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Pt. MOHAN LAL S.D. COLLEGE FOR WOMEN, GURDASPUR

A MULTI FACULTY POST GRADUATE INSTITUTE

Re - accredited with 'A' grade by NAAC (3rd cycle 2024)

IIC Ranking '3 Star' Rating by Ministry of Education 2024

Listed in the Tribune Guide to Best Colleges (25th April, 2025)

MANAGED BY: GGDSD COLLEGE SOCIETY, CHANDIGARH

AFFILIATED TO: GURU NANAK DEV UNIVERSITY. AMRITSAR

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E-MAGAZINE

‘DARPAN’

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Dear Sdians...

It gives me immense sense of fulfilment when I look at the monthly edition of college e-Magazine 'DARPAN'. The essential purpose of e-magazine 'DARPAN' is to inform, engage and inspire faculty, students, parents, alumni and our stakeholders. This e-magazine endeavors to reflect the values and the long tradition of excellence of the institution itself. Throughout the year campus buzzes with various activities that makes learning experience at SD Gurdaspur, a unique one. The perpetual efforts of the faculty, students and clubs/societies of the college in keeping the campus alive are commendable. Workshops, conferences, competitions, rallies, sports, guest lectures, FDPs, PDPs and a great variety of activities that corroborate academic learning help our students to grow in the real sense.

I congratulate Er. Surkhab Shelly and Dr. Khushboo (editors) for giving practical shape to my idea of e-magazine and wish all the best for inspired and result oriented session.

Dr. (Mrs.) Neeru Sharma

Principal

REMEMBERING OUR FORMER PRESIDENT SH. UPKAR KRISHAN SHARMA JI

The S.D College family solemnly paid tribute to Late Shri Upkar Krishan Sharma Ji, Former President of Pt. Mohan Lal S.D. College for Women, Gurdaspur. College Principal Dr. Neeru Sharma, along with faculty members, office staff, students and support staff paid floral tributes to him. The Central Association and Rotaract Club of the College organized a special charitable programme. Reflecting his lifelong values of compassion and community service, kheer was distributed to passers-by outside the college premises. This act of kindness served as a humble homage to his legacy of generosity and his enduring dedication to uplifting society through thoughtful and inclusive initiatives. The Eco Club and NSS Unit of the college organized a plantation drive in the college. The event was graced by the presence of Mr. Hira Mani Aggarwal, Chairman Local Managing Committee, along with Mr. Avtar Singh Sidhu, Former Principal Govt College, Gurdaspur and Mr. Gorakhnath, Member Local Managing Committee who joined the plantation drive in nurturing the green initiative. A variety of shrubs such as Jatropha, Pentas and Plumeria were planted during the drive.

3RD SH. UPKAR KRISHAN SHARMA MEMORIAL LECTURE

IQAC organised a 3rd Sh. Upkar Krishan Sharma Memorial Lecture on 'Reclaiming Moral Values through Indian Knowledge System'. The session was conducted by BK Prof. R.P. Sharma, a renowned motivational speaker and expert in self-management and Indian philosophy from Bombay. Prof. Sharma delivered an inspiring and thought-provoking lecture, highlighting the significance of Indian Knowledge Systems (IKS) in restoring moral and ethical values. He emphasized that virtues like truth, compassion, self-control, and discipline can be revived through regular practice, reflection, and mindfulness. He encouraged the integration of meditation and value-based education into both academic and personal life to build mental resilience and inner peace. He further explained that by aligning one's actions with dharma and embracing silence, meditation, and self-inquiry, individuals can overcome stress, anger, and moral confusion. He described IKS as a powerful source of not only philosophical understanding but also practical guidance for creating a just and balanced society. As a mark of appreciation, College Principal presented a token of gratitude to Prof. Sharma. The event concluded with a message of hope and responsibility—to embrace our cultural roots and promote values that contribute to a harmonious and ethical societv.

