

Through The Looking Glass

Contents	
World Cancer Day	February 4 th
Birth Anniversaries of Charles Darwin And Abraham Lincoln	February 12 th
International Mother Language Day	February 21 st

FROM THE EDITOR'S DESK :

February is a month of transitions as the winter chill and short days begin to give way to the nascent signs of summer. The bare trees and fallen leaves will soon be gone so let's look forward to this month and the months to come with a new spirit of optimism. January bogged us down with the third wave of COVID 19, so let February bring hope.

This month "Through the Looking Glass" brings you new topics to deliberate upon and widen your perspectives. We begin with the , World Cancer Day which is observed on February 4th every year. The word, cancer brings a sense of fear, dread and impending doom. Cancer Day is observed to tell the world that all is not lost and that together we can make a difference to ourselves, the people we love and the world we live in.

This month also celebrates the birth anniversary of two towering personalities- one who transformed the way we understand the natural world and the diversity of living beings and the other who transformed America. Both never met, yet it is believed that they shared the same vision of race, science and religion.

This month we also celebrate the many tongues in which we speak, most importantly our mother tongue. 21st February is International Mother Language Day. The importance of our mother tongue cannot be undermined as it determines our identity. I recall a poem that I read many years ago, Search For My Tongue by Sujatha Bhatt. In this poem the poet laments the death and decay of her first tongue (figurative reference to her native language) and how it grows back when she dreams and speaks in Gujarati (her native language). She compares her native tongue to a small shoot which grows stronger as she uses it and pushes away her foreign tongue (English). Many of us who take pride in having forgotten our mother tongue must pause and reflect as our mother tongue is our strength, our cultural identity and without it we can never grow as individuals.

As always wishing you a Happy Reading and conversations in your mother tongue!

World Cancer Day 4th February

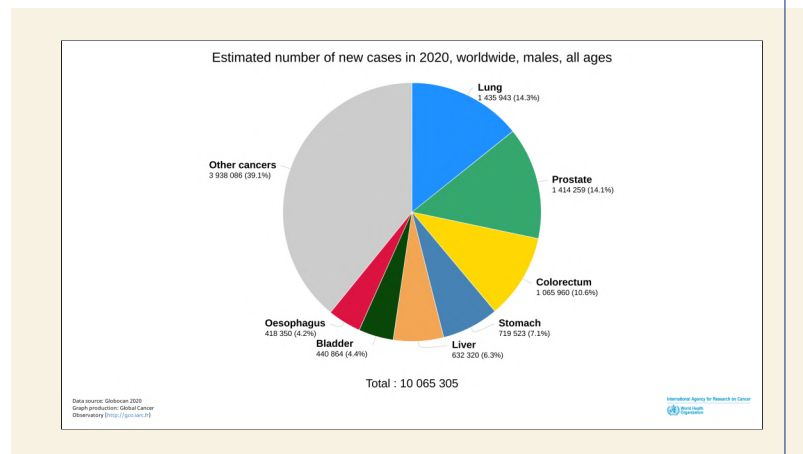
A leading international awareness day

- A global uniting initiative created in 2000, led by the Union for International Cancer Control (UICC)
- Mission: Working together to reimagine a world where millions of preventable cancer deaths are saved and access to life-saving cancer treatment and care is equitable for all, by raising worldwide awareness, improving education and catalysing personal, collective and government action.
- World Cancer Day's theme for 2022: "Close the Care Gap"
- To raise awareness of the equity gap that affects almost everyone in high, low, middle-income countries and costs lives.



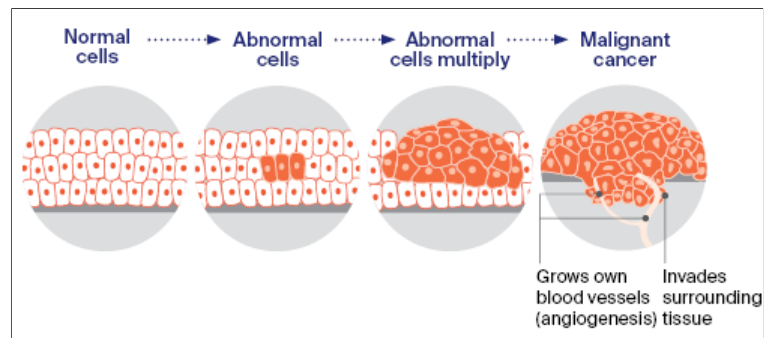
Why Cancer?

- Every year ten million people die from cancer.
- Cancer is the second-leading cause of death worldwide
- One third of common cancers are preventable.
- 70% of cancer deaths occur in low-to-middle income countries.
- We could save millions of lives each year by implementing appropriate prevention, early detection, and treatment strategies.
- The total annual economic cost of cancer is US\$1.16 trillion.



What is cancer?

