



Mars is the closest planet to earth in the solar system, and for centuries and millennia, it has been at the forefront of the cosmic objects that have raised human interest and curiosity. Thus, it was inevitable at the dawn of the space age during the latter half of the 1950s and the start of the 1960s that the two leading space faring nations of the time, USSR and USA do all they can to get to the red planet before the other. What started as a rivalry as part of the ongoing Cold War proved to be immensely beneficial to the scientific growth of the human kind as the attempts became more ambitious with time, which ultimately resulted in the landing of rovers and the talks about manned missions in the next two decades.

The missions to Mars that have taken place over the last five or six decades have brought to the forefront the virtually inexhaustible limits of human ingenuity, and has set the template for the future endeavors along the same lines. Humans have made their presence felt on the surface of the Red Planet with the landing of the Mars 2 and Mars 3 Landers by USSR and the Viking expedition by NASA, which provided the first ever color photographs of the Martian surface from up close. Since, then humans have always dreamt of realizing their ultimate dream of going on interplanetary missions, and become a space faring species. If the future planned mission to the nearest planetary neighbor is anything to go by, then humans are on the right track towards achieving that big dream.

Apart from a number of ongoing Mars mission by different countries, the next decade look filled with schedules launches of future Mars Missions. At present, NASA of the United States has multiple missions, both orbiters and rovers present in the Martian orbit and the surface respectively. Apart from that, the Mars Orbital Mission or Mangalyaan of the Indian ISRO is currently orbiting that planet, and has shattered records by being at a fraction of the budget of other Mars Missions.

In the near future, one of the most talked about mission destined for the Red Planet is the InSight by NASA which is a Lander mission consisting of a drill and seismometer that aims to determine the interior structure of that planet. The InSight mission is scheduled for 2016. Another ambitious mission, aiming to find traces of evidence of presence of microscopic Martian lifeforms sometime in the past involves the Trace Gas Orbiter and the Schiaparelli Lander to Mars in 2016, and the ExoMars Rover in 2018. The European Space Agency or the ESA and the Russian Federal Space Agency are jointly collaborating for this mission.

The MARS 2020 rover mission by NASA will take off in 2020 and would have the scientific payload based on the Mars Science Laboratory design to conduct research on various aspects of astrobiology. Another ambitious mission is the Russian Mars-Grunt mission, which aims to bring samples of Martian soil back to earth. Moreover, Indian intends to build up on its unprecedented success at reaching the Mars orbit on the maiden attempt by sending Mangalyaan 2 mission within the 2018-2020 timeframe. Similarly, other nations such as China and the United Arab Emirates intend to become a member of the exclusive club of nations that have successfully sent a mission to Mars.

Finally, there are positive developments in the field of manned missions to Mars to suggest that it could come out of the realm of science fiction and become reality sometime during the third decade of the present century. Both NASA and ESA have claimed that they will be in a position to put a manned mission to Mars by around 2035.

## **Questions**

1. The Space Race between the USSR and the US was a part of the ongoing
  - a. Cold War rivalry
  - b. Scientific collaboration
  - c. Effort of private individuals and not the respective governments

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2. Which was the first mission sent by humans to touch the Martian surface?
    - a. Viking Expedition
    - b. Mars 2 Mission
    - c. Mars 2020 Rover
  3. The Mars Mission that provided the first ever color panoramas of the Martian surface is the
    - a. Viking Expedition
    - b. Mars 3 Mission
    - c. Mangalyaan Mission
  4. Which country's Mars Mission has made the record of reaching the Martian orbit on the maiden attempt?
    - a. India's Mangalyaan Mission
    - b. USA' Viking Expedition
    - c. European Space Agency's Rosetta Mission
  5. Which future Mars Mission is going to conduct research of various aspects of Astrobiology?
    - a. Mangalyaan 2
    - b. Mars 2020 Rover
    - c. Mars-Grunt Mission
  6. According to the author, what has the Mars Mission proved about the human race?
    - a. That they are in possession of inexhaustible ingenuity
    - b. That they are deluded to waste resources on visiting alien planets
    - c. That they are only good readers of sci-fi novels
  7. What is the general view of the author regarding the future of manned mission to the Red Planet
    - a. Optimistic and hopeful
    - b. Pessimistic and cynical
    - c. Indifferent

## Mary Shelley an English novelist: Frankenstein

1. Mary Shelley was the famous English novelist who has been immortalized because of one of her creations that has been in the spotlight for nearly two centuries, The Frankenstein or the Modern Prometheus. Even though she has been the creator of a number of other popular works as well, the novel Frankenstein remains her most enduring legacy of all. She was also the wife of the noted poet Percy Bysshe Shelley.
2. Mary Shelley was born on August 30, 1797 as Mary Wollstonecraft Godwin in London, England. She was the daughter of philosopher and political writer William Godwin and Mary Wollstonecraft, who was an early feminist. In fact, her mother was the author of an early feminist work, The Vindication of the Rights of Woman in 1792, but passed away shortly after giving birth to Mary Shelley. Mary, along with her half-sister Fanny Imlay, was left in the care of her father.
3. Shelley never had the chance to receive formal education because of the influence of her stepmother Mary Jane Clairmont, but still managed to satiate her intellectual yearnings and providing wings to her vivid imaginations by making fullest use of the extensive library that her father housed at their place of residence. Moreover, visits by distinguished guests at their household such as the likes of William Wordsworth and Samuel Taylor Coleridge helping in broadening her perspective.
4. Mary Shelley from the very beginning had a natural inclination towards creative writing, and this was in part because of the habit she developed from childhood of turning the practice of writing stories into her favorite pastime. In fact, she published her first poem, Mounseer Nongtongpaw, when she was barely a decade old in 1807, through her father's company.
5. Mary had the first chance to sense tranquility in household life when she visited the home of William Baxter in Scotland, who was one of her father's friends in 1812. The experience she had there made her return to that household the following year.
6. The noted poet Percy Bysshe Shelley was a devoted student of Mary's father, and with his she began a relationship in 1814, when he was still married and she a teenager. Percy and Mary fled England the same year, along with Mary's stepsister Jane, and traveled through Europe.
7. In Europe, the couple faced emotional distress in the form of the loss of their first child, a girl, who was born in 1815, and lived for only a few days. Later, while in Switzerland, the Shelley couple spent their time in the company of Jane Clairmont, Lord Byron, and John Polidori. It was there, that Lord Byron suggested every member of their small group to come with a horror story of their own. Mary Shelley began working on her most famous work, Frankenstein or the Modern Prometheus during that time.
8. Mary half-sister Fanny committed suicide followed by Percy's wife that same year, while the couple finally married in 1816. Their only child to survive in adulthood, Percy Florence, was born in 1819, while Percy Shelley tragically drowned while sailing with a friend in the Gulf of Spezia in 1822.
9. Mary's travelogue of her escape with her eventual husband to Europe appeared in the form of History of Six Week's Tour in 1817, while several other novels such as Valperga in 1823 and the science fiction tale The Last Man was published in 1826. Moreover, her novel Mathilde released almost a century after her demise in the 1950s, but her most memorable work remains Frankenstein that appeared in 1818.
10. Mary Shelley succumbed to brain cancer on February 1, 1851 in London, England, at the age of 53.

1. Mary Shelley has been immortalized as the –
  - a. Daughter of Mary Wollstonecraft
  - b. Wife of Percy Bysshe Shelley
  - c. Creator of the Frankenstein or Modern Prometheus
2. Mary Shelley mother, Mary Wollstonecraft's most famous work was –
  - a. Her treatise on origin of feminism
  - b. The Vindication of the Rights of Woman in 1792
  - c. Mathilde
3. Who, among the following, was a not a renowned guest of Mary Shelley's father?
  - a. Samuel Taylor Coleridge
  - b. William Wordsworth
  - c. Lord Byron
4. What was the first published work by Mary Shelley?
  - a. Frankenstein
  - b. Mounseer Nongtongpaw
  - c. The Last Man
5. Who accompanied Percy and Mary Shelley to Europe?
  - a. Mary's stepsister Jane
  - b. Mary half-sister Fanny Imlay
  - c. Mary stepmother Mary Jane Clairmont
6. What was the name of the only surviving child of Percy and Mary?
  - a. Percy Shelley
  - b. Bysshe Shelley
  - c. Percy Florence
7. Mary Shelley's posthumously published novel was -
  - a. The Last Man
  - b. Mathilde
  - c. History of Six Week's Tour

## **Mary Stevenson Cassatt an American Painter**

1. Mary Stevenson Cassatt was an American Impressionist artist, who became one of the leading exponents of this movement in the latter part of the nineteenth century. She was born in Alleghany City, Pennsylvania to a family with high social standing on May 22, 1844. Her father was a successful real estate and investment, and she received the upbringing that aimed to make her ideally suited for leading the life of an upper class lady. Thus, her childhood lessons included classes in homemaking, embroidery, sketching, music, and painting. In fact, the aim was to prepare her to become the ideal wife and mother in her alter life.
2. Mary Cassatt lived in an age when pursuing of a career was not a desirable prospect among women because of societal norms. However, she still decided to defy such norms and enrolled at the Pennsylvania Academy of Fine Art in Philadelphia when she was merely 16. However, the slow course work, and patronizing behavior from her fellow students and male faculty convinced her to leave for Europe, which she did despite strong objections raised by her father.
3. Mary Cassatt left her home for Paris in 1866, and began her training with private art lessons in the Louvre. She diligently studied and copied works of old masters, which continued in relative obscurity till one of her portraits, got selected for the prestigious Paris Salon of 1868. This prestigious annual exhibition of art, run by the French government, provided an opportunity to her to showcase her artistic talents. However, she entered her well-received painting under the name of Mary Stevenson in a rebuke to her disapproving father.
4. Mary Cassatt had to return to her home in 1870 due to the outbreak of the Franco-Prussian War. However, she found her going tough because of the adversarial behavior of her father who refused to pay for anything related to art, while also finding it hard to get her regular supplies. She tried to sell some of her painting to get some funds, but a fire in 1871 led to destruction of the painting she intended to sell in the most tragic manner.
5. A call from the archbishop of Pittsburgh to paint copies of two works by the Italian master Correggio provided an opportunity to Marry Cassatt to resume her artistic career in Europe. Her paintings were accepted at the Paris Salon back to back in 1872, 1873, and 1874, which helped secure her stature as an artist. She moved through Europe while continuing her study and painting, and eventually settled down in Paris.
6. Mary Cassatt felt increasingly constrained due to the restrictive nature of the Salon, and decided to experiment with her paintings, which received a lot of criticism for the use of bright colors and unflattering details of the subjects. During this time, she formed a close friendship with Edgar Degas, and as a result in 1879 exhibited 11 of her paintings with the Impressionists, which provided her with much critical acclaim, and monetary gains.
7. Mary Cassatt continued to evolve as a painter, and stopped joining the Impressionists from 1886 onwards. Her paintings were brutally honest, instead of being full of idyllic romanticism. She continued to move away from any particular school of painting, and experimented with many different styles. This included the creation of a series of colored prints by drawing inspiration from Japanese master printmakers, with Woman Bathing and The Coiffure, in 1891 being two of the finest specimens of such experimentations.
8. In the final decade of her life, Mary Cassatt became blind from diabetes, and finally breathed her last on June 14, 1926, in Le Mesnil-Theribus in France.