SAVING OUR MOTHER EARTH

The Eco-Club and NSS Unit organized a 'Plant Distribution Drive' to mark Vanmahotsav 2025. A total of 40 saplings, including ornamental, medicinal and native species were distributed to staff and students. The event fostered a spirit of environmental responsibility and encouraged participants to contribute to a greener future.

In another event, the NSS Unit and Eco Club in collaboration with Bharat Vikas Parishad and Environment Protection Society, organized a tree plantation drive under the 'Ek Ped Maa Ke Naam' initiative. Saplings were planted around the college campus and it was heartening to see that trees planted last year now provide dense shade. Guests appreciated the college's consistent efforts in nurturing planted trees. The event witnessed the gracious presence of several dignitaries and members of Bharat Vikas Parishad, including Mr. Balkar Singh (President), Mr. Inderjit Singh Bajwa (Project In-charge), Mr. Pawan Kumar, Mr. Rajinder Kumar, Mr. Ashwani Gupta, Mr. Nikhil Gupta, Mr. Sanjeev Sanwla and Mr. Anil Mahajan. College Principal Dr. (Mrs.) Neeru Sharma emphasized the importance of tree planting in maintaining ecological balance and shared that saplings are also distributed among staff and students to promote this habit.

CAREER COUNSELING SESSION



The District Bureau of Employment and Enterprises (DBEE), Gurdaspur organized a Career Counseling Session focusing on the Job Selection Process and Preparation for Government Sector Jobs. Students from the Department of Computer Science participated in this informative session. During the program, the DBEE officer provided insights into the objectives and functioning of the Bureau, along with details of the recruitment procedures for various government jobs. The Placement and Training Generation Officer Sh. Purshotam Singh guided students about reliable job search platforms such as Naukri.com, FreeJobAlert.com, and others. Students were also made aware of several government skill development programs that are free of cost and designed to enhance employability and technical competencies. The session concluded with an interactive Q&A round, where students' queries related to career opportunities and eligibility criteria in the Banking, IT, and Insurance sectors were thoroughly addressed.

SESSION ON ANTI-RAGGING


The Anti-Ragging Cell organized an informative session to spread awareness against ragging. Incharges Mrs. Savita Nanda and Mrs. Samita Khajuria guided senior students to maintain a respectful and supportive environment for newcomers. During the first assembly of the new session, Mrs. Savita Nanda explained the meaning and harmful impact of ragging, highlighting that it is a punishable offense across educational institutions. She emphasized the importance of welcoming new students by introducing them to the college's cultural, academic, and sports activities.

DISTRICT GREEN CHAMPIONSHIP AWARD

It is a matter of pride that our college is the only institution in the district to win the District Green Championship Award, triumphing over 430 colleges from Punjab and Chandigarh. Besides this award, our college Principal Dr. (Mrs.) Neeru Sharma is honoured with the Best Principal Award, Nodal officer Mrs. Samita Khajuria has been honoured with the best teacher award and coordinator Dr. Rajwant Kaur with appreciation award by National EduTrust of India. National EduTrust of India is a registered organization under the Ministry of MSME, Government of India. The Sustainability Excellence Awards Ceremony was proudly hosted at Chitkara University, Punjab. A total of 13 Principals and 6 Nodal Officers from various institutions across Punjab and Chandigarh were honored for their exemplary contributions in the fields of sustainability, environmental protection, and innovation in education. The event was further elevated by the gracious presence of the Guest of Honour – Arjit Kumar Gupta, a visionary with over 55 years of professional excellence in architectural education. Mr. Samarth Sharma, CEO of National EduTrust of India, extended his heartfelt appreciation to all the Principals and institutions for their commendable efforts in driving sustainability initiatives and inspiring positive change within the education ecosystem.