- Cancer is a disease which occurs when changes in a group of normal cells within the body lead to uncontrolled, abnormal growth forming a lump called a tumour
- This is true of all cancers except leukaemia (cancer of the blood).
- If left untreated, tumours can grow and spread into the surrounding normal tissue or other parts of the body via the bloodstream and lymphatic systems, affecting the digestive, nervous and circulatory systems or releasing hormones that may affect body function.



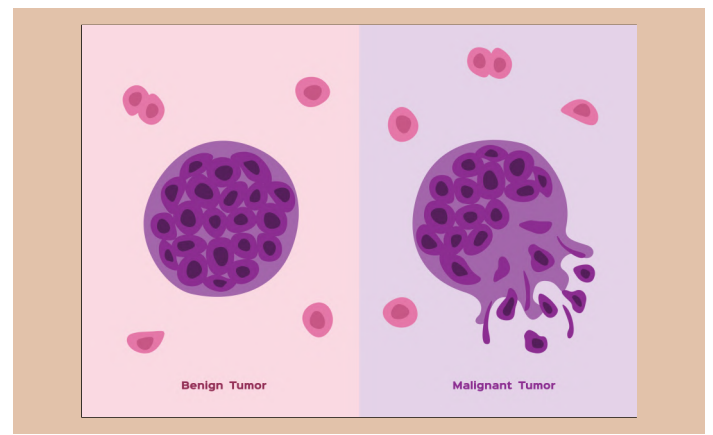
How does cancer grow?

Benign tumours

- Benign tumours are not cancerous and rarely threaten life.
- They grow slowly without spreading to the surrounding normal tissue of the body and consist of cells similar to healthy cells.
- They can cause problem if they become very large and press on other organs - for example a brain tumour inside the skull.

Malignant tumours

- Malignant tumours grow faster than benign tumours
- They can spread and destroy surrounding normal tissue.
- Metastasis is a process through which cells of malignant tumours from the main (primary) tumour break off and spread to other parts of the body
- After invading the new part of the body, they continue to divide and grow.
- These secondary sites are called the metastases and the condition is referred to as metastatic cancer.

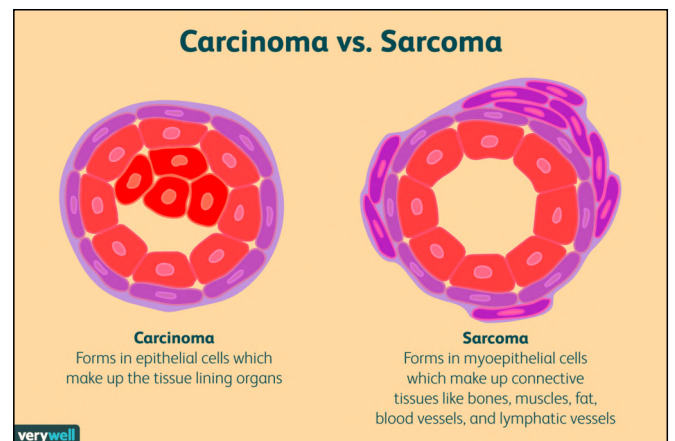


Precancerous (or premalignant) describes the condition involving abnormal cells which may (or is likely to) develop into cancer.

What are the main types of cancer?

- Cancer can be classified into more than 200 types
- One way of classifying cancers is based on where they start in the body, such as breast cancer or lung cancer.
- We can also group cancer based on the type of cell they start in. According to this, there are five main groups. These are:

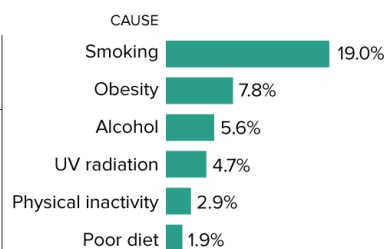
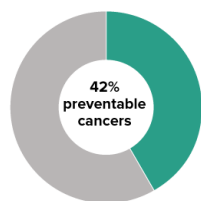
1. Carcinoma cancer begins in the skin or in tissues that line or cover internal organs.
2. Sarcoma cancer begins in the connective or supportive tissues such as bone, cartilage, fat, muscle or blood vessels
3. Leukaemia is the cancer of white blood cells. It starts in the tissues that make blood cells such as the bone marrow.
4. Lymphoma and myeloma cancers begin in the cells of the immune system
5. Brain and spinal cord cancers are known as central nervous system cancers



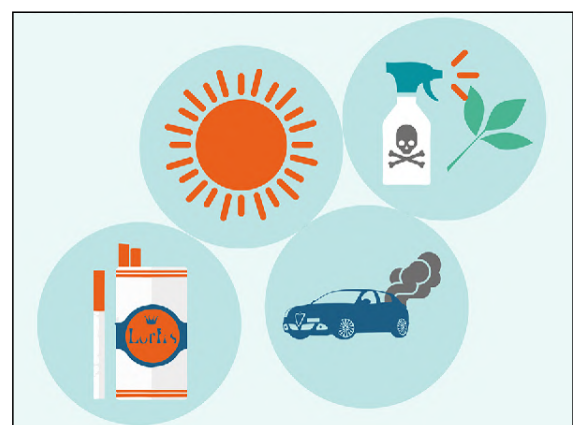
What causes cancer?

