

QUEST

June 2023



*Summer
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Quest is an engaging platform for students to express their scientific and mathematical creativity through cartoons, art forms, creative writing, research articles, analysis, paintings, drawings and other forms relative to General Science and Mathematics.

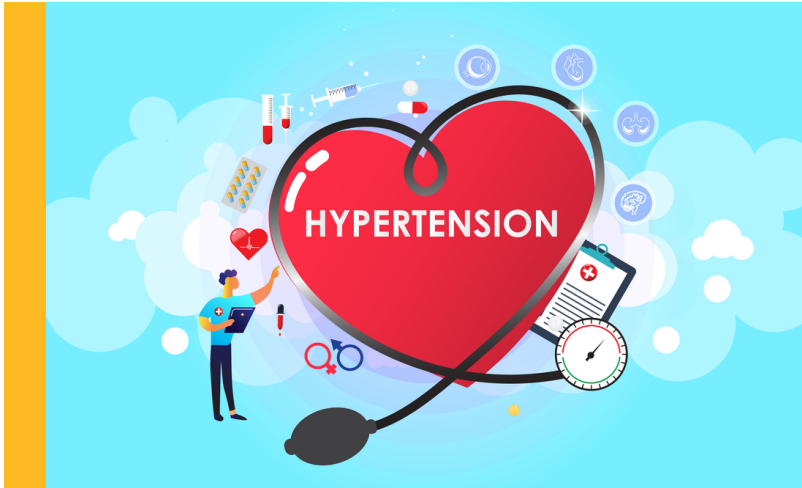
All the students of classes P4- SS2 are encouraged to bring forth their scientific temperament in any representation of writings, videos, photography or art forms.

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LIMITS
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LIFE
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HYPERTENSION



1. WHAT IS HYPERTENSION?

Hypertension is caused by high blood pressure in blood vessels. It's a common but poorly understood disease. This article aims to raise awareness about hypertension. It can be caused, prevented, and treated. Let's first look at its prevalence.

2. PREVALENCE

Hypertension is a very common disease. Out every four men one men have hypertension and many of them don't know about it.

Causes and risk factors of hypertension.

a. Genetics: In many cases, hypertension has been acquired from ancestors and considered as a hereditary disease.

b. Age: Age is also a factor which increases the chances of hypertension. The persons above 40 years have higher risk to get this disease.

c. Gender: Mostly males have a higher risk of developing hypertension.

3. SYMPTOMS

If you have following symptoms please consult a doctor:

- A. DIZZINESS
- B. FAINTING
- C. VOMITING

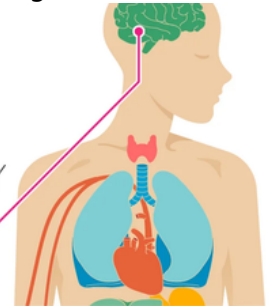


4. EFFECTS

Hypertension has very harmful effects on the body like :

- A. Heart failure
- B. Vision loss
- C. Kidney failure

The Effects Of
Hypertension
ON YOUR BODY



5. PREVENTION

- a. Reduce salt intake (less than 2 gm /day)
- b. Reduce weight
- c. Avoid stress
- d. Eat fruits and vegetables
- e. Avoid Saturated fats
- f. Avoid tobacco/ smoking
- g. Reduce alcohol



CONCLUSION

So today by this article, we learnt many things about the importance of National Hypertension Day. Lets take a pledge to stop hypertension and ensure that we spread awareness about hypertension all over in the world. Thank you for reading this article. All things written in the article have been included after consulting a professional doctor.

-Siddhanth Gupta M3E



INTERNATIONAL DAY FOR BIODIVERSITY



1. Why is it celebrated & who created it?

It is celebrated to raise awareness for the protection of natural bio-diversity & eliminating threats to it. It was created by the UN General assembly.

2. What is Bio-diversity?

Bio-diversity means the diverse span of life which exists on Earth. It includes all the ecosystems which exists all around the world.




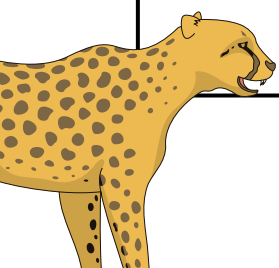
1. What are the threats to it & their main cause?

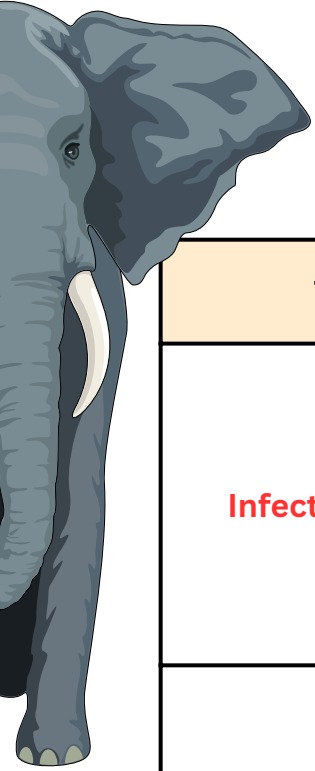
A few threats to the natural bio-diversity are:-


| Threats | Their Defination | A few causes |
|----------------------------|--|--|
| Climate Change | It means the shift in weathering and temperature patterns of a place. | Global warming, increase in CO2 levels, deforestation |
| Pollution | Pollution occurs when human-made or natural toxins/harmful material are introduced in the environment resulting in its degradation | Deforestation, increased requirements for agriculture, urbanisation |
| Habitat destruction | It means the destruction of the natural habitat of animals and other bio-diversity which exist, forcing them to leave their environments | Deforestation, increased requirements for agriculture, urbanisation |
| Overexploitation | It means to exploit a resource to such extent that it is impossible to replenish resulting in extinction of this resource | Overpopulation, overconsumption, deconstruction of natural ecosystems. |