1. What was the aim of the lessons Mary Cassatt received as a child?
  - a. Becoming a successful and independent lady in latter life
  - b. Becoming a proper wife and mother
  - c. Becoming a successful painter
2. What prompted Mary Cassatt to leave Pennsylvania Academy of Fine Art for Europe?
  - a. Patronizing behavior by male faculty members and her fellow students at the academy
  - b. Slow course work at the academy
  - c. Both
3. What sort of training process did Mary Cassatt go through upon arriving in Paris?
  - a. She copied the works of the old European masters
  - b. She started painting for exhibitions
  - c. She joined various academies
4. What prompted Mary Cassatt to return home from Europe in 1870?
  - a. Her failing health condition
  - b. The outbreak of Franco-Prussian War
  - c. Her deteriorating financial status
5. Who commissioned Mary Cassatt painting of copies of two of masterpieces by Correggio?
  - a. The Pennsylvania Academy of Fine Art
  - b. The Paris Salon
  - c. The Archbishop of Pittsburgh
6. What aspect/s of Mary Cassatt's paintings in the Impressionist style drew sharp criticism?
  - a. Use of bright colors
  - b. Unflattering detailing of the subjects
  - c. Both
7. Mary Cassatt drew inspiration from which traditional artisans for her works such as Woman Bathing and The Coiffure?
  - a. The Impressionists
  - b. The Renaissance Masters
  - c. The Japanese Master Printmakers

## **Mini Benjamin Franklin Biography**

1. Benjamin Franklin through his life and philosophy truly epitomized the existence of the ultimate 'Renaissance Man' who was deeply appreciative of the natural world around him, while also empathizing with the pain and tribulations faced by his fellow men. Benjamin Franklin has left an indelible mark in the world of science, while also being one of the Founding Fathers of the oldest democracy in the world, the United States of America.
2. Benjamin Franklin was born on January 17, 1706 in Boston, Massachusetts to Josiah Franklin who was a soap maker by profession, and had moved to America from England, and Albiah Folger, who was a homemaker. He was the eighth of the ten children his mother had, while his father had seventeen children in total through his two wives.
3. Benjamin only had a couple of years of formal education, and then began apprenticing under his elder brother James, who owned a printing shop. However, at the age of 17 he left his apprenticeship and moved to Philadelphia, and later to London, England. He returned to Philadelphia at the age of 20 with great knowledge in printing technology to take it up as his profession.
4. At the age of 23, Benjamin became the publisher of the Philadelphia Gazette, while he published the Poor Richard's Almanac in December 1732 when he was just 27 years of age. This almanac would go on to become immensely popular and provide Benjamin with financial security to pursue his other interests, which lay in the field of science and philosophy.
5. Franklin discovered the bifocal spectacles in 1739 at the age of 33 largely to solve his own infuriating experience with the lenses available in his day. The split-lens bifocals made it possible to read clearly, and then look up and not face problem with blurry vision.
6. Franklin next delved into the field of heat transfer, and came up with the realization that the standard cooking stoves were highly inefficient. In 1741, the Franklin stove hit the market, and allowed the homeowners to benefit from greater supply of heat to their homes from each unit of fuel utilized.
7. Franklin went on to found the American Philosophical Society in 1743, which served as an excellent platform for the airing of different scientific views that served to widen the scientific temperament of the community. In fact, he himself used the platform to discuss his new ideas regarding the electrical theories.
8. A chance visit to a science show in a fair in the summer of 1743 in his hometown of Boston exposed Franklin to the fascinating world of static electricity. He felt much curious about the true state and nature of electricity, something that nobody had the slightest idea during those days.
9. Franklin got hold of a long glass tube by 1747, and realized that electricity consisted of a fluid motion between two points, positive and negative. This was a good 150 years before the discovery of electrons by J.J. Thompson. Franklin's observations came out in the form of his most famous book, Experiments and Observations in Electricity, in 1751. The following year, his famous experiment proved that lightening was indeed electricity.
10. Franklin also performed seminal work on various other branches of science including the investigative work behind the principal of refrigeration by evaporation, as well as, relation of storms with the direction of prevailing winds.
11. Benjamin Franklin was much more than a scientist, and he was among the five men who drafted the Declaration of Independence in 1776 that resulted in the United States ceasing to be a colony of United Kingdom.
12. Benjamin Franklin breathed his last at the ripe old age of 84 on April 17, 1790.

1. What qualities, according to the author, qualified Benjamin Franklin to be hailed as a 'Renaissance Man'?
- a. His appreciation for the natural world and empathy for others
- b. His interest in dressing up like the people from fourteenth century Italy
- c. His interest in collecting paintings of masters from the Age of Renaissance
2. When and where was Benjamin Franklin born?
- a. January 17, 1716 in Boston Massachusetts
- b. January 07, 1706 in Boston Massachusetts
- c. January 17, 1706 in Boston Massachusetts
3. Where did Franklin go from Philadelphia to learn more about printing technology?
- a. Boston, Massachusetts
- b. London, England
- c. Paris, France
4. Which was Franklin's earliest and among the most useful invention for the common man made in 1733?
- a. The split-lens bifocal spectacles
- b. The incandescent bulb
- c. The Telephone
5. Benjamin Franklin was the founder of which important scientific organization in 1743
- a. The American Scientific Society
- b. The American Philosophical Society
- c. The American Philosophical Organization
6. What was the name of Benjamin Franklin most famous book on scientific principles?
- a. Observations and Experiments in Electricity
- b. Experiments and Observations in Electricity
- c. Experiments and Observations in Static Electricity
7. Benjamin Franklin was one of the five who drafted which famous piece of document
- a. Declaration of Independence
- b. US Bill of Rights
- c. Universal Declaration of Human Rights



## **Mini Biography Astronaut Sally Ride**

1. Sally Ride created history by becoming the first American woman to fly into space, when she found a place in the National Aeronautics and Space Administration or NASA's astronaut program to go into space aboard one of its space shuttles. This momentous event led to firing the imagination of countless girls in America and beyond regarding the possibilities that were there in front of them in terms of career options.
2. Sally Ride was born on May 26, 1951 in Encino, California, and she grew up in Los Angeles before going on to the Stanford University. Her father, Dale B. Ride, was a professor of political science, while her mother, Carol Joyce (Anderson) Ride, was a counselor. Sally Ride credited her parents for having imbibed a profound interest regarding science in her from a very early age despite none of them having a science background.
3. Sally Ride was athletic as a teenager, and attended school on a partial tennis scholarship. In fact, she delved in professional tennis for a bit after graduating from school before returning to academics by joining Stanford University from where she received a double major in physics and English. She received her Bachelor of Science degree in physics and Bachelor of Arts degree in English in 1973. Thereafter, she pursued studying physics, which led to her earning a Master of Science degree in physics in 1975, and ultimately a PhD degree in 1978.
4. The same year that Sally Ride got her PhD degree she applied for the astronaut program conducted by NASA, and beat thousands of other applicants to bag a spot for herself. This led to her becoming one of the six first female astronauts that NASA ever had. She began her career in NASA on the ground as part of the ground support crew, working as a capsule communicator for the second and third shuttle flights that took off in November 1981 and March 1982 respectively.
5. Sally Ride entered the history books on June 18, 1983, when she left earth on board the space shuttle Challenger as the mission specialist on STS-7, which was NASA's seventh shuttle mission. Ride became the first woman in space to operate the shuttle's robotic arm during the flight. A number of records were created during that eventful mission.
6. Even though Sally Ride had already entered the history book through her maiden flight aboard a space shuttle as the first American woman in space, she was the one to rest on her laurels. Thus, she challenged herself to become the first American woman to go on a second spaceflight as well. This happened when she left for the space board another Challenger mission, in the form of mission STS-41-G, on Oct 5, 1984. She proved herself a valuable member of the crew by aptly handling the shuttle's robotic arm to readjust a radar antenna, and remove ice from the shuttle's exterior.
7. Ride was intending to extend her enviable record even further by going on a third mission, but the Challenger disaster of 1986 resulted in the cutting short of her crew's training.
8. Ride also served NASA in other capacities by serving on the accident investigation board that was set up in response to the two space shuttle tragedies in the form of Challenger in 1986, and Columbia in 2003.
9. Sally Ride was married to fellow astronaut Steven Hawley from 1982 to 1987, and had no children.
10. Ride became a professor of physics at the University of California, San Diego after leaving NASA, and later served as the president of SPACE.com from 1999 to 2000.
11. Sally Ride passed away on July 23, 2012 at the age of 61 after succumbing to a 17-month battle with pancreatic cancer.

