

The Dawn of an Era

# The Epoch

• ISSUE 01 •



# E

6

**sections**

Including a note  
from the editors

**An epic  
adventure  
awaits!**

EDITORS

ARYAN SRIVASTAVA

AARYAN MEHTA



# Editorial

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By Editor  
Aryan

Srivastava

E P O C H

We, the Editors, are proud to present the first edition of this prestigious magazine, The Epoch.

The inception of the magazine was a mere thought by my comrade, Aaryan Mehta, who is also the founder. He never thought that a simple idea could lead this far. He made his editing team complete by asking me to come on board.

It hasn't been a very long journey, with the idea itself being a month old. I would also like to take this opportunity to thank Ms. Soumita Sen, without whom this magazine wouldn't even have reached this stage. She pushed and encouraged us to do this even when we thought that it wouldn't be successful.

Now many of the students have asked what exactly does the term 'epoch' mean.

Epoch means era, or a period of time. We thought it would be nice to have a slogan saying 'the dawn of an era.' It sounds professional as well, which is one of our goals we hope to achieve.

One of the other targets we are hoping to achieve is making people aware of staggering issues around the world. This makes one knowledgeable and I am a firm believer and enforcer of 'knowledge is power.'

We also hope to externalize this magazine so that our words reach the public, and so that they can witness the students, staff and the faculty in action.

The next step was delegating roles. I am glad to say that The Team took this initiative seriously, and worked hard to complete the goals set by Aaryan and I. The Team did not disappoint, in which they followed deadlines and the instructions we gave them. We also hope that this remains the case in the future.



E P O

Speaking of the future; I plan to make a career in either journalism or international relations and global politics. I feel that this magazine is paramount for me to be successful in either field. It could give my application a major boost and help me with prior experience.

To conclude, I just want to say that this month had been a wonderful one for us, and we are extremely gladdened to present The Epoch.

The editing team and IBDP-1 have worked very hard to make this dream come true, and they sincerely hope that you enjoy reading the pioneering edition as much as the team did making it.

Warmest Regards,  
Aryan Srivastava,  
The Epoch



E P O



The background of the cover features a large, stylized United Nations emblem. It consists of a world map with latitude and longitude lines, centered on the North Pole, surrounded by a wreath of olive branches. The emblem is rendered in a light blue color against a darker blue background.

# International Affairs

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By Gurbani  
Bhatia



# Fire and Fury – Whose button is bigger?

BY GURBANI BHATIA

Since the ascension of Kim Jong-Un as North Korea's leader in 2011, the country has posed an ongoing diplomatic challenge for the United States. Pyongyang has ramped up work on its nuclear program and claims it is capable of launching a nuclear-armed missile that would reach the continental USA. The reclusive nation carried out its sixth and most powerful nuclear test early Sunday morning, which North Korean state television swiftly described as a "perfect success." The regime claims it detonated a hydrogen bomb, and although analysts have expressed skepticism about that, Japan's Chief Cabinet Secretary, Yoshihide Suga, said Tokyo could not yet dismiss the possibility that it was indeed an H-bomb — a device much more powerful than the atomic bombs dropped on Hiroshima and Nagasaki during World War II.

Pyongyang successfully conducted its first two intercontinental ballistic missile tests in July, 2017 — a feat USA President Donald Trump had called an impossibility shortly before his inauguration in January. The launches triggered international alarm and condemnation, and sparked a battle of escalating threats between the Trump administration and the North Korean regime. North Korea has been working to acquire a functional, deliverable nuclear weapon for decades. Those aspirations began during the rule of former Supreme Leader Kim Il Sung at the close of World War II and began to take shape under the reign of his son, Kim Jong Il, who first tested a nuclear weapon in 2006. North Korea was able to purchase much of its initial nuclear technology from one of the founders of Pakistan's nuclear program and bought centrifuges to enrich uranium from Libya.



North Korea is in possession of up to 20 nuclear warheads, according to an annual report released this week by the Stockholm International Peace Research Institute.

Pyongyang's claims that it has the ability to strike the continental USA sparked a heated war of words between Kim and Trump, with the threatening in August "fire and fury" for North Korea.