| Threats | Their Definition | A few causes |
|----------------------------------|--|---|
| Invasive species | It means that a new specie is introduced in an environment which is harmful for the environment or harms the environment in a direct or indirect way | Destruction of that specie's natural environment  |
| Overpopulation | As the term 'overpopulation' suggests, it means the population has gone out of control. The number of deaths and births are no more in balance | Decrease in the mortality rate |
| Environmental degradation | The deterioration or destruction of the quality of lithosphere, atmosphere or hydrosphere which results in the non-supportability of any ecosystem | Soil degradation, environmental issues, deforestation, contamination, ozone depletion, urbanisation, |
| Habitat fragmentation | It means that a specie is not getting its preferred environment as it was before which affects the organism somehow altering its growth | Wildfires, volcanic eruption, human activities |
| Wildlife trade | It means the trade of wildlife for their skin, bone, meat or any part of their body | The growing consumption and need of animal parts |





| Threats | Their Defination | A few causes |
|----------------------------|---|---|
| Infectious diseases | Any parasite which is formed in an environment which harms the ecosystem is known as an infectious disease | Contamination  |
| Affected food chain | If any part of the food chain goes missing, the whole food chain gets affected which may result in the extinction of any specie | Other biological problems |

-Aarav Gupta M3 -B



THE GREATEST SCIENTIFIC INVENTION IN THE FIELDS OF TECHNOLOGY: CRYOGENIC PRESERVATION OF HUMAN BODY



In this era of technological advancements, there is hardly anything that seems unachievable to us.

Technology has made everything within our reach and has given new hopes to our paradoxical questions and thoughts a promising, luminous future.

Cryogenic preservation is one such eyeopening technology that believes everything can be achieved by technology and science.

The freezing of humans was first scientifically proposed by Michigan professor Robert Ettinger when he wrote *The Prospect of Immortality* (1962) and in April 1966, the first human body was frozen.





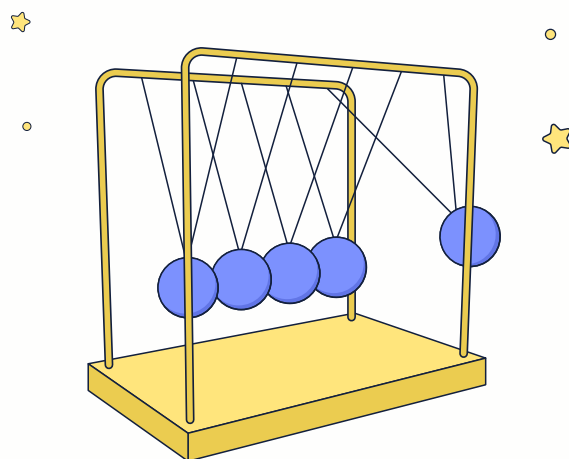
Cryogenic preservation is the process by which living cells, tissues, organs or entire bodies are protected from decaying by storing them at extremely low temperatures for indefinite periods.

According to the Cryonics Institute, an organization in the US, the goal of this is to “give living beings another chance to live and extend lifespans.” The companies offering this cryogenic preservation believe that technology and medicine would someday be able to revive patients and even heal or cure the diseases that killed them in order to give them a second opportunity to live life again. This process is really expensive and only a handful of people have been cryogenically preserved till now. Some famous people cryogenically preserved people are: Walt Disney, American billionaire Peter Thiel, American professional baseball player Ted Williams, English actor Simon Cowell.





After a person has been declared death, at the storage facility, patients are infused with cryoprotectants (like antifreeze) to prevent ice crystal formation on the body and a ventilation mask is used simultaneously to provide oxygen to human body parts- before the temperature is slowly lowered and they are preserved in liquid nitrogen at extremely low temperatures below -130 degree Celsius. This is enough to store the body for indefinite periods of time. The human civilization should focus on such life-preserving possibilities, cryonics when it is preoccupied by religious and cultural arguments.



-Shaurya Pant M3A

SCHRÖDINGER'S CAT

And in physics was broken the mould
By one little, purring cat.
Quantum mechanics gained its hold
And modern world advanced rapidly.



A thought experiment devised in 1935
By the brilliant Erwin Schrödinger,
Whether the cat is dead or alive
Became an important question.

An ordinary cat in a box, he says,
With poison and a radioactive source.
50-50 chance that an atom decays
And spills the poison in the box.

That cat will either quickly die
Or remain a meowing, breathing creature.
But he asks with an intelligent sigh,
"Before you opened, what was its state?"

The subsequent words were famously his,
As he declared with enlightened, resourceful eyes that
In life and death simultaneously the cat is, A critique to
the Copenhagen interpretation.

But it became one of quantum mechanics' foundations.
Superposition, being in two states, came into limelight,
How long do last these superpositions?
And when, or whether, do they collapse?

It remains an unsolved mystery,
Yet its contribution is huge.
Has gone down in physics' history,
A special yet simple cat.

-Shreyas Mishra M3-B

WHY SHOULD WE WEAR A SEAT BELT WHILE DRIVING ?

“ Principle:-

It is based on Newton's first law of motion or the law of inertia which states that every object will remain at rest or in uniform motion in a straight line unless compelled to change its state by the action of an external force. This tendency to resist changes in a state of motion is inertia.

How it works:- Vehicles are provided with seat belts for the safety of the travellers. When a fast moving car suddenly stops, our lower part of the body stops sooner than the upper part of the body, which continues to remain in motion due to inertia of motion. Hence we fall forward hitting the steering which can cause damage. When a car suddenly stops you move forward because the car seat exerts an unbalanced force on your body. An inertial locking mechanism of a seatbelt is designed to prevent further seatbelt extension when it exceeds an acceleration threshold. Among drivers and front-seat passengers, seat belts reduce the risk of death by 45%, and cut the risk of serious injury by 50%.”



1. Mass and inertia are directly proportional
 $m \propto I$
2. The three-point seatbelt was developed to its modern form by Swedish inventor Nils Bohlin for Volvo—who introduced it in 1959 as standard equipment.