INAUGURAL HAWAN CEREMONY



To seek the blessings of the Almighty, a Hawan Ceremony was organized to mark the beginning of the academic session 2025–2026. The sacred ritual was held under the guidance of Principal Dr. Neeru Sharma and witnessed the gracious presence of Local Managing Committee members Sh. Hira Mani Aggarwal Ji, Former Principal S. Avtar Sidhu Ji, and Sh. Gorakh Nath Ji. The staff and students actively participated in the prayers, seeking a smooth and successful academic year ahead. Principal Dr. Neeru Sharma encouraged everyone to work with sincerity and dedication. Prasad was distributed among all present, marking the conclusion of the spiritual gathering.

ORIENTATION PROGRAM


An Orientation Program was organized to welcome the new students for the academic session. The program provided detailed information about various aspects of college life including committees, clubs, class timetables, courses, examinations, internal assessments (CA), identity cards, uniform, library rules, hostel regulations, suggestion box, canteen, transportation, and the college's social media platforms. Faculty members interacted with the students and offered complete guidance and support. Principal Dr. Neeru Sharma welcomed the students with warm wishes and encouraged them to work hard towards their academic goals while actively participating in cultural activities for holistic personality development.

AWARD CEREMONY

The Rotaract District Organisation 3070 organised Award Ceremony and Thanksgiving 'Shukran' of DRR Rtr. Sukhpinder Kaur at Hotel Bloom, Amritsar. The event was a celebration of the hard work, dedication and impact made by Rotaract clubs throughout the year. During this event, our college Rotaract Club received multiple awards. The awards received were: Overall Championship Trophy (Institution Based), Best Project in Community Service, Promoter of Sportsmanship, Rotaract Club of the Month (August), Rotaract Club of the Month (October), Outstanding Club President of the Year to Rtn. Nandini Gupta, Outstanding Club Secretary of the Year to Rtr. Anamika Sharma and Outstanding Rotaract Faculty Advisor to (Dr.) Mrs. Khushboo Aggarwal. The college Principal (Dr.) Mrs. Neeru Sharma congratulated the Rotaract Club incharges and students for their remarkable achievement.

KARGIL VIJAY DIWAS

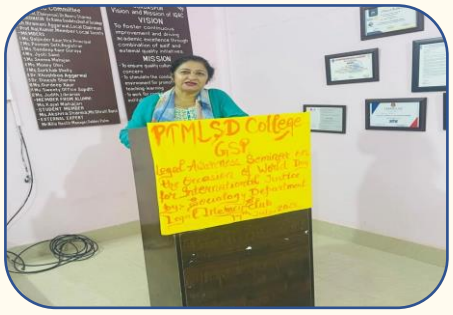
The Department of Political Science and the NSS Unit commemorated Kargil Vijay Diwas. Students highlighted the bravery of Indian armed forces through informative Power Point presentations. Head of the Political Science Department, Mrs. Daljinder Kaur, delivered a speech on the historical and strategic significance of the Kargil conflict. The NSS Unit also conducted an online quiz organized by the Ministry of Youth Affairs and Sports, in which 42 students participated and received e-certificates.

ONE-DAY WORKSHOP



The Fashion Designing Department in collaboration with IIC organized a one-day workshop on Scrunchies & Keychain Making. The main objective of the workshop was to teach students the basics of handmade scrunchies and keychain crafting. Students used materials like wool, beads, threads and charms to design their own creative and personalized keychains.

INTERNATIONAL JUSTICE DAY

On the occasion of International Justice Day, a special program was jointly organized by the Legal Literacy Club and the District Legal Services Authority, Gurdaspur. Dr. Rama Gandotra, incharge of the Legal Literacy Club, highlighted the importance of this day in promoting international criminal justice and human rights awareness. Ms. Punita Sehgal Head Hindi Dept. and Ms. Pooja Hans, Head, History Dept. delivered informative PPT sessions on various legal acts such as the POCSO Act, Domestic Violence Act, Juvenile Justice Act and others. They also shared toll-free helpline numbers including 15100 for legal aid and 1930 for cybercrime complaints. College Principal Dr. (Mrs.) Neeru Sharma emphasized the importance of such awareness programs in enhancing students' knowledge beyond academics and understanding the relevance of legal rights and responsibilities in society.

