HACKSAT

INTRODUCTION TO

WORKSHOP

STEM STARTER

Get Inspired, Find your Career and Start your Journey

HACKSAT

Our Mission is to Empower People and Organizations.

288+	20+	65+
Members	PROJECTS CREATED	CITIES

We hope you learn something awesome today!

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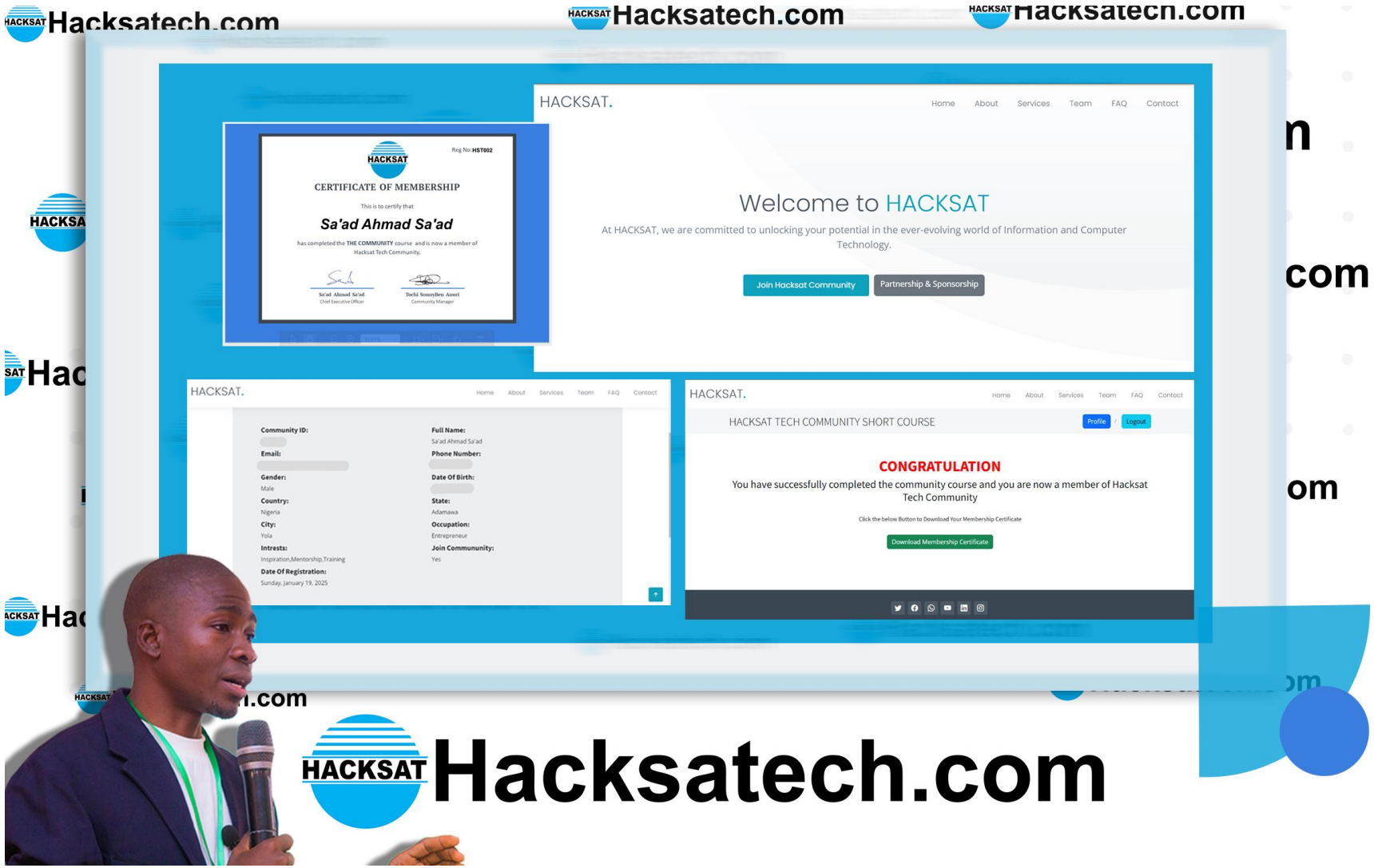

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What will you learn today?

1. Best understanding What Science is with clear examples.
2. Best Understanding of What Engineering is with clear examples.
3. Best Understanding of What Technology is with clear examples.
4. Best Understanding of What Mathematics is with clear examples.
3. Where to go for more knowledge.

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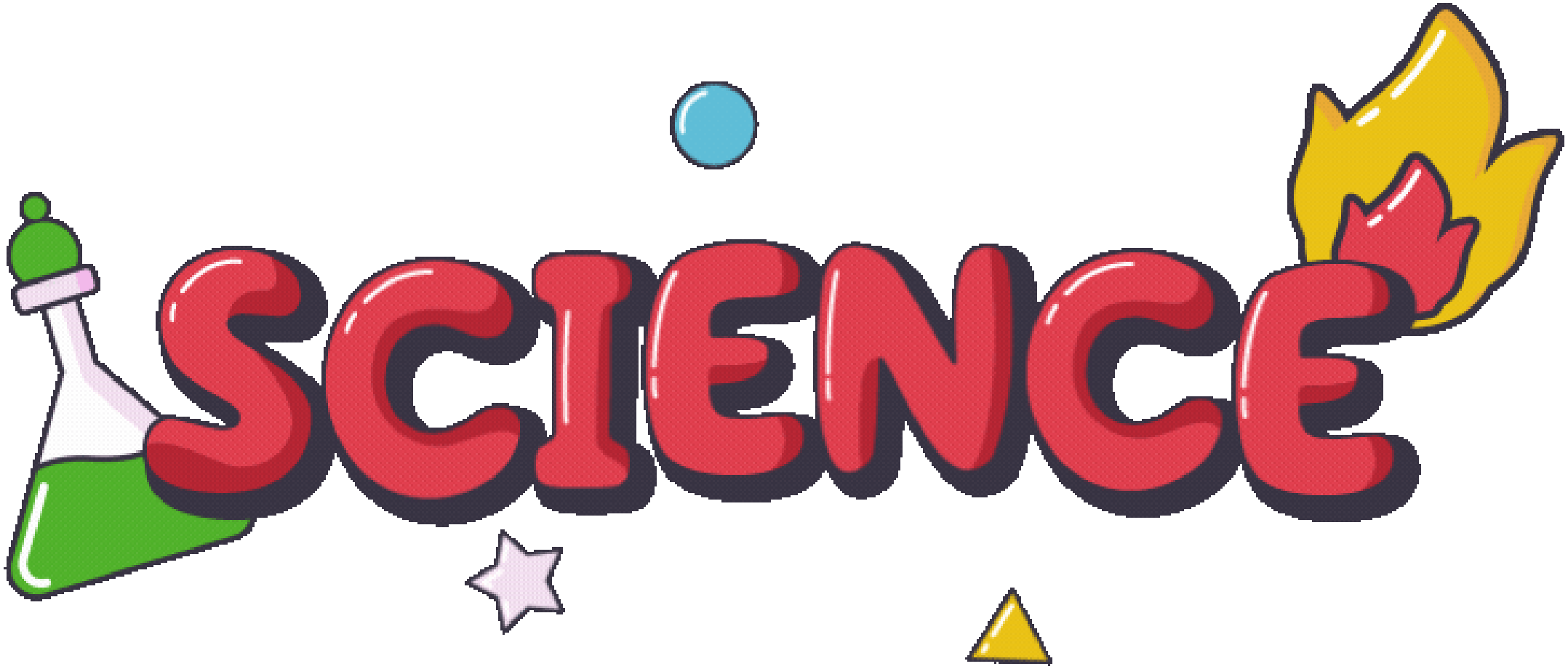
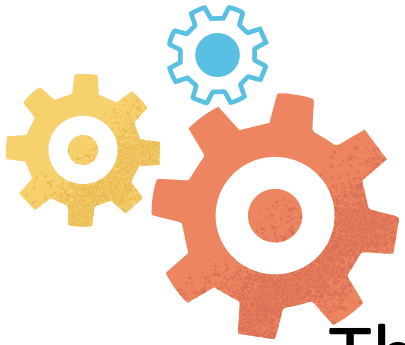

SCIENCE



What is Science?

The word “SCIENCE” has been derived from a latin word “SCIENTIA” which means knowledge.