QUIZ!!!!??????

This is a quiz based on inertia -

<https://forms.office.com/r/7jBnRdSwbT>

Please attempt it . Your response would be appreciated and the one who scores the highest would get recognition in the next month's quest with his/her photo and name .

INTERESTING

<https://youtu.be/uRaU1HMJyCo>

Last Month's
Winner !!!!



Shrineet Mishra
M3C

Made by - Nikhil Asrani S1A and Supervised by - Mrs. Arvinder Kaur

NATIONAL TECHNOLOGY DAY

National Technology Day is observed in our country India on 11th May every year to honour our scientists, engineers and researchers who work for our country's development and to highlight their achievements.



This Day is celebrated on the occasion of the Pokhran Nuclear tests which were conducted on 11th May, 1998 in Pokhran, Rajasthan by the Indian Army. A year later, on 11th May, 1999, on the anniversary of this historic event, Former Prime Minister Atal Bihari Vajpayee declared this day as National Technology Day in India.

The Pokhran Nuclear Tests were a series of five explosions conducted by the Indian Army in 1998 also called Operation Shakti. Before this, India had already performed a nuclear test here code named the 'Smiling Buddha' in 1974. This mission was a massive success for our scientists who worked day-night to make India a member of the elite Nuclear Club. Honourable Former President, Dr. APJ Kalam was the mastermind who led all the successful tests in Pokhran.



Hence, this significant day reminds us of the struggles our scientists faced while they were making our country's first nuclear bomb. This day is also encourages the youth of our country to select science and technology as their career option and serve our country.

The Ministry of Science and Technology hosts and organizes lectures and workshops on this day for the youngsters of our country. The ministry's Technology development Board hosts an event in which the President of India is invited as the principal guest, and bestows prizes on scientists for their achievements. We as the young minds of our country should be aware of this day and its importance. We should respect the hard efforts put in by our scientists and strive to uphold our country in the field of technology.



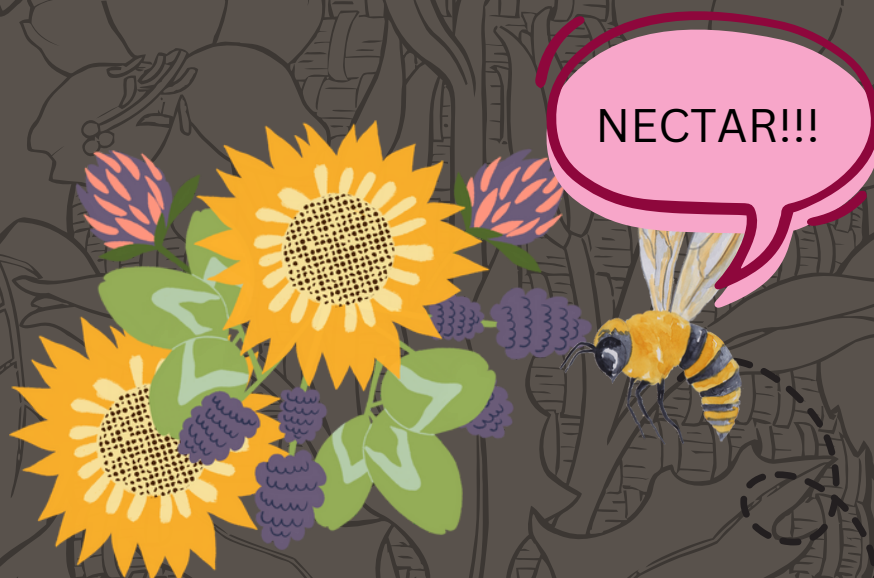
-Shlok Dubey , M3-D



Why do we celebrate World Bee Day?

World Bee Day is observed on 20th May each year, since being established in 2017 by the United Nations, to draw attention to the essential role bees and other pollinators play in keeping people and the planet healthy.

This year's theme (2023) was 'Bee engaged in pollinator-friendly agriculture production, focusing on actions for restoring, supporting, and enhancing the role of these pollinators'.



WHY THE
WORLD
NEEDS
BEES



WHAT IS POLLINATION

The process by which pollinators (bees, birds, insects) help plants to produce fruit by transporting pollen from one flower to another

3 out of 4 crops across the globe producing fruits or seeds for human use as food depend on pollinators; more than half of such crops depend on bees