Preventable cancers

More than 40 percent of cancer cases can be prevented, the American Cancer Society finds in a new report. Here is a list of things people can change and their share of cancer cases:



Source: American Cancer Society



Numerous factors can cause cancers and similar to many other diseases, most cancers are the result of exposure to different causal factors. Some factors cannot be modified. However, around one-third of cancer cases can be prevented by reducing behavioural and dietary risks.

Non-modifiable risk factors include:

- Cancer-causing substances (carcinogens): Substances increase the chances of developing cancer.
- Mutations: Genes are the coded messages inside a cell that tell it how to behave. Mutations or changes to the gene can alter how that cell behaves, making it more likely to be cancerous.
- Genetics: Some people are born with a genetically inherited high risk for specific cancer, making the diseases more likely.
- The immune system: People who have weakened immune systems are more at risk of developing some types of cancer.
- Age: The longer people live, the more exposure to carcinogens and the more time there is for genetic changes or mutations to occur within their cells.

Modifiable risk factors include:

1. Alcohol
2. Being overweight or obese
3. Diet and nutrition
4. Physical activity
5. Tobacco
6. Ionizing radiation
7. Infectious agents

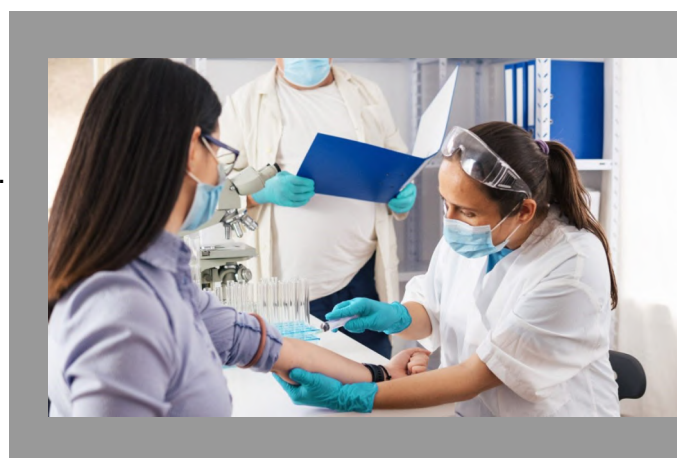
How to prevent cancer?

1. Between 30% and 50% of cancer deaths could be prevented by modifying or avoiding key risk factors and implementing existing evidence-based prevention strategies.
2. The cancer burden can also be reduced through early detection of cancer and management of patients who develop cancer.
3. Prevention also offers the most cost-effective long-term strategy for the control of cancer.
4. Modifying or avoiding the key risk factors can help prevent cancer.

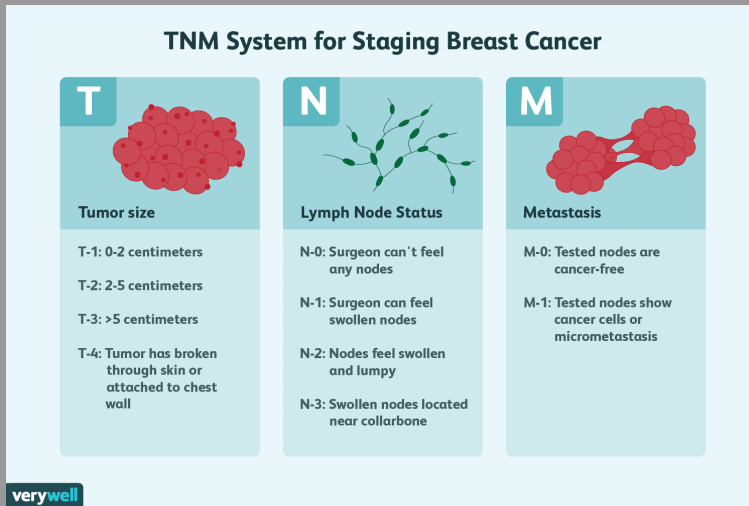


How to detect cancer in the early stages?

1. Cancer screening tests aim to find cancer before it causes symptoms and when it is easier to treat successfully. It reduces the chances that someone who is screened regularly will die from cancer.
2. Screening mammography has been shown to reduce deaths from breast cancer among women ages 40 to 74.
3. Human papillomavirus (HPV) tests and Pap tests are recommended cervical cancer screening tests. These tests prevent the disease by detecting abnormal cells to be treated before they become cancerous.
4. Low-dose helical computed tomography, a type of CT scan, has been shown to reduce lung cancer deaths among heavy smokers.



What are the stages of cancer progress?