That means SCIENCE is a knowledge, but the question is;

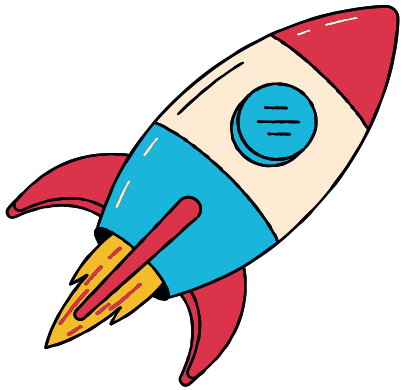
But $E=m.c^2$

What type of knowledge is it?

Science - Definition

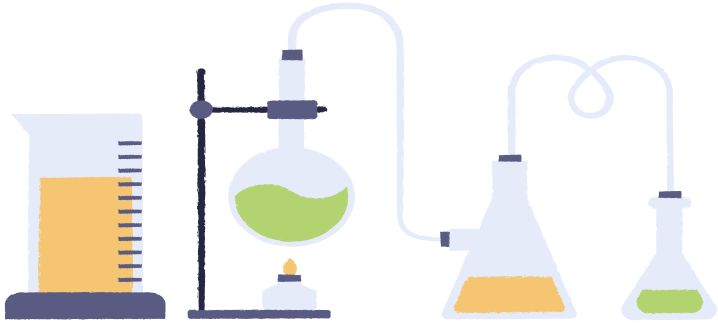
The knowledge gained through “OBSERVATIONS” and “EXPERIMENTATIONS” is known as “SCIENCE”.

As SCIENCE deals with NATURE, it is also called;



“NATURAL PHILOSOPHY”

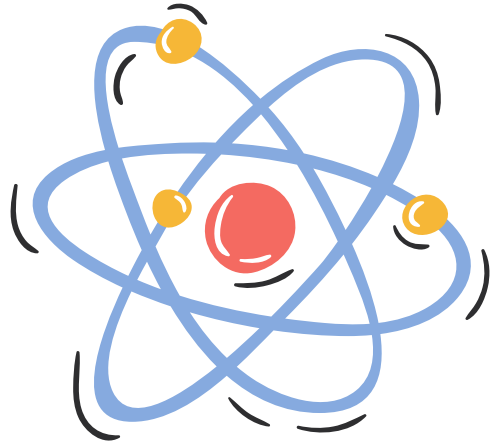
(An organized study of nature)



Division of Science

Science has been divided in to two branches:

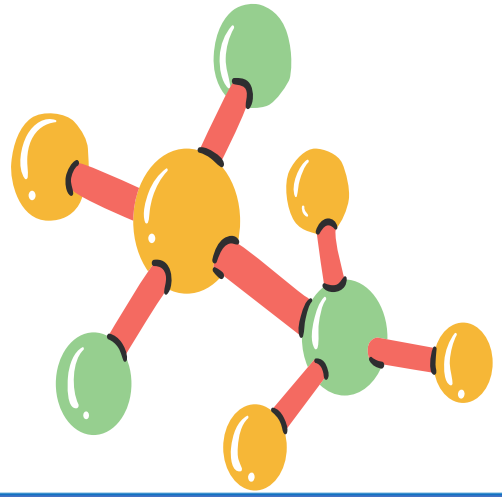
1. Biological Sciences: that deals with the study of living things.
2. Physical Sciences: that deals with the study of non-living things.

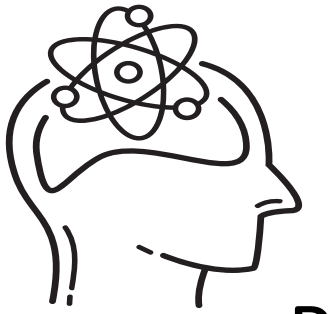


Biological Sciences

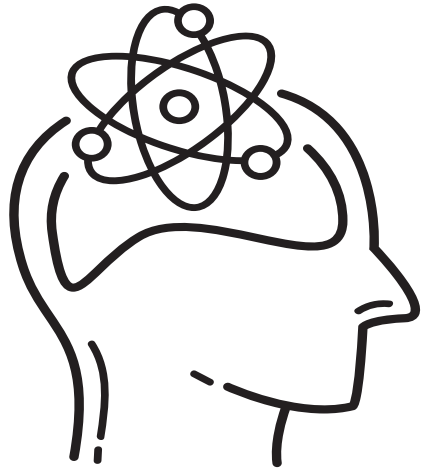
Science has been divided in to two branches:

1. Botany: that deals with the study of "**PLANTS**".
2. Zoology: that deals with the study of "**ANIMALS**"





Physical Sciences



Physical sciences are also called fundamental Sciences, because;

These provides foundations for other areas of Science.

Physics, Chemistry, Mathematics etc. are the main disciplines in **PHYSICAL SCIENCES**.

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What is Technology?

You all heard about this word **Technology**.

Did you ever think what it **Means**?

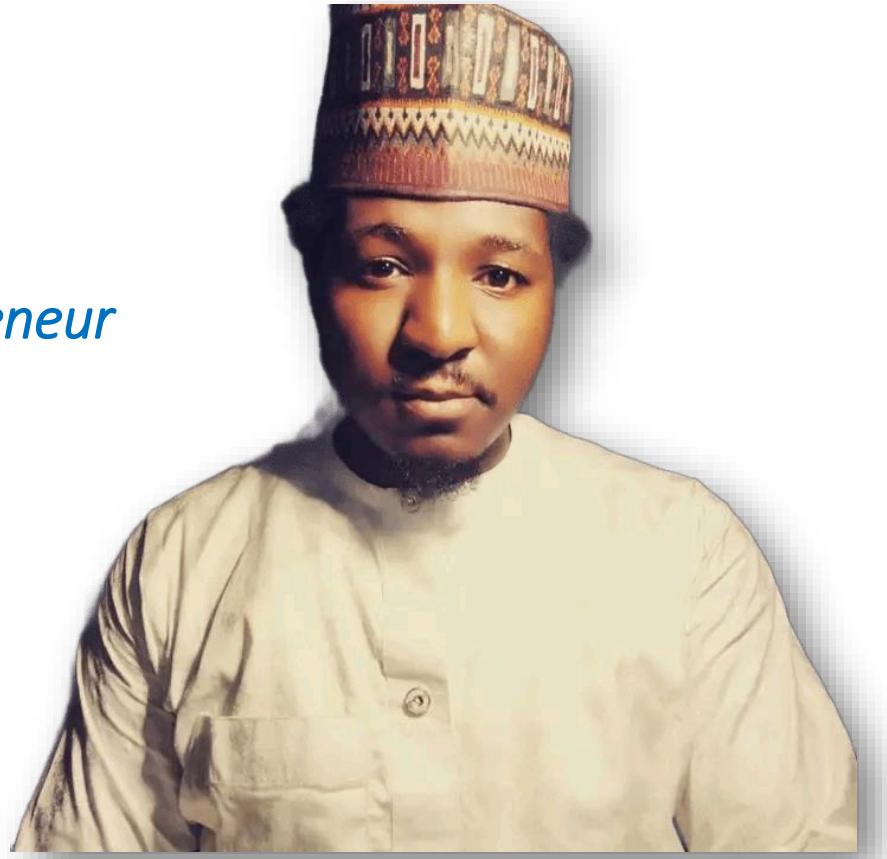
Did you know were it **Come from**?

Don’t worry!

Mal. Faruk Mansur Kamfani is a CEO of E-Connect and also senior lecturer at Informatics Nigeria.

Technology is the process of easy our difficult work in simple, and automate hard work in to smart work by using technology equipment or infrastructure.

Alhassan Atama Isiaka is an Entrepreneur and also a software developer.



Product of Application of science – this includes methods, techniques and tools that are innovated using scientific experiments and research.

Mark Zuckerberg is the CEO of Meta, the parent company of Facebook. He focused on technologies such as artificial intelligence (AI), social media, and the metaverse.

Mark Zuckerberg has said that technology can help scale education beyond the classroom, and that it can help teachers create better learning experiences for students.

