

## Hey Smart Scoopers

We're back with your weekly mix of stories, facts, and fun all brewed to tickle your curiosity and keep those thinking caps shining bright!

This week's edition has it all: cosmic visitors, clever math in nature, animal testing debate, heroic wins of brave women in cricket and the shiny metals powering our tech.

So dive in, scroll on, and enjoy your SmartScoop fix for the week!

Scoop 1: Fibonacci Sequence: How Nature Uses Math To Look Pretty!

Scoop 2: The Cosmic Visitor 3I/ATLAS: Story Of the Interstellar Comet

Scoop 3: The Lab Monkeys On The Loose: Should Science Rely On Animal Testing?

Scoop 4: India's Women Rewrite Cricket History: Turning Struggle To Strength

Scoop 5: Rare Earth Elements: The Not-So Rare Treasure Everyone Wants

Can't wait for you to dig-in!

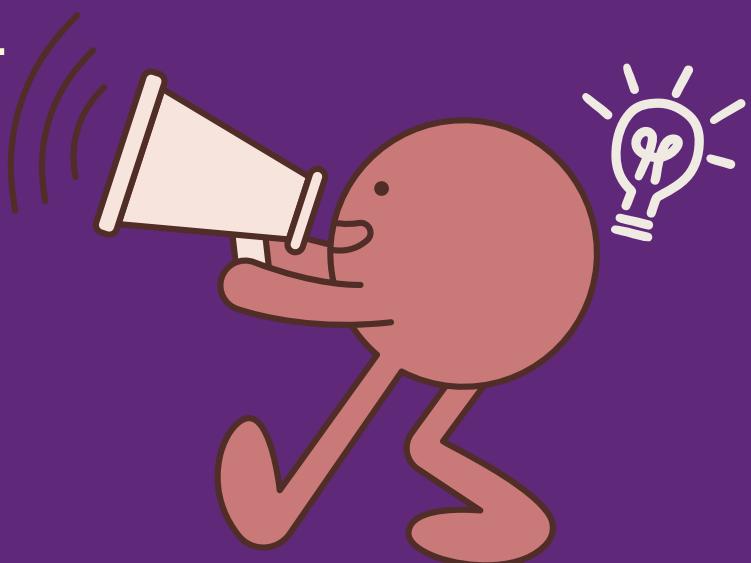
Happy scooping!

The SmartScoop Team

Our mascot, Blurt  
will follow us  
along the way.

Blurt /blurt/  
noun:

A loud, round, super-curious character who just can't keep a fact in.



# Fibonacci Sequence

## HOW NATURE USES MATH TO LOOK PRETTY!



Look closely at a sunflower, a pinecone, or even the swirl of your fingerprint. See that spiral? Count the petals of a flower or trace the pattern of a tree's branches, a hidden rhythm begins to emerge.

### Welcome to the fascinating world of the Fibonacci sequence.

Every year on November 23 (11/23), math lovers around the world celebrate **Fibonacci Day**, because 1-1-2-3 are the first four numbers of the most fascinating pattern in mathematics!

### What Is Fibonacci Sequence?

Imagine starting with 0 and 1. Now, to get the next number, just add the two previous numbers together. That's it! Here's how it works:

**0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144...**

So:  $0+1=1$ , then  $1+1=2$ , then  $1+2=3$ , then  $2+3=5$ , and so on forever. Simple, right? But this seemingly basic pattern unlocks one of nature's most beautiful secrets.

The sequence is named after **Leonardo Fibonacci**, a 12th-century Italian mathematician who introduced it to Europe in his 1202 book *Liber Abaci* (The Book Of Calculation). He didn't discover it, though... Indian scholars, including Sanskrit poet Pingala (200 BCE), described the pattern centuries earlier. Fibonacci helped spread the Hindu-Arabic numeral system (0-9) in Europe.

### Nature's Favorite Number Pattern All Around!



#### Sunflower Spirals

Look closely at a sunflower's center. You'll see spirals going both clockwise and counterclockwise. Count them, you'll typically find 34 spirals one way and 55 the other, or 55 and 89. Yep, Fibonacci again!



