

QUEST

September 2022



IN FOCUS

Alan Turing

JUNE 23, 1912 - JUNE 7, 1954

Alan Turing is known as the father of modern computer science. He is renowned for his contributions to varied fields such as mathematics, cryptanalysis, and artificial intelligence. Alan Turing is also a war hero who used his skill in numbers to break codes during World War II.

WHO WAS ALAN TURING?

A BRILLIANT COMPUTER SCIENTIST

Alan Turing's theories and ideas laid the groundwork for the invention of digital computers. He proposed a hypothetical "Turing Machine," capable of solving anything that can be computed when given an algorithm.



A WAR HERO

Turing is known for deciphering the German "Enigma" code during World War II, which the Nazis employed to protect all forms of military and diplomatic communication. He is credited for saving countless lives and was awarded Officer of the Most Excellent Order of the British Empire by the end of the war.



AN A.I. PIONEER

In 1950, Alan Turing published a paper, "Computing Machinery and Intelligence." It hypothesized the "imitation game" where the best test of a computer's intelligence is its ability to convince a human that it is human as well. It is also known as the "Turing Test."

A BRITISH ICON

Alan Turing received posthumous honors for his incredible legacy in different fields. His life story was depicted on film—on stage as both an opera and a play—and referenced in several literary and musical works. He is also currently the face of the 50 pound banknote.



Albert Einstein and Mathematics



Einstein's contributions to the scientific world would not have been possible without his innovative use of mathematics. Check out some of his work below:

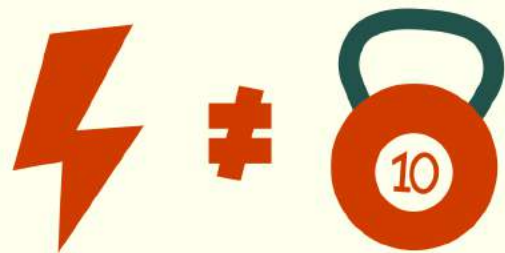


General Theory of Relativity

Grounded in the mathematical concepts of differential geometry and tensor calculus, Einstein conceptualized the groundbreaking General Theory of Relativity, which posits that time and space are two aspects of spacetime.

Pure mathematics is, in its way, the poetry of logical ideas.

Albert Einstein



Theory of Special Relativity

Einstein's most famous theory explains motion between different places that move at constant speeds relative to each other.

The mathematical equation $E=MC^2$ demonstrates that energy and mass are not only the same physical entity; they may also be changed into each other.

Einstein Field Equations

These equations use geometry to represent gravity's effects. They are also referred to as the Einstein Hilbert Equations.

REFERENCES

"Albert Einstein." *Encyclopædia Britannica*, Encyclopædia Britannica, Inc., <https://www.britannica.com/biography/Albert-Einstein>.

HOW TO DEAL WITH WASTE PROPERLY AND CORRECTLY



FAQ

Managing waste properly and properly helps us save the earth. There has been a lot of garbage that has accumulated due to a lack of education and a lack of awareness among us to dispose of garbage properly and correctly.



USING EQUIPMENT THAT IS NOT USED ONCE AND THEN THROWN AWAY.

BRING YOUR OWN EQUIPMENT SO YOU DON'T USE PLASTIC TOOLS.

Self-awareness is certainly important to deal with waste so that you don't always use plastic materials. Now there are many tools made of stainless steel.



DISPOSE OF NON-RECYCLABLE WASTE AT A LANDFILL.

The importance of disposing of waste in landfills that cannot be recycled is that there are tools that can make it decompose even though it takes a long time.



TURN ORGANIC WASTE INTO FERTILIZER.



CHANGE THE GARBAGE DISPOSAL TO CARDBOARD MATERIAL.

You can apply this easy method so that you don't use a lot of plastic bags that are difficult to decompose, in contrast to cardboard or paper materials.

REDUCE THE USE OF PLASTIC OR OTHER WASTE.



SEPARATE THE TRASH ACCORDING TO THE KINDS OF RAW MATERIALS.

There are various materials that are difficult to decompose into those that are easy to decompose. The purpose of sorting waste is to make it easier to recycle.



4 Easy Ways to Reduce Your Plastic Waste

Bring your own shopping bag

Reduce plastic waste by bringing your own reusable produce bags or skipping them entirely.