THE IMPORTANCE OF MORAL VALUES AMONG STUDENTS

Introduction

Education is not merely the accumulation of knowledge, facts, and technical expertise; it is also the cultivation of the human spirit and the nurturing of an ethical foundation. True education aims to create not only intelligent individuals but also compassionate, responsible, and upright human beings. In this sense, moral values become indispensable in the holistic growth of students. Values such as honesty, integrity, respect, empathy, compassion, and discipline provide a moral compass that guides students through life's complexities.

The student years are often called the formative years because the impressions and habits developed during this time leave a lifelong impact. A child who is nurtured with strong moral values grows up with a clear sense of right and wrong, develops healthy relationships, and becomes a valuable contributor to society. Thus, instilling moral values among students is not just desirable—it is essential for building a balanced individual and, by extension, a healthy society.

What Are Moral Values?

Moral values can be defined as the principles, standards, and beliefs that guide human behavior and distinguish between right and wrong. These values are universal in nature, transcending geographical and cultural boundaries, though they may find expression in different ways across societies.

Some key moral values include:

- **Honesty – speaking the truth and living authentically.**
- **Integrity – aligning one's actions with one's beliefs and principles.**
- **Kindness – showing concern and goodwill towards others.**

- **Empathy – understanding and sharing the feelings of others.**
- **Discipline – practicing self-control and responsibility.**
- **Respect – valuing others' opinions, rights, and dignity.**

These values not only enrich personal life but also play a pivotal role in maintaining harmony within communities, classrooms, and larger social structures.

Why Moral Values Matter for Students

1. Building Character and Personality

Moral values serve as the foundation of character. A student who consistently practices honesty and responsibility naturally develops into a person who commands respect and trust. Such individuals stand out not merely for their intellectual abilities but also for their moral strength. These traits shape their personality, making them better equipped to face life's challenges. As Narvaez (2002) argues, knowledge of moral principles influences the actual development of morality and character.

2. Creating a Positive Learning Environment

A classroom where values such as respect, cooperation, and empathy are encouraged becomes more than just a place of academic instruction—it transforms into a community of learning. Students in such environments show greater willingness to help peers, resolve conflicts peacefully, and engage in constructive dialogue. This leads to reduced bullying, increased collaboration, and higher levels of engagement. As Lickona (1991) highlights, the infusion of character education in schools enhances both discipline and learning outcomes.

3. Shaping Future Citizens

Today's students are the decision-makers of tomorrow. They will become parents, professionals, leaders, and policymakers who influence the world around them. If they grow up without moral grounding, society risks being driven by selfishness, corruption, and indifference. Conversely, morally guided

individuals act as agents of justice, equality, and compassion. Berkowitz and Bier (2005) emphasize that character education is central to shaping responsible citizenship.

4. Improving Decision-Making

Life is full of dilemmas, both big and small. Students often face challenges such as peer pressure, the temptation to cheat, or the decision whether to stand up for a classmate being treated unfairly. Those who are grounded in values such as integrity and empathy are better prepared to make ethical decisions in these situations. Halstead & Taylor (2000) note that moral education equips learners with the critical capacity to evaluate choices and their consequences.

How to Instill Moral Values in Students

1. Role of Parents

Parents are the first teachers of moral values. The home provides the earliest lessons in honesty, kindness, and respect. Parents who model ethical behavior, engage in conversations about right and wrong, and encourage reflective discussions foster a strong value base in their children.

2. Role of Teachers and Schools

Schools are second homes for students and play a crucial role in shaping their character. Integrating moral education into the curriculum—through literature, history, civic studies, and daily practices—can nurture ethical behavior. Activities such as storytelling, role-playing, group discussions, and participation in community service provide practical contexts where values are internalized. Teachers, by serving as role models, can profoundly influence students' behavior and worldview.