1. The classification of cancer by anatomical extent of the disease, i.e., stage, is important to patient care, research and cancer control.
2. The TNM staging system is the common language to communicate the cancer extent for individual patients.
3. The TNM classification focuses on the anatomical extent of the tumour
 - T describes the size of the main (primary) tumour
 - N describes whether the cancer has spread to the nearby lymph nodes
 - M describes whether the cancer has metastasised (spread from the primary tumour to another part of the body)

How to treat cancer?

1. Treatment depends on the type of cancer, where the cancer is, how big it is, whether it has spread, and general health.
2. The general treatments include surgery, chemotherapy, radiotherapy, hormone therapy, immunotherapy, and gene therapy.
3. Survivorship focuses on the physical, psychological, social and economic health of the people after the end of the primary treatment for cancer.
4. Survivorship care includes issues related to follow-up care, the management of late side-effects of treatment, the improvement of quality of life and psychological and emotional health and future anticancer treatment.
5. Palliative care runs throughout a patient's journey from diagnosis to cure or end of life, and is designed to relieve symptoms and improve a cancer patient's quality of life.



How to close the gap in cancer care?

The reality today is that who you are and where you live could mean the difference between life and death.

1. 50% of the world's population lacks access to the full range of essential health services.
2. Income, education, geographical location and discrimination based on ethnicity, race, gender, sexual orientation, age, disability and lifestyle are just a few of the factors that can negatively affect care.
3. The most disadvantaged groups are also more likely to have increased exposures to a host of other risk factors
4. We can reduce inequity by:
 - Educating people about cancer prevention
 - Strengthening primary health care delivered in communities
 - Increasing the money and people – dedicated to cancer research
 - Implementing country-specific cancer prevention and control plans that address each country's unique needs and resources.

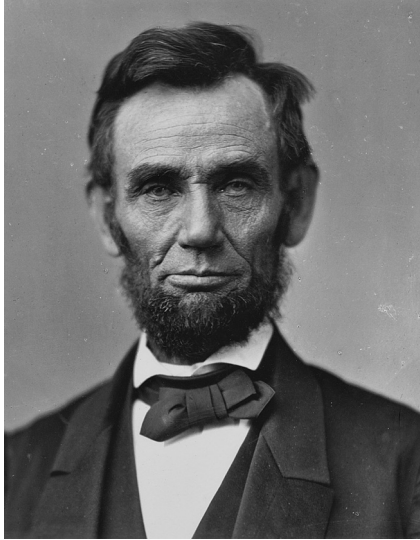
Two Great Thinkers

Birth Anniversaries of Charles Darwin and Abraham Lincoln (February 12th)

Two people who shaped history, Abraham Lincoln and Charles Darwin, were both born on February 12th.

Abraham Lincoln (12.2.1809 – 15.4.1865)

Abraham Lincoln is considered one of the greatest presidents of the United States of America.



He was born into poverty, in a farmer's log cabin, in the state of Kentucky in the United States. His family attended the Separate Baptist's Church, which was opposed to alcohol, dancing and slavery. His family moved through various locations before settling in Indiana. Abraham Lincoln had very little formal schooling, since he had chores on the family farm. He might have attended formal school for a total of 12 months, sporadically, before the age of 15. He was an avid reader and was largely self-taught. He became a lawyer, a leader of the Whig party and then the Republican party before running for President in 1860.

Slavery in the United States

When North America was colonized by Europeans, the colonizers found that they had vast amounts of land, but a shortage of people to work on them. First, indentured servants were brought in from Europe. These servants had to work to pay off the expenses of travelling from Europe to America. However, this did not solve the issue completely.

From the 1600s, people from Africa were brought to North America for enslaved labour. These people were forcibly transported on ships in horrific conditions, and sold in auctions when they reached North America.



The invention of the "Cotton Gin", which reduced the labour of separating seeds from cotton resulted in the ability to process more cotton. This in turn led to the need for cheap labour to produce cotton, increasing the demand for slaves. The number of slaves sold in North America and the then newly formed "United States" over the years is given in the table below.

Slaves shipped to those regions that are part of the present-day United States

Date	Slaves
1626–1650	824
1651–1675	0
1676–1700	3,327
1701–1725	3,277
1726–1750	34,004
1751–1775	84,580
1776–1800	67,443
1801–1825	109,545
1826–1850	1,850
1851–1875	476
Total	305,326

From <http://www.slavevoyages.org/estimates/6yAAZ4FL>

Slaves were considered less than human and were not entitled to any human right. They were, with rare exceptions, treated brutally. Whipping and mutilation were common punishments, and families were often separated when children were sold to other owners or when spouses were separated. The cruel treatment of slaves led to the abolitionist movement, which advocated an end to slavery. However, slave owners defended their behaviour by stating that people from Africa or those of African descent were incapable of caring for themselves, and that slave owners were being benevolent by giving them food, shelter and exposing them to organised religion.