GREEK

“tekne” & “logia”

ART OR CRAFT RELATED TO STUDY

“teknologia”

Systematic Treatment

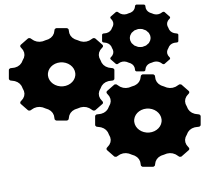
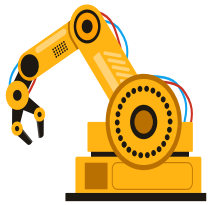
TYPES OF TECHNOLOGY

1. Mechanical Technology

2. Industrial Technology

3. Medical Technology

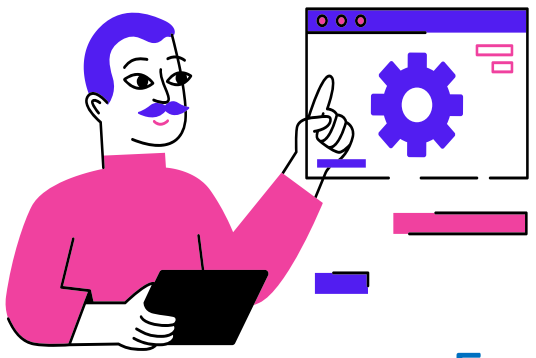
Mechanical Technology

1. Produce 
2. Control 
3. Transmit 

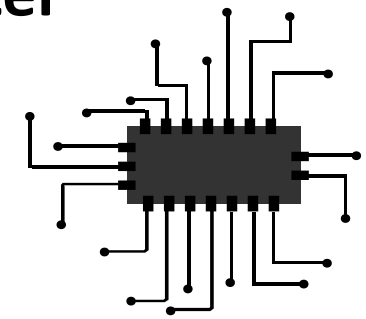
Example: Manufacturing of a Car

Industrial Technology

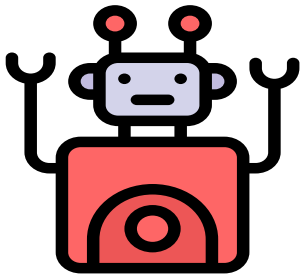
Industrial Technology use Engineering & Manufacturing to make production faster.



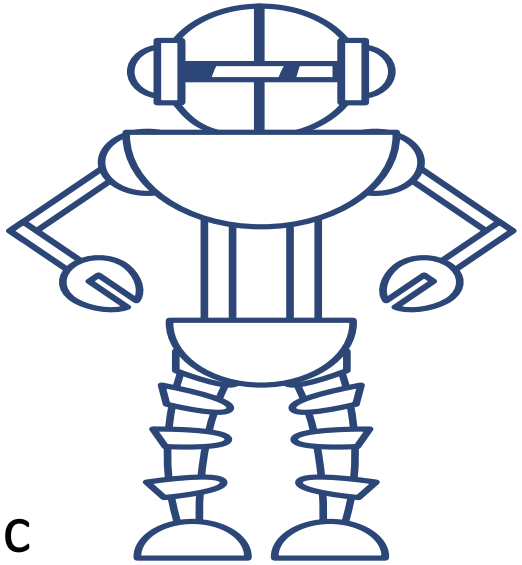
Faster



Simpler



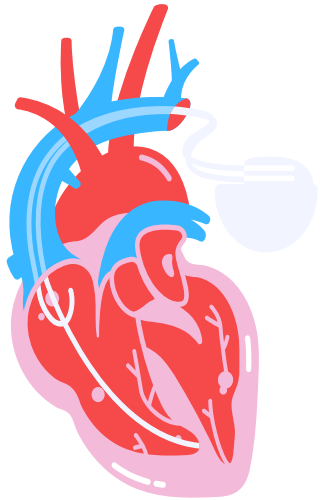
More Efficient

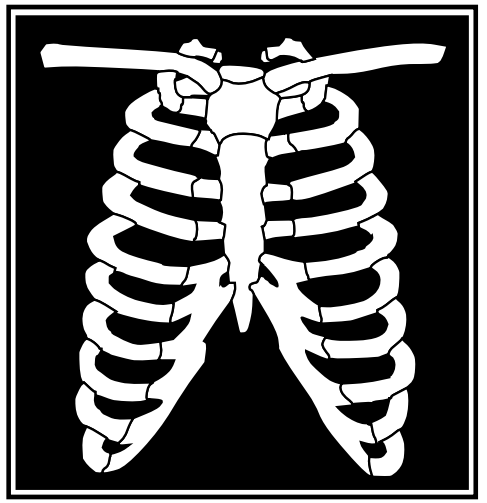


Example: Electronics, Automations and Robotics E.t.c

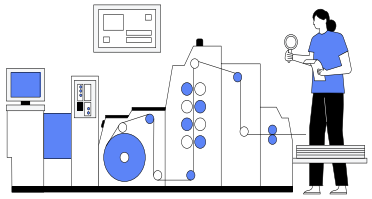
Medical Technology

Medical Technology can be define as an application of science to develop solutions to health problems.





Example: Artificial Organs, X-Rays e.t.c



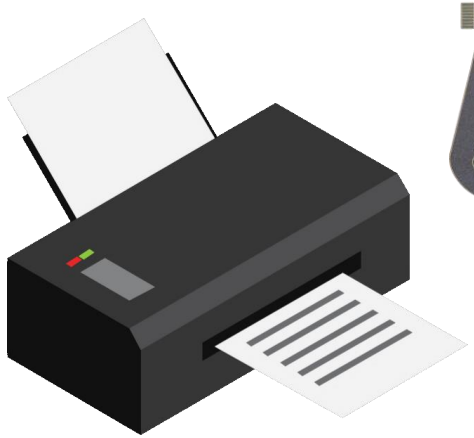
Evolution of Technology

Pen is one of the first technology to make human to RECORD AND REFERENCE.

DATA

THOUGHTS

ACTIONS



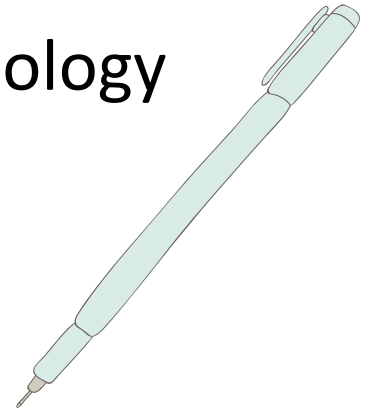
Later it improves to printing press, typewriters, Computers e.t.c

Daily Life

We can’t imagine our world without technology.

Education is very important in our life, to note down things we need a pen which is basically a product of technology.

A paper you need along with the pen is also a Technology product.



Technology is involved in **EVERYTHING** we can’t deny it.

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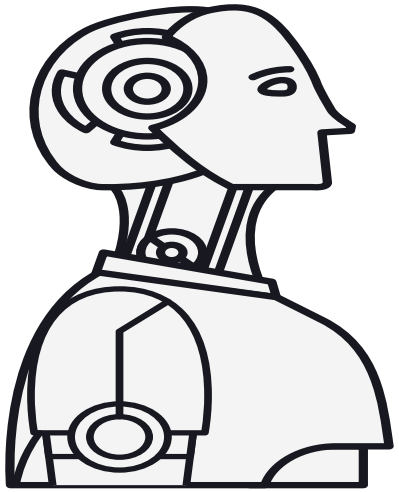
Engineering

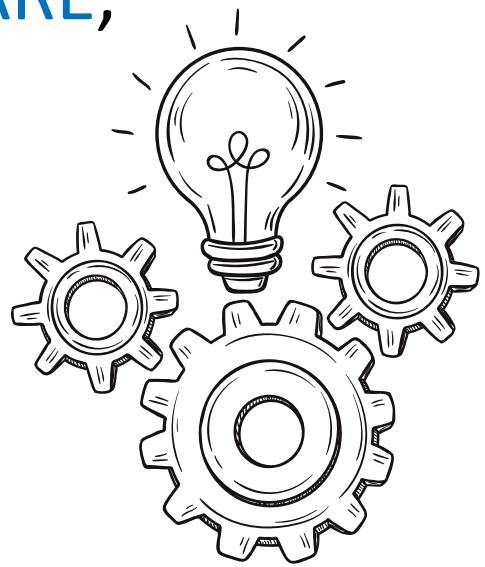


CLEVER!

What is Engineering?

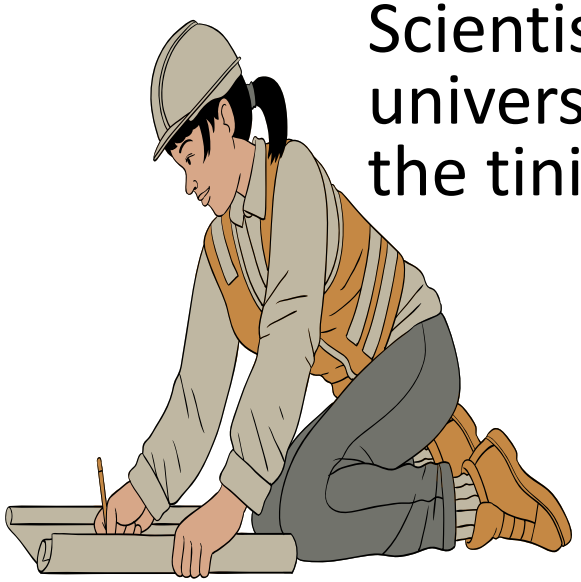
The word “ENGINEERING” itself comes from the Latin INGENIUM, meaning “CLEVERNESS”, and INGENIARE, meaning “TO DESIGN OR DEVISE”.