3. Peer Influence

Peers exert a strong influence during adolescence. Encouraging friendships and peer groups rooted in positivity helps reinforce good behavior. Mentorship

programs, student clubs, and collaborative learning activities can strengthen moral bonds within peer groups.

4. Religious and Cultural Teachings

Religious and cultural traditions across the world emphasize compassion, truthfulness, discipline, and respect for others. Incorporating these teachings—while maintaining inclusivity and respect for diversity—can enrich students' understanding of universal values.

Challenges in Teaching Moral Values

Despite the clear importance of moral values, imparting them in today's world comes with significant challenges:

- **Academic Pressure – The race for grades, examinations, and competitive success often sidelines moral education.**
- **Digital Distractions – The overexposure of students to media, social networks, and materialistic influences sometimes promotes superficial values over deeper ethical commitments.**
- **Value Conflicts – A lack of consistency between what children learn at school, what they observe at home, and what they consume from the media can create confusion.**
- **Declining Role Models – In an era where public figures are often celebrated for wealth and fame rather than integrity, students may struggle to find authentic role models.**

Conclusion

Moral values are not optional luxuries; they are the backbone of education and life. A student equipped with knowledge but lacking moral grounding is like a ship without a compass—directionless and prone to drift. Schools, parents, and society must work together in a coordinated effort to reinforce these values consistently and practically.

Mahatma Gandhi's words remain timeless: "Education which does not mold character is absolutely worthless." A value-based education system is thus not

only desirable but essential for nurturing responsible, compassionate, and ethical human beings who will shape the future of our world.

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DR. (MRS.) DINESH SHARMA

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DEPARTMENT OF ENGLISH

TOPOLOGY IN MATHEMATICS

Topology is a fundamental area of mathematics that studies the properties of space that are preserved under continuous transformations. It serves as a bridge between geometry and analysis and has far- reaching implications across mathematics, physics, and computer science. This article presents a basic introduction to topology, its key concepts, and its relevance in both pure and applied mathematics.

Origin and Development.

Topology grew out of geometry and set theory in the 19th and early 20th centuries. One of the earliest
topological results were Euler's formula for polyhedral:

$$V - E + F = 2$$

where V, E, and F are the number of vertices, edges, and faces. Though originally geometric, this formula is fundamentally topological.

The formal foundation of topology was laid by mathematicians such as Henri Poincaré, Georg Cantor, and Felix Hausdorff, who introduced key concepts like open sets, continuity, and metric spaces.

Introduction

Topology, often referred to as "rubber-sheet geometry," focuses on qualitative properties of spaces that do not change under stretching, twisting, or bending — but not tearing or gluing. It evolved from questions in geometry and analysis in the 19th century and became a field in its own right in the 20th century.

Historical Background

The roots of topology trace back to Leonhard Euler's 1736 solution to the Seven Bridges of Königsberg problem, which laid the groundwork for graph theory and topology. The formal development began in the 19th century through the

works of mathematicians like Augustin-Louis Cauchy, Bernhard Riemann, and Henri Poincaré, and later saw axiomatic foundations laid by Felix Hausdorff.

Basic Concepts

Topological Spaces

A topological space is a set X together with a collection τ of subsets of X (called the topology) satisfying:

- **The empty set and X itself are in τ**
- **The union of any collection of sets in τ is also in τ**
- **The intersection of any finite collection of sets in τ is also in τ**

Open and Closed Sets

Sets in the topology τ are called open sets. Their complements are closed sets. These generalize the notion
of intervals in real analysis.

Open Sets

Definition:

A set is open in a topological space if it belongs to the topology τ. Intuitively, an open set does not
include its boundary.

