



STEAM

全創號

FRONTIER

科學小知識

你知道以下哪一顆是生雞蛋，哪一顆是熟雞蛋嗎？



A



B

將兩顆雞蛋放在平滑的表面上輕輕轉動時：

雞蛋A：能夠流暢地轉動

雞蛋B：轉動較慢並且顯得不穩定

猜到嗎？答案是……





答案解說:

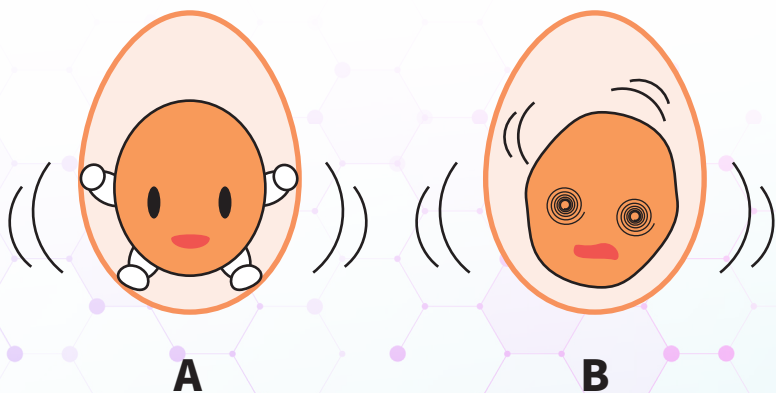
熟雞蛋內的蛋白和蛋黃全部都已凝結成固體，並會和蛋殼黏在一起，所以當轉動雞蛋時，整顆雞蛋包括蛋殼、蛋白和蛋黃會一齊受力，所以就能暢順地轉動。

而生雞蛋的蛋黃和蛋白都是液體，當我們轉動生雞蛋時，只有蛋殼受力，內裏的蛋白和蛋黃幾乎沒有受到力的作用。所以當生雞蛋轉動時，蛋白和蛋黃由於慣性作用留在原地，就會對蛋殼的轉動產生了一種牽制作用，讓整顆雞蛋不能暢順地轉動。

The Answer Explained:

The boiled egg is solid inside. The yolk and white are firmly connected to the shell. When you spin it, the entire egg moves as one solid object, allowing it to spin smoothly and steadily.

The raw egg has liquid inside. When you spin the shell, the liquid yolk and white inside barely move at first due to inertia. This creates a dragging effect, causing the egg to spin slowly and wobble.



答案：雞蛋A是熟的，雞蛋B是生的。

So, the result is: Egg A (spins smoothly) = Boiled Egg; Egg B (wobbles) = Raw Egg



讓我再給你多些資料吧! Let me give you a little more information!

有聽過牛頓第一運動定律 – 慣性定律嗎? 要分辨哪顆是生雞蛋可從這個科學原理想想。

Have you heard of Newton's First Law of Motion - the Law of Inertia? You can figure out which one is the raw egg by thinking about this scientific principle.

慣性定律

LAW OF INERTIA

$$\sum_i \mathbf{F}_i = 0 \Rightarrow \frac{d\mathbf{v}}{dt} = 0$$

- 靜止的物體會保持靜止狀態, 除非有外力施加於這物體。
- 運動中的物體不會改變其運動速度, 除非有外力施加於這物體。注意到速度是向量, 物體運動速度的大小與方向都不會改變。
- An object at rest will stay at rest unless a force acts on it.
- An object in motion will keep moving at the same speed and in the same direction unless a force acts on it.

牛頓是英國偉大的科學家, 他發現了萬有引力定律和三大運動定律, 徹底改變了人類對宇宙的認識。

Newton was a great British scientist who discovered the laws of motion and universal gravitation.



想了解更多一點牛頓嗎? 掃描二維碼!
Want to know more about Newton?
Scan the QR code!



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Fun Fact

Do you know which one is a raw egg and which is a boiled egg?



A



B

When you spin both eggs on a smooth surface:

Egg A: Spins smoothly and steadily

Egg B: Spins slowly and wobbles unstably

Can you guess which is which? The answer is...