DID YOU KNOW

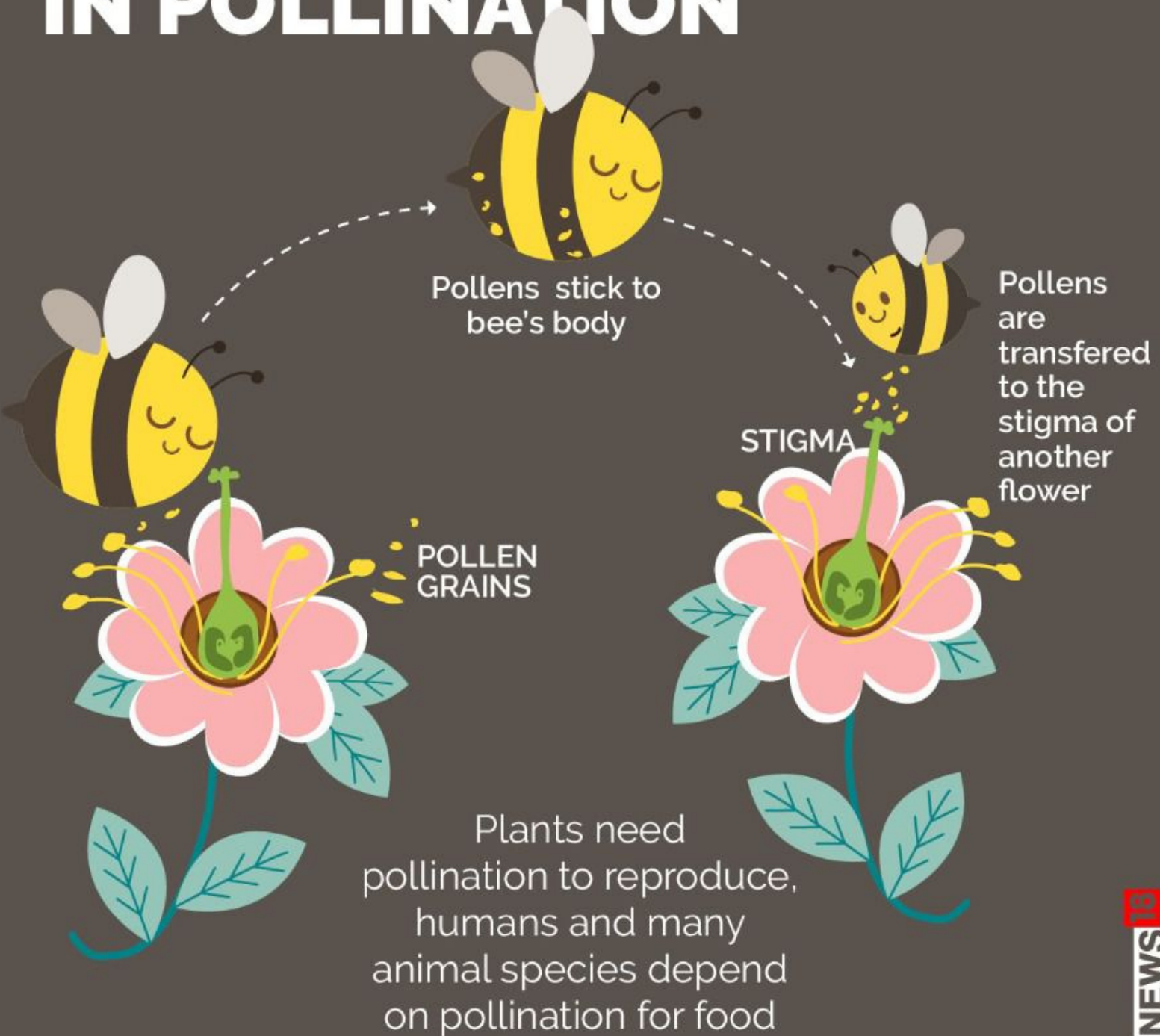
Technically, anything with seeds inside is a fruit. So veggies like cucumbers and tomatoes are actually fruits and their production depends on pollination





WHY THE
WORLD
NEEDS
BEES

HOW BEES HELP IN POLLINATION

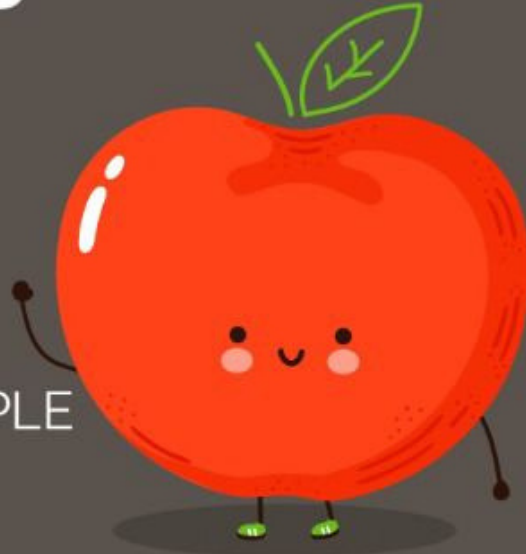




WHY THE
WORLD
NEEDS
BEES

SOME IMPORTANT CROPS POLLINATED BY BEES

APPLE



COCONUT



CARROTS



CAULIFLOWER



MANGO



SUNFLOWER





WHY THE
WORLD
NEEDS
BEES

MIRACLE WORKERS

**\$235 - \$577
billion a year**

Estimated value of
global crops that directly
rely on pollinators



Pollinators are responsible for...

More than 1,200 crops

87 of the leading 115 food
crops in the world today

If we consider the indirect
products of plants, such as milk
products from cows (fed on
grains and their byproducts),
the value of pollinator services
would increase manifolds





WHY THE
WORLD
NEEDS
BEES

IMAGINE A WORLD WITHOUT BEES



Many species of pollinators are in decline around the world due to destruction of natural habitat

Bees are dying from a variety of factors:



PESTICIDES



HABITAT
DESTRUCTION



NUTRITION
DEFICIT



AIR
POLLUTION



GLOBAL
WARMING

SOURCE: FAO, NEWS REPORTS

NEWS
creativ

VACCINE: A MIRACLE FOR HUMAN LIVES



INTRODUCTION

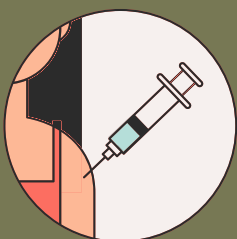
A vaccine is defined as any substance which is used to stimulate the production of antibodies, in turn providing immunity against one or a few diseases. Vaccines contain dead or weakened microbes of a particular disease. When a vaccine is introduced into a healthy body, the body fights and kills them by producing suitable antibodies. These antibodies remain in the body and protects it from the microbe when it invades the body again. The main function of vaccines is to provide protection by recognizing the pathogens like viruses or bacteria and fighting the pathogens. The life-threatening diseases include measles, polio, tetanus, diphtheria, meningitis, influenza, tetanus, typhoid, and cervical cancer.





INVENTION OF VACCINE:

The term 'vaccine' as later coined, was taken from the Latin word for cow, vacca. In 1796, English physician Edward Jenner expanded on his discovery of world's first successful vaccine and inoculated 8-year-old James Phipps with matter collected from a cowpox sore on the hand of a milkmaid. Despite suffering from a local reaction and feeling unwell for several days, Phipps made a full recovery. Two months later, Jenner inoculated Phipps matter from human smallpox sore in order to test Phipps resistance. Phipps remained in perfect health and became the first human to be vaccinated against smallpox.