It’s more useful to think of science as a tool, A tool that ENGINEERS use-along with mathematics to perform their unique duties.



What engineering really does is to solve the problems.

What is Engineering?

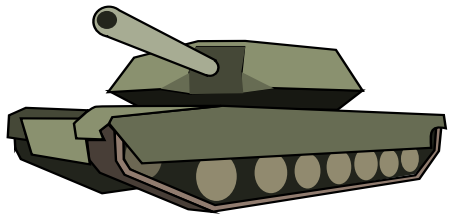


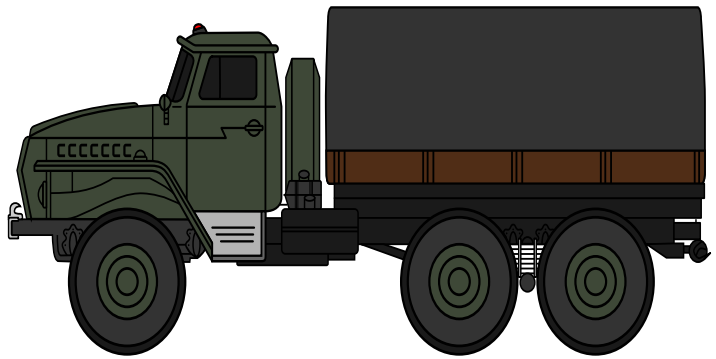
Scientists ask questions about the nature of the universe, from our expanding knowledge of space, to the tiniest particles found in the tip of your pencil.

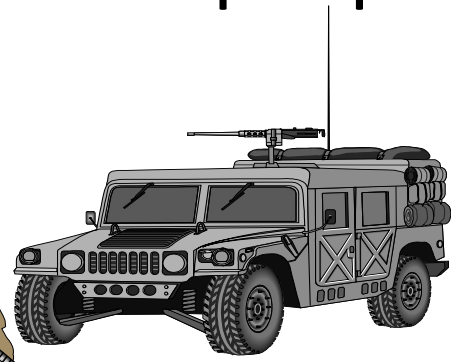
What engineering really does is to solve the problems.

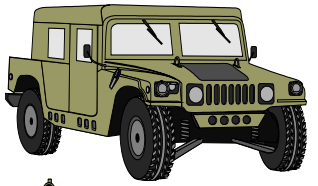
Military Engineering

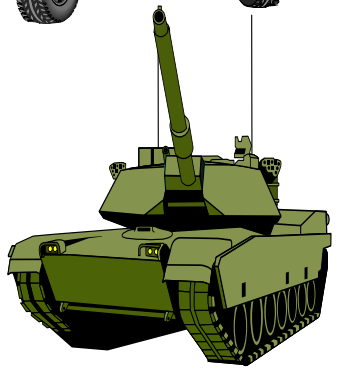
Involves DESIGN in building military works along with COMMUNICATING & TRANSPORTING people and things.

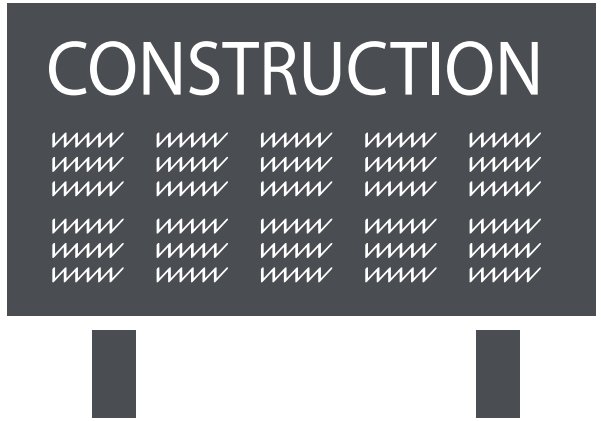






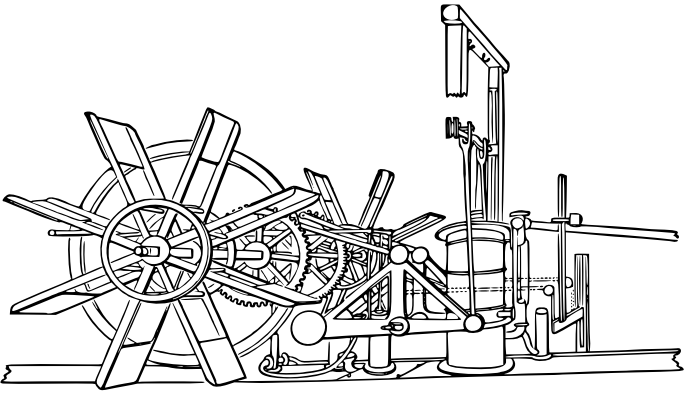


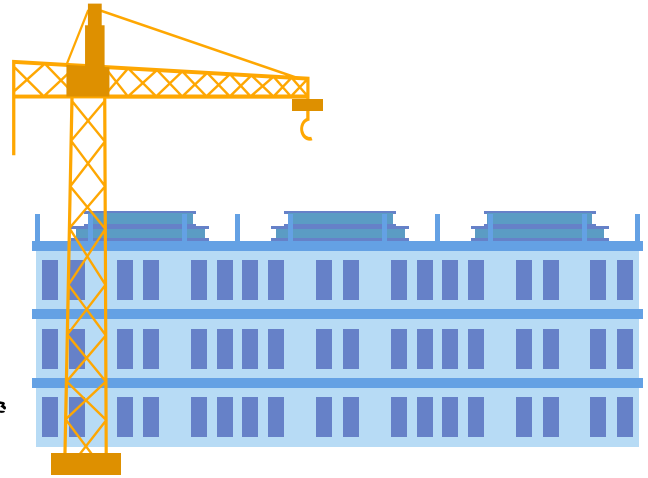


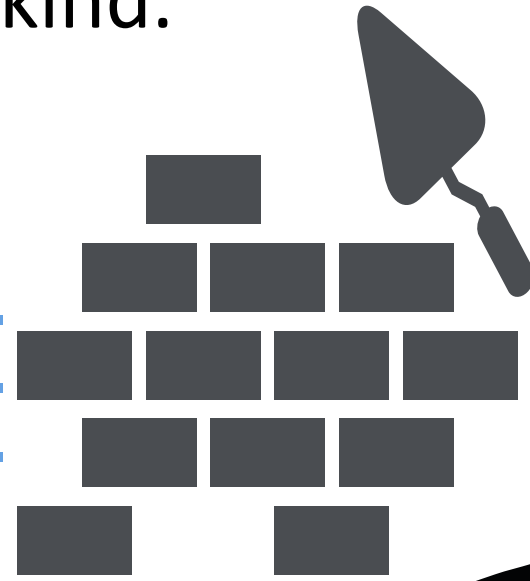


Civil Engineering

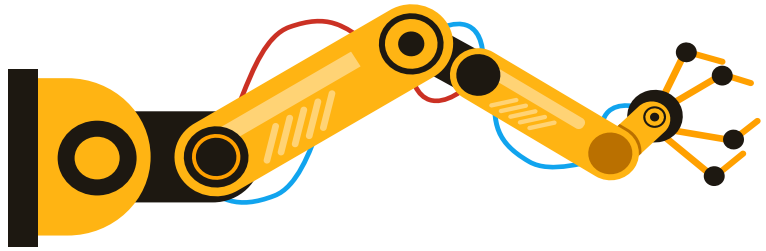
Was use for civilians' purposes it focusses on building structures for all kind.