1. Why has Sally Ride become an important name in history?
  - a. She was the first human to be in space
  - b. She was the first woman to be in space
  - c. She was the first American woman to be in space
2. Where and when was Sally Ride born?
  - a. 1950 in Los Angeles, California
  - b. 1951 in Encino California
  - c. 1952 in San Diego, California
3. In which two subjects did Sally Ride earn double bachelor's degree from Stanford University?
  - a. Mathematics and Physics
  - b. Physics and English
  - c. English and Mathematics
4. What was the official designation of Sally Ride's first space mission aboard the Challenger space shuttle?
  - a. STS-7
  - b. STS-41-G
  - c. STS-7-G
5. What led to the aborting of Sally Ride's intended third space mission?
  - a. Challenger Disaster in 1986
  - b. Columbia Disaster in 2003
  - c. Her own failing health
6. In the later years, Sally Ride became a professor of physics at which university?
  - a. University of California, Berkeley
  - b. University of California, Los Angeles
  - c. University of California, San Diego
7. What was the true significance, according to the author' of Sally Ride's admirable achievements
  - a. She showed the girls in America and beyond that the sky was literally the limit when it came to career choices
  - b. She encouraged young girls to daydream about going to space and meeting aliens
  - c. She encouraged students to pursue physics instead of English

Motivation often stands out as the deciding factor that distinguishes between the successes and failures in life. In fact, motivation has been exceedingly important from the evolutionary standpoint as well because the primitive humans needed to be highly motivated to maximize their chances of survival in a harsh and unforgiving environment. Even though the contours of challenges that humans face have undergone a sea of change in the ensuing period, the importance of motivation has stayed all the same. In fact, it has risen in importance because of the sort of obstacles and challenges that people face in their way towards success in the present day. The threats have shifted from hungry predators and uncertain environment to inner turmoil, and the inability to focus in the face of barrage of distractions that come in myriad shapes and forms. This is where fear or reason can serve as the matchstick for lighting up the fire of motivation within a person, and inspire to reach heights that they never thought was possible to surmount.

Fear and reason are both important instigating factors so far as motivation is concerned because of the indispensable role they play in self-preservation. Thus, effective use of these two factors is bound to come extremely handy in motivating people who lack the fuel to aim for loftier heights in their lives. Between the two factors, fear is the one that is more universal in nature, and is present in more or less every living being to a certain degree. In fact, fear was an essential survival tool that always helped the primitive humans to stay on their toes to remain a few steps ahead of their predators, and any other natural enemy. The modern day fear has emerged in the form of insecurities regarding personal relationships, and career options, which can however turn out to be quite a strong motivating factor.

In the modern age, fear often embodies the latent insecurity and misgiving that any individual might harbor in response to the rapidly changing landscape in their personal and professional life. However, these rapid changes need not be obstacles in someone's way but opportunities that can open up the avenue towards greater success. Thus, people harboring fears can use it as a motivation to inspire them to face challenges head on, and turn obstacles into opportunities to help them reach their goal in life. Even though most will find it easier said than done, the truth is that there is no shortcut to success.

Fear can also arise because of personal misgivings regarding one perceived lack of ability or skills, but this can also turn out to be an extremely strong motivating factor to egg individuals on towards acquiring better set of skills to succeed in life. Thus, individuals can learn to embrace their innermost fears, and turn them into their great friend and companion, namely in the form of motivation. Often, such an attitude is all that separates the winners from the perpetual runner-ups.

Reason, unlike fear, is a uniquely human trait, which does not affect the survival of all other living species much like it does in humans. Thus, humans can use reason as a tool or weapon that is exclusively available to them, and make the most out of this unique gift they possess. People can reason their way out of a number of sticky situations, without losing their mind or hope, which can also turn out to be a strong enough motivating factor in many individuals. Reason can work as a great fuel for motivation by allowing people to think logically and make most of their skills and talents.

## Questions

1. What role does motivation play, as per the author, in an individual's life?
  - a. Propel individuals towards achieving their true potential
  - b. Distinguishing successes from failures
  - c. Both

2. What are the survival threats faced by people in the present age?
  - a. Threats from predators and other natural enemies
  - b. Inner turmoil and too much distraction
  - c. Both
3. Why are fear and reason indispensable as motivating factors?
  - a. They impede people from taking bold and life changing decisions
  - b. They help in surviving instead of thriving
  - c. They instigate people to take action for self-preservation
4. Why is fear a universal factor among practically all living beings?
  - a. Because it enhances chances of survival through self-preservation
  - b. Because it helps in affecting actions that helps in negating danger
  - c. Both
5. How can fear turn out to be extremely beneficial aspect in an individual's life, as per the author?
  - a. By turning opportunities into obstacles
  - b. By turning obstacles into opportunities
  - c. By helping people maintain the status quo in their lives
6. How does reason differ from fear as a motivational factor, according to the author?
  - a. Reason is easier to cultivate compared to fear
  - b. Reason cannot be present in the absence of fear
  - c. Reason is a unique human trait while fear is universal
7. How can reason emerge as a redeeming quality in people facing sticky situations?
  - a. By helping them make logical decisions
  - b. By enabling them to panic
  - c. By assisting them in shutting their thought process

# Norse explorer Leif Erikson Explores America 500 years before Columbus

Leif Erikson holds the distinction of being the very first European voyager and explorer to have set his feet upon the land in the New World. In fact, the Norse voyagers were the first Europeans to have pioneered establishments on the mainland in North America, quite contrary to the generally held view of Christopher Columbus of holding that distinction. Leif Erikson was among descendants of the first generation of Nordic voyagers who had settled down in Greenland, and were ready to explore even further. In fact, Leif Erikson holds the distinction of pioneering the Nordic settlement of Vinland, which was present in the present-day Labrador and Newfoundland communities in Canada. Leif Erikson was also an important figure in the spread of Christianity in Greenland.

Leif Erikson was born to the famous Nordic explorer from Norway, Erik Thordvalsson, or more popularly Erik the Red, in Iceland in 970 AD. However, his father migrated to Greenland with his family in 986 AD. It was during the stay in that country that Erik discovered two Norse colonies, which were the Eastern and the Western settlements. Erik the Red named those two colonies according to the traditional beliefs as the Landnama and the Eiriks Saga Rauda respectively. It was while in Greenland that Leif reached his adulthood, and decided to marry quite early as an adult. The woman Leif married, by the name of Thorgunna, was a resident of Greenland but of Icelandic origin. The couple went on to have a child, a boy by the name of Thorkell Leifson.

Leif resided in Greenland with his family for a number of years, but then decided to settle down in Norway. Upon arriving in Norway, Leif decided to convert to Christianity like many of the other Norsemen of the time, with the blessings of the Norwegian sovereign, King Olaf I. His conversion was something that his father did not approve of, but his mother was quite supportive of the decision, and she converted and went on to found a new church. Next, Leif decided to return to Greenland, and purchased a ship called Bjarni Herjolfsson from a local merchant. He boarded the ship with 35 other men that he had recruited for the voyage, and used the ship for exploring the western boundaries of Canada and Greenland. Moreover, in the year 1003, Leif led the Saga of the Greenlanders. This saga happened to coincide with the route followed by the Bjarni towards the Northern coastal areas.

During the voyage, Leif Erikson and his crew of 35 men made a number of landfalls on different islands that dot the coast of Canada. The first island that Leif came across was the Helluland or the Land of the Stones that was nothing but an island covered with solid rock formations. Next, Leif renamed as Baffin Island the Land of the Stones before he made his following landfall. Finally, Leif and his crew reached the island of Markland or the present-day Labrador Island, and then left it to make landfall at Leifsbudir. This name literally means Leif's Storage Houses in the Icelandic tongue, and Leif's crew suggested this name after discovering that they had indeed reached their hometown.

Later on, Leif returned to Greenland upon the orders of King Olaf I to spread Christianity among the islanders, and stayed at the remote town of Brattahild with his father Erik. The general consensus is that Leif breathed his last somewhere around 1020, and his family slipped into oblivion thence on. However, he has made a return into the popular culture with the discovery of the fact that Leif had discovered a Norse settlement along Newfoundland, with the name of Le Anse Aux Meadows. Since 1964, the US Congress has proclaimed October 9 as the Leif Erikson Day.

## **Questions**

1. Why is the name Leif Erikson so special?
  - a. Because he was the first mate of Christopher Columbus during the maiden voyage to the New World
  - b. Because he was the first recorded European to set feet upon the New World
  - c. Because he was the first Nordic person to embrace Christianity

2. Leif Erikson was the pioneer of the ~~Norwegian~~ [www.abhyasoliman.com](http://www.abhyasoliman.com) –
- Markland
  - Vinland
  - Newfoundland
3. Leif Erikson was born in 970 AD. in –
- Norway
  - Iceland
  - Greenland
4. Leif Erikson's decision to convert to Christianity was –
- Under the patronage of King Olaf I of Norway
  - Chided by his father but supported by his mother
  - Both
5. The ship Leif Erikson used for his voyages was –
- The royal vessel Bjarni Herjolfsson
  - Bjarni Herjolfsson that was bought from a local merchant
  - Part of the expedition led by his father, Erik the Red
6. What was the name given by Leif Erikson to the Land of Stones?
- Helluland
  - Baffin Island
  - Markland
7. October 9 has been proclaimed as the Leif Erikson Day in the United States of America by the –
- US President
  - US Congress
  - US Supreme Court

# Pakistani schoolgirl Malala Yousafzai, winner of the Nobel Peace Prize

Malala Yousafzai has emerged as the beacon of hope for millions of girls across the planet that face daily hurdles and challenges in their path towards accessing quality education, and the chance to lead their lives with dignity. She has transformed from a simple but brave girl who was always fighting for the right to education for young girls in the Swat Valley in Pakistan's tenuous Khyber Pakhtunkhwa province of Pakistan, which was then under the Taliban occupation, into a global icon for advocacy of education for all. However, this has not been an easy transformation, and has come at the cost of almost losing her life to Taliban gunmen, as well as, self-imposed exile from her homeland.