The number of states in which slavery was legal changed over time. During the American Revolution (1775 – 1783, when the United States was formed) 5 states among the original 13 states were “free states” where slavery was illegal, and 8 were “slave states” where it was legal. By 1858 there were 17 free states and 15 slave states. There was always a geographical divide, with the North of the United States having free states and the South having slave states.

Lincoln and Slavery

Lincoln was always opposed to slavery. As he progressed through his career as a lawyer and then a politician, he fought against slavery, first by defending former slaves in the courtroom and then voting for bills that supported the abolition of slavery.

His anti-slavery views first came to prominence in seven debates, now called the “Lincoln-Douglas debates”. These took place in 1858, when Lincoln unsuccessfully ran for a seat in the U.S Senate against Stephen Douglas. Stephen Douglas advocated that each territory in the United States could decide whether slavery was legal there. Lincoln's position was that the slaves had the right to “Life, liberty and the pursuit of happiness.”

Lincoln was elected the 16th President of the United States in 1860. His victory was mainly due to the support of the free states in the North. The Southern states saw this as the rejection of their right to practice slavery and decided to secede (withdraw) from the United States. This led to the American Civil War between the Union (North) and Confederates (South). During the war, Lincoln emancipated the slaves in many of the states that had seceded. Blacks were also allowed to join the Union army. The Civil war ended in 1865 when the Confederates surrendered. The Thirteenth Amendment to the United States Constitution was then passed, abolishing slavery.

The Gettysburg Address

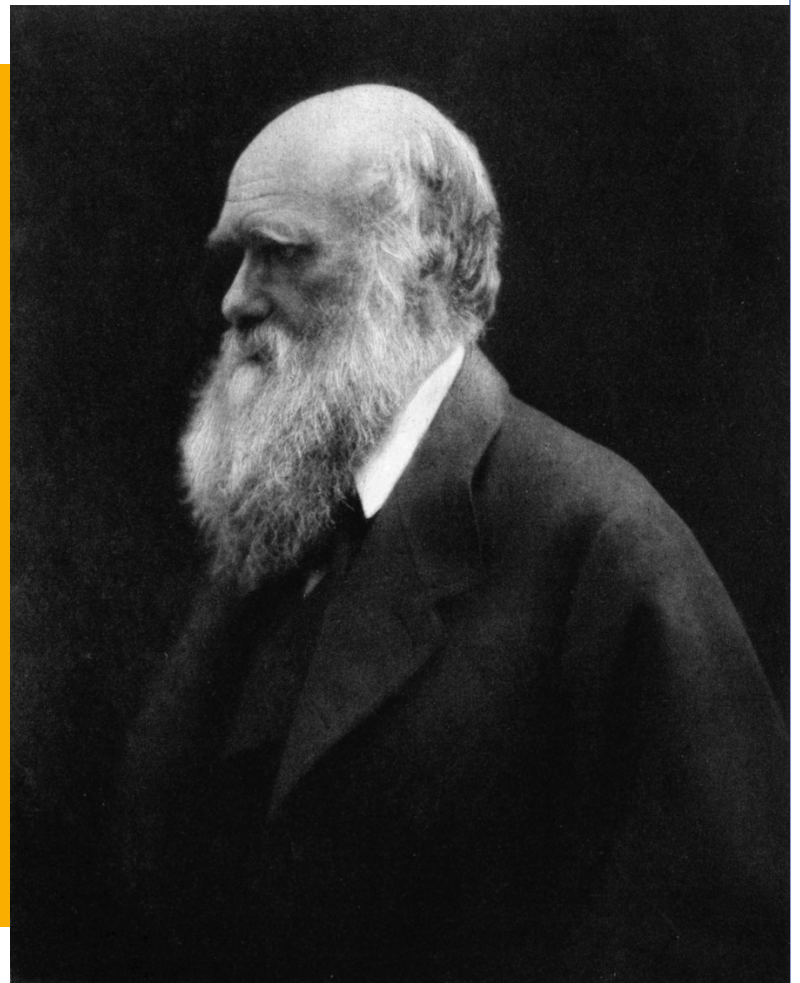
One of the decisive battles in the American Civil War was fought at Gettysburg in July 1863. Between 46000 to 51000 soldiers died (both sides combined). Though the Union army also lost many of their soldiers, they were able to hold their lines till the Confederate army retreated. A short speech that Lincoln gave at the Inauguration of the Gettysburg War Cemetery is known as the Gettysburg address, and is considered one of the most powerful speeches in history. Here is the full text:

Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal. Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battlefield of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this. But, in a larger sense, we cannot dedicate, we cannot consecrate, we cannot hallow this ground. The brave men, living and dead, who struggled here, have consecrated it, far above our poor power to add or detract. The world will little note, nor long remember what we say here, but it can never forget what they did here. It is for us the living, rather, to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us - that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion - that we here highly resolve that these dead shall not have died in vain - that this nation, under God, shall have a new birth of freedom - and that government of the people, by the people, for the people, shall not perish from the earth.