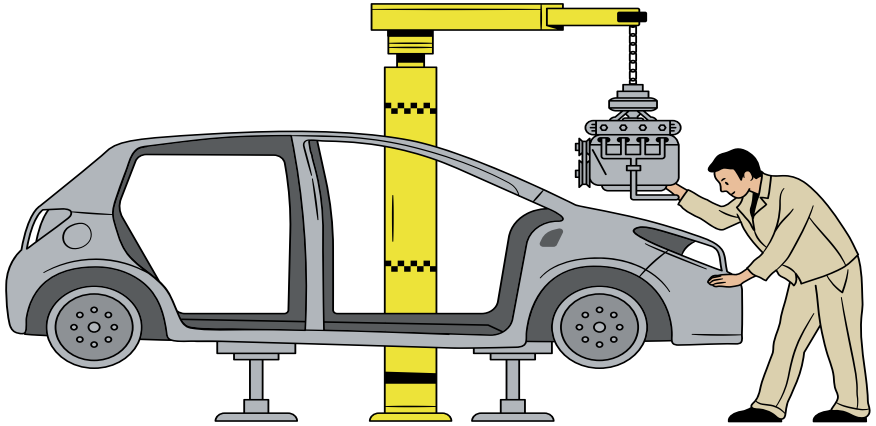


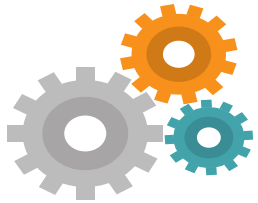


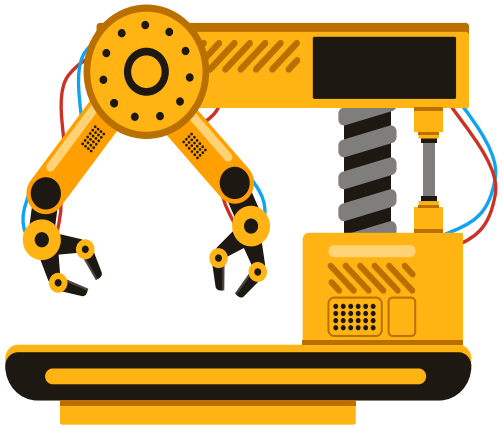
Mechanical Engineering

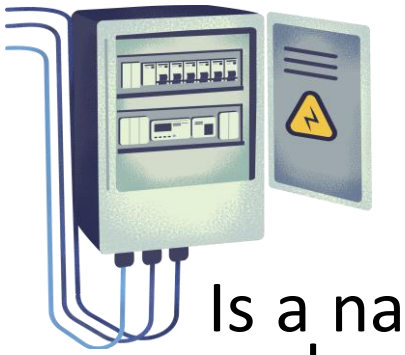


Is a fine discipline, broad focusses on machineries and mechanical systems from robots to engines.

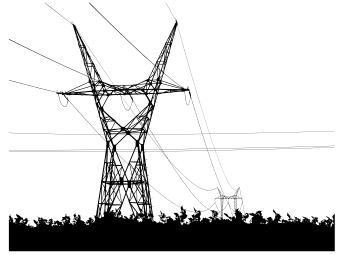




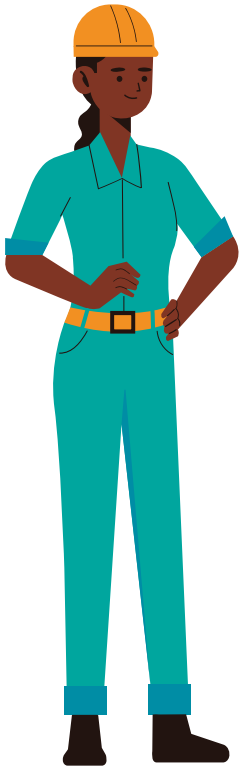




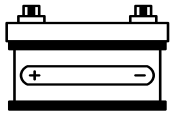
Electrical Engineering



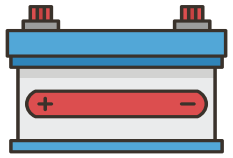
Is a natural progression once you are able to generate electricity and create electronics.

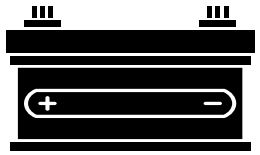


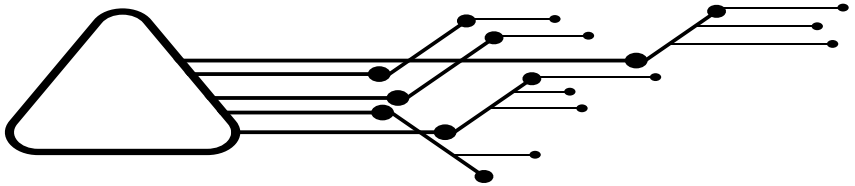
In 19th century electrical engineering deals with devices and systems. it can range from anywhere from micro-chips to cell phone to the giant power station generated that help supply energy to big cities.

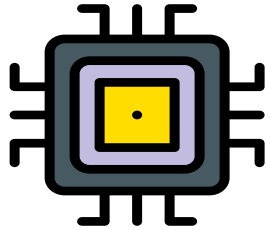


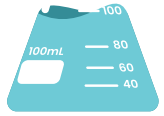
Electrical engineering often come together to create some pretty fantastic inventions.



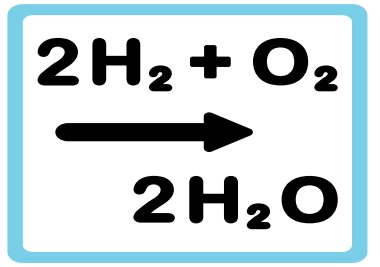


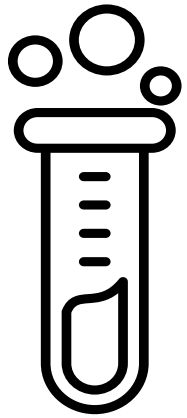




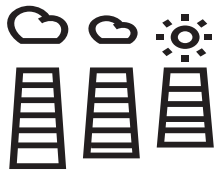


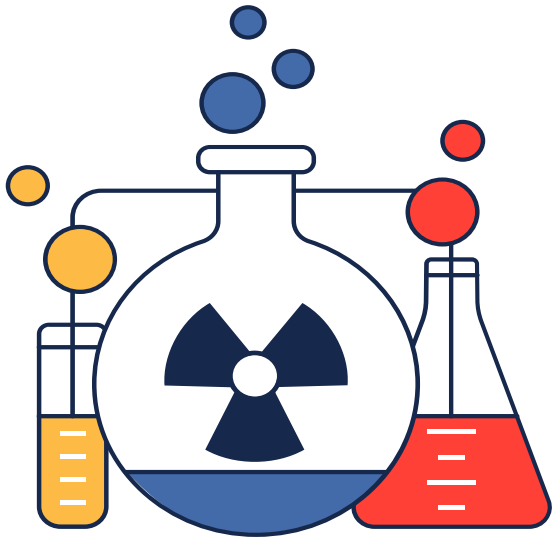
Chemical Engineering



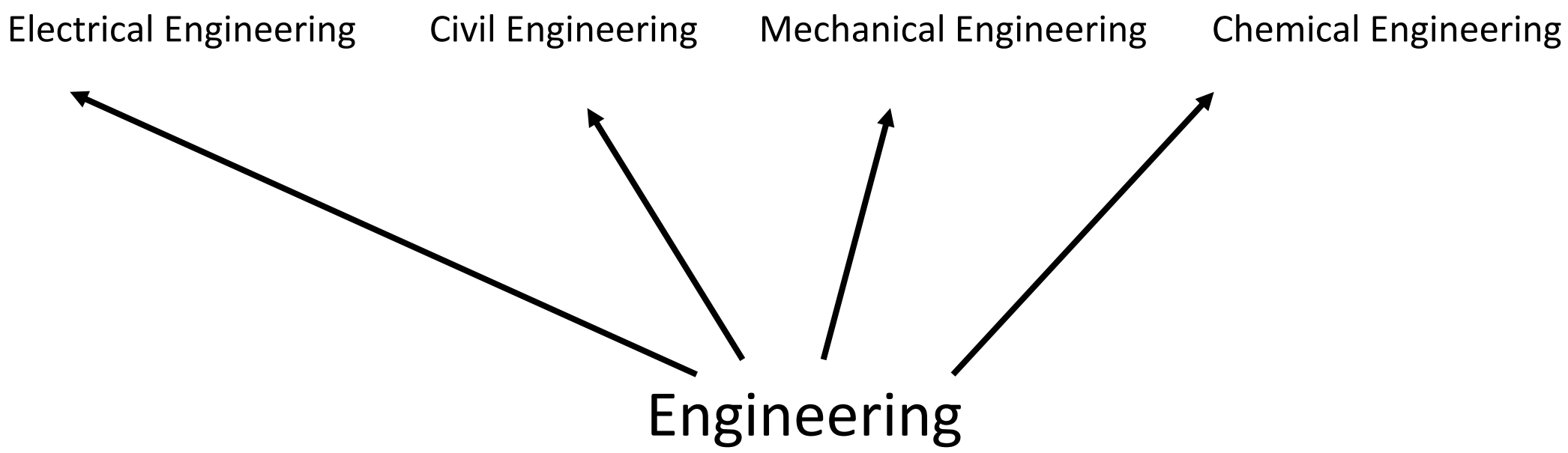


This engineers have a quite wide focus not only designing and operating chemical plants, they do things like refinery oil and distil alcohol they also deals with foods, medications, environments and much more.