VACCINE HISTORY TIMELINE:



| Year | Name of the vaccine | About the Invention |
|--------------|-----------------------|--|
| 1796 | Smallpox | Edward Jenner often called "the father of immunology" pioneered the concept of vaccines by creating the smallpox vaccine. |
| 1800's | Rabies and cholera | Louis Pasteur introduced the attenuated vaccines. He also developed the first vaccine against rabies and cholera in humans. |
| Early 1900's | Toxoid vaccine | <p>The introduction of toxoid vaccines (e.g.-tetanus, diphtheria).</p> <p>The cultivation of viruses on the chorioallantois membranes of chick embryos and the development of the influenza and yellow fever vaccines</p> |
| 1950 | Polio vaccine | Hilary Koprowski was a polish virologist who demonstrated the world's first effective polio vaccine |
| 1985 | Haemophilus influenza | Pure polysaccharide vaccine was first licenced in the United States in 1985. The conjugate vaccine developed in 1988 and showed superiority in inducing an immune response during infancy. |
| 1992 | Hepatitis A | Hepatitis A is a serious liver disease. It is usually spread through close, personal contact with an infected person or when a person unknowingly ingests the virus from objects, food, or drinks that are contaminated by small amounts of stool from an infected person. |
| 1998 | Rotavirus | The first FDA-approved vaccine was licenced in 1998, but it was withdrawn later. |



VACCINE HISTORY TIMELINE:



| Year | Name of the vaccine | About the Invention |
|------|---------------------|---|
| 2006 | HPV vaccine | The first HPV vaccine became available in 2006. More than 120 million people have been administered since 2006. |
| 2019 | Ebola vaccine | The first vaccine (vs-ebov) was approved in 2019. It was found to be 95-100% effective against the virus. |
| 2020 | Covid 19 vaccine | On December 2020, the Pfizer-bioNTech vaccine became the first vaccine to be approved for covid 19. As of June 2021, more than 2.5 billion doses of various covid 19 vaccines have been administered. |

Conclusion;

During COVID 19 pandemic we realized the health, economic and social benefits of vaccine. Vaccination lessens the burden on the hospitals and healthcare systems and helps to reduce the social and psychological toll of illness on people.

During COVID 19 pandemic It has been estimated that 18.1 million deaths due to COVID- 19 would have occurred without vaccinations worldwide during the first year of the COVID-19 vaccination programme (Dec 8, 2020, to Dec 8, 2021). So COVID-19 vaccination prevented 14.4 million deaths, representing a global reduction of 79% of deaths (14.4 million of 18.1 million) during the first year of COVID-19 vaccination showing the importance of vaccines for humans.



Riddhima Rathor M3C

BRAHMAGUPTA: THE MATHEMATICAL GENIUS



Brahmagupta son of **Jisnugupta** was the foremost Indian mathematician of his time. He was born in India in 598CE and died in 670CE. He wrote **Brahmasphutasiddhanta**, in 628. In addition to the **Brahmasphutasiddhanta**, Brahmagupta wrote a second work on mathematics and astronomy which is the **Khandakhadyaka** written in 665 when he was 67 years old.

The **Brahmasphutasiddhanta** consists of 25 chapters. The first ten delve into typical Indian mathematical astronomy topics, such as planetary longitudes, diurnal rotation, eclipses, and celestial conjunctions. The remaining fifteen chapters serve as a major addendum, exploring previous treatises, mathematics, algebra, instruments, and more. The treatise concludes with a summary and versified tables. In total, the **Brahmasphutasiddhanta** provides comprehensive coverage of various aspects of astronomy and mathematics during that period.

$$\begin{aligned} \tan x + \tan y &= \frac{\sin(x+y)}{\cos x \cos y} \\ a^2 + b^2 &= r^2 \cos^2 \alpha + r^2 \sin^2 \alpha = r^2 \\ \frac{L}{2 \cdot \pi \cdot r} &= \frac{\alpha}{360^\circ} \end{aligned}$$

In the **Brahmasphutasiddhanta** he defined zero as the result of subtracting a number from itself. He gave some properties as follows:-

When zero is added to a number or subtracted from a number, the number remains unchanged; and a number multiplied by zero becomes zero.

He also gave arithmetical rules in terms of fortunes (positive numbers) and debts (negative numbers):-

A debt minus zero is a debt.

A fortune minus zero is a fortune.

Zero minus zero is a zero.

A debt subtracted from zero is a fortune.

A fortune subtracted from zero is a debt.

The product of zero multiplied by a debt or fortune is zero.

The product of zero multiplied by zero is zero.

The product or quotient of two fortunes is one fortune.

The product or quotient of two debts is one fortune.

The product or quotient of a debt and a fortune is a debt.

The product or quotient of a fortune and a debt is a debt.

Brahmagupta perhaps used the method of continued fractions to find the integral solution of an indeterminate equation of the type $ax + c = by$.

Brahmagupta also solved quadratic indeterminate equations of the type $ax^2 + c = y^2$ and $ax^2 - c = y^2$. For example he solves $8x^2 + 1 = y^2$ obtaining the solutions $(x,y) = (1,3), (6,17), (35,99), (204,577), (1189,3363), \dots$. For the equation $11x^2 + 1 = y^2$ Brahmagupta obtained the solutions $(x,y) = (3,10), (161/5, 534/5), \dots$.

In the **Brahmasphutasiddhanta**, **Brahmagupta** gave remarkable formulae for the area of a cyclic quadrilateral and for the lengths of the diagonals in terms of the sides.

- The **Brahmasphutasiddhanta** dealt with **solar and lunar eclipses, planetary conjunctions and positions of the planets**. Brahmagupta believed in a static Earth and he gave the length of the year as 365 days 6 hours 5 minutes 19 seconds in the first work, changing the value to 365 days 6 hours 12 minutes 36 seconds in the second book the **Khandakhadyaka**.
- The **Khandakhadyaka** has eight chapters covering topics such as: the longitudes of the planets; the three problems of diurnal rotation; lunar eclipses; solar eclipses; risings and settings; the moon's crescent; and conjunctions of the planets. Of particular interest to mathematics in his second work Brahmagupta he uses the interpolation formula to compute values of sines.