Charles Darwin (12.2.1809 – 19.4.1882)

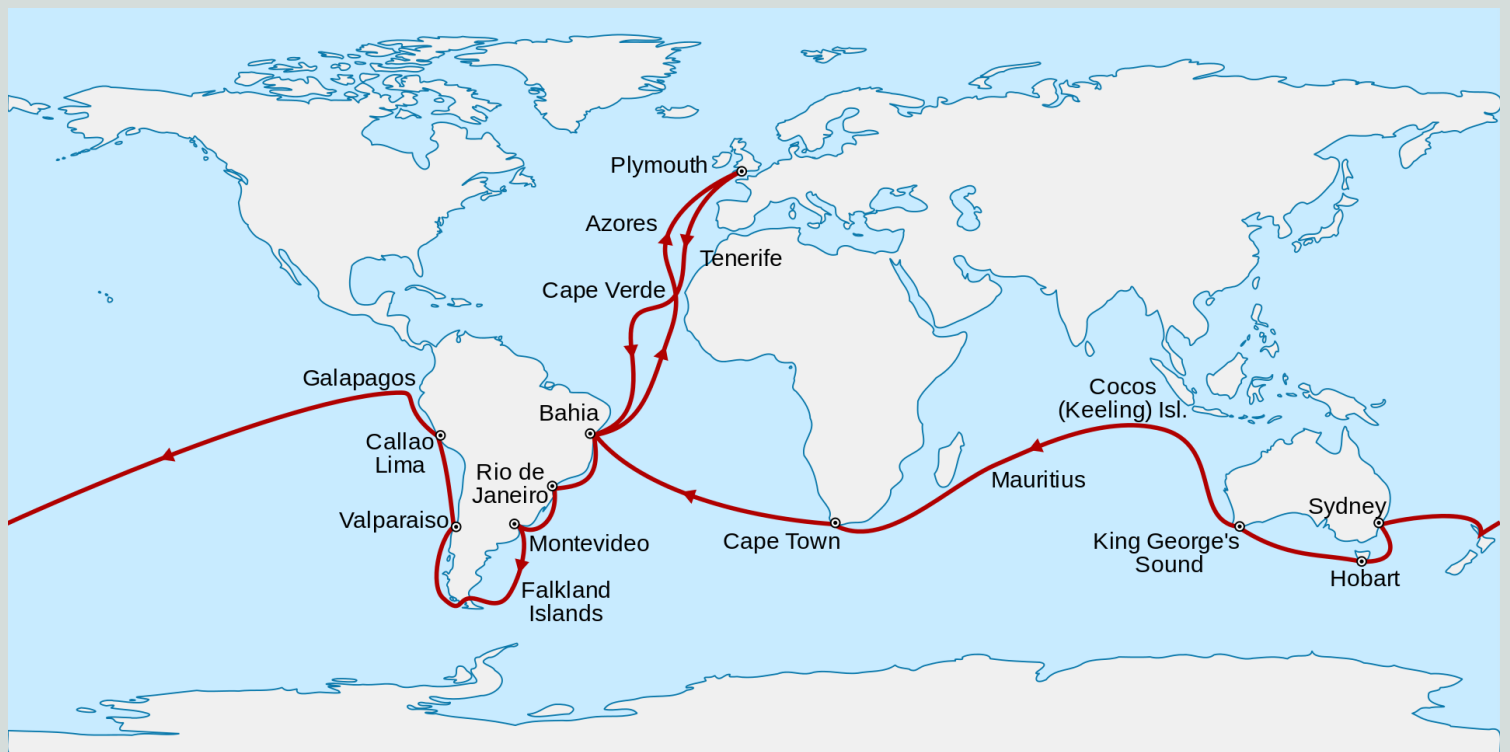
Charles Robert Darwin was an English biologist, naturalist and geologist. He is best known for proposing the theory of evolution.

Charles Darwin was born in Shrewsbury, England. His father was a physician and his mother was the daughter of an industrialist. Darwin was educated in the classics (Greek and Latin) like the other elite English, but it was soon clear that he was interested in science. He was then sent to study medicine at Edinburgh University. In the university he was exposed to many new ideas in science, even those that were against the religious and social norms of the time. He was introduced to Robert Edmund Grant, a disciple of the evolutionist Jean-Baptiste Lamarck, who became Darwin's mentor in invertebrate marine zoology. However, he did not like anatomy or surgery. This put an end to his medical studies, and he was shifted to Christ's College, Cambridge to work towards a Bachelor of Arts degree. Here, he was exposed to more Botany and Zoology.