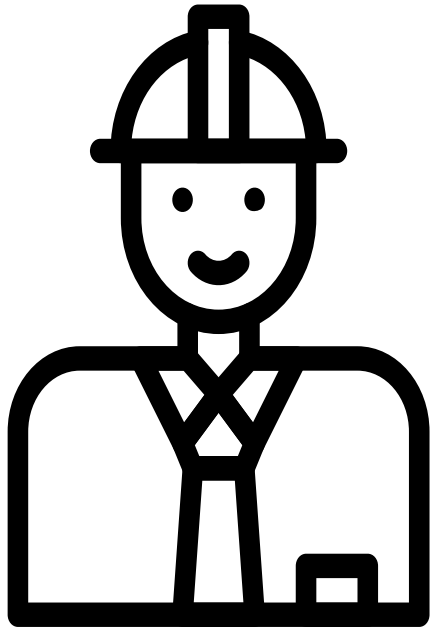




Together

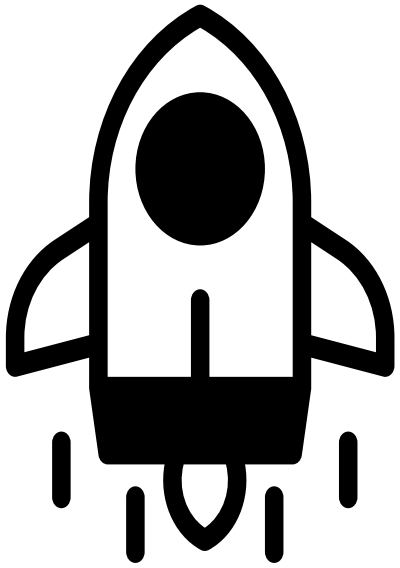


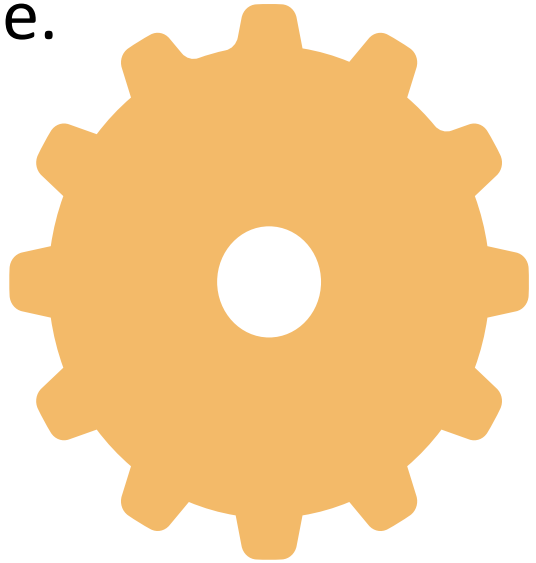
Seen as the four main branches of engineering in the modern world.

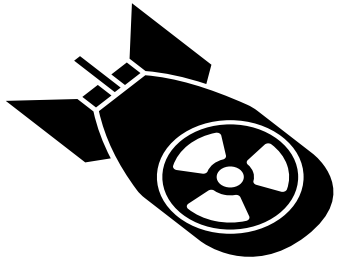


Aerospace Engineers

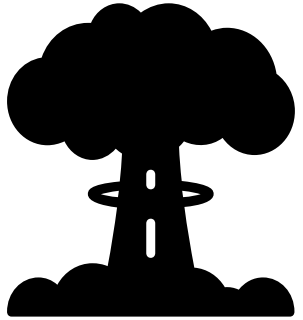
Building machines that flies in the air and space.

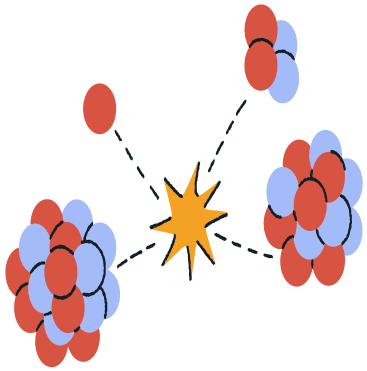




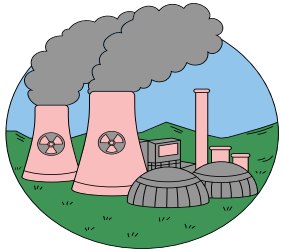


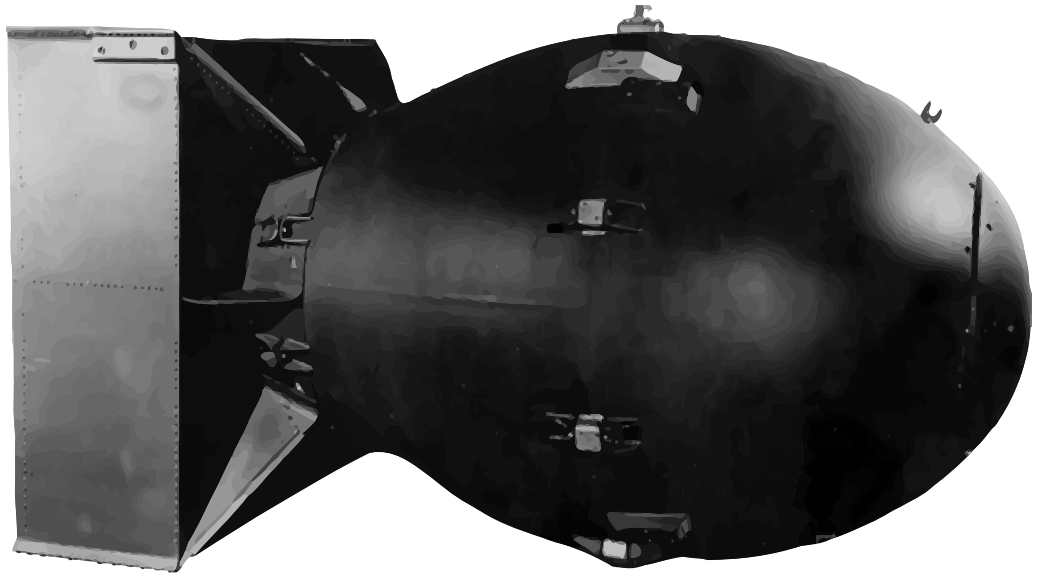
Nuclear Engineers

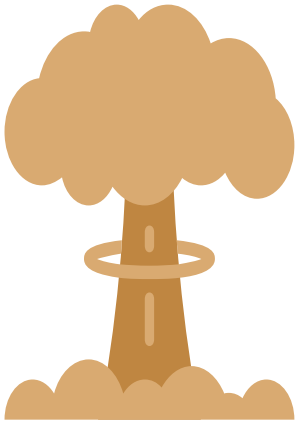


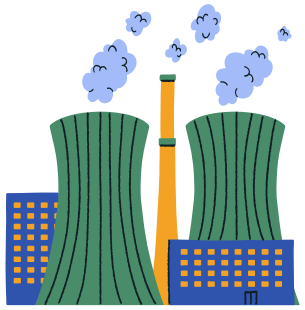


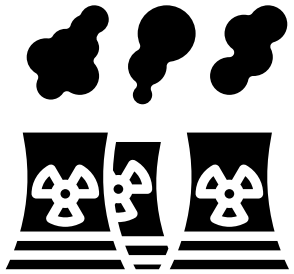
Energy release from nuclear reactions.

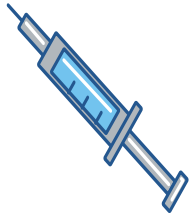






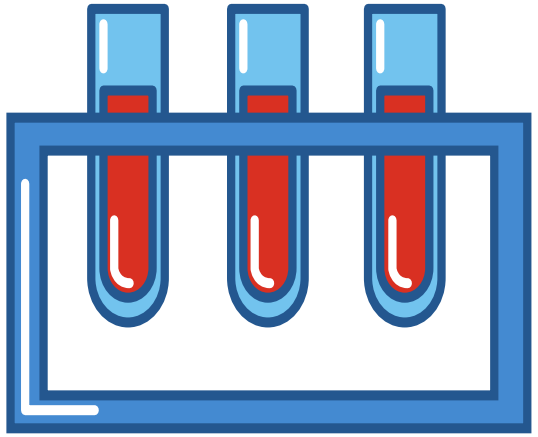


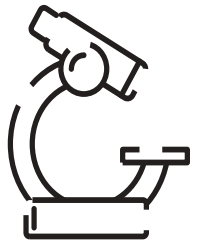




Biomedical Engineers

Creating medical equipment's devices to solve chemical problems.