Malala Yousafzai, whose name literally means 'grief stricken', was born to an educator named Ziauddin Yousafzai and Toropekai in the town of Mingora in the Swat Valley on 12<sup>th</sup> of July 1997. Her father ran several private schools in the region that is renowned for its spectacular scenic beauty and popular as a honeymoon vacation area. It was there that Malala grew up with her two brothers, Khushal Khan and Apal Khan.

However, much of the beauty of the area was robbed by the violently oppressive rule set up by the militant Islamic fundamentalist group, the Taliban, who insisted on setting up of a theocratic state by enforcing Sharia or Islamic law in the region. One of the oppressive actions initiated by the Taliban was to deny education to girls and women, and they set forward to achieve this aim by burning down and demolishing numerous schools in the Swat Valley between 2007 and 2009. In fact, by the early part of 2009, the Taliban militants were able to seize control of the entire area from the government forces.

Malala Yousafzai and her father played a leading role in defying the oppressive orders put forward by the Taliban regime regarding the closing down of educational facilities for girls and women. Even though the militants had ordered outlawing of education for girls immediately when they had seized control, Malala's father kept the school for girls open long after the order for closing them down was given. Moreover, even though Malala herself was absolutely terrified to speak out against these restrictions, she nonetheless decided to do so by writing a blog for the BBC Urdu service under the pseudonym of Gul Makai in 2009. Through her blog, Malala described the trials and tribulations faced by the girls in her area, as well as, her own concern for her personal safety and that of her school and classmates.

Malala had fled to Abbottabad with her family but returned to Swat Valley once the military had flushed the militants out. She continued writing her blog and even appeared on television. She was nominated for the International Children's Peace Prize in 2011, while the Pakistani government awarded her the National Youth Peace Prize the same year. However, her joy was cut short when a Taliban gunman shot her in the head and neck on her school van going home, and she was rushed to Great Britain for emergency surgery. However, meticulous treatment has led her to joining a school in Birmingham, UK, while the Pakistani government has renamed the National Youth Peace Prize as National Malala Peace Prize.

November 10, 2012, was also named as a day of global action-Malala in her honor, while Angelina Jolie helped establish the Malala Fund as a charity to fund education of girls. Finally, she was awarded the Nobel Peace Prize in 2014 along with the Indian child activist Kailash Satyarthi.

## **Questions**

1. How has Malala Yousafzai been the beacon of hope for girls across the globe?
  - a. By enabling them to dream about leading lives of dignity
  - b. By promoting education of girls on a global scale
  - c. Both

- www.yahyasoliman.com
2. How has Malala's life transformed in a short span?
    - a. She transformed from a girl fighting oppressive regime to a global advocate for girl's right to education
    - b. She had taken up arms against the militants in her homeland
    - c. She has formed a political party of her own and won elections
  3. What was Swat Valley famous for before the Taliban militants took over?
    - a. A place of scenic beauty particularly popular as a honeymoon vacation spot
    - b. A place of higher learning in Pakistan
    - c. An important military and command base for the army
  4. What did the Taliban militants do to put a curb on women education in the Swat valley?
    - a. It demolished and burnt down schools meant for girls
    - b. It forbade all local families from sending their girls to schools
    - c. Both
  5. What did Malala do initially to defy the restrictions imposed by the Taliban militants?
    - a. She openly defied the Taliban militants by organizing protest marches
    - b. She worked as an informant for the Pakistan military
    - c. She wrote about her experiences in a blog under a the Taliban's policies
  6. What did the Pakistani government do to honor Malala after the life-threatening attack on her by the Taliban?
    - a. It awarded the National Youth Peace Prize to her
    - b. It renamed the National Youth Peace Prize as National Malala Peace Prize
    - c. It made Malala their representative to the United Nations
  7. Malala Yousafzai won the Nobel Peace Prize in 2014 along with –
    - a. Indian environment activist Medha Patkar
    - b. Pakistani politician Imran Khan
    - c. Indian child activist Kailas Satyarthi



# RECYCLING FACTS & STATISTICS

Our Earth is capable of fulfilling all our needs but none of our greed. Thus, it has become important that recycling take precedence over exploitation of newer resources in a bid to provide a more comfortable life to the people.

1. Almost 60 to 70% of the waste materials that reach the dumps are of recyclable nature that people can reuse with productive outcome. Similarly, more than half of that same waste can be composted to enhance fertility of soil and increase crop production without the need of using chemical fertilizers.
2. Plastic is often the nuisance number one when it comes to non-biodegradable wastes since it takes almost 700 years to dispose naturally in a landfill. Moreover, it constitutes more than half of the total recyclable wastes that are present in the dumps. In fact, we are dumping more than 250,000 plastic bottles, and the recyclable plastics kill hundreds and thousands of sea creatures every year.
3. Famous chocolate brands from across the world uses aluminum to wrap their products to make it more presentable and attractive to their customers. People enjoy these products but do not think twice about recycling the aluminum wraps, which almost always ends in the dustbin. However, the energy, manpower, and money required for manufacturing these wraps from virgin material is almost hundreds that from recycled aluminum metal. Most people are unaware of the monetary and environmental benefits of recycling these seemingly insignificant items such as aluminum wrappings around their favorite chocolate products.
4. Recycling of paper is fortunately more popular than that of most other materials. Even then, tress felled for the purpose of manufacturing of paper and various allied products is going on at an unimaginable rate of more than 100 acres of wooden land per minute. This alarming rate of deforestation is leading to further skewing of balance between the production and absorption of carbon dioxide on a global scale. Recycling of paper is the only way to put a cap on this alarming development.
5. A fully-grown tree can yield around 700 paper grocery bags on an average, which an average supermarket can consume in less than an hour. On the other hand, it takes around minimum of 15 to 20 years for a tree to reach its maximum size. Therefore, one single supermarket can consume a whole tress within an hour, which took nearly a couple of decades to grow.
6. On the other hand, recycling a ton of paper can help in saving 17 trees, 350 pounds of limestone, 275 pounds of sulfur, 9,000 pounds of steam, 60,000 gallons of water, 3.3 cubic yards of landfill space, and 225 kilowatts of water. Moreover, recycling of paper consumes energy which is nearly 70% less compared to what making paper from virgin wood and other raw materials would have required. In fact, by recycling paper that is worth saving 14 trees, recyclers can reduce air pollutants by a whopping amount of 165,142 tons.
7. Glass is among the few items that are completely recyclable while takes the maximum time to decompose in landfills. However, the tragedy lies in the fact that most of the glass items end in landfills instead of being recycled because of lack of awareness. Even then, there is a distinct rise in the demand for cullet or the recycled glass because of the less consumption of electricity in their processing compared to manufacturing of virgin glass.
8. Styrofoam items such as coffee cups have become immensely popular, but these are not biodegradable. The discarded Styrofoam items end in landfills and remain there for centuries. Thus, it is essential to say no these products and instead opt for biodegradable options such as paper and clay cups.

1. According to the author, why does recycling need to take precedence over exploring new resources?
  - a. Because recycling is the latest in-thing
  - b. Because the earth can only fulfill our needs but not our greed
  - c. Because recycling has been made mandatory by international law
2. What is the percentage of recyclable waste materials that are dumped?
  - a. 60 – 70%
  - b. 65 – 75%
  - c. 70 – 80%
3. Dumping plastic indiscriminately into landfills is not a good idea because
  - a. Plastic is practically non-biodegradable and remains in landfills for hundreds of years
  - b. More plastic items are dumped than can be disposed of without causing harm to the environment
  - c. All of the above
4. The act of cutting down tree for various industrial purposes can be summed into a single term
  - a. Reforestation
  - b. Deforestation
  - c. Afforestation
5. Recycled glass is know by the term of
  - a. Cullet
  - b. Cutlet
  - c. Cutlass
6. What are the best substitutes to the use of Styrofoam coffee cups according to the author?
  - a. Paper and clay cups
  - b. Plastic containers
  - c. Glass bottles
7. According to the author, what is the main reason behind the limited popularity of recycling?
  - a. Lack of proper awareness
  - b. Because people are lazy and callous by nature
  - c. Because recycling is not a profitable option

## **Renewable Resources, Wind Solar and Hydroelectric: FACTS & STATISTICS**

Renewal energy resources are the only hope that humanity has against the rising tide of various greenhouse gases that have polluted the atmosphere ever since the inception of industrial revolution and the consequent rise in the use of various fossil fuels. Lack of awareness about the important of using the renewable resources is the prime reason behind its lack of popularity. However, the uses of the alternate sources of energy are on the rise, and few interesting facts and statistics can help in providing a better insight into what its true potentials are.

1. Wind energy is one of the most abundant forms of energy on the planet, and a single wind turbine is capable of producing enough electricity to run around 300 homes on an average. Windmills have been around for more than two millennia, and they were used by ancient civilizations for myriad uses from drawing water to crushing grains.
2. However, the modern wind turbine to generate electricity was first installed by Siemens more than three decades back, and it produced just 30 kilowatts of power. The latest wind turbine from the same company produces 6 megawatts, which is 25,000 more than the earlier amount, and is enough to light up more than 6,000 homes.
3. The earth absorbs only a small portion of the incident solar radiation, while reflecting everything else back. However, only just 0.3% of the earth's surface is adequate area for setting up solar panels that would provide enough electricity to meet the energy needs of the entire human population.
4. Weight for weight, advanced silicon-based solar panels is capable of producing the same amount of electricity as the nuclear rods. However, since every part of the solar panels is recyclable, they have negligible impact of the environment. On the other hand, nuclear power generation has the associated issue of hazardous radioactive waste products.
5. Wind is a result of the uneven heating caused by the solar radiation of the earth's surface. Earth receives more solar energy per hour than people can spend in an entire year. In fact, solar panels and wind turbines provide more than 100 times better energy yields compared to the non-renewal energy resources.
6. The manufacturing of solar cells is much less taxing on the environment compared to manufacturing of conventional energy technologies because it emits 90% less pollutants. Moreover, solar energy can also serve as a considerable source of employment generation. This is because for every 10 megawatts of solar energy generated annually anywhere on the planet, anywhere between 200 to 400 individuals receives employment in the various sectors of solar energy industry such as research, development, manufacturing, and installation.
7. While larger countries such as USA, China, India, and others are the lead producers of pollutants and greenhouse gases such as CO<sub>2</sub>, smaller countries have at the forefront of utilizing non-renewable energy resources. Thus, Iceland receives its entire energy supply from geothermal energy sources, while Paraguay receives 90% of its energy requirements from the Itaipu Dam.
8. Hydroelectric power generation has been one of the oldest forms of harnessing of renewable energy resources by humans. Its cost of generation per unit is among the lowest, while it also helps in cutting down carbon emission. Dams built for hydroelectric electricity generation also has a number of additional uses such as irrigation, navigation, and shipping.
9. The share of hydroelectric power's contribution to world energy requirements stands at around 20%, and it has remained steady at this level for quite some time. Several factors discouraging its

widespread utilization are the main reasons for investment and adverse impacts on the local population by causing dislocation and flooding.

