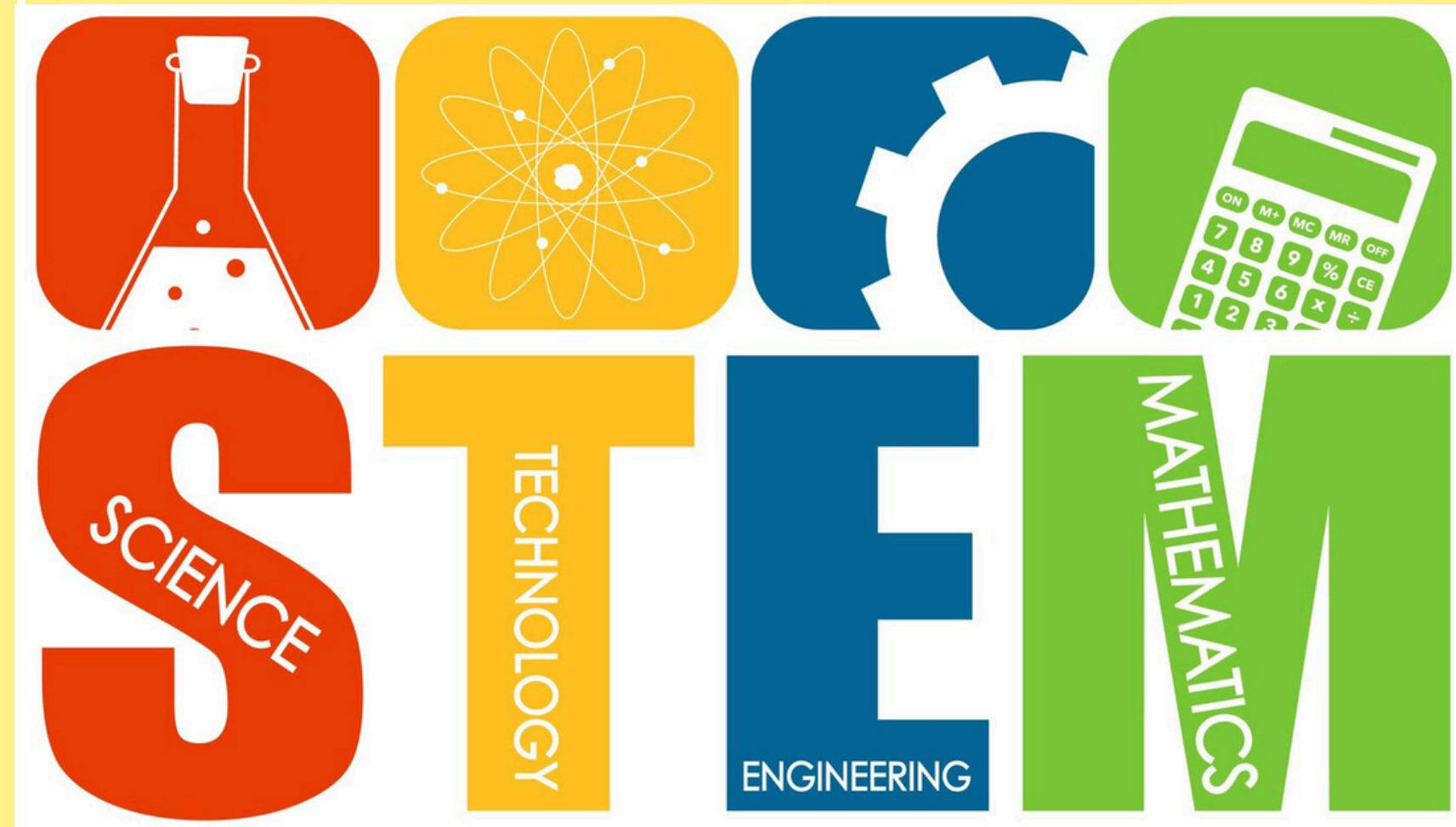


# STEM: The Power of Problem Solving

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# Introduction

STEM (Science, Technology, Engineering, and Mathematics) competence refers to the knowledge, skills, and mindset needed to solve real-world problems through critical thinking, innovation, and collaboration.



# Key Areas



## Mathematical Thinking

Applying logic, data analysis, and calculations.



## Engineering Design

Creating solutions through design and problem-solving



## Technological Literacy

Using and adapting to new technologies



## Scientific Inquiry

Understanding and applying scientific principles

# Real Life Examples

## ✓ Space Exploration (All STEM Fields)

🚀 Example: Mars Rovers & Space Missions  
NASA scientists and engineers design rovers like Perseverance to explore Mars, using robotics, physics, coding, and mathematical models to navigate and collect data from another planet

## ✓ Medical Innovations (Science & Technology)

💊 Example: MRI Scanners & AI in Healthcare  
Doctors and researchers use MRI technology and artificial intelligence to detect diseases like cancer early, improving patient outcomes. This combines science, technology, and mathematics to enhance medical diagnostics.

# Challenges in STEM

- Lack of Diversity & Inclusion – Women and underrepresented groups face barriers in STEM fields, limiting innovation and perspectives.
- Access to Quality Education – Not all students have equal opportunities to learn STEM due to lack of resources, funding, or trained educators.
- Ethical & Environmental Concerns – Issues like AI bias, data privacy, and sustainability pose challenges for responsible STEM development.

# Why it Matters

- ✓ Drives Innovation & Technology – STEM fuels advancements in medicine, AI, renewable energy, and space exploration, shaping the future.
- ✓ Solves Real-World Problems – From climate change to cybersecurity, STEM provides solutions to global challenges.
- ✓ Improves Everyday Life – From smartphones to medical breakthroughs, STEM makes our lives easier, safer, and more connected.

# Conclusion

- ✓ STEM is Essential

It empowers individuals to innovate.

- ✓ The future is STEM

STEM will continue to shape industries, economies, and society at large.

- ✓ Embrace STEM

Let's encourage curiosity, creativity, and collaboration to solve the challenges of today and tomorrow.





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