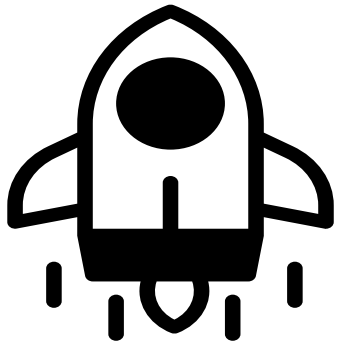


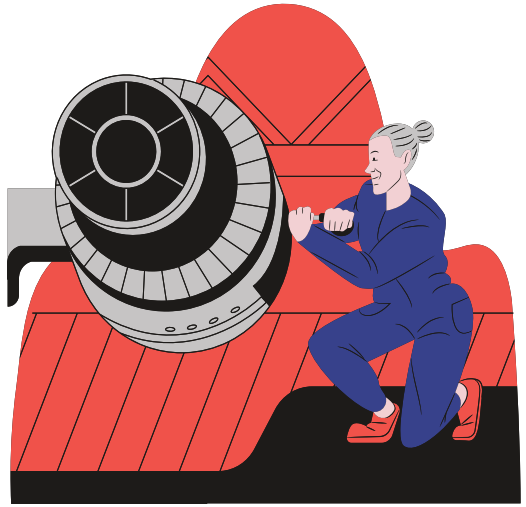


Industrial Engineering

Engineers in this field designs and optimize the facilities, equipment's, systems that many engineers use to create their products.

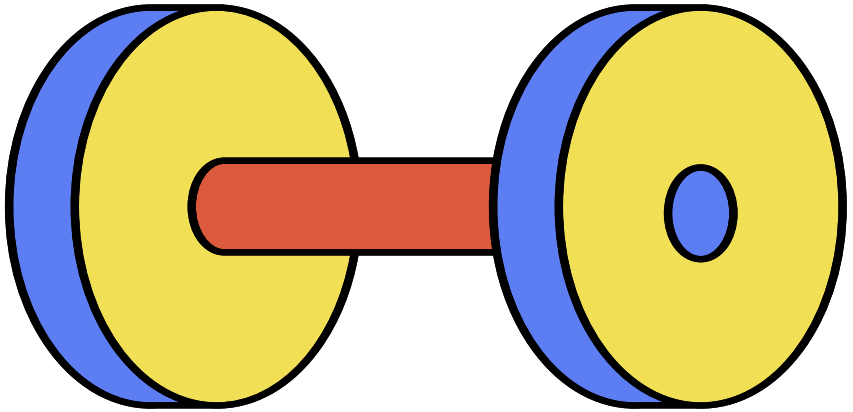
"Think of them as a support cause of engineering world."





Industrial Engineering

We will need some industrial engineers help us with our factory when we start manufacturing our cool new products, base on whatever is made up.



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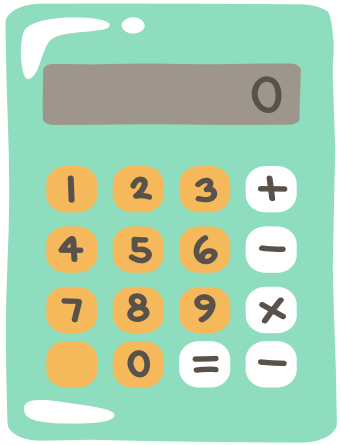
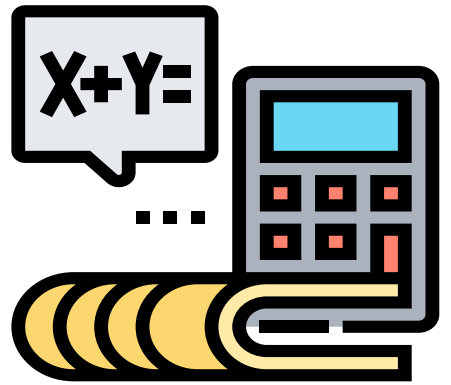
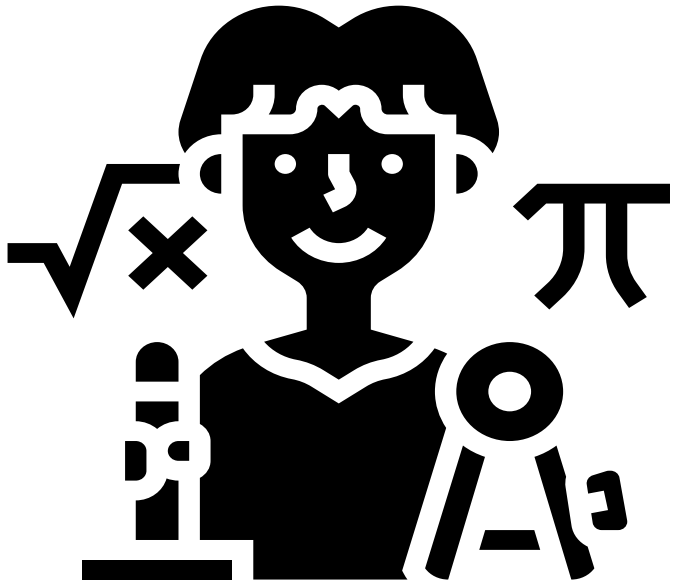
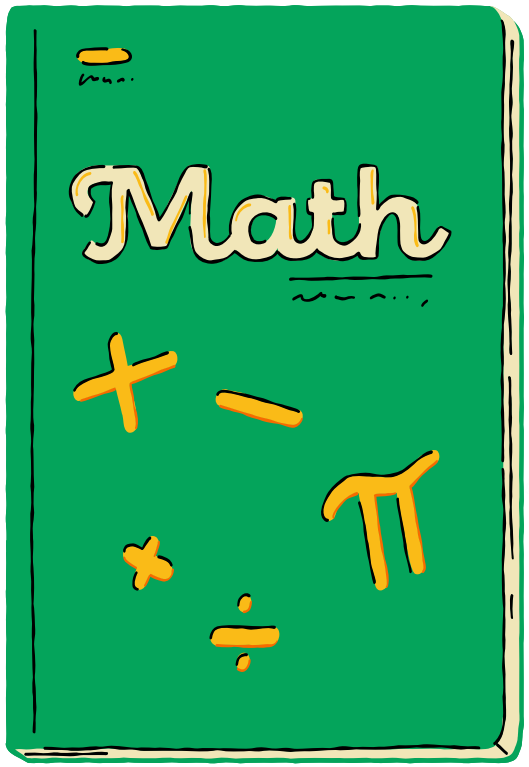


What is Mathematics



The LAW of NATURE rains in MATHEMATICS.





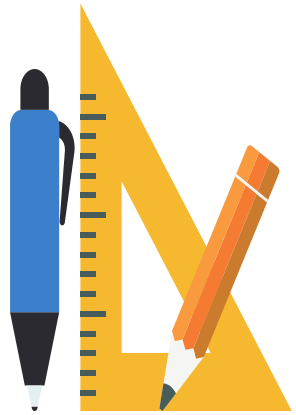
MATH JUST LIKE ENGLISH

It allows people to communicate, people need math to conduct a trade, pyramid, measuring distance etc.

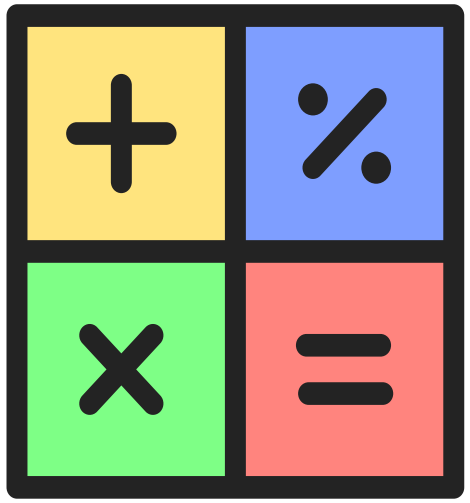
$$(x+a)^n = \sum_{k=0}^{n} \binom{n}{k} x^k a^{n-k}$$