Sources:

<https://mathshistory.st-andrews.ac.uk>

<https://www.javatpoint.com>

<https://testbook.com>

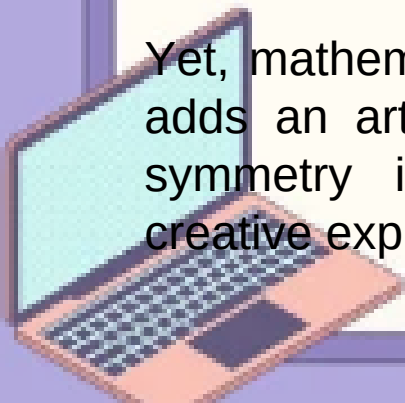
The Beauty of Mathematics in Technology

The connection between mathematics and technology is fueled by our shared quest for progress and innovation. Mathematics, with its captivating beauty, empowers us to explore the potential of technology. Its elegance, logic, and precision assist us in unraveling complex phenomena, designing efficient algorithms, and devising groundbreaking solutions.

Mathematics has a remarkable ability to simplify and break down real-world problems, enabling us to represent and analyze intricate systems. It forms the very foundation of technologies such as search engines and digital encryption, providing the necessary framework for their functionality and security.

Moreover, mathematics plays a pivotal role in enhancing technology by optimizing processes and improving efficiency. In various industries, including supply chain management and resource allocation, mathematical optimization techniques guide us in finding optimal solutions. This leads to increased productivity and fosters innovation.

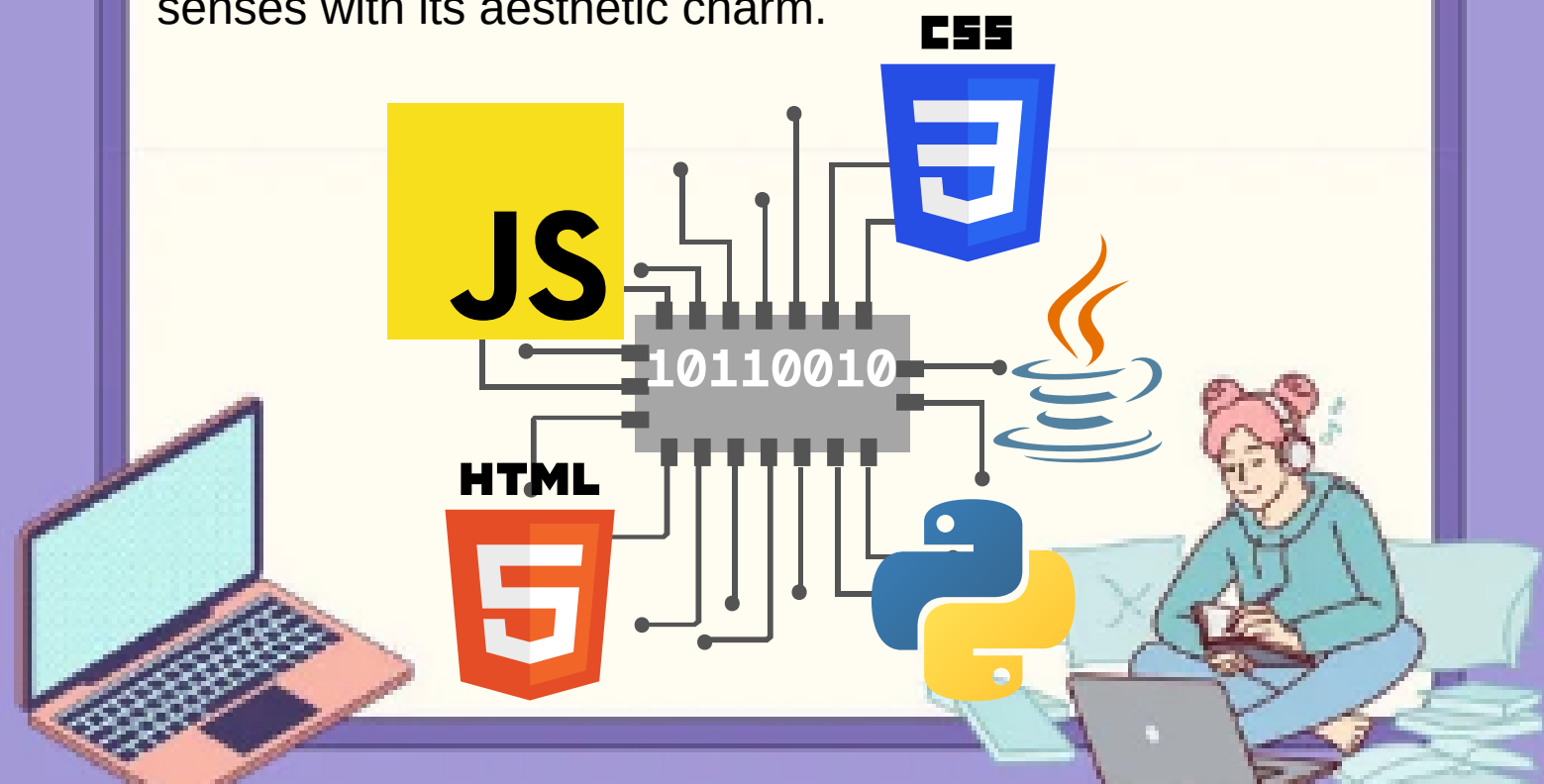
Yet, mathematics goes beyond its practical applications; it adds an artistic touch to technology. The elegance and symmetry inherent in mathematical structures inspire creative expressions in technological design.



Architectural wonders and graphic masterpieces benefit from the captivating allure of mathematical patterns.