Stop buying bottled water



Unless there's some kind of contamination crisis, plastic water bottles are an easy target for reducing waste.



Bring your own tumbler

Speaking of refillable, bringing your own tumbler for to-go coffee is another way to reduce your plastic footprint.

Say no to straws

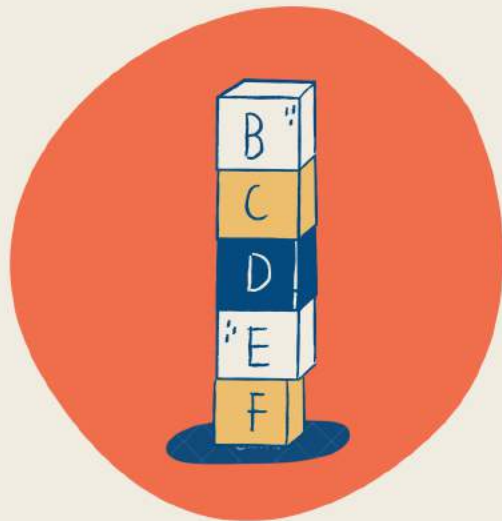
plastic straws are often a single-use item that's just not necessary.



Newton's Laws of Motion

First Law of Motion

The first law or 'law of inertia' postulates that if a body is at rest or moving in a straight line, it will remain at rest or remain moving in that same direction unless it is acted upon by an outside force.



Second Law of Motion

Newton's second law states that the momentum of a body is equal to the product of its velocity and mass. It also states that the time rate of change of this momentum is equal in both magnitude and direction to the force imposed upon it.

Third Law of Motion

Also known as the 'law of action and reaction,' the third law states that when two bodies interact, the force they apply to each other is equal in magnitude and opposite in direction.



The Scientific Revolution

Newton's publication of Principia and his presentation of the laws of motion form part of other major discoveries of his time.

The Scientific Revolution includes discoveries in science from Nicolaus Copernicus, Galileo Galilei, Johannes Kepler, and Rene Descartes.

Did You Know?

In the 20th century, quantum mechanics and relativity replaced Newton's laws of motion to account for the behavior of minute bodies like electrons or bodies that move closer to the speed of light.

INFORMATION SOURCE

ENCYCLOPAEDIA BRITANNICA

[HTTPS://WWW.BRITANNICA.COM/SCIENCE/NEWTONS-LAWS-OF-MOTION](https://www.britannica.com/science/newtons-laws-of-motion)

Mathematical Tools Across the Ages

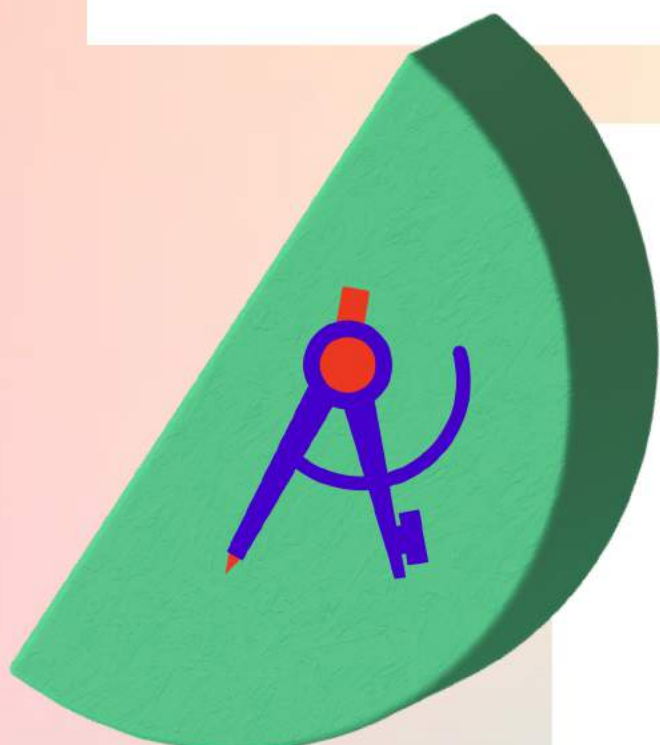
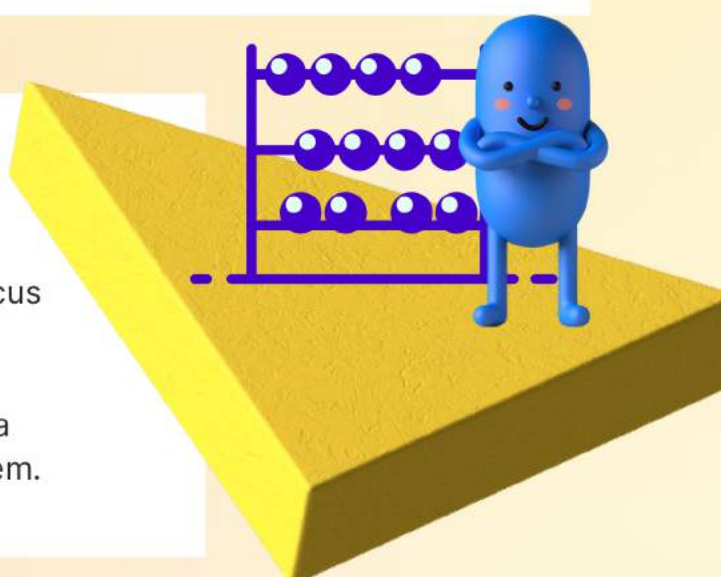