This presents major difficulties for the South Korean capital, Seoul, as well, since it lies just 35 miles from the North's border and within easy striking distance of the country's non-nuclear artillery.

Were Trump to act, Kim could set his sights on a city of 12 million people that has long been a friend to the West. It's also unclear whether strikes could effectively target the North's program, as infrastructure is spread across the country and in some cases lies underground.

For now, only time will tell how the Trump administration will handle a country set on pursuing a nuclear arsenal at any cost.

As New York Times reporter David Sanger explained in an interview with NPR's Dave Davies in late March, 2017: "Kim Il Sung remembers that General [Douglas] MacArthur, during the Korean War, wanted to use nuclear weapons against North Korea and China. He was stopped from doing this. But it made a very big impression on Mr. Kim, and he knew that North Korea, to survive and deter attack, needed to have this capability itself. And he's the one, the grandfather of the current North Korean leader, who started down this path."

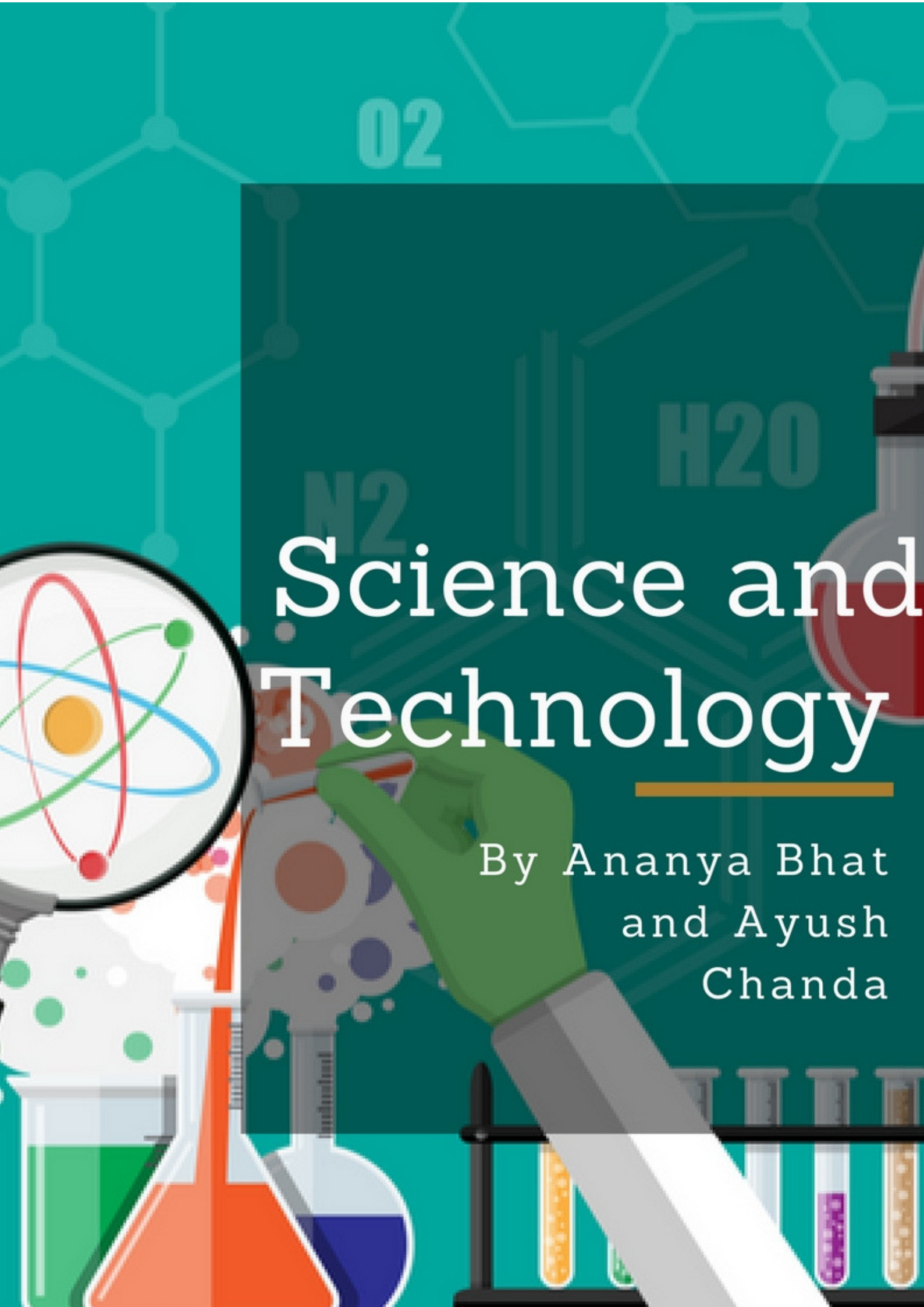


02

# Science and Technology

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By Ananya Bhat  
and Ayush  
Chanda





# Cryptocurrency: the new era of currency

BY AYUSH CHANDA