By embracing the beauty of mathematics in technology, we embark on a journey of exploration and pave the way for a future of innovation. The interplay between mathematics and technology propels us forward, enriching our lives, economy, and society. Appreciating mathematics nurtures creativity, problem-solving, and transformative breakthroughs.

In conclusion, the beauty of mathematics serves as a guiding light in our quest to comprehend, innovate, and shape the world through technology. Its elegance, logic, and precision drive advancements, enabling us to unravel complex problems and create visually captivating designs. By embracing the profound allure of mathematics, we unlock boundless possibilities and inspire progress, where technology not only solves problems but also captivates our senses with its aesthetic charm.



E-waste

- **What is E-Waste?**

E-waste, as the name suggests, means electronic waste. It ranges in size from a big train to a small small bulb. It can be anything such as an A/C, our Ipads, tabs, mobile phones etc. Anything electronic that is not in use is called Ewaste. They can very harmful to us sometimes and even poisonous in certain cases.

- **Some harmful effects of improperly disposed E-waste**

1. It is non-biodegradable, hence it accumulates in the environment.
2. it contaminates all the elements of the nature, such as air, water, soil etc., which are extremely useful for humans.
3. It has a lot of metals such as tin, aluminium, mercury, iron and sometimes even gold and silver. These, if consumed by any animal or human, may be harmful to them.

4.It can also cause internal human damage to a human which may or may not be severe depending on certain complex conditions such as the material, the medium, the damaged place etc.

5.In extreme cases, E-waste can cause climate change by a number of processes.

6.Harmful materials such as lead, mercury etc. may leach into the near by natural sources of water if not disposed of properly.

- **How to properly dispose E-waste**

1.Reduce:- We can reduce the E-waste produced by buying less electronic products. We should only buy them if extremely required.

2.Reuse:- We should use it until it is no longer functionable or can't serve the purpose for which it is required. Then also, if it is functional , we should donate it to charities which distribute it to people who may be able to use it.

3.Recycle:- If it is no longer functional, we should give it to government certified E-waste recyclers. They'll properly recycle it and make the best use

-Aarav Gupta M3-B

E WASTE

THE HAZARDOUS ONE

Myself E-waste, the hazardous one
Constituent of Garbage Patch in Pacific ocean,
Humans ask me, Why I seem to be immortal ?
Why around the world you throttle ?



First they boasted me in front of everybody
Then they discarded me and used by nobody,
They forgot my lead and beryllium,
Neurological problems are caused by cadmium

Don't throw me into landfilled waste,
To make my metallic paste
My usage should be minimized completely,
Or I will affect the environment adversely



Buy my constituents when it is need,
Save the world by your small yet revolutionary deed
It is high time now to be sensible,
about recycling old tech and cables

Written by -
Shrineet Mishra M3C

The Sparkling Sunrises

By the Photography Club

What can you say about sunrise? “Every sunrise gives you a new beginning and a new ending. Let this morning be a new beginning to a better relationship and a new ending to the bad memories. It’s an opportunity to enjoy life, breathe freely, think and love. Be grateful for this beautiful day.”



Why Does The Sun Reflect Off Seas And Oceans?

The Sun reflects off seas and oceans because the water acts as a smooth surface on a macroscopic scale. A rippled - but locally smooth - surface will reflect the sun at different angles, creating different observable images of the sun.

Edited by- Nikhil Asrani
Photo Credits- Aditya Lahiri
Supervised by- Mrs. Kanika A.

Problem solving

Problem solving is the act of defining a problem; determining the cause of the problem; identifying, prioritising, and selecting alternatives for a solution; and implementing a solution.

Steps for problem solving

Define the problem.

- 1-Specify underlying causes.
- 2-Identify what standard or expectation is violated.
- 3-Determine in which process the problem lies.

Analyse the problem.

- 1-Understand nature of problem.
- 2-Find all possible ways out.

Generate alternative solutions.

- 1-Specify alternatives consistent with organisational goals.
- 2-Specify short- and long-term alternatives.
- 3-Brainstorm on others' ideas.
- 4-Seek alternatives that may solve the problem.

Evaluate and select an alternative.

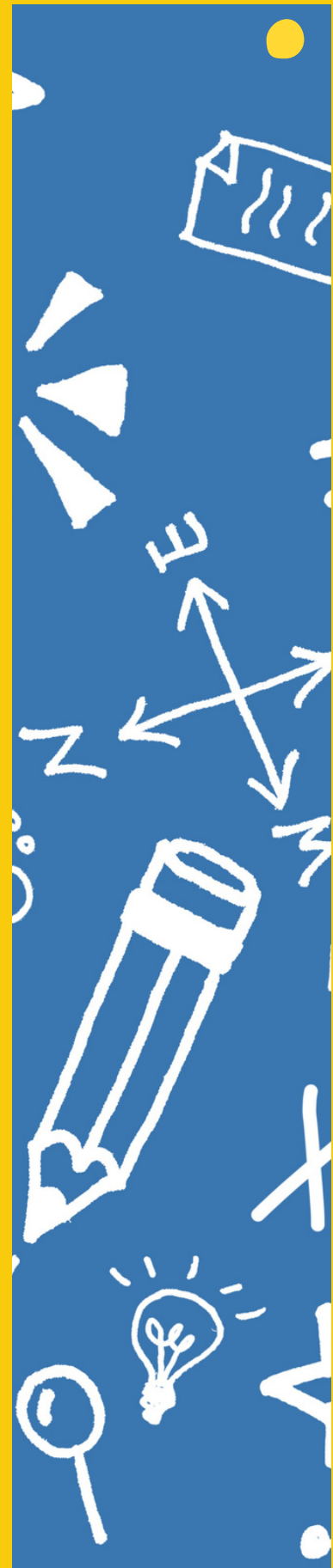
- 1-Evaluate alternatives relative to a target standard.
- 2-Evaluate all alternatives without bias.
- 3-Evaluate alternatives relative to established goals.
- 4-Evaluate both proven and possible outcomes.
- 5-State the selected alternative explicitly.