## Questions

1. According to the author, what role can renewable energy resources play in saving the earth's environment?
  - a. Renewable energy resources can help in cutting down on greenhouse gas emissions
  - b. Renewable energy resources are limited in amount and will end before causing any harm to the atmosphere
  - c. Renewable energy resources do not require any investment for developing technologies compatible to it
2. What was the power generation capacity of the oldest commercial wind turbine set up by Siemens?
  - a. 30 kilowatt
  - b. 30 megawatt
  - c. 30 gigawatt
3. How much of earth's surface is adequate for setting up solar panels to meet earth's energy consumption?
  - a. 0.03%
  - b. 0.3%
  - c. 3%
4. Solar panels and wind turbines provide \_\_\_ times better energy yield compared to non-renewable energy sources
  - a. 10
  - b. 100
  - c. 1000
5. According to the author, development of solar technology is better for the environment because
  - a. It emits 90% less pollutants than conventional technologies
  - b. The people involved are highly skilled
  - c. Solar panels take less space compared to conventional power generation equipments
6. Share of hydroelectric power in total power output is around
  - a. 20%
  - b. 22%
  - c. 25%

7. What is/are the probable cause/s behind the popularity of hydroelectric power generation?
- Mammoth initial investment required
  - Adverse impacts on the local population such as dislocation
  - All of the above

## **Sherlock Holmes: Man or mystery?**

Sherlock Holmes is undoubtedly the most famous and beloved of fictional detective characters that have appeared on the world literary scene since time immemorial. This famous fictional character was the brainchild of the famed Scottish author and physician Sir Arthur Conan Doyle, who made his creation an endearing legacy of his literary career. Sherlock Holmes made his appearance as a ‘consulting detective’ based in London, who is capable of using his astute logical reasoning and power of observation to build cases and apprehend criminals from the barest of clues. Moreover, Holmes had profound knowledge of forensic science, which in addition to his ability to adopt almost any disguise, made him phenomenally successful in solving even the most challenging of cases.

The creator of Sherlock Holmes, Sir Arthur Conan Doyle, was a graduate of the University Of Edinburgh Medical School, and found inspiration for the most phenomenal of his literary creations from a number of people he met there. Among his several inspirations for the character of Sherlock Holmes was a surgeon at the Royal Infirmary of Edinburgh, Joseph Bell, who had the gift of drawing broad conclusions from the minutest of observations. Another inspiration was Sir Henry Littlejohn, chair of Jurisprudence at the University of Edinburgh Medical School, as well as, policeman Francis ‘Tanky’ Smith, who was a master of disguise and went on to become the first private detective of Leicester. However, Joseph Bell had made it clear in a letter to Canon Doyle that Sherlock Holmes was based largely upon the personality traits of his creator himself.

Sherlock Holmes appeared in print in a total of four novels, as well as, 56 short stories over the course of several decades, and became the favorite detective character of multiple generation readers all over the world. The first time that Sherlock Holmes made an appearance in print was in 1887 through the novel, *A Study in Scarlet*, which appeared in Beeton’s Christmas Annual. The next Sherlock Holmes novel to emerge from the pen of Sir Arthur Conan Doyle was *The Sign of Four*, which appeared in the Lippincott’s Monthly Magazine in 1890. However, the popularity of Sherlock Holmes as a literary character grew more robustly with the publication of the first series of short stories in *The Strand Magazine*.

The first short story, *A Scandal in Bohemia*, made its appearance in 1891, and became quite popular among the readers. All the other short stories, as well as, the two novels, which were published in serial form, made their appearance between then and 1927. However, the events that took place in the stories occurred between the timeline of 1880 and 1914. Almost all the stories have been narrated from the perspective of Dr. John H. Watson, who was the friend, confidante, and biographer of Holmes. Only two stories were narrated by Holmes himself, *The Adventure of the Blanched Soldier* and *The Adventure of Lion’s Mane*, while *The Adventure of the Mazarin Stone* and *His last Bow*, the stories are written in third person.

*The Adventure of the Musgrave Ritual* and *The Adventure of the Gloria Scott* are two stories narrated by Holmes to Watson from his memory. Sir Arthur Conan Doyle had tried to kill Holmes by writing about his presumed death in the story *The Final Problem* in 1893, but had to give in public demand by resurrecting him through the story, *The Adventure of the Empty House* in 1903. Sherlock Holmes finally withdrew to a life of retirement in a small farm on the Sussex Downs, which readers came to know through the story, *His Last Bow*. However, the appeal of Sherlock Holmes continues to hold strong to the present day.

1. Sherlock is famous as a –
  - a. London-based Consulting Detective
  - b. London-based police detective
  - c. London-based amateur detective
2. What are some qualities that made Sherlock Holmes popular as a fictional detective character?
  - a. His mastery of forensic science and adopting disguises
  - b. His ability to solve cases from minutest of observations and clues
  - c. Both
3. Which person did Conan Doyle drew inspiration for the character of Holmes because of drawing broad conclusions from minute observations?
  - a. Joseph Bell
  - b. Sir Henry Littlejohn
  - c. Francis ‘Tanky’ Smith
4. When and where Sherlock Holmes did make his second appearance in print –
  - a. A Study in Scarlet in Beeton’s Christmas Annual in 1887
  - b. The Sign of Four in Lippincott’s Monthly Magazine in 1890
  - c. In serialized publication in the Strand Magazine
5. The events in Holmes’s timeline took place between
  - a. 1887 and 1927
  - b. 1893 and 1903
  - c. 1880 and 1914
6. Which, among the following stories, was not narrated by Sherlock Holmes himself?
  - a. The Adventure of the Blanched Soldier
  - b. The Adventure of the Mazarin Stone
  - c. The Adventure of Lion’s Mane
7. Sherlock Holmes makes his final appearance in the story –
  - a. The Final Problem
  - b. The Adventure of the Empty House
  - c. His last Bow

Off-road racing is an immensely popular segment of racing competitions because of the large variety of classes specially modified vehicles that are involved in such races, while the off-road conditions under which these races take place make them much more interesting and exciting than the regular races for many audiences. This has been one of the deciding factors behind the cult following that the popular off-road races that place around the world enjoy year after year. Among the most popular of off-road races that take place anywhere on the planet, the Baja 500 off-road race is among the most renowned.

The Baja 500 off-road race forms a part of the series of races that take place on the Baja California in Mexico in early June every year. Apart from this race, other events that form part of the series of races taking place at the same time include the Baja 1000, Primm 300, and the San Felipe 250 racing events. The real excitement of this off-road racing lies in the huge range of different classes of vehicles that form part of these racing events, while the off-road racing environment takes the excitement several notches higher for the audiences.

The main racing event in the Baja 500 off-road race usually have varying mileages for the racing course, but the length of the racing distance to be covered during the race is usually a little under 500 miles. Over the years, the racing course has remained almost the same with a large majority of the racing events consisting of a loop race, which starts, as well as, finish in Ensenada. The event consists of various types of vehicle classes that range from two wheelers in the form of motorcycles to production vehicles, and even stock VW and trucks. In fact, the buggies, and trucks form one of the most popular racing segment in the middle of the desert. Moreover, the custom fabricated race vehicles make some serious contributions towards infusing a high dose of adrenaline into the racing action.

The roots of the racing events in Baja go back to the early 1960s when Bud Ekins of the famed Ekins brothers of Los Angeles was approached by American Honda to test the durability of their CL72 Scrambler model. What started as a test of endurance for a motorcycle model by a famed Hollywood stuntman has given rise to one of the most popular off-road racing event on the planet. The route posed considerable difficulties in the form of logistics, with no refueling stations availing for most of the journey, as well as, adverse weather conditions and general terrain of the land.

The success of the Ekins brothers in traversing the distance under such harsh conditions inspired Ed Pearlman to form the National Off-Road Racing Association or NORRA, which organized the first Mexican 1000 race from Tijuana to La Paz in 1967. It was this organization that was instrumental behind the launching of the inaugural Baja 500 off-road race in the year 1969. Since, then the race has continued uninterrupted even while facing various crises such as the oil crisis of the mid 1970s. However, it has managed to survive and even thrive, thanks largely to the interest of the local government and populace in keeping its venerated tradition alive.

The Baja 500 off-road racing competition offers a test of endurance and adaptability to the drivers in their bid to master the hostile terrain and racing conditions to emerge victorious. The race offers an opportunity to the racing aficionados to witness firsthand the limit of human endurance and creativity in developing and mastering the ultimate ride for becoming the champion.

