

THE MYSTERY OF MIRAGES



A Perplexing Performance Of Heat And Light

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This is the story of Layla, a small girl who lived in the Sahara Desert, where the sun scorched the earth and the sand danced in waves of heat. One blistering day, as Layla roamed the dunes, she stumbled upon a mesmerising sight: a shimmering lake. Her parched throat danced at the sight, but as she ran towards it, the lake disappeared. Each time the lake seemed within reach, it vanished, making Layla wonder if some spell was at play.

Exhausted and baffled, she decided to retire home with a resolve to continue her search the next day, at a time when the temperatures were relatively cooler. She woke up the next day at the crack of dawn and set out on a quest for the lake. The sun was yet to rise and the sand soothed by the cool of the night, felt cold against her feet. Her expedition was certainly more comfortable now, but more elusive, for the lake was nowhere in sight.

Soon, the sun was overhead and the heat had again begun to get the better of Layla. Sweat trickled down her forehead when she saw another glistening lake. This time, it was even bigger than the last time. But it was just as fleeting, too. No matter how hard she tried, each time she got closer to the lake, it would disappear into thin air. She tried and tried, until she grew exhausted and decided to retire home and resume her search at night, when the weather would be cooler.

After a few hours, she resumed her mission in the evening only for the lake to be nowhere in sight. Disappointed, she buried her head in the sand, when an elder from her tribe approached her. Layla shared the story of the lake, only to be met by a friendly laughter. Wise and weathered by years of desert life, the wise man had seen everything there was to see

The science of it

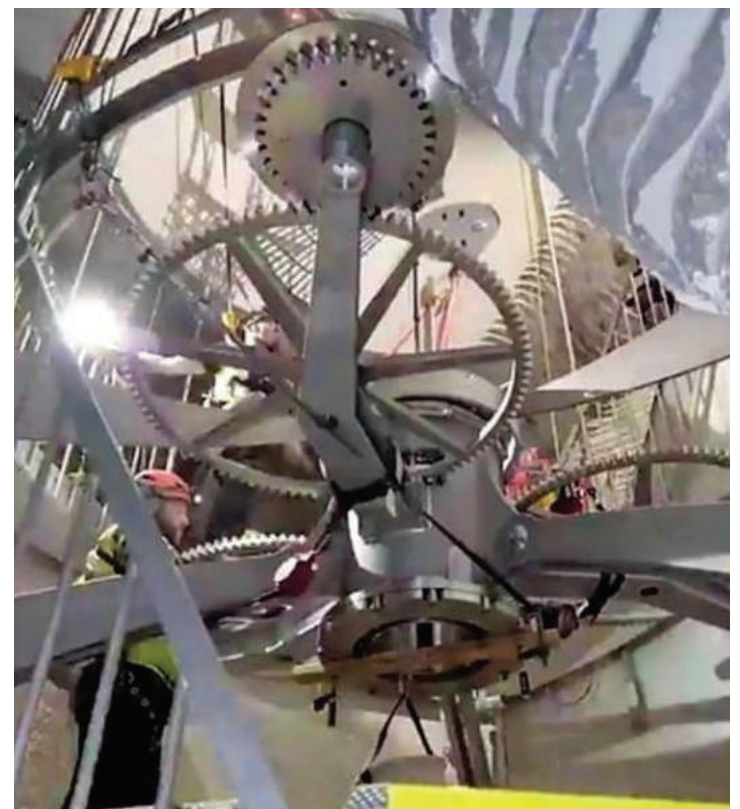
A mirage is a naturally occurring optical illusion that produces a displaced image of a distant object or water body. In hot surface regions like deserts, mirages occur when light rays bend due to refraction in the hot air layers.

in the sand dunes. “You’ve seen a mirage, child,” he said, “it’s a trick played by the desert, a dance of light and heat that deceives the weary traveler.”

“In the desert,” he began, “the sun beats down upon the sand, heating it to scorching temperatures. This intense heat creates a stark contrast between the air close to the ground and the cooler air above. As light passes through these layers of hot and cold air, it bends and refracts, creating optical illusions that trick the eye into seeing things that aren’t there. The shimmering lake you saw was nothing more than a reflection of the sky, distorted by the desert’s heat.” As Layla absorbed the elder’s words, she marvelled at the intricacies of the natural world. “So, the mirage is not real?” she asked, her mind buzzing with newfound understanding.

The elder nodded, a smile playing on his lips. “No, dear child. But in its illusion lies a deeper truth: the desert is a land of mystery and wonder. The mirage reminds you to see through the illusions of life and find clarity in the shimmering heat of truth.”

With a sense of enlightenment, Layla rose to her feet, carrying with her a newfound wisdom that would guide her through the endless expanse of the desert and beyond.



The unique clock

One That Ticks Once A Year

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All of us look at clocks multiple times a day. Whether it is digital or analog, it keeps us in check. An important asset but pretty basic, right? We won’t travel miles to see it...well, not until it is the Big Ben, however, a new clock has been added to that list. Say hello to the Clock of the Long Now aka the 10,000 year clock – a mechanical clock built by the Long Now Foundation which aims to keep time for 10,000 years.

The idea was first thought of by Danny Hillis in 1986 and its first prototype was set up on Dec 31, 1999. The project is currently being funded by Jeff Bezos, and in the words of Stewart Brand, a founding member of the foundation, “such a clock would embody deep time for people.” Of course, he also mentioned how the Clock would be charismatic to visit, interesting to think about, and famous enough to become iconic. So, it was in 2018 that Jeff Bezos took it upon himself to let this idea be a sight the world will remember. The initiative began with an excavation at the Sierra Diablo mountains in Texas. Once it was complete, the installation took place where enormous time-keep-

ing components were assembled, including the drive weight, winder, and main gearing.

The Clock serves the purpose of marking time with astronomic and calendric displays and a chime generator that will produce over 3.5 billion unique bell chimes. With 42 million dollars being spent on the Clock, it is entirely mechanical and made of long-lasting materials like titanium, ceramics, quartz, sapphire, and 316 stainless sheets of steel.

But how will the Clock run for 10,000 years? Well, the Clock has a special technique through which the sunlight enters a 12 ft cupola whose focus is shifted downwards to the synchroniser of the solar. This heats up the chamber of air which is considered as the solar noon’s mechanical signal, hence keeping the Clock working. This 10,000-year Clock is made with a vision to make us aware of how time moves. The Clock is to make us introspect the generational impact of our decisions and try to be better ancestors. It reminds us to take better care of our planet for the generations to follow because, at the end of the day, it all comes down to doing better for humanity. [GT](#)

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