A young botany professor at Cambridge suggested that Darwin travel on the H.M.S Beagle on its voyage around the world. The H.M.S Beagle travelled around the world over a period of almost five years. Darwin's position on the crew was that of a supernumerary, an additional member of the crew who paid a fee to be the captain's companion. This meant that he was free to travel extensively on land, away from the ship and return to it later. Darwin spent only 18 months on the ship. The rest of the time – three years and three months he spent on land, exploring and collecting specimens. By the end of the voyage, Darwin had made 1750 pages of notes, collected 5436 specimens of skins, bones and carcasses which he compiled into 12 catalogues, and had written a 770-page diary.

1. At Punta Alta in Argentina, Darwin came across a large collection of gigantic marine fossils.
2. At Tierra de Fulgo, he saw people whom he perceived as having a crude nature. He also observed that people from 'uncivilized' areas could learn the habits of the English.
3. At Port St. Julian, he found fossils of mastadons and other large animals
4. At the Galapagos Islands, he made drawings of several types of birds and animals and collected specimens. He noted that the mockingbirds differed from island to island.
5. Darwin also made geologic observations, comparing the movement of the Earth and trying to comprehend how long it would have taken for the Andes mountains to rise up, calculating how long a coral reef would have taken to form, etc. This made him think of 'deep time' – the changes over very long timelines.



Major discoveries made on the Voyage

A book based on Darwin's discoveries – *Journal of Researches into the Geology and Natural History of the Various Countries Visited by H.M.S. Beagle* was published in 1839. Along with what he had learnt on the voyage, Darwin spoke to dog and pigeon breeders to understand how they selected for preferred characteristics. He also experimented with seeds in seawater, to see if they could cross over from one landmass to another, and raised pigeons to observe the process of artificial selection.

The result of his studies was the publication of “*The Origin of Species*” in 1859. Contrary to popular belief, Darwin was not the first person to propose a theory of evolution. However, since his theory was supported most by facts and evidence, it made a huge impact.

The findings were summarized by biologist Ernst Meyers as follows:

- Every species, if fertile enough for all offspring to survive and reproduce will increase in number (fact).
- Despite periodic fluctuations, populations remain roughly the same size under the same conditions (fact).
- Resources such as food are limited and are relatively stable over time (fact).
- A struggle for survival ensues because of limiting factors such as food and space (inference).
- Individuals in a population vary significantly from one another (fact).
- Much of this variation is inheritable (fact).
- Individuals less suited to the environment are less likely to survive and less likely to reproduce; individuals more suited to the environment are more likely to survive and more likely to reproduce and leave their inheritable traits to future generations, which leads to the process of natural selection (fact).
- This slow process results in populations changing to adapt to their environments, and ultimately, these variations accumulate over time to form new species (inference).

The book was written for non-specialist readers and quickly became popular. Some of the ideas in the book were easily accepted, such as the 'branching' of species. However, the importance of natural selection was not accepted. This led to a number of competing theories of evolution, till modern science proved Darwin right. Darwin's birthday is celebrated as Darwin Day. Abraham Lincoln lived in the same era and faced the same social issues. Like Lincoln, Darwin was also opposed to slavery. In his writings, he referred to heart-sickening atrocities which slaves were subjected to. His opposition to slavery might have led him to find a common origin for all of humankind.

My Language, My Identity International Mother Language Day 21st February

*"If you talk to a man in a language he understands, that goes to his head.
If you talk to him in his mother language that goes to his heart."* – Nelson Mandela



Source: <https://www.smh.com.au/world/thousands-spoke-his-language-in-the-amazon-now-he-is-the-only-one-20171227-h0aeqr.html>

Let's begin with the Tower of Babel- a story that is often used to explain the multiplicity of languages. According to this story the Babylonians wanted to make a name for themselves by building a mighty city and a tower which would touch the heavens. God disrupted the work by having the workers speak multiple languages such that they could no longer understand one another. The city was never completed, and the people were dispersed over the face of the earth with their diverse languages. This story is not verifiable and some scholars argue that it was the scattering of people that caused the confusion and not vice-versa. Whatever we wish to believe the fact remains that approximately 7000 languages are spoken worldwide. So what's this fuss about mother tongue?

The man in the picture is Amadeo Garcia Garcia of the Taushiro tribe and the only person on the planet who speaks Taushiro. The Resigaro language, an Upper Amazonian language suffers from the same fate as it has only one native speaker left. Ancient Incan languages have almost disappeared due to the weight of Spanish. Linguistic imperialism of the last 200 years has wiped out local languages. Over 100 aboriginal languages in Australia have disappeared in the last two centuries and similar stories abound in India. Of the 7,000 living languages in the world, around 3,000 are considered as 'endangered'. This means that almost half of the planet's current linguistic diversity is under threat. India tops the list with 197 endangered languages.