## **Questions**

1. According to the author, what is/are the main reason/s behind the immense popularity of the off-road races?
  - a. Large variety of modified vehicle classes
  - b. Challenging off-road racing conditions
  - c. Both

2. Which among the following races is not part of the series of races that Baja 500 belongs to
  - a. Baja 1000
  - b. Primm 350
  - c. San Felipe 250
3. What does the author means by the phrase ‘Loop Race’?
  - a. A race that begins and ends at the same spot
  - b. A race where the vehicles need to go through a loop
  - c. None of the above
4. The Ekins brothers decided to ride through the challenging terrain of Baja California because
  - a. They were fond of taking part in challenging races
  - b. They had the task of testing the endurance of CL72 Scrambler model by American Honda
  - c. They were considering starring a racing event themselves
5. The full form of NORRA is
  - a. National On-Road Racing Association
  - b. National Off-Road Racing Association
  - c. National Off-Road Racing Assembly
6. The first time Baja 500 off-road race took place was in the year
  - a. 1967
  - b. 1968
  - c. 1969
7. According to the author, what does this race offers to the drivers?
  - a. A test of foolhardiness and adrenaline pumping action
  - b. A test of endurance and adaptability
  - c. A test of technological advancement and ingenuity



# The Future of High Speed Trains

The high-speed trains have been around for quite some time in different parts of Asia and Europe, with the bullet trains in Japan and France being the most notable examples respectively. The gradual increase in the speed at which the trains can travel have come as a big boon to the nations with high population density, and an extremely availability of space for building new road and other transport-related infrastructure. These high-speed trains are allowing the commuters in these nations to travel to various destinations at an extremely short time, while also ensuring utmost care for their convenience and safety. One of the countries that have joined the race in building the most sophisticated of high-speed trains on a global basis is China, with the Shanghai Maglev being one of the most technologically advanced transport system in the world.

Most experts believe that the future of high-speed train transport lies with the advancement in the field of magnetic levitation trains, which are able to avoid the familiar issues present in the conventional trains running on tracks. One of the major benefits of magnetic levitation trains is the fact that it has no direct contact with the train track, and this enables it to bypass the force of friction, which serves as a major limiting force in enhancing the speed and efficiency of any such train. Thus, trains are able to maximize their speed by using the energy generated through their engines into velocity instead of overcoming friction.

The magnetic levitation trains are also able to provide a much more comfortable ride to their passengers by eliminating the familiar bumps experienced while travelling on conventional trains running on tracks. Moreover, these Maglev trains are able to accelerate and decelerate extremely quickly, which helps in averting major accidents while not compromising with the ride quality. In fact, the high-speed trains are often proving to be a much more environmental friendly alternative to air travel over shorter distances. However, the upper speed limit of such high-speed magnetic levitations trains is still pegged around the 400 km per hour mark, which is due to the excessive air resistance it experiences at such excessive speed.

One of the major efforts at negating this excessive air resistance has been in the way of improving the aerodynamics of the trains, which is sure to improve its efficiency by a considerable margin. However, it would still not be enough to present the next big breakthrough in the field of high-speed trains, and enhance its top speed by quite a few notches higher. This is where the concept of creating vacuum tube designs which will allow trains running within them to avert such air resistance are promising to be the next big breakthrough on the high-speed train scene. These trains are being hailed as the Super-maglev trains and they, at least on paper, are capable of running even more than seven times the present speed of Maglev trains sometime in the future.

The exciting new concept of Loop Line is allowing the engineers to come up with innovating solutions to the problems that transport experts are familiar with while handling trains that travel over 400 km per hour. One such problem is the wastage of as much as 83 percent of the energy is overcoming air resistance, while the other issue is with the aerodynamics noise of over 90 decibels that is well over the environmental standard of 75 decibels. Once operational, these trains will be able to transport passengers at blazingly high speeds without causing any inconvenience to anyone. In fact, the Super-Maglev trains seem to be destined to become the harbinger of the next generation of high-speed trains that will completely transform the transport sector in Asia.

## **Questions**

1. Which country among the following is not an early pioneer of high-speed train service?
  - a. Japan
  - b. France
  - c. USA

2. What is the name of the transport system in China that has become among the most notable in this field?
  - a. Beijing Maglev
  - b. Shanghai Maglev
  - c. Guangzhou Maglev
3. What is it about magnetic levitation technology that makes these trains so much faster than conventional ones?
  - a. These trains run on magnetic tracks without actually touching them
  - b. Lack of contact with the tracks means no frictional force to overcome which enhances the speed
  - c. Both
4. Magnetic levitation trains are more passenger friendly because they –
  - a. Can decelerate extremely quickly to avert major accidents
  - b. Do not offer the bumpy rides familiar on conventional trains
  - c. Both
5. How can the vacuum tube design help in enhancing the speed of future high-speed trains?
  - a. By creating a vacuum for more efficient transfer of electrical energy
  - b. By reducing the air resistance experienced at extremely high speeds
  - c. Both
6. How much do Maglev trains spend in overcoming air resistance at speeds over 400 km per hour?
  - a. 75 percent
  - b. 83 percent
  - c. 90 percent
7. What is so exciting about the Loop Line concept?
  - a. It will successfully negate the issues faced by maglev trains at speed over 400 km per hour
  - b. It offers a stylish way to travel for the future generation of passengers
  - c. It will not require any fuel to run, making it highly environmental-friendly

1. The ice cream has been among the most popular of comfort food for people from across the world, and this has led to multiple countries laying claim to its invention. However, the history of ice cream is quite messy to say the least, even though there are mentions of Alexander the Great enjoying ice and snow flavored with honey and nectar. Moreover, the Roma Emperor, Nero Claudius Caesar, is said to have sent runners to the mountain to fetch snow that was mixed with honey, nectar, and fruit pulp to create a delicious mix, even though it is now discarded largely as a myth.
2. Among the earliest concrete evidence about the existence of this popular dessert lies with the T'ang dynasty of China who ruled between the seventh and tenth century A.D. it was from the Far East that the famed explorer Marco Polo returned with the recipe for a dish now closely resembled by the Sherbet. It was during the 16<sup>th</sup> century that the big revolution in ice cream making took place in Europe with England and Italy, as well as, France through the Italians, with the frozen desserts appearing regularly on the dinner tables of the royalty and nobility.
3. The next big step in the history of ice cream was its introduction to the New World through the Armenian colonists who brought over its recipe from Europe. One of the earliest recorded instance of ice cream being part of the dining table was from May 19, 1744 when the then Governor of Maryland Thomas Bladen hosted a bunch of VIPs at his home. The guests described the new frozen dessert as a delicious mix of strawberries and milk, which gained immense popularity among the people lucky enough to be able to taste it within a very short time.
4. The production of ice cream remained pretty much the same until September 9, 1843, with the established ice cream making method being described as the 'Pot Freezer Method'. However, on that eventful day, the history of ice cream making was about to go for a sea of change, all thanks to the efforts of one Nancy M. Johnson of Philadelphia, who got her unique 'Artificial Freezer' technique patented. This technique consisted of a design featuring a tub, cylinder, lid, dasher, and a crank. The ingenuity and simplicity of this design has made it ubiquitous with the process of ice cream making, and it remains widely in use even today.
5. However, the first commercial ice cream factory came up a few years later, in 1850 through the enterprising efforts of one Baltimore dairyman by the name of Jacob Fussell. He built an ice cream factory in the Seven Valleys, Pennsylvania, and in time emerged as the father of wholesale ice cream industry.
6. Among the most celebrated of ice cream variants, the ice cream sundae has multiple claimants to the fame of having invented it, with Buffalo, New York; Ithaca, New York; and Two River, Illinois, all laying claim to the fame. However, the story behind its invention is quite funny, with church authorities not subscribing to the consumption of sinful ice cream sodas on Sundays. Thus, ice cream makers had to come up with ice creams san sodas, which gave rise to the variant called Sunday that was later changed to Sundae to remove all connection with the Sabbath.
7. The earliest recorded application for patenting the ice cream cone was made by Italo Marchiony in 1903. Since then the ice cream has grown in popularity in leaps and bounds, having played a significant role in the two World Wars, and has now become an ubiquitous part in people's lives.

## Questions

1. What was the name of the Roman Emperor associated with the myth of enjoying frozen desserts?
  - a. Julius Caesar
  - b. Augustus Caesar
  - c. Nero Claudius Caesar

2. The earliest recorded instance of use of frozen desserts similar to present-day ice cream comes from the era of
  - a. T'ang Dynasty of China
  - b. Ming Dynasty of China
  - c. Manchu Dynasty of China
3. Who brought the recipe of recipe of a dish resembling modern Sherbet from the Far East to Europe?
  - a. Nicola Conti
  - b. Marco Polo
  - c. Ferdinand Magellan
4. Who brought the recipe of ice cream to the New World?
  - a. The Irish Colonists
  - b. The Armenian Colonists
  - c. The Italian Colonists
5. Where was the first commercial ice cream factory first set up?
  - a. Seven Valleys, Pennsylvania
  - b. Ithaca, New York
  - c. Two River, Illinois
6. The name of Ice Cream Sundaes were changed from the initial Sunday in order to
  - a. Make it sound more pleasing to the consumers
  - b. To remove all associations with the Sabbath day
  - c. To make it harder for the little children to spell it correctly
7. Which, among the following words, describe 'ubiquitous' the best in the given context
  - a. Omni-present
  - b. Necessary
  - c. Indispensible

The Taj Mahal of Agra serves as one of the most popular historical monument of note across the world, and is among a handful of structures that have become an integral part of Indian cultural milieu as well. The immaculate beauty and the heart touching story behind the construction of this mesmerizing creation by the great Mughal Emperor Shah Jahan has become one of the Seven Wonders of the World, which has ensured its place in the conscience of lovers of such incredible architectural splendor from around the globe.

The Taj Mahal of Agra serves as the greatest legacy of emperor Shah Jahan who has etched his name in the annals of history as one of the most profligate builder of mighty monuments, often at the risk of running his considerable treasury dry. However, none of the other monuments commissioned by him, in spite of their own unique splendor, holds a candle to the beauty and magnificence of the Taj Mahal. This is because of the breathtaking design of this marble mausoleum, as well as, the back-story of love and its tragic end that has made this monument special in the hearts of millions.

The Mughal Emperor Shah Jahan made sure that the legacy of his love for his deer wife, the Empress Mumtaz Mahal, remained etched in the annals of history and in the heart of people for the centuries to come. Mumtaz Mahal, whose real name was Arjumand Banu prior to her marriage to the future emperor, was a princess of Persian origin. Shah Jahan was the son of Mughal Emperor Jahangir, and grandson of Akbar, who was the greatest Emperor of the Mughal dynasty. He met Mumtaz at the age of 14 when he was still Prince Khurram and not the Emperor of India. He fell in love with her, and after five years, they finally got married in 1612. Thus, began the saga of love between two of the most memorable characters in Indian history.