Cryptocurrency have become a global phenomenon in this digital age. While somehow being geeky, most people have not yet understood the ins and outs of cryptocurrency. Although Governments, banks and companies are trying to adopt the new form of currency, the world seems to have a negative outlook of cryptocurrency.

## Origins

Few people know but cryptocurrency was a side product of another invention. The anonymous founder of Bitcoin, Satoshi Nakamoto, had never intended to make a cryptocurrency. In the 20th century many firms tried to create digital money but they all seemed to fail. After seeing all centralized attempts fail, Satoshi created a new digital cash system which was decentralized. It was like a Peer-to-Peer network file sharing software but instead gave birth to Bitcoin.

## What are crypto miners?

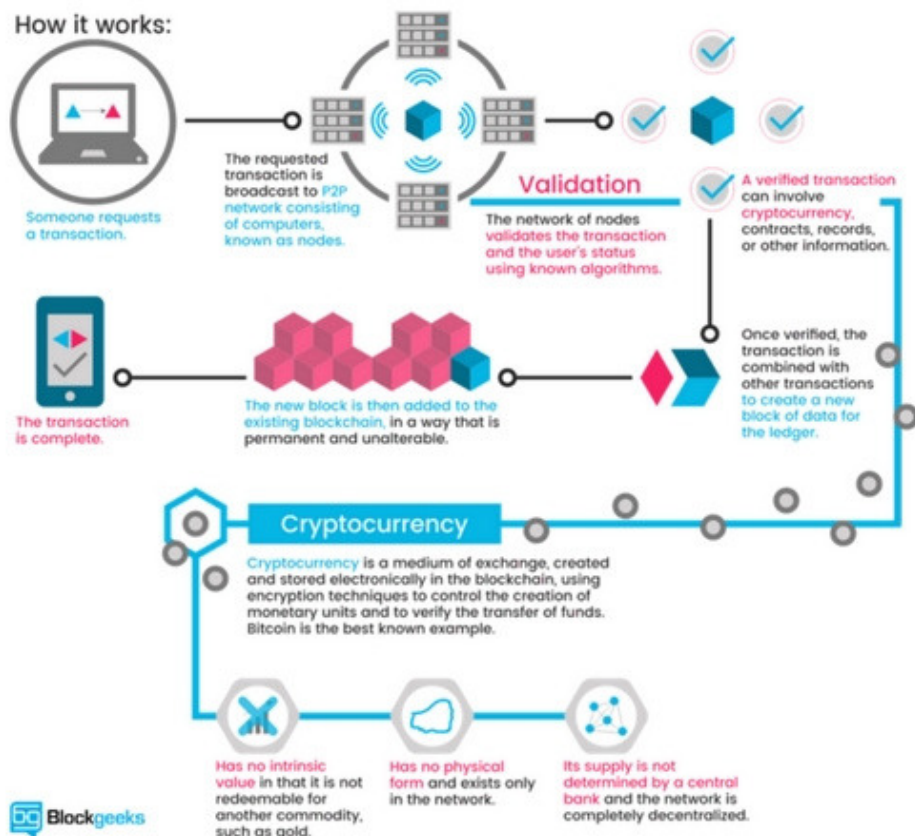
Theoretically anyone can be a miner. Due to its decentralized networking system, there is no authority to start mining. However, this also arises the problem of consumers making forged peers and earn bitcoins tenfold. The system would crash immediately. So, Satoshi created a policy in which miners will have to find a hash which can connect itself to the previous blockchain to initiate the process and create new blocks. This is called the Proof-of-work. Miners usually use high end graphic cards for the most efficient mining system. Although most laptops can mine cryptocurrencies, they may take hours or even days to find one hash to find a new blockchain.