Example in Real line {R} (Real Line with Standard Topology):

- **(1, 3) is an open set because every point inside it has a small interval around it that stays within the set.**
- **(1, 3) ∪ (5, 6) is also open (union of open sets is open).**

ClosedSets
Definition:

A set is closed if its complement (relative to the whole space) is open.

Example in {R}:

- **[1, 3] is a closed set because its complement (-∞, 2) ∪ (3, ∞) is open.**
- **The set {1}is closed because {R} \ {1}is open.**

Continuity and Homeomorphisms

A function f: X → Y between topological spaces is continuous if the preimage of every open set in Y is open in X. A homeomorphism is a bijective continuous function whose inverse is also continuous — it is the topological equivalent of an isomorphism.

Major Branches of Topology

General Topology (Point-Set Topology)

Studies properties like compactness, connectedness, and convergence. It provides the language and foundational tools for most of modern mathematics. General topology, also known as point-set topology, is a branch of mathematics that studies the fundamental concepts of continuity and convergence in abstract spaces. It provides the foundational definitions and constructions used in various other areas of topology, such as differential topology and algebraic topology. It's essentially the study of topological spaces and continuous functions between them, focusing on properties that are preserved under continuous deformations.

Algebraic Topology

Uses algebraic methods (like groups and rings) to study topological spaces. Key concepts include homotopy, homology, and fundamental groups.

Homology Groups Hn(X)

- **Measure n-dimensional “holes” in a space.**
- **Examples:**

- **H0(X): number of connected components.**
- **H1(X): loops or 1D holes.**
- **H2(X): 2D voids (like inside a sphere).**
- **Constructed via simplicial, singular, or cellular homology.**

Homotopy Theory

- **Two maps f, g :X → Yare homotopic if one can be continuously deformed into the other.**
- **A central notion for defining homotopy equivalence (when two spaces have the same "shape" up to deformation).**

<u>Differential Topology</u>

Studies differentiable functions on differentiable manifolds, often using tools from calculus.

1. Smooth Manifolds:

- **A manifold is a topological space that locally looks like Euclidean space.**
- **A smooth manifold is a manifold equipped with a structure that allows for calculus (differentiation).**

2. **Smooth Maps:**

- **Functions between smooth manifolds that are infinitely differentiable.**
- **Examples: Diffeomorphisms (smooth bijections with smooth inverses), immersions, submersions.**

3. **Diffeomorphisms:**

- **A central object in differential topology.**
- **Two manifolds are diffeomorphic if there is a smooth, invertible map between them with a smooth inverse — this means they are "the same" in the smooth category.**

Geometric Topology

Focuses on the study of low-dimensional manifolds, knots, and surfaces.

1. **Manifolds**

- **Spaces that locally look like Euclidean space.**
- **E.g., a 2-manifold is a surface like a sphere or torus.**
- **A 3-manifold is a 3D space that locally resembles {R}^3.**

2. **Knot theory**

- **Studies embeddings of circles (S^1) in {R}^3 or S^3 (3-sphere).**
- **Central in understanding 3D topology.**

Applications of Topology

- **Mathematics: Foundational in areas such as functional analysis, algebraic geometry, and number theory.**
- **Physics: Plays a critical role in quantum field theory, general relativity, and string theory.**
- **Computer Science: Used in data analysis (topological data analysis), robotics (configuration spaces), and network theory.**
- **Biology and Chemistry: Applied in understanding DNA structure and the shapes of molecules.**

Future Scope of Topology in Mathematics

Topological Dynamics and Ergodic Theory: These areas explore the long-term behavior of systems using topological tools, with applications in number theory, group theory, and combinatorics. Category Theory and Topos Theory*: Topological ideas continue to influence abstract structures in category theory, including higher categories and topoi, enriching the language of modern mathematics. Computational Topology: As computation becomes integral to

mathematics, topology provides powerful methods for discrete models, mesh generation, and algorithms, especially in geometric and algebraic computations.