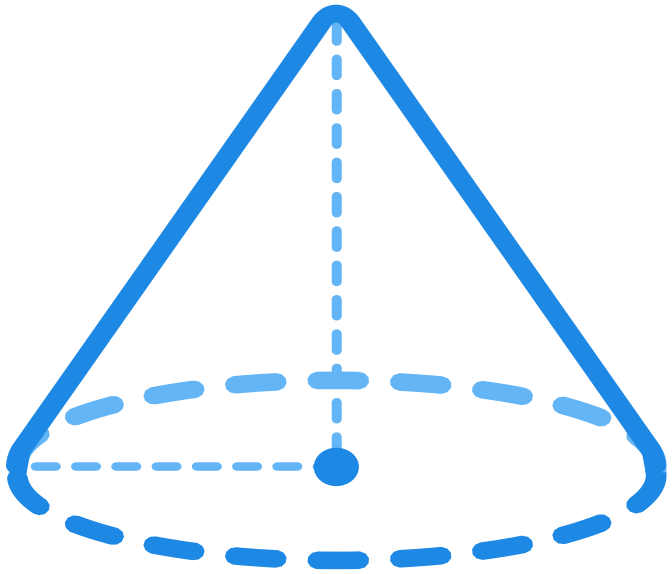
$$a^2 + b^2 = c^2$$

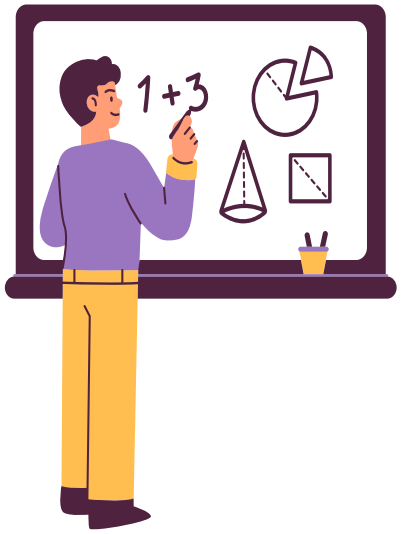
MATH IS EVERYWHERE



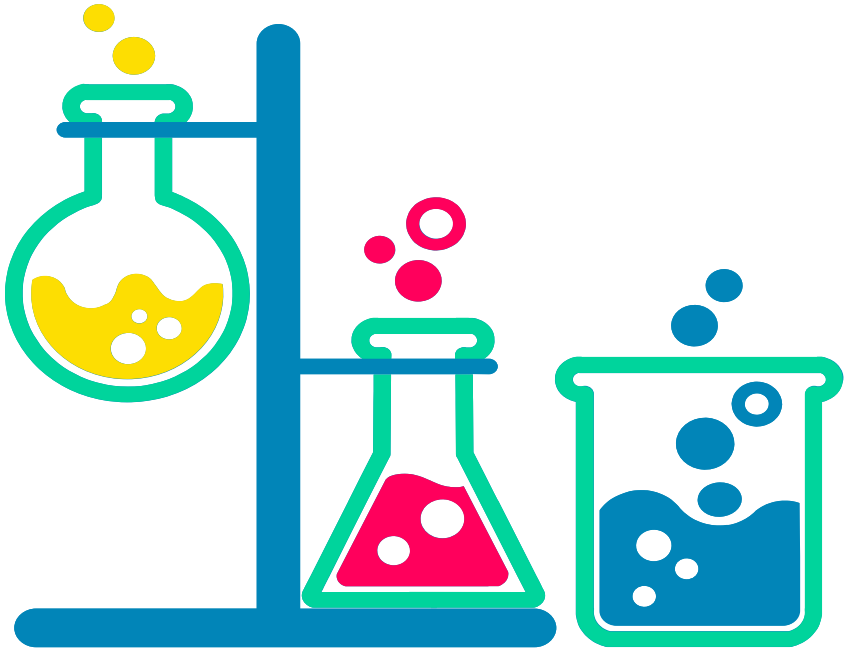
Like an Air and…….







OUR UNIVERSE IS MATHEMATICAL

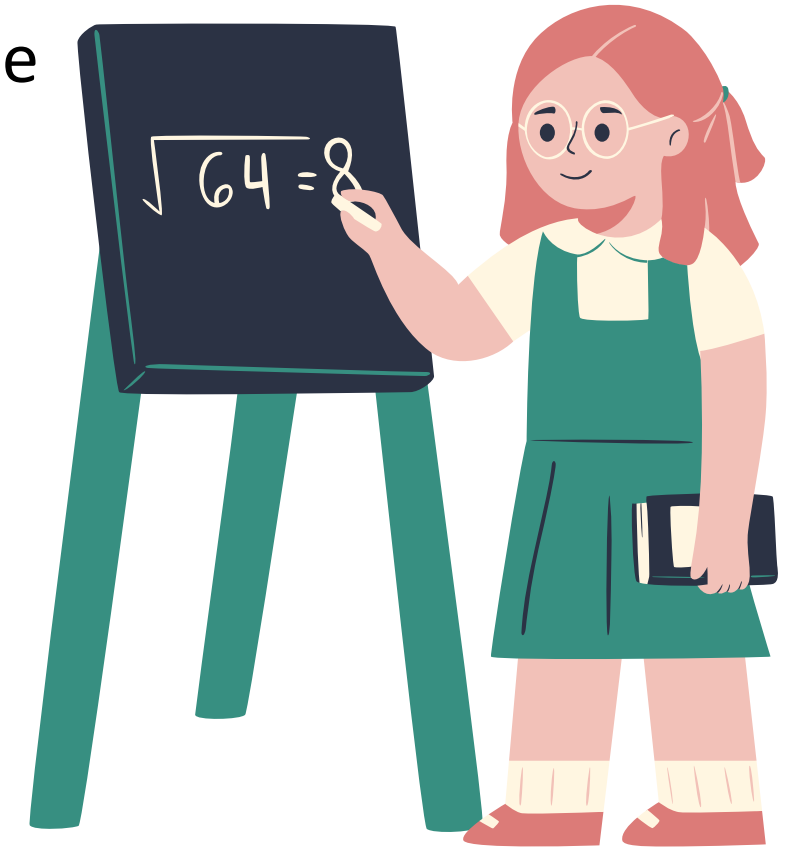


MATHS DISCIPLINES US

Even time is a measure quality we don't know the exact time if we don't know the numbers.

It's the key to problem solving.

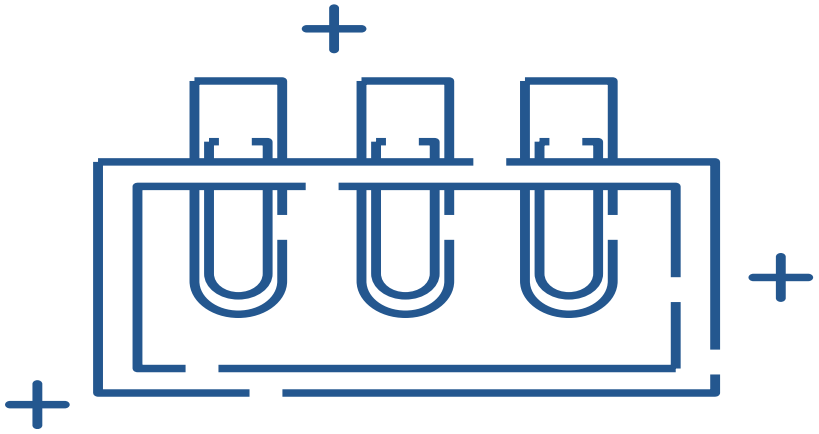
Creative thinking.



WE ALL NEED MATHS

One may think why so many kids confused by

$a^2 + b^2 =$ $a^2 + b^2 =$ $a^2 + b^2 =$ $a^2 + b^2 =$



MATH IS SIMPLE
LIKE 1+1=2

Is math simple to you?

RESOURCES

STEM is an education is all about combining Science, Technology, Engineering and Mathematics in to an interdisciplinary approach to learning, students can find real-world solutions for today's problems and open up more possibilities in their own lives.

Read more here:

https://hacksatech.com

What did you learn today?

1. It's good to ask questions and learn about STEM!

2. Plan your journey in to STEM industries!

3. Your career is just as important as your future.

Where to go from here

1. Join our whatsapp group to connect with other community members.

2. Sign up for your membership ID for Hacksat Community

3. Learn more about Tech by following us on facebook and instagram.

We hope you learn something awesome today!

Find more resources: https://hacksatech.com

Contact us for partnership or sponsorship +2348100448196

HACKSAT

CALL FOR

INSPIRATIONAL STORIES

SHARE YOUR STORIES TO INSPIRE OTHERS

- Do you have a story of resilience, success, or personal growth?
- Have you overcome challenges and want to inspire others?
- Do you want to share your journey and impact lives?

HOW TO PARTICIPATE:

Submit a short description of your story

Be featured in [a book, website, social media, event—customize based on your project]

Inspire and connect with a wider audience

INTERESTED? SEND YOUR STORY AT:

community@hacksatech.com

Your story could be the spark that changes someone's life!

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Inspiring Innovation * Empowering Growth * Transforming Futures

COMMUNITY

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INTRODUCTION TO

WORKSHOP