## What makes cryptocurrency so unique?

- 1.) Irreversible: After confirmation, a transaction can't be reversed. By nobody. And nobody means nobody. Not you, not your bank, not the president of the United States, not Satoshi, not your miner. Nobody. If you send money, you send it. Period. No one can help you, if you sent your funds to a scammer or if a hacker stole them from your computer. There is no safety net.
- 2.) Pseudonymous: Neither transactions nor accounts are connected to real-world identities. You receive Bitcoins on so-called addresses, which are randomly seeming chains of around 30 characters. While it is usually possible to analyse the transaction flow, it is not necessarily possible to connect the real-world identity of users with those addresses.
- 3.) Fast and global: Transaction are propagated nearly instantly in the network and are confirmed in a couple of minutes. Since they happen in a global network of computers they are completely indifferent of your physical location. It doesn't matter if I send Bitcoin to my neighbour or to someone on the other side of the world.

- 4.) Secure: Cryptocurrency funds are locked in a public key cryptography system. Only the owner of the private key can send cryptocurrency. Strong cryptography and the magic of big numbers makes it impossible to break this scheme. A Bitcoin address is more secure than Fort Knox.
  - 5.) Permission less: You don't have to ask anybody to use cryptocurrency. It's just a software that everybody can download for free. After you installed it, you can receive and send Bitcoins or other cryptocurrencies. No one can prevent you. There is no gatekeeper.
- Since cryptocurrency has started to become more mainstream, NPOs, NGOs and UN are asking people with capable mining systems to mine for currency to help fund their projects and activities. The most reputed one is UNICEF's Gamechangers, which helps you mine Ethereum and the money received goes directly to the organization. If you want to participate go to this site: <https://www.chaingers.io/en/index.html>.







# Coral Reefs: Clothes aren't the only things getting bleached

BY ANANYA BHAT

Firstly, what are corals? “Corals are marine invertebrates in the class Anthozoa of phylum Cnidaria.” But, let me break that down for you. Corals are, as a whole, classified as animals. But they have a few components. They are in a symbiotic relationship with a plant species known as zooxanthellae. The zooxanthellae are able to photosynthesise and thereby provide the coral with food; they also give corals their vibrant colours. The coral, in turn, provides the plant species with shelter using their hard exoskeleton, made of calcium carbonate. (Some corals can take in dissolved carbon dioxide from the water and make calcium carbonate.)

A coral reef is a vast expanse of coral on the seafloor. They are typically found in shallow waters, as the zooxanthellae require the sunlight to photosynthesise, and sunlight cannot penetrate all the way through deep waters.

The current issue we face regarding the coral reefs is the bleaching of the reefs. No, this does not only mean that the corals lose their colour. This means that the corals die. A bleached coral is one where the zooxanthellae are dead, and they are the ones that provide the coral polyp with food. Therefore, due to the lack of food, the corals also die.

Coral bleaching is occurring at alarming rates across the Great Barrier Reef lately. Multiple studies show tight correlations to the rising sea temperatures. This makes sense, as the enzymes in the plant species are working at their optimum within a certain range of temperatures, between 25°C and 29°C. Once the sea temperatures exceed the range, the enzymes denature, and the plant isn't able to carry out its biological functions; it then dies.



This impacts the entire ecosystem that centres itself around the corals. A decline in the number of coral-associated fish species has been noticed, a clear indication of the loss of biodiversity in the region. This also doesn't bode well for the economies of countries near coral reefs.