#### Pinecones and Pineapples

The spiral patterns on pinecones usually come in counts of 8 and 13. Pineapples? Often 8, 13, or 21 spirals.



#### Let's smell some flowers and count their petals!



Yay, Fibonacci all the way!

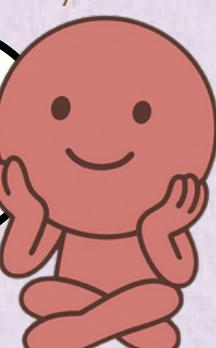
### Another Fascinating Fact: THE GOLDEN RATIO!!!

Divide any Fibonacci number by the one before it. You'll get approximately **1.618**. This special number is called the **Golden Ratio** (represented by the Greek letter  $\varphi$ , phi), and artists and architects have used it for thousands of years because it's supposedly the most aesthetically pleasing proportion. The old Twitter logo's curves, the Apple logo, and countless other designs are based on Fibonacci spirals because they're naturally pleasing to our eyes.

### Why Does Nature Love Fibonacci?

Because it's nature's way of staying efficient! Sunflowers use Fibonacci spirals to pack the most seeds into the smallest space. Leaves grow in Fibonacci patterns so each one gets sunlight without blocking the others. Over time, evolution chose Fibonacci as nature's perfect formula for packing and spacing.

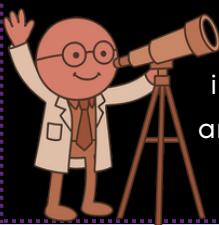
Mother nature sure did loads of math homework and she totally aced it with Fibonacci!



# The Cosmic Visitor 3I/ATLAS

## THE STORY OF INTERSTELLAR COMET

In July 2025, astronomers using the ATLAS telescope in Chile spotted a fast-moving object entering our solar system. They named it 3I/ATLAS : "3" for the third confirmed interstellar visitor, "I" for interstellar, and "ATLAS" after the telescope that found it. Starting around November 11, star gazers should be able to spot it glowing in the predawn sky.



Hold Up! Before we dive in, time for a quick vocab check



Photo of 3I/ATLAS taken from Mars

A **comet** is a mix of ice, dust, and rock. Far from the Sun, it's just a frozen lump. As it gets closer, the Sun's heat makes the ice vaporize, forming a glowing coma (a cloud of gas and dust) and a bright tail that always points away from the Sun due to solar wind.

**Where Comets Come From:** Most comets come from two faraway regions of the solar system:

- the Kuiper Belt (just beyond Neptune), and
- the Oort Cloud (a giant icy shell surrounding the solar system).

An **interstellar comet** is a comet that didn't originate in our Solar System but instead traveled through space from another star-system. These are objects which are on hyperbolic (open-ended) paths, meaning they won't orbit the Sun and return; they fly in and then fly out.

### But why is this visitor 3I/ATLAS so special?

It's the third interstellar object (that's the "3I" part) ever discovered passing through our cosmic neighborhood. The first two were 1I/Oumuamua in 2017 and Comet 2I/Borisov in 2019.

It's **HUGE**. The dusty cloud surrounding the comet (called a coma) measures about 26,400 kilometers across. That's roughly twice the diameter of Earth!

This particular comet might be up to 7 billion years old, older than our entire solar system!

This visitor is a time-capsule from outside our solar system, so studying it gives clues about how other star systems form comets, what materials they carry, and how cosmic neighbourhoods differ.

**What's Next?:** In December, 3I/ATLAS will make its closest approach to Earth, though "closest" is relative, it'll still be about 170 million miles away, so no worries about it hitting us. After sweeping past the Sun and some of the planets, it will continue into deep space beyond our solar system.

Hmm...so comets are basically space popsicles on fire. No wonder astronomers are obsessed!