Select the best option.

- 1-Select the solution that is best fitted to the goal.
- 2-The solution should meet all criteria you set for evaluating the options

Implement and follow up on the solution.

- 1-Plan and implement a pilot test of the chosen alternative.
- 2-Gather feedback from all affected parties.
- 3-Seek acceptance or consensus by all those affected.
- 4-Establish ongoing measures and monitoring.
- 5-Evaluate long-term results based on final solution.



Some Common Problem-Solving Interview Questions and Answers



1. When you are faced with a problem, what do you do?

Tip: Employers typically ask this question to understand what your problem-solving process looks like. They are looking for you to describe a logical problem-solving process that includes gathering information, analyzing the information and making decisions based on what you've found.

Example: “When I'm faced with a problem, I typically start by doing research or looking at examples of how this problem has been solved by others. From that research, I'm able to decide which approach to solving the problem works best for me and the organization. Then, I decide what actions need to be taken to solve the problem, and I start putting the process into motion while communicating with my managers and co-workers.”



2. How do you weigh the pros and cons before making a decision?

Tip: This question helps the employer better understand your problem-solving process. They want to make sure that you are making intelligent decisions that are based on the information you have available to you.

Example: “When I have a list of pros and cons to help me make a decision, I start by considering whether the cons will hinder me from achieving my desired outcome or cause unnecessary burden somewhere else. If so, then the approach probably won't be effective. If not, then I will consider if the pros outweigh the cons in terms of a positive outcome. If the pros outweigh the cons, then it is worth pursuing and dealing with any negative effects as they come.”



Some Great Examples Of Problem Solving (Interview Answers)



Examples of Problem Solving Scenarios in the Workplace.

- 1-Correcting a mistake at work, whether it was made by you or someone else.
- 2-Overcoming a delay at work through problem solving and communication.
- 3-Resolving an issue with a difficult or upset customer.
- 4-Overcoming issues related to a limited budget, and still delivering good work.
- 5-Handling and resolving a conflict with a co-worker.
- 6-Taking initiative when another team member overlooked or missed something important.
- 7-Taking initiative to meet with your superior to discuss a problem before it became potentially worse.
- 8-Finding a way to make the company more profitable through new service or product offerings, new pricing ideas, promotion and sale ideas, etc.
- 9-Changing how a process, team, or task is organized to make it more efficient .
- 10-Using creative thinking to come up with a solution that the company hasn't used before.
- 11-Boosting a company or team's performance by improving some aspect of communication among employees.



Problem Solving Examples for Recent Graduates/Entry Level Job Seekers.

- 1-Coordinating work between team members in a class project.
- 2-Reassigning a missing team member's work to other group members in a class project.
- 3-Adjusting your workflow on a project to accommodate a tight deadline.
- 4-Speaking to your professor to get help when you were struggling or unsure about a project.
- 5-Asking classmates, peers, or professors for help in an area of struggle.
- 6-Talking to your academic advisor to brainstorm solutions to a problem you were facing.
- 7-Researching solutions to an academic problem online, via Google or other methods.
- 8-Using problem solving and creative thinking to obtain an internship or other work opportunity during school after struggling at first.

By: Md. Shadaab, SS2B

Q Through the lens



beauty
around us.



Compiled by Tanvi Dugar S2-D

"A good photograph is knowing where to stand."

Dr. Manpreet Kaur

DID YOU KNOW?

The chemicals used in the development of photographs included mercury, silver nitrate, lye, and more. These chemicals were extremely dangerous and many photographers had to take time off from their work due to illness caused by exposure to the chemicals. Over time, prolonged contact with these chemicals and metals could lead to madness or even death. Photography before the digital age was serious, potentially life-threatening business!



*"If you can see it,
you can shoot it."*

Tanvi Dugar S2-D



"Photography takes an instant out of time, altering life by holding it still."

Nikhil Asrani
S1-A

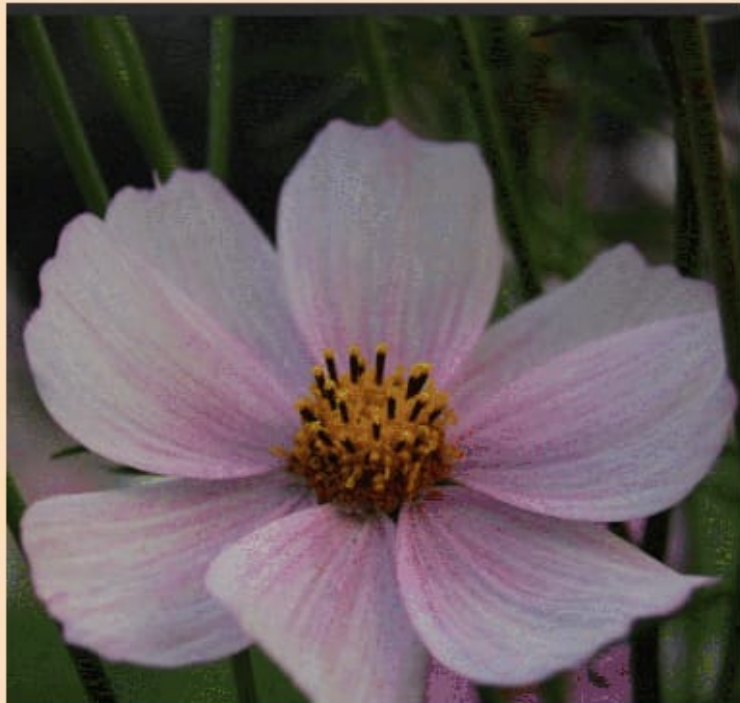


**Award
Winning
Picture**



"The biggest cliché in photography is sunrise and sunset."

Pritika Oram S1-A



Thank you

Quote of the MONTH

*The people who are crazy enough to
think they can change the world
are the ones who do.*

-Steve Jobs