Much revenue is generated through tourism, and as an attraction, if the reef loses its colour and the corals, they stand to lose quite a lot of money since people will no longer be so keen to view it. A lot of medical research is also dependent on coral reefs, and research into cures for ailments like HIV and cancer will take hits.








# School and the City

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By Vaidehi  
Patel, Isha Shah  
and Supriyaa  
Kaushick





# cradle to cradle

## Cradle to Cradle

Cradle to cradle is an initiative by Grade 11 to protect the environment, an idea put forward by Riya Venugopal, the pioneer and head of the club. We aim to spread awareness about and find practical solutions to some major local and global environmental problems such as pollution, waste burning, and many more. Also, we aim to understand decisions and actions that can be taken locally and globally to encourage sustainable living and avoid unsustainable practices.

The environment is gifted by the nature to nourish the life on the earth. There is a balanced natural cycle that exists between the environment and mankind. However, it's time we recognize that we are taking advantage of our control over the environment. The indiscriminate use of environment is the root of ecological crisis. Hence, we find it our responsibility to protect the environment.





# HeForShe GICLM

HeForShe GICLM is a club pioneered and headed by Gurbani Bhatia to address a major earthly issue, gender equality. Gurbani has received official permission from UN Women to start this club. HeForShe is a solidarity movement by UN Women to help achieve gender equality.

Gender equality will have been achieved when women do not experience violence in their homes, share unpaid care work with men and are represented at the highest levels of business and politics. No country in the world has achieved gender equality, and the pace of change is frustratingly slow.

For decades, women have advocated for equal rights – but without the support of men, equality will not be achieved.



# The Sanitary Napkin

BY VAIDEHI PATEL AND ISHA SHAH

In a bid to curb the daily problems of choked up drains in community toilets, another problem for the government arose **"THE SANITARY NAPKINS"**.

The sanitary napkins have become a crucial problem as, when it comes to the health and hygiene of women, the situation is quite bad in India.

According to the 2015-2016 report released by the National Family Health Survey, only 48 percent of women use sanitary napkins during periods in rural India.

The first question that comes to your mind is **Why?**

The taxes on sanitary napkins are exceptionally high and most women cannot afford them. Most of them are not even aware of the concept of sanitary napkins.

Laxmi, a domestic help from Begumpet, who earns 8,000 per month and has a family to take care of, uses a sanitary napkin that costs 34. But after 12% GST, she fears that the cost of pads might go up. "If the cost of sanitary napkins goes up even by 10, I won't be able to afford it," she said.

Women resort to cheaper but unhygienic alternatives such as sand, sawdust, leaves and ash. More worrisome are those who use cloth, but who out of embarrassment, refuse to dry them in the sun, so they don't get disinfected. Up to 70 percent of reproductive diseases, which are often fatal to the woman, are attributed to poor menstrual hygiene.



"If not me then who, if not now then when?"

As a community, we must do something about this vital issue. Two girls from Jaipur have started a campaign to spread awareness among women regarding health issues and the use of sanitary napkins during menstruation.







# Connect – Create – Celebrate – The Chembur Festival 2018

BY SUPRIYAA KAUSHICK

The Chembur festival is a yearly festival organized by the Chembur Citizen's Welfare Association. It was initiated in the year 2011.

“

A combination of various communities, nodes, landmarks and paths is how we associate Chembur with. This sense of belonging can be experienced by one who was born and bred in it. Chembur Festival is one such expression.”


“

The festival aims at reviving, rejuvenating and propagating the character of Chembur. It offers opportunities to the new, and glory to the ones who have reached the pinnacle of their careers.”

Chembur festival 2018 is the 7th edition of the festival with the theme ‘Incredible India’.

The Chembur festival consists of a lot of competitions, workshops and cultural programs. I'm going to be listing some of the main events of the Chembur festival:

- Rangoli Exhibition
- Teen Talkies by Teengage – the teen space
- Cultural Parade
- Incredible Indian
- Drawing Competition
- Landscape Drawing Competition
- Chembur's Got Talent



# Sports

By Shivank  
Ganesh





# Man City, Barcelona & Bayern: cream of the crop

BY SHIVANK GANESH

Despite losing their invincibility against Liverpool at Anfield in early Jan, Man city have restored normalcy, with thumping home victories against Newcastle and Leicester. With potent attacking talent in Sergio Aguero and Raheem Sterling, to go along with an industrious midfield bossed by Kevin de bruyne and David Silva, coupled with a tactical genius in Pep Guardiola (coach), they are a serious force to reckon with.

