.

Metal, such as iron, copper and steel, allow electricity to pass **through** them.

Metal is used in plug ends to help electricity to flow.



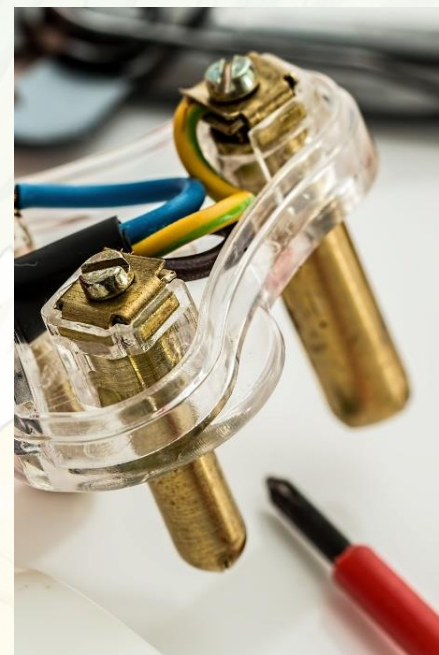
Electrical insulators are the **opposite** of conductors: they don't allow electricity to flow easily.

Plastics, wood, glass and rubber are examples of electrical insulators.

Plastic is used to cover electrical wires to stop people getting an electric shock.



Always be careful around electricity!



[Find out more about electricity here.](#)



Compare and contrast electrical insulators and conductors.





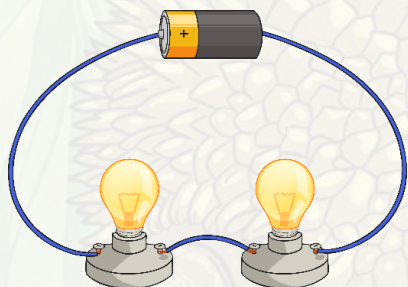
## What Is a Complete Circuit?

through  
complete

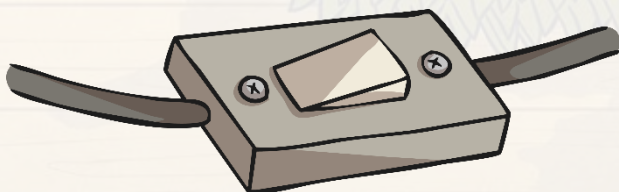


Electricity can only flow **through** a **complete** circuit.

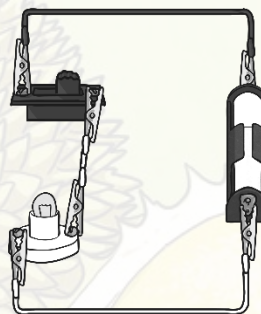
Wires must be connected to a positive and negative end of the power supply.



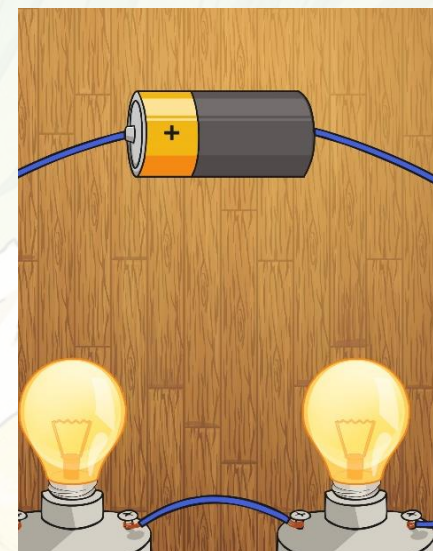
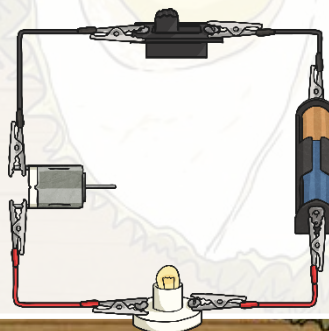
Switches can be used to open or close a circuit.



When a switch is turned off, it breaks the circuit.



When the switch is turned on, the circuit is complete and the electrons can flow around the circuit.



Summarise what  
a complete  
circuit is.







## Pong Power

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**36** It's famous for having a really bad smell. Some  
**47** people say it smells like cheese. Others say it's like a  
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**58** It comes from Southeast Asia. It's grown in a  
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**71** Professor Gomes says durians could charge  
**80** "phones, laptops and tablets". He even thinks it could  
**84** be a "low-cost solution".  
**92** If everything goes to plan, today's news shows  
**100** that the durian's bad smell may conceal a  
**102** hidden power.



## Quick Questions

1. Find and copy two things people say the durian smells like.

1. \_\_\_\_\_
2. \_\_\_\_\_

2. Find and copy a verb that means the same as to hide.

3. 'He even think's it could be a "low-cost solution".'

This suggests that...

- ☐ the durian charger could be cheaper.
- ☐ the durian charger will be expensive.
- ☐ the durian charger will cost the same.
- ☐ they're bad for the environment.

4. What do you think scientists will do next?

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## Glossary

Word	Definition
variety	A wide range of something or different places.
public	A place that is open to everyone or where many people can go.
laboratory	A place where scientific experiments are done or where scientists work.
conducts	Something that allows electricity to flow through it.