Mathematical physics: Topology is a key player in modern theoretical physics, and its mathematical structures (e.g., fiber bundles, cobordisms) continue to influence gauge theory, string theory, and quantum field theory, thereby feeding back into pure mathematics.

Topology's future in mathematics lies in its flexibility and universality — as a language, a toolkit, and a framework that connects diverse branches of mathematics through deep, structural ideas.

Conclusion

Topology is a rich and expanding field that forms a critical part of modern mathematics. Its abstract yet intuitive ideas offer a powerful lens through which to view and analyze both theoretical and real-world problems

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ETI MAHAJAN

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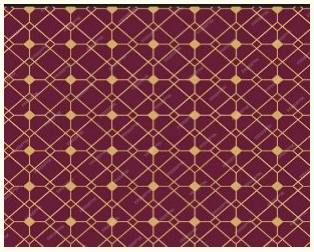
MATHS IN ART AND CULTURE

We often think of mathematics as something limited to classrooms, numbers, and calculations. But in reality, maths has always played a beautiful and powerful role in art and culture. From ancient monuments to modern paintings, the connection between numbers and creativity runs deep.

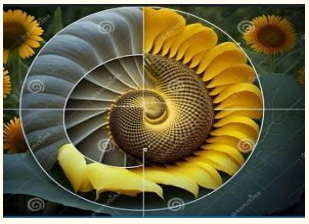
1. Patterns and Symmetry

One of the most visible ways maths appears in art is through patterns and symmetry. Whether it's a rangoli design in India, Islamic tile work, or African tribal art, repeated patterns and balanced
designs are based on mathematical ideas. Artists use symmetry (mirror-like balance) to make their work more pleasing to the eye.



2. The Golden Ratio

Have you heard of the Golden Ratio? It's a special number (about 1.618) that shows up in nature, architecture, and art. Many believe it creates the most beautiful proportions. Famous artists like Leonardo da Vinci used it in their paintings, including the Mona Lisa. Even today, photographers and designers use this ratio to create visually balanced work.



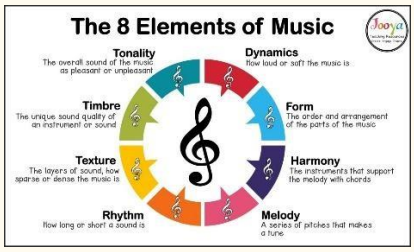
3. Geometry in Art

Shapes like circles, triangles, and squares are everywhere in art. These geometric shapes are based on maths. Mandalas, stained-glass windows, and even the layout of

ancient temples often follow geometric patterns. This not only adds beauty but also reflects harmony and order.

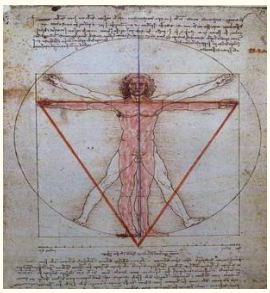
Music and Rhythm

Maths is also behind the scenes in music. Notes, beats, and rhythms are all based on counting and patterns. Different cultures around the world have used mathematical timing to create complex musical pieces, from Indian classical rhythms to African drum patterns.



4. Architecture and Cultural Symbols

Great architectural wonders like the Pyramids of Egypt, the Taj Mahal, and the Parthenon in Greece all use precise measurements and angles—mathematics at work. Cultural symbols like labyrinths, spirals, and grids also carry mathematical meanings passed down through



generations.

Conclusion

**Understanding the link between maths, art, and culture helps us see the world differently. It shows us that maths is not just about solving problems—it's also about creating beauty,
expressing ideas, and preserving traditions.**

So the next time you admire a painting, a temple, or a song, remember—maths is there, quietly shaping the magic.