Meanwhile, in the Bundesliga, Bayern have continued their impressive league form over recent seasons, by taking a seemingly unassailable 18-point lead at the top. Top scorer Lewandoski (19 goals), is leading their march towards yet another league triumph.



Lastly, in the La liga, Barcelona haven't disappointed, with mesmerizing displays consistently throughout the season, with, undoubtedly, their 3-0 away at the Bernabeu against Real Madrid being the highlight so far. Six points ahead of second placed Athletic, and 16 points ahead of Zidane's Madrid, Barcelona seems to be tipped for regaining the coveted title from the hands of their arch enemies. To add to their armor, they've signed Phillipe Coutinho, (Brazilian winger) from Liverpool, in a big money move that could prove to be the decisive factor in the title race this season.

Some matches to look forward to in the champions league over the next fortnight ;

Juventus vs Tottenham ( 14 Feb and 8 march)

Paris Saint Germain Vs Real Madrid ( 15 feb and 7 march)

Chelsea vs Barcleona ( 21 feb and 15 march)

Sevilla vs Man united ( 22 feb and 14 march)



Club	MP	W	D	L	GF	GA	GD	Pts
1  Man. City	27	23	3	1	79	20	59	72
2  Man United	27	17	5	5	51	19	32	56
3  Liverpool	27	15	9	3	61	31	30	54
4  Chelsea	27	16	5	6	49	23	26	53
5  Tottenham	27	15	7	5	52	24	28	52
6  Arsenal	27	13	6	8	51	36	15	45
7  Burnley FC	27	9	9	9	21	24	-3	36
8  Leicester City	27	9	8	10	39	40	-1	35
9  Everton	27	9	7	11	32	46	-14	34
10  Bournemouth	27	8	7	12	31	41	-10	31
11  Watford	27	8	6	13	37	47	-10	30
12  West Ham	27	7	9	11	34	46	-12	30
13  Newcastle	27	7	7	13	25	36	-11	28
14  Brighton	27	6	10	11	22	36	-14	28
15  Crystal Palace	27	6	9	12	25	42	-17	27
16  Swansea City	27	7	6	14	20	37	-17	27
17  Huddersfield	27	7	6	14	23	47	-24	27
18  Southampton	27	5	11	11	28	40	-12	26
19  Stoke City	27	6	7	14	27	53	-26	25
20  West Brom	27	3	11	13	21	40	-19	20



# Entertainment

By Riya  
Venugopal

# Friends

J	L	I	S	A	K	U	D	R	O	W	K	B	O
K	N	A	C	E	G	U	N	T	H	E	R	I	Y
A	R	G	E	L	L	E	R	G	A	Y	E	N	H
C	R	R	A	C	H	E	L	O	N	A	P	G	S
I	O	R	H	F	R	I	E	N	D	S	L	P	S
N	P	A	P	A	R	T	M	E	N	T	A	N	E
O	T	E	A	S	C	P	N	Y	G	I	R	E	R
M	N	F	B	C	H	O	Y	E	A	I	T	W	T
O	N	O	E	E	T	G	R	E	O	R	N	Y	I
L	R	R	R	S	O	O	R	F	O	J	E	O	A
A	C	K	I	A	S	H	I	E	A	J	C	R	W
G	I	N	W	S	W	E	P	L	E	S	Y	K	E
G	A	W	S	B	U	F	F	A	Y	N	E	G	F
R	R	P	N	B	I	A	R	P	E	E	N	S	R

FRIENDS  
 CENTRAL PERK  
 ANISTON  
 RACHEL  
 GREEN  
 ROSS  
 MONICA  
 GELLER  
 LISA KUDROW  
 GUNTHER  
 PHOEBE  
 BUFFAY  
 APARTMENT  
 JOEY  
 BING  
 WAITRESS  
 NEW YORK

Just for fun.....