# Lab Monkeys On The Loose!

## SHOULD SCIENCE STILL RELY ON ANIMAL TESTING?



On October 28, 2025, a truck hauling about 21 rhesus lab monkeys overturned on a highway in Mississippi, sending the primates scrambling into roadside grass. Some monkeys were quickly recaptured. By early November, two monkeys had been fatally shot by residents and one remained missing. This dramatic escape offers a rare glimpse into a world most of us never see: animal testing for medical research.

### What Is Animal Testing?

Animal testing, also called animal experimentation or animal research, involves using animals in scientific experiments to understand diseases, test new medicines, and develop treatments. Scientists use various animals for research, including mice, rats, rabbits, dogs, cats, pigs, and primates like monkeys.



But why are scientists testing animals?

Scientists use animals because they share biological similarities with humans. For example, mice share about 85-97% of their genes with humans, and primates like rhesus monkeys are even more similar to us 93-97%. This makes them useful for studying how diseases work and whether new medicines are safe before testing them on humans.

### The DEBATE : Why People Disagree

#### Medical breakthroughs:

Supporters note that almost every major medical advance from vaccines to chemotherapy to insulin has relied on animal research at some stage.

#### Ethical concerns:

Many people believe it's wrong to cause suffering to animals, no matter the potential benefit. Animals can feel pain and fear.



The good news is that science is evolving!!!

Here are some promising developments:

Organoids (tiny lab-grown organs made from human cells).

Advanced cell cultures that behave more like real human tissue.

Microchips that simulate human organ systems.

Computer models that predict how drugs will work in the human body.

#### No perfect alternatives yet:

Supporters say that computer models and cell cultures can't yet match the complexity of a living body. A drug that works in a petri dish might fail or cause problems in a real organism.

#### Not all research is essential:

While some animal testing aims to cure serious diseases, animals are also used to test cosmetics, household products, and other non-medical items. Many people question whether these uses are necessary.

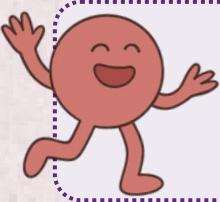
The real test isn't in the lab, it's in how we humans balance progress in science and showing kindness for animals.

No perfect answers yet, but hey, every smart question gets us closer.



# India's Women Rewrite Cricket History

## TURNING STRUGGLES INTO STRENGTH



For the first time ever, India's Women's Cricket Team lifted the ICC Women's World Cup 2025, defeating South Africa.

But beyond the scoreboard lies a story more powerful than the win.



### A story of small beginnings, big dreams, and unbreakable spirit

Deepti Sharma



Born to a railway employee in Agra, Deepti Sharma began by helping her brother at the practice nets. She grew up in a modest home, where cricket was not an obvious career choice for a girl.

There were no cricket academies for girls in her hometown, Rohtak. Her father was a small jewellery shop owner with limited resources. At nine, Shafali disguised herself as a boy to play local matches!

Hailing from Moga, Punjab, Harmanpreet Kaur has long been the face of Indian women's cricket. Her dad was a clerk in a district court with a small income. Her early days were filled with challenges like limited facilities, social pressure, and little recognition.

Radha lived in a 200-square-foot house in Mumbai, part of a slum redevelopment area near a vegetable market. Her father sold vegetables from a roadside stall. Life wasn't easy, five family members shared one small room. But what Radha had in abundance was determination.

Smriti Mandhana, from Sangli, Maharashtra, is the poster girl of Indian women's cricket. She came from a family of cricketers and became a role model early on. Her calm consistency reminds that greatness often comes from doing the small things right, every single day.

Jemimah went through a rough patch. Runs dried up. Critics got louder and she started struggling with self-doubt. Jemimah began working on her mental health by journaling, playing her guitar, and talking openly about her feelings. She learned to separate her worth from her performance, and that got her performance back on track.

From Assam's Golaghat district, Uma Chetry used to play barefoot with her brother on dusty roads: the only girl among five siblings. She had to fight all odds to reach the world stage.

