

## **Headline:**

### **Awesome Physics Facts That Will Blow Your Mind**

## **Sub-Headline:**

Not really, but it's still going to give you a slight headache when you realize just how interesting our little corner of the universe is, and just how amazing it would be to explore the rest.

## **Cover Photo:**

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## **Body Content:**

I think we can all agree that physics has to be one of the weirdest fields of study: cats that may or may not be dead, laws and principles that apply to virtually everything, and a lever long enough to move the world. But if you think that's how far the weird goes, oh boy, you cannot be more wrong:

### 1. Space travelers age slower

Astronaut Scott Kelly stayed for a year on board the International Space Station. This in itself is historic, but there was something else interesting when he got back to terra firma – he was a bit younger than he should have been, which had his twin brother worried that he might be the eldest now. Time slows down when gravity and speed goes up, and the ISS, though at reduced gravity, was travelling very fast around the Earth.

Another excellent example of this is the entire *Interstellar* movie, especially that scene when Matthew McConaughey's daughter tells him they're now the same age.

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### 2. Atoms are a waste of space

We've all been shown diagrams of atoms as kids, and they all looked pretty compact from what I remember.

<https://s-media-cache-ak0.pinimg.com/736x/2c/d1/6d/2cd16d8dfd8cc83d65097a3e944ec78f.jpg>

But the truth is, if you enlarged an atom to the size of a football field, the nucleus would be the size of a teeny tiny marble, and the electrons are other insects flitting around the field. Atoms are mostly empty space, which leads us to...

### 3. The entire human race can sweeten coffee, but weigh loads

[http://www.inforum.com/sites/default/files/styles/full\\_1000/public/field/image/sugar-cube-1325425-1280x800.jpg?itok=6C0RGDt9](http://www.inforum.com/sites/default/files/styles/full_1000/public/field/image/sugar-cube-1325425-1280x800.jpg?itok=6C0RGDt9)

Okay, that's not true (I think). What's true is that all of the atoms that make up the entirety of the human race, when compressed and all the empty space taken out, would be the size of a sugar cube. Of course, it would also weigh five billion tons, since that sugar cube would be ultra-dense.

### 4. Light isn't always as fast as you think

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We've always been taught that light is the fastest thing in the universe, and is always constant – it's like the Usain Bolt of the cosmos. But that only holds true for when it's traveling in a vacuum. If it has to go through something else, like water, it slows down. The slowest recorded speed of light is – wait for it – 38 miles per hour. It would still get a ticket in a school zone but heck, that's slower than the roadrunner.

5. You are a walking hydrogen bomb

The law of conservation of energy states that the amount of energy is constant, which means that the energy from the food you eat must be somewhere. And guess what, it's being stored inside you. About  $7 \times 10^{18}$  joules worth. If released at once, that's about the same amount of energy released by 30 hydrogen bombs. So yeah, you are *the bomb*.

<https://media.giphy.com/media/XbLZIFXQiHSU0/giphy.gif>

There's so much more about physics that's guaranteed to blow your mind – it's kind of in the job description. Here's some advice: read up, because brainy is the new sexy.

**Source:**

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