1. Why do cows go to New York?

A: To see the moosicals!

2. What's the slipperiest country?

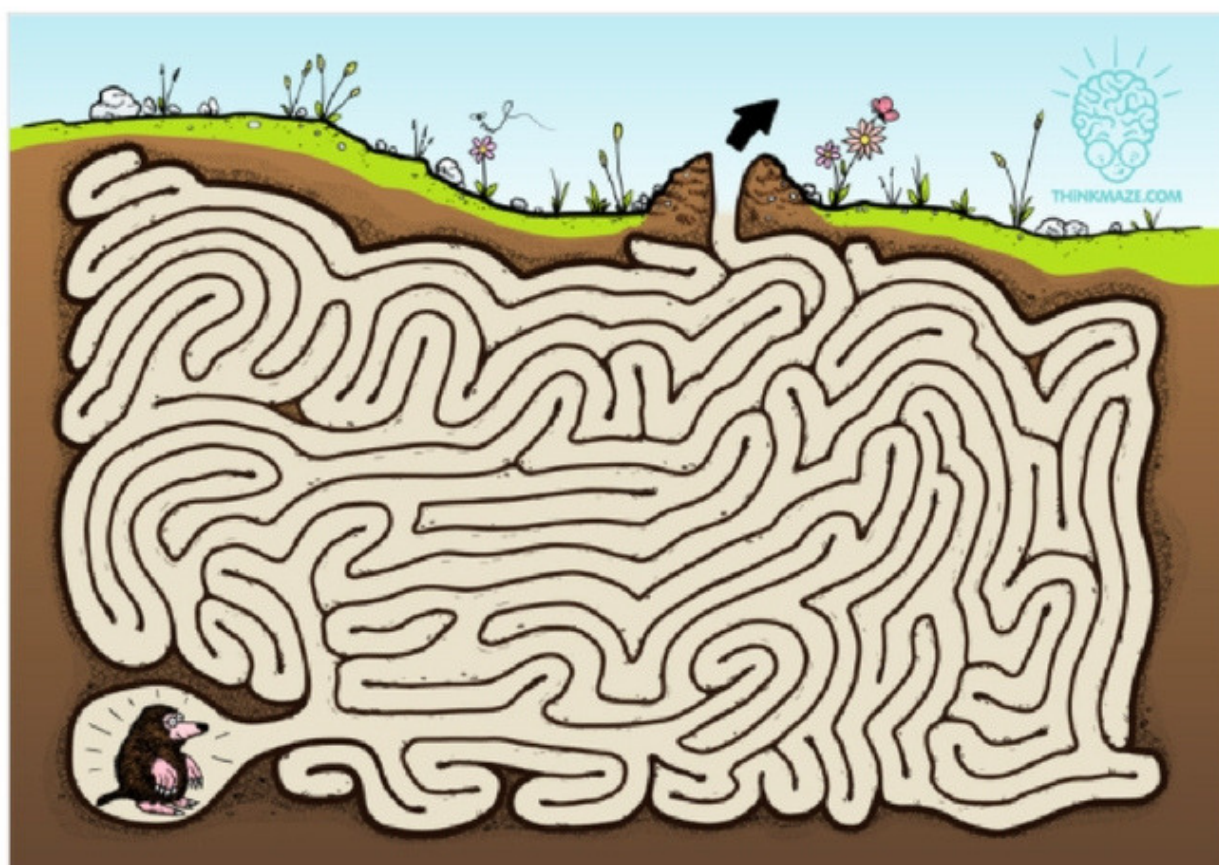
A: Greece!