Mumtaz Mahal became an inseparable companion to Shah Jahan ever since their marriage, but their blissful conjugal life was not to last forever. It ended in 1631, when Mumtaz Mahal passed away while giving birth to their 14<sup>th</sup> child. Emperor Shah Jahan was inconsolable in his despair, and he decided to erect a monument which will ensure that the tale of their undying love will not fade away even after he ceased exist on earth. Thus, began the quest to find the right people for one of the most ambitious building mission in world history.

The construction of Taj Mahal began in 1631 itself, with thousands of masons, stonecutters, carvers, inlayers, painters, dome-builders, calligraphers, and various other artisans requisitioned by the Emperor from across the whole of Mughal Empire, as well as, from beyond the realm such as Central Asia and Iran. It took almost 22 years to build this grand and magnificent epitome of love. Moreover, the entire building process required the services of over 22,000 labors, as well as, 1,000 elephants. In fact, it cost the royal exchequer approximately 32 million rupees to build this grand monument, with the white marble used completely in the exteriors and sourced from all over India and Central Asia being responsible for much of the cost. The Taj Mahal finally stood completed in the year 1653.

The Taj Mahal, as we see today, has gone through a lot of transformation and ravages during the British period, including the chiseling out of precious stones and lapis lazuli from the walls, as well as, the addition of British style lawns. However, irrespective of all such atrocities and modifications, the Taj Mahal continues to shine as the epitome of undying love and unflinching devotion through the ages.

## **Questions**

1. What factors, as per the author, has helped the Taj Mahal in gaining the popularity it enjoys?
  - a. The immaculate beauty of the marble-white monument
  - b. The heart touching back-story
  - c. Both

2. Emperor Shah decided to build the Taj Mahal.
  - a. Serve as a monument to his undying love for his departed wife
  - b. Serve as a reminder to his subjects regarding his magnificence
  - c. Serve as a reminder to his enemies regarding his enormous wealth and power
3. What was the name of Emperor Shah Jahan prior to his coronation?
  - a. Prince Salim
  - b. Prince Khurram
  - c. Prince Khusrau
4. Replace the word 'epitome' from the phrase 'epitome of love' with any of the following words.
  - a. Example
  - b. Embodiment
  - c. Indication
5. What was the cost to the royal exchequer for the building of Taj Mahal?
  - a. 30 million rupees
  - b. 32 million rupees
  - c. 35 million rupees
6. The Taj Mahal was completed in which year?
  - a. 1612
  - b. 1631
  - c. 1653
7. What has the author hoped about the fate of Taj Mahal?
  - a. That it will continue to serve as a top money earner for the tourism department
  - b. That it continue to serve as the epitome of undying love and unflinching devotion through the ages
  - c. That it will serve as the perfect example of Mughal architectural prowess

# [www.vahyasoliman.com](http://www.vahyasoliman.com) **The Seven Wonders of the Ancient World**

The Seven Wonders of the Ancient World were –

1. The Great Pyramid of Giza is the oldest of all the wonders of the ancient world, and it has survived the longest the vagaries of time as well. It is also the largest of the three pyramids that form part of the Giza Necropolis, and is the only of the ancient wonders that is still present in a relatively intact condition. The pyramid is believed to have been built as a tomb for Pharaoh Khufu of the Fourth Dynasty somewhere around 2560 BC. The Great Pyramid, at a height of 481 feet, also held the distinction of being the tallest manmade structure in the world for nearly 3800 years.
2. The Hanging Gardens of Babylon was an ascending series of tiered gardens with rows of trees, shrubs, and bushes, and one of the most widely known wonders of the ancient world, even though its exact location is not known till date. In fact, there has been no extant Babylonian text, which definitively has any information about the existence and location of the gardens. However, according to the common belief, it was probably build by the Neo-Babylonian king Nebuchadnezzar II sometime between 605 and 562 BC.
3. The Temple of Artemis was a Greek temple, dedicated to the Goddess Artemis, and was one of the seven wonders of the ancient world. The temple was completely rebuilt thrice in total, and it was located in Ephesus near the modern town of Selcuk in Turkey. The earliest of the structure dated back to the Bronze Age, while the latest of the sanctuaries stood intact till its eventual destruction several centuries later.
4. The Statue of Zeus at Olympia was one of the grandest statues in the ancient world, and this huge seated figure was around 13 m tall. It was sculpted around 435 BC at the sanctuary of Olympia in Greece by the sculptor Phidias. The statue consisted of wooden framework with ivory plates and gold panels over it and intricate cedar wood throne along with ornamentation in the form of gold, ivory, ebony, and precious stones. The statue was a visual spectacle till its destruction in the fifth century AD.
5. The Tomb of Mausolus or the Mausoleum at Helicarnassus was a tomb built by Artemisia II of Caria for her brother and husband Mausolus, who was a satrap in the Persian Empire. The mausoleum, which means any over-ground tomb in the modern parlance, was built between 353 and 350 BC by following the design of the Greek architects Satyros and Pythius of Priene. The mausoleum had a height of approximately 45 m, and contained sculptural reliefs on foresides by one of four Greek sculptors – Timotheus, Scopas of Paros, Bryaxis, and Leochares.
6. The Colossus of Rhodes was a gigantic statue of the Greek titan-god of the sun, Helios, which was erected in the city of Rhodes, which was on the Greek island of the same name somewhere around 280 BC. The statue was erected by Chares of Lindos to celebrate the victory that Rhodes had gained over the ruler of Cyprus, Antigonus I Monophthalmus. The statue stood over a height of 30 m till it was destroyed by an earthquake in 226 BC.
7. The Lighthouse of Alexandria, also known as the pharos of Alexandria, was built by the Ptolemaic Kingdom of Egypt somewhere between the years 280 and 247 BC. The lighthouse stood at a height of between 393 and 450 feet, which made it one of the tallest manmade structures in the world for many centuries. The lighthouse was badly damaged by three earthquakes between 956 and 1323 AD, while some of its remnants have been discovered on the floor of Alexandria's Eastern harbor.

1. The Great Pyramid was built as a –
  - a. Pleasure palace for the Egyptian Pharaoh Khufu
  - b. Tomb for Egyptian Pharaoh Khufu
  - c. Resting place for the Egyptian Pharaoh Khufu
2. What was the Hanging Gardens of Babylon?
  - a. A hanging building resembling a garden
  - b. A garden hung from a superstructure
  - c. A tiered garden with rows of trees, shrubs, and bushes
3. The earliest sanctuary of the temple of Artemis was built during the –
  - a. Bronze Age
  - b. Iron Age
  - c. Classical Age
4. The statue of Zeus at Olympia consisted of –
  - a. Wooden framework with ivory plates and gold panels over it
  - b. Cedar wood throne along with ornamentation
  - c. Both
5. Artemisia II of Caria built the Mausoleum at Helicarnassus for the Persian Satrap Mausolus who was her –
  - a. Father and commander
  - b. Brother and husband
  - c. Neither of the two
6. The Colossus of Rhodes was built to commemorate –
  - a. The defeat City of Rhodes handed to the King of Cyprus
  - b. The defeat City of Rhode suffered at the hand of the King of Cyprus
  - c. As a tribute to Helios, the Greek Titan-God of the Sun
7. The Lighthouse of Alexandria was built by the –
  - a. The Berber kingdoms of North Africa
  - b. The Ptolemaic Empire of Egypt
  - c. The Arab Empire of Egypt



The Titans were the first generation of Greek gods who played an important role in the growth of Greek mythology, as well as, helping the Greeks explain a lot of natural phenomenon such as earthquakes. They were the thirteen immortal children who were born to the Mother Earth or Gaia, and her husband, Uranus, who was the God of sky. The first six children of Uranus and Gaia were of monstrous appearance, including three one-eyed Cyclopes and three Hundred-Handed Giants, whom Uranus had banished to the deepest pit of the underworld, Tartarus. However, the Titans were born next, and these thirteen children were as beautiful and wonderful, as the first six were ugly and monstrous.

Uranus was extremely fond of the Titans because of their beauty and charm, and consequently gifted them a number of magical powers. These children became the first true Greek Gods, and controlled a number of different aspects of the natural world. Thus, Helios, a Titan, drove the chariot that pulled the sun from east to east across the sky, while his sister, Selene, was responsible for pulling the moon across the night sky. Similarly, other Titans were responsible for controlling various other aspects of natural world such as rivers and oceans.

Among the thirteen children of Uranus and Gaia, Cronus was the youngest of the Titan children, as well as, the one to take the place of his father as the leader of the immortal gods. Cronus was married to another of the Titan children, Rhea, who was also his sister. Cronus fathered several children through his wife Rhea, but he was extremely afraid of his children much like his father Uranus. Thus, in order to avert the possible threat posed by his children in the future, each time Rhea gave birth, Cronus used to swallow the infant whole. This made Rhea immeasurably sad, and she petitioned to Gaia for help. Gaia hid the baby when Rhea gave birth the next time in a deep cave, and this infant grew up to become Zeus.

Zeus grew up in time to become a strong and powerful god, whom his mother found a way to place inside Cronus' home in the guise of a servant. Zeus waited for his opportunity, and when Cronus called for drink, Zeus brought him a drink laced with poison. Upon consuming the poison laced drink, Cronus became violently ill and begun vomiting out each of his own infant that he had swallowed. These infants had by then become fully-grown gods who teamed up with Zeus to take on Cronus and the other Titans in a battle for supremacy.

Zeus sought the help of Gaia in his fight against Cronus and the other Titans, and learnt that the Cyclopes and Hundred-Handed Giants were ready to help his cause, if they were freed from the deepest pit of the underworld. Zeus was able to free the monstrous Cyclopes and the Giants from the Tartarus, and with the help these newfound allies, he and his brothers and sisters were able to defeat Cronus and other Titans. In fact, he was able to trap Cronus and his allies deep in the underworld, whose repeated attempts to free themselves was the reason behind the strange rumbling of the earth during earthquakes, as per ancient Greek beliefs.