Lebombo Bone

Found inside the Border Cave in the Lebombo Mountains, Swaziland, this bone is considered to be the oldest mathematical artifact.

Abacus

Although the exact origin of the abacus has not been determined, this calculating tool has been used in countries such as China and Russia long before the Arabic numeral system.

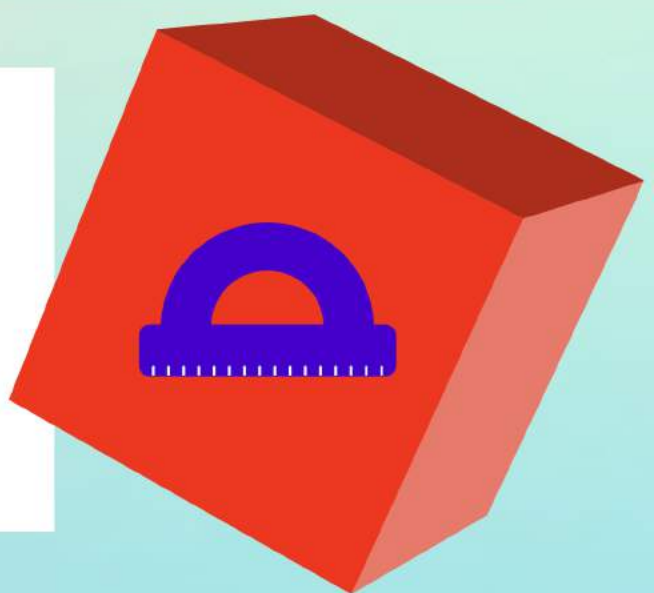


Compass (Tool)

The compass is a mathematical instrument that has existed since ancient times, often utilized to draw circles and measure distances. Euclid, the famous Greek mathematician, often used a simple compass to conceptualize his *Elements of Geometry*.

Protractor

Protractors are mathematical tools used to measure plane angles. They have existed since the 13th century. The most basic protractors are semi-circular disks that measure up to 180 degrees.



Electronic Calculator

The electronic calculator is a handheld, portable computing device developed in Japan and introduced to the general public in the early 1970s. Its functions vary in complexity; depending on type and model, calculators can perform both simple arithmetic and complex mathematical operations.



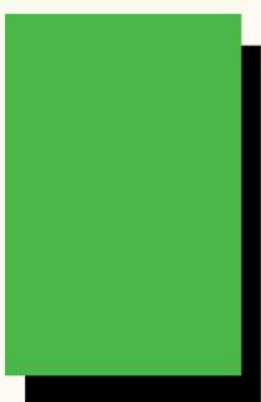
THE TEN COLOR PSYCHOLOGY

Color psychology is the study of how colors affect perceptions and behaviors. In marketing and branding, color psychology is focused on how colors impact consumers' impressions of a brand and whether or not they persuade consumers to consider specific brands or make a purchase.