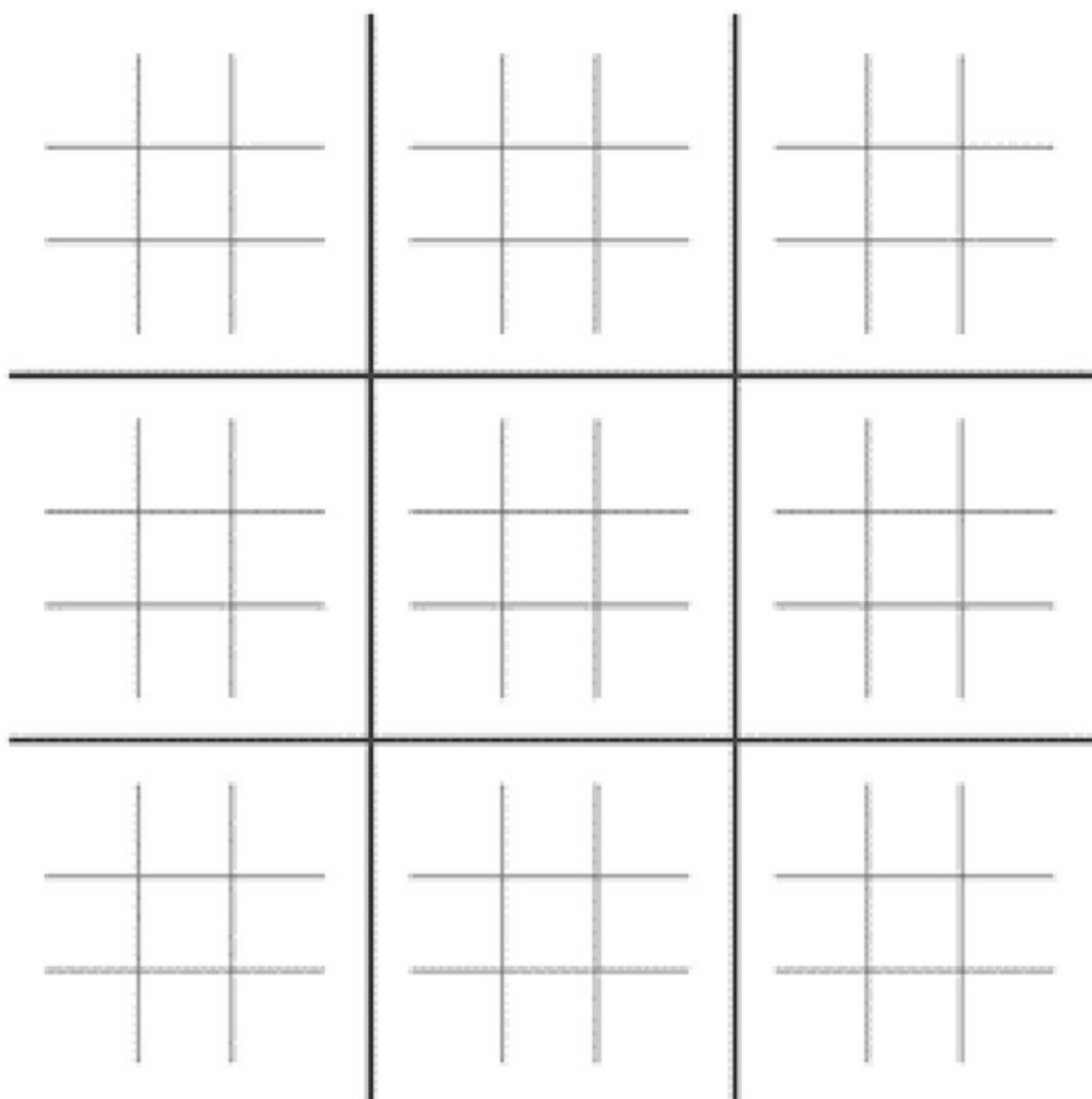
3. Why did the golfer wear two pairs of pants?

A: Just in case he got a hole in one!



5	3			7				
6			1	9	5			
	9	8					6	
8				6				3
4			8		3			1
7				2				6
	6					2	8	
			4	1	9			5
				8			7	9









## The Team

Mentor – Soumita Ma'am, without whome we could not have done this.

Editors – Aryan Srivastava & Aaryan Mehta

The Team – Gurbani Bhatia, Ayush Chanda,

Ananya Bhat, Supriyaa Kaushick, Riya

Venugopal, Shivank Ganesh, Vaidehi Patel

and Isha Shah.