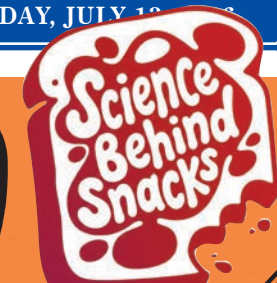


FIZZ-TORY LESSON



Picture the crack of a chip, the pop of popcorn, the pssst of soda... sounds that make snacking irresistible. Do you ever wonder how science turns simple ingredients into sensory explosions? **Aadhya Praval, AIS Gwalior, VIII C**, brings to you **part II** of GT's Science Behind Snacks series, where every snack shall have its moment. Without further ado, let's dig in!



Power type

The main character trait of a soda is not its sweet flavour but its bubbles. The tiny bursts of carbon dioxide turn a plain sip into a fizzy thrill that makes everyone go, "Aahh!" The fizz tickles on the tongue as the CO₂ particles activate its nerve cells. Even your nose and ears feel the tingle. From ginger ale to coca cola, it is the fizzy soda which gives them life.

Snack
Soda
Science involved
Carbonation and nucleation
Threat level
Explosive bubbles upon shaking



Snack-ology

Soda isn't just a beverage; it is liquid science! It's mindfully crafted to hit all your senses at once like an orchestra of sound, chills, and fizz. Did you know that diet soda has more fizz than a regular one? It's because the sugar content in them makes them thicker, reducing the formulation of bubbles. What a fizz-kill right?

Lab behind the sip

Believe it or not, every bottle of soda is science that you can



drink. During manufacturing CO₂ is forced into the drink under immense pressure. The liquid and the CO₂ get mixed until it's time to open the bottle. With a twist of the cap, the pressure is released, giving way for CO₂ to escape and bubbles to appear. But notice that soda gets fizzier when poured into a glass, creating extra bubbles when the ice cubes slide in. This is the magic of nucleation, where tiny surface imperfections trigger bubble growth. Once it hits your mouth, an enzyme on your tongue, called carbonic anhydrase, converts that CO₂ into carbonic acid, triggering your nerve receptors to create that signature, refreshing fizzy sensation.

Well, why can't you stop sipping?



The temptation of soda's sensory overload is

Test it yourself

Drop in a raisin into a glass of soda. You might expect it to sink but within a few seconds, you will find the raisin receiving a lift from the bubbles, just like an elevator ride. This ride, however, has a limited-time voucher. Just as the bubbles pop, the raisin sinks down. But again, bubbles will stick to the raisin and create a temporary soda-powered ship.

difficult to combat. The cool temperature refreshes you, the sweetness activates the pleasure signals in your brain, and the fizz bounces on your tongue's nerve endings like a grasshopper in a disco. During the sweltering summer, almost everyone falls prey to this irresistible, instant dopamine rush. One cool sip will turn into an empty bottle even before you get the opportunity to even blink thrice.

Rating:

COSMIC DNA

An Astrobiological Tour Of The Periodic Table Of Elements

Eeshvi Sharma

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What if I told you that we are made from stars? Our cosmic DNA hints that the fundamental building blocks of every creature - CHNOPS - originate from the cosmos. Wait not, sail into the unknown!

C for carbon

Forged within the core of red stars, carbon constitutes 18% of the human body. It contributes to DNA formation, proteins, and cells, weaving the soul of our essence. Due to its ability to form stable bonds, it binds our molecular structure

together in an organic web.

H for hydrogen

The oldest ingredient in the human recipe is hydrogen, making up about 10% of your body mass (though it accounts for over 60% of your actual atoms). Created 13.8 billion years ago during Big Bang Nucleosynthesis, it remains the most abundant element in the universe (about 74% of all baryonic matter). It is a key component of water and the 'proton gradient' that powers your mitochondria.

N for nitrogen

Roughly 3% of our body is nitrogen, an element produced

during the CNO (carbon-nitrogen-oxygen) cycle in the hearts of stars. Not just the most abundant gas in our atmosphere, it's also a vital component of amino acids and the nitrogenous bases in DNA.

O for oxygen

This heavy lifter, makes up about 65% of our body. It is formed in the nucleus of stars and spreads across the cosmos during supernovae. In your body, oxygen acts as the final electron acceptor in cells, generating energy.

P for phosphorus

Phosphorus forms molecular grids, making up roughly 1%

of the body. Born through stars during supernova explosions, it forms the structural phosphate of genetic code and is the central component of ATP (Adenosine Triphosphate), like a battery cell.

S for sulphur

Elusive in interstellar gas clouds, this element is vital for forming amino acids, proteins, and enzymes. When a star, in its final stage, goes through nuclear fusion, sulphur forms by fusing helium and oxygen.

And that sums up the cosmic concoction of our bodies. It is a reminder that we already carry the universe within us.