Rhea went on to live on Mount Olympus with Zeus and her other children, with the new generations of the God being known as the Olympians. However, some of the Titans who had not sided with Cronus during the war were allowed to remain free. One such Titan was Prometheus, who used clay to create mortal men and women with the objective of populating the earth.

## **Questions**

1. Uranus fathered Cyclopes and Hundred-Handed Giants with Gaia who was—
  - a. Mother Earth
  - b. Sky Goddess
  - c. Goddess of Underworld

2. The thirteen children of Uranus and Gaia are known as –
  - a. Cyclopes
  - b. Titans
  - c. Olympians
3. Helios was responsible for –
  - a. Causing rain and thunder
  - b. Pulling Sun's chariot from east to west across the sky
  - c. Pulling the Moon across the night sky
4. What was the reason behind Rhea's appeal to Gaia?
  - a. Cronus was locking their children in the underworld
  - b. Cronus was butchering their children upon birth
  - c. Cronus was swallowing their children upon birth
5. How did Zeus manage to liberate his siblings?
  - a. By fighting Cronus and setting his siblings free for his clutches
  - b. By tricking Cronus into drinking a poison-laced drink and vomit all the swallowed children
  - c. By pleading with Cronus to let his siblings go
6. Where did Zeus keep most of the Titans, including Cronus, locked after defeating them?
  - a. In the deepest pits of the Underworld, Tartarus
  - b. On Mount Olympia
  - c. On earth
7. Who was Prometheus?
  - a. He was one of Olympian Gods and sibling of Zeus
  - b. He was one of the free Titans who created humans to populate earth
  - c. He was one of the Cyclopes, banished to the Underworld by Uranus

Almost everyone at some in their childhood had dreamt of growing up to become a fearsome pirate, with command over vast expanses of the ocean, while charting a majestic pirate ship. A major reason behind the growing prominence of the pirates among the popular culture has been because of their somewhat romantic portrayal in books and movies, where they epitomized free spirit and a 'never say die' attitude. However, along with the romanticism of the pirates, a number of myths and misconception about the pirates have crept into the popular beliefs as well. A number of surprising facts is sure to clear lot of those misconceptions while also providing interesting information for trivia quizzes.

1. One major view that people have developed about the life of piracy on the high seas is that it was bereft of any type of rules and regulations. It seems as if the pirates had no rules other than to attack rich Spanish galleons filled with gold, and drink rum and sing songs while they were not attacking unsuspecting merchant ships. However, this was far from the truth, and the pirates had to agree upon and sign upon the necessary documents as a proof of their acknowledgement. Breaking the rules such as stealing from the ship, or lying to the fellow pirates attracted penalty. Moreover, they were forbidden from fighting onboard even though they were free to do so while on land.
2. Another major misconception is that major pirates sued to captain their ships for many years, which was not true at all. In fact, the truth is that even the best among them could only expect to be at their top game for two to three years at a maximum, and even during the so-called 'Golden Age of Piracy' that lasted from 1700 to 1725. This was the case with even the most celebrated names in the history of piracy such as Bartholomew Roberts, and the feared Blackbeard. In fact, Bartholomew Roberts was able to lead a life of active piracy for only three years, from 1719 to 1722, even though it was considered long and successful by the contemporary standards.
3. However, the mother of all myths about the pirates is about the buried treasure, which has fired the imagination of countless souls down the centuries. This has been primarily because of the picture painted by the popular novel, 'The Treasure Island', which was about the quest to find a buried treasure. However, the truth is that most of the items looted by pirates consisted of perishable items such as cocoa and cotton, which would get spoiled if left buried. Moreover, the pirates led a fast and reckless life, and saving would not have been consistent with their lifestyle. However, certain exception were there such as Captain William Kidd who buried his treasure on the way to New York to turn himself in and possibly clear his name in the process.
4. The myth about pirates punishing people making them walk the plank is largely a figment of imagination as well. However, that does not mean that the pirates lacked means of punishing those held guilty of infraction or other serious charges. The guilty could be marooned on a deserted island, whipped, or even tied to a rope and thrown overboard to be dragged to one side of the ship and under it before being hauled up the other side.
5. Finally, the myth about pirates being nothing more than thieves or criminals with no discipline is not true either, because a ship could only sail when it had clear division of labor under a firm and capable captain.

## Questions

1. What has led to the infusion of pirates, as per the author, into the mainstream popular culture?
  - a. An interest in leading the life of an outlaw
  - b. A romantic portrayal of the life of a pirate
  - c. An increase in the spirit of adventure among the general populace

2. What, according to common belief, was/were the major activities of pirates?
  - a. Attacking gold-filled Spanish galleon
  - b. Singing and drinking rum during leisure
  - c. Both
3. What were some of the acts the pirates were forbidden from doing while onboard a ship?
  - a. Stealing or lying to fellow pirates
  - b. Fighting
  - c. Both
4. Which period was termed as the 'Golden Age of Piracy'?
  - a. 1700 – 1720
  - b. 1700 – 1725
  - c. 1700 – 1730
5. Which pirate led a successful life on the high seas from 1719 to 1722?
  - a. Sir William Kidd
  - b. The Blackbeard
  - c. Bartholomew Roberts
6. Which among the following options is synonymous with the phrase 'walking the plank'?
  - a. Forced to walk towards own death
  - b. Forced to display balance by walking on a narrow piece of wood
  - c. Forced to improve one's woodworking skills
7. What does the author allude towards the nature of the men who lived onboard the pirate ships?
  - a. That they were nothing more than cutthroats having utter disregard for rules or authority
  - b. That they were men with clear division of labor and reasonable regard for authority, in the form of the Captain
  - c. That they were solely interested in looting others and not in the proper running of their ships

# www.yahyasoliman.com What is your carbon footprint?

Carbon dioxide is the most prevalent greenhouse gas in the earth's atmosphere, while carbon is the most prevalent of all naturally occurring elements. Carbon dioxide or CO<sub>2</sub> gas plays an instrumental role in increasing the temperature of earth's atmosphere by trapping the infrared rays of the sun, which is in turn leading to an increased extremity of weather and disruption of the normal weather pattern across the globe. Thus, it has become essential that regular people become more aware about the implications of their actions, and the way it results in the addition of an ever-increasing amount of carbon into the atmosphere. However, everyone can contribute in his or her own little way by taking into account his or her own carbon footprint, which calculates the net amount of carbon dioxide or its equivalents that are released into the atmosphere.

The calculations for measuring anyone's carbon footprint takes into account every activity in their daily schedule ranging from sleeping to commuting. This is because we give out carbon dioxide even while lying still in bed, but the amount generated through our natural life processes is not enough to cause any harm to earth's natural balance. However, the rise in the use of modern gadgets and felling of trees have seriously affected the fine balance between the amount of carbon dioxide generated and those absorbed by plants to produce their food through the process of photosynthesis. Thus, taking into account even the minutest use of electronic gadgets makes calculation carbon footprint for individuals such a constructive practice.

The best way to find out about your carbon calculation is by finding out about the ecological impact of your lifestyle choice such as the car you drive, or even the food you throw away every day after meals. Thus, if you are able to become knowledgeable about your carbon footprint, chances are that you are likely to be proactive regarding ways to reduce it to a more acceptable level. In fact, even the car that you drive or the flight you take can have quite a pronounced impact upon your annual carbon footprint. Therefore, it is imperative that people become more aware of their carbon footprint, as well as, simple but efficient ways to limit it.

One of the most effective ways of restricting the extent of carbon footprint is by opting for carpooling which helps in cutting down on fuel bill and carbon emission of a number of people at once. Similarly, opting for a more restraint use of the accelerator paddle, and maintaining it regularly are surefire ways of minimizing carbon emissions. Opting for non-stop flights instead of one with one or more stopovers can also substantially reduce the carbon footprint of frequent fliers. Such small gestures can be quite substantive in the extent to which they have an impact upon the carbon footprint of a person, if they become popular among a large enough section of the population.

People who consume vegetarian meals have much less carbon footprint compared to those who depend primarily upon meat and fish for their daily meals. In fact, people who do not consume non-vegetarian dishes are already having a carbon footprint, which is less by 3000 pounds of CO<sub>2</sub> when compared to their meat-eating counterparts. Moreover, restricting consumption of processed food can also help in cutting down on one's carbon footprint.

It is quite clear that people can make a difference to their atmosphere with a few simple modifications to their lifestyle practices. However, the most effective way to start that is by knowing your carbon footprint, which provides an accurate measurement of the implications of your lifestyle choices upon the earth's atmosphere.

## **Questions**

1. Why is carbon dioxide a greenhouse gas?
  - a. Because it is primarily green in color
  - b. Because it entraps infrared sun rays and heat up the atmosphere
  - c. Because it is more widespread in greenhouses

2. What is the meaning of carbon footprint?
  - a. The total amount of CO<sub>2</sub> and its equivalents added to the atmosphere because of any entity
  - b. The print marks left by people in a CO<sub>2</sub> rich environment
  - c. The carbon removed from the atmosphere through afforestation by humans
3. While calculating any individual's carbon footprint
  - a. All activities are taken into account
  - b. Only certain activities are taken into account
  - c. None of the activities are taken into account
4. What is the process, by which plants absorb CO<sub>2</sub> to produce food, known as?
  - a. Transpiration
  - b. Photolysis
  - c. Photosynthesis
5. What practices can people who own cars follow to lessen their carbon footprint?
  - a. Be more discerning while accelerating
  - b. Be serious about the maintenance of their cars
  - c. Both
6. How much more CO<sub>2</sub> do non-vegetarians add to their carbon footprint compared to their vegetarian counterparts on account of their diet
  - a. 3000 kg
  - b. 3000 pounds
  - c. 3000 liters
7. What is the importance of knowing about one's carbon footprint, as per the author?
  - a. Become more aware about how their lifestyle choices impact the environment by adding greenhouse gases
  - b. Enhanced awareness makes it easier to find remedy to such actions
  - c. Both