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THE BASIC NEED OF MATHEMATICS IN DAILY LIFE

Mathematics is often seen by students as a difficult subject limited to classrooms and textbooks. However, in reality, math is a powerful and essential part of everyday life. From the moment we wake up until we go to bed, we constantly engage with numbers and mathematical ideas — often without even realizing it. Whether we're managing money, cooking meals, shopping, or planning a trip, mathematics helps us make decisions, solve problems, and function effectively.

1. Math in Home and Family Life

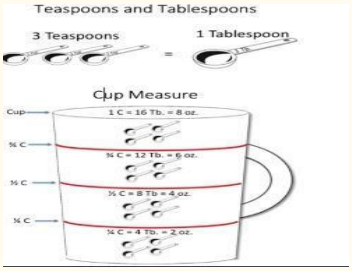
At home, math is a vital tool. Parents use it to plan budgets, pay bills, manage time, and organize household tasks. Children use it while doing homework, measuring ingredients for recipes, or dividing snacks evenly. Time management — such as knowing when to leave the house to catch a bus or how long a task might take — also relies on basic mathematical understanding.

2. Financial Management

Perhaps the most obvious and frequent use of math in daily life is when managing money. We use basic arithmetic to budget our income, calculate expenses, pay bills, and save for the future. Understanding interest rates, discounts, taxes, and loans all require math skills. When shopping, we often calculate price per item, total costs, and whether we're getting a good deal. This helps prevent overspending and supports smart financial decisions.

3. Cooking and Measurements

Cooking is another area where math comes in handy. Recipes require accurate measurements and proportions. If a recipe serves four people but you're cooking for eight, you need to double the ingredients. This requires multiplication and understanding of fractions and ratios. Miscalculating even a small measurement can affect the entire dish.



4. Health and Fitness

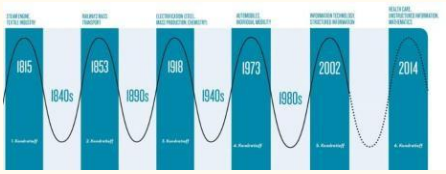
Math plays a critical role in maintaining health. People count calories, monitor their heart rate, calculate body mass index (BMI), or measure medication doses — all using basic math.
Fitness apps and trackers rely on numbers to track progress in steps, distance, or calories burned.

5. Technology and Daily Tools

In our modern digital world, technology runs on mathematics. From smartphones and computers to apps and social media, all operate using mathematical algorithms. Even when using simple tools like calculators, GPS, or spreadsheets, we are interacting with mathematical concepts like geometry, statistics, and data analysis.

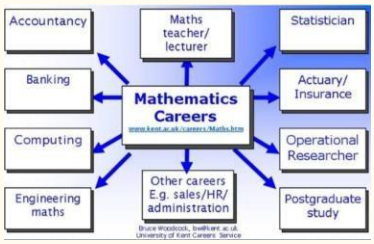
6. Transportation and Travel

Math helps in planning routes, calculating travel times, estimating fuel costs, and even converting currency while traveling internationally. Whether you're navigating public transportation schedules or using GPS to reach a location, math ensures that you arrive on time and stay within budget.



7. Jobs and Professions

Many careers depend heavily on math, including engineering, architecture, medicine, and finance. Even jobs not directly related to mathematics, such as carpentry, photography, or event planning, involve measuring, budgeting, and planning — all of which rely on numbers and calculations.



8. Critical Thinking and Decision-Making

Beyond its practical applications, math also builds problem-solving skills and logical thinking. It teaches us how to break down problems, analyze patterns, and choose the best solution. These skills are not only important in academic or work settings but also in everyday life decisions.

Conclusion

In conclusion, mathematics is not just an academic subject — it is a life skill. It touches every part of our daily routines, helping us manage time, money, health, and responsibilities. Understanding and applying basic math can lead to better decisions, increased efficiency, and a more organized life. Rather than seeing it as difficult or irrelevant, we should view math as a practical and empowering tool that helps us navigate the world around us. As society and technology continue to advance, a good grasp of math becomes not just useful, but essential.

References

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