Smriti Mandhana



Shaifali Verma



Radha Yadav



Jemimah Rodrigues



Uma Chetry



Reading their stories makes me want to stop complaining about small things. They chased big dreams with less resources and that's the kind of energy I want in my life too!



# Rare Earth Elements

## THE NOT-SO-RARE TREASURE EVERYONE WANTS



Right now, you're probably reading this on a smartphone or laptop. Maybe you've got earbuds in. Perhaps your family drives an electric car, or you've heard about wind turbines saving the planet. What do all these things have in common?

They all depend on a group of elements with weird names like **neodymium**, **dysprosium**, and **ytterbium**. But supplies of these elements are tightening. Why is that happening? Let's find out.

### Welcome to the world of Rare Earth Elements (REEs)

#### What Exactly Are Rare Earths?

Despite the name, rare earth elements aren't rare at all. There are **17 rare earth elements**. The real challenge is that they're tough and costly to extract, and mining them harms the environment. These elements power nearly every modern gadget from smartphones and wind turbines to EVs and MRI scanners. If it's high-tech, it probably uses rare earths!

The boxes in orange in the periodic table are Rare Earth elements.



#### Why Is Everyone Freaking Out Over REE?



#### China's Dominance: The Real-Life Monopoly Game



Here's where the geopolitics comes in. Even though REEs are found all over the planet, one country controls the vast majority of their supply: **China**. Today, China controls around 70% of global REE mining and nearly 90% of the super-important processing/refining needed to turn the raw dirt into a usable powder. This means they have a huge amount of leverage (power or influence) over the global economy. And to keep control, China now uses tools like **export licences, quotas, and technology bans** to control the supply of REEs to other countries.



Countries are racing to reduce reliance on China for rare earths. The U.S. is reopening mines and recycling metals, the EU is pushing greener mining and stockpiles, and India is boosting exploration and local production. Together, these moves aim to secure supplies for the world's growing tech and clean-energy needs.



**China: We got the magnets, everyone else is stuck!!!**



Let's find our own REE reserves. Let me team up with my allies.



Make America Mine Again!

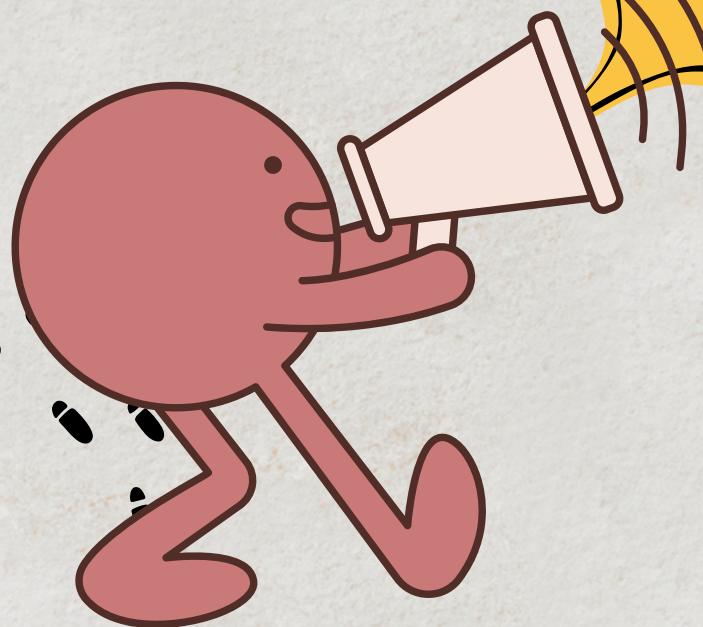


Pushing for cleaner mining, please!



We are digging deeper, like literally! Deep-sea mining...

Sea otters hold hands while they sleep to avoid drifting apart in the water.



That's all for this  
week folks!

Got some feedback or want to share something with us?  
Write to us here:

[smartscoopteam@gmail.com](mailto:smartscoopteam@gmail.com)  
<https://www.smartscoop.in>

We'd love to hear from you! Mostly Blurt tbh..



The freshest finds for clever minds!!!

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