India	197
Us	191
Brazil	190
China	144
Indonesia	143
Mexico	143
Russia	131
Australia	108
Papua New Guinea	098
Canada	087
Source: Economic Times	

Mother Language Day- 21st February

International Mother Language Day recognizes that languages and multilingualism can advance inclusion, and the Sustainable Development Goals. UNESCO believes that education, which focuses on the mother tongue, must begin from the early years as early childhood care and education is the foundation of learning. This year's Mother Language Day calls upon policymakers, educators, parents and families to scale up their commitment to multilingual education, and inclusion in education to advance education recovery in the context of COVID-19.

This effort also contributes to the United Nations International Decade of Indigenous Languages (2022-2032), for which UNESCO is the lead agency.

Languages, are of strategic importance for people and planet as they are a source of our identity and contribute to communication, social integration, education and development. Yet, due to globalization, they are under threat, or have disappeared altogether. When languages die, so does the rich tapestry of cultural diversity. Modes of thinking and expression, traditions, memories, valuable resources for ensuring a better future are all lost. To make a case in point, let's take the word "aarti". This word conjures a particular image in your mind, doesn't it. If this word was lost forever and replaced with "lights with wicks soaked in ghee that are lit and offered up to one or more deities". will it give you the feel of your pooja room, its fragrance, your family and the sense of spirituality?

"According to UNESCO every two weeks a language disappears taking with it an entire cultural and intellectual heritage. Only a few hundred languages have been given a genuine place in education systems and the public domain, and less than a hundred are used in the digital world. Societies exist through their languages which transmit and preserve traditional knowledge and cultures in a sustainable way.

International Mother Language Day was proclaimed by the General Conference of the United Nations Educational, Scientific and Cultural Organization (UNESCO) in November 1999. On 16 May 2007 the United Nations General Assembly in its resolution A/RES/61/266 called upon Member States "To promote the preservation and protection of all languages used by peoples of the world".

India writes in many languages and speaks in many more, yet communication has never broken down in this land of many tongues. According to a report published in 2018 in The Hindu BusinessLine, 19500 languages or dialects are spoken in India as mother tongues. However, 96.71 per cent population in the country have one of the 22 scheduled languages as their mother tongue. According to Ganesh N Devy founder-director of the Bhasa Research and Publication Centre, Vadodara and Adivasi Academy at Tejgadh, Gujarat, "India may have lost 220 languages since 1961 and another 150 languages could vanish in the next 50 years." There are five tribal languages that are moving towards extinction in India. Majhi in Sikkim is supposed to be the most threatened.

In the Land of Many Tongues

According to a research conducted by People's Linguistic Survey of India, there are just four people who speak Majhi and all of them belong to the same family. Similarly, the Mahali language in eastern India, Koro in Arunachal Pradesh, Sidi in Gujarat and Dimasa in Assam are facing extinction. UNESCO has now put Asur, Birhor and Korwa in its list of the world's endangered languages with Birhor being categorised as 'Critically Endangered', with just 2,000 speakers left. According to UNESCO, any language that is spoken by less than 10,000 people is potentially endangered. In India, after the 1971 census, the government decided that any language spoken by less than 10,000 people need not be included in the official list of languages. From 1971 onwards, the census has been counting only of those languages that have more than 10,000 speakers. This practice has resulted in a decline in the list of languages to 108 in the 1971 census, as against 1,652 in 1961.

A survey in Karnataka by the People's Linguistic Survey of India says that there are 10 endangered languages in the state of which 8 are potentially endangered. These are: Koraga, Irula, Soliga, Badaga, Yerava, Gouli, Bettakuruba and Jenukuraba. These languages are spoken by less than 10000. Hakki Pikki and Siddi are critically endangered.

Mother Tongue: The Language of the Soul

"English can never exude the magic of emotions that our mother tongue can."- Kailash Kher

Today it is quite common to see parents talking to their tiny tots in English. The fascination for English among the middle class does not augur well for our mother tongue and could eventually lead to the extinction of our native languages over a period of time. Although the British left India 75 years ago we seem to be suffering from a colonial hangover and have an obsession for the English language. While English does serve a purpose, do we need to make it all pervasive and allow it to intrude into our thoughts and conversations with family and friends. Is speaking in the language of our colonial rulers a privilege? Do we have to ape our erstwhile rulers?

Our native languages have a rich history. They hold memories of our ancestors, they are vivid, vibrant, colourful, powerful and they are our identity. Unfortunately they have been relegated as the second or even the third language in our educational system and many languages don't find a place at all in our schools. Can't we try to take pride in our mother tongue, be proficient in it, develop it by adding new words and concepts instead of trying to shy away and be half good in a foreign language?

A tree grows tall only if it can put its roots deep down and draw from the Earth!

Share your thoughts with us. We look forward to hearing from you.

ilavenil.t@excelindia.com | steny.simon@excelindia.com

Excel Public School
40-P-1, Koorgalli Industrial Area, Belavadi Post, Mysuru - 570018
Phone : (0821) 2972121, 9686574556
Email : eps@excelindia.com | Web : www.excelpublicschool.com
(CBSE Affl. No. 830385)