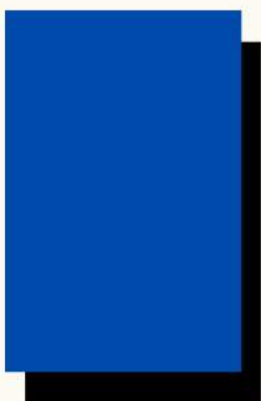
RED

Associated with energy, war, danger, strength, power, determination as well as passion, desire, and love. Enhances human metabolism, increases respiration rate, and raises blood pressure. It attracts attention more than any other color, at times signifying danger.



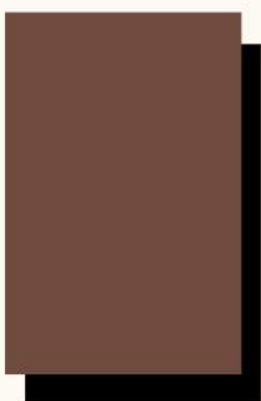
GREEN

Color of nature. It symbolizes growth, harmony, freshness, and fertility. Considered beneficial to the mind and body. Slows human metabolism and produces a calming effect. Strongly associated with tranquility and calmness. Used to symbolize piety and sincerity.



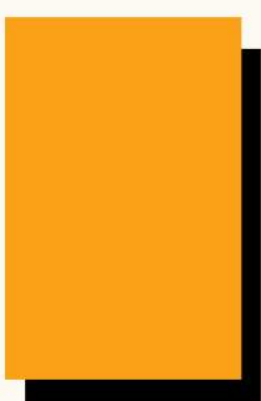
BLUE

Unique and authentic Enthusiastic, sympathetic, and personal; they seek meaning and significance in life Warm, communicative, and compassionate; they care about what they do Idealistic, spiritual, and sincere; they value unity and integrity in their relationships Peaceful, flexible, and imaginative; they are natural romantics and nurturers



BROWN

Associated with the traits of dependability, reliability, and resilience. Brown-lovers are most often reserved and not looking to attract attention to themselves While light brown represents honesty and stability, dark brown is considered mature, predictable, and dull.



ORANGE

Combines the energy of red and the happiness of yellow. Associated with joy, sunshine, and the tropics. Represents enthusiasm, fascination, happiness, creativity, determination, attraction, success, encouragement, and stimulation.



YELLOW

Associated with joy, happiness, intellect, and energy. Produces a warming effect, arouses cheerfulness, stimulates mental activity, and generates muscle energy. Bright, pure yellow is an attention-getter, which is the reason taxicabs have painted this color. When overused, yellow may have a disturbing effect. It is known that babies cry more in yellow rooms. Yellow indicates honor and loyalty. Later the meaning of yellow was connected with cowardice.



PINK

This is a color that represents a gentle type of love. Pink stands for tenderness, and vulnerability, and youth is a calming, non-threatening color. It is linked to innocence, hope, and optimism. The pink color also represents positive aspects of traditional femininity like nurture and kindness. Pink can be linked to childhood sweetness and innocence, appearing sometimes as naïve or silly.



PURPLE

Combines the stability of blue and the energy of red. Associated with royalty. It symbolizes power, nobility, luxury, and ambition. Conveys wealth and extravagance. Associated with wisdom, dignity, independence, creativity, mystery, and magic.



WHITE

Associated with light, goodness, innocence, purity, and virginity. Considered to be the color of perfection. Signifies safety, purity, and cleanliness. Usually has a positive connotation. Can represent a successful beginning. Depicts faith and purity.



BLACK

Associated with power, elegance, formality, death, evil, and mystery. A mysterious color associated with fear and the unknown (black holes). Usually has a negative connotation (blacklist, black humor, 'black death'). Denotes strength and authority; it is considered to be a very formal, elegant, and prestigious color. The symbol of grief.

Types of Cyberattacks

Learn about the two most common threats to cybersecurity!

MALWARE

What is it?

Applications or links that install malicious software

What does it do?

Accesses the computer's network, deals damage, and gathers private information

What are examples?

Viruses, worms, ransomware

How is it prevented?

Avoid suspicious websites or applications; update and secure your system

PHISHING

What is it?

Attackers pretending to be a genuine entity

What does it do?

Installs malware or leaks sensitive information

What are examples?

Emails, voice calls

How is it prevented?

Avoid opening suspicious emails and links; do not disclose personal information



“Science is a way of thinking much more than it is a body of knowledge.”

– Carl Sagan

