



ROBOTS
Read more...

MACVISTA



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*We're fascinated with robots
because they are reflections
of ourselves.*



— Ken Goldberg

Global COVID-19 Pandemic

Hello everyone, the world is undergoing a serious calamity in the form of the COVID-19 virus pandemic. In such times, it is essential that each one of us contributes to keeping ourselves and our communities safe.

Here are some tips to help you stay safe:

Protect yourself and others from getting sick

Wash your hands

- after coughing or sneezing
- when caring for the sick
- before, during and after you prepare food
- before eating
- after toilet use

- when hands are visibly dirty
- after handling animals or animal waste



To prevent COVID-19 it is safest to avoid physical contact when greeting.

Safe greetings include a wave, a nod, or a bow.

How should I greet another person to avoid catching the new coronavirus?



#Coronavirus #COVID19

9 March 2020

For more information and updates, please visit:

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>

Even in the face of this virus, we all continue to live our normal lives. And in that spirit, presenting the MACVISTA newsletter with Robots as the theme. Start your reading experience now.



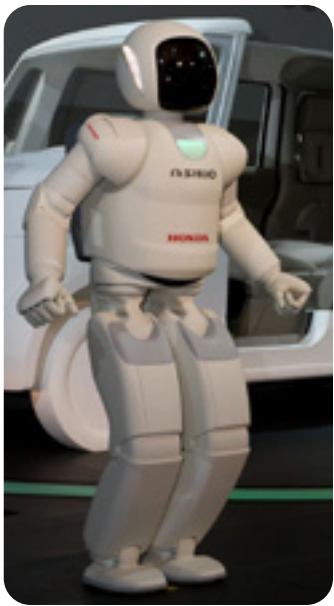
FROM GOLEM TO HUMANOID

Alien lives, automated warriors or spirit-less servants have fascinated humans since decades. Till long, such warriors and servants remained in the domain of imagination; frequently finding space in popular literature such as the character of Golem of the Hebrews or the mechanical assistants of the Greek god Hephaestus. The first time that the word Robot was used was in a play in 1921 by Czech playwright Karel Capek in his play *R.U.R. (Rossum's Universal Robots)*. The play was about a factory that builds artificial people to be servants for humans. The word Robot is derived from the Czech language and means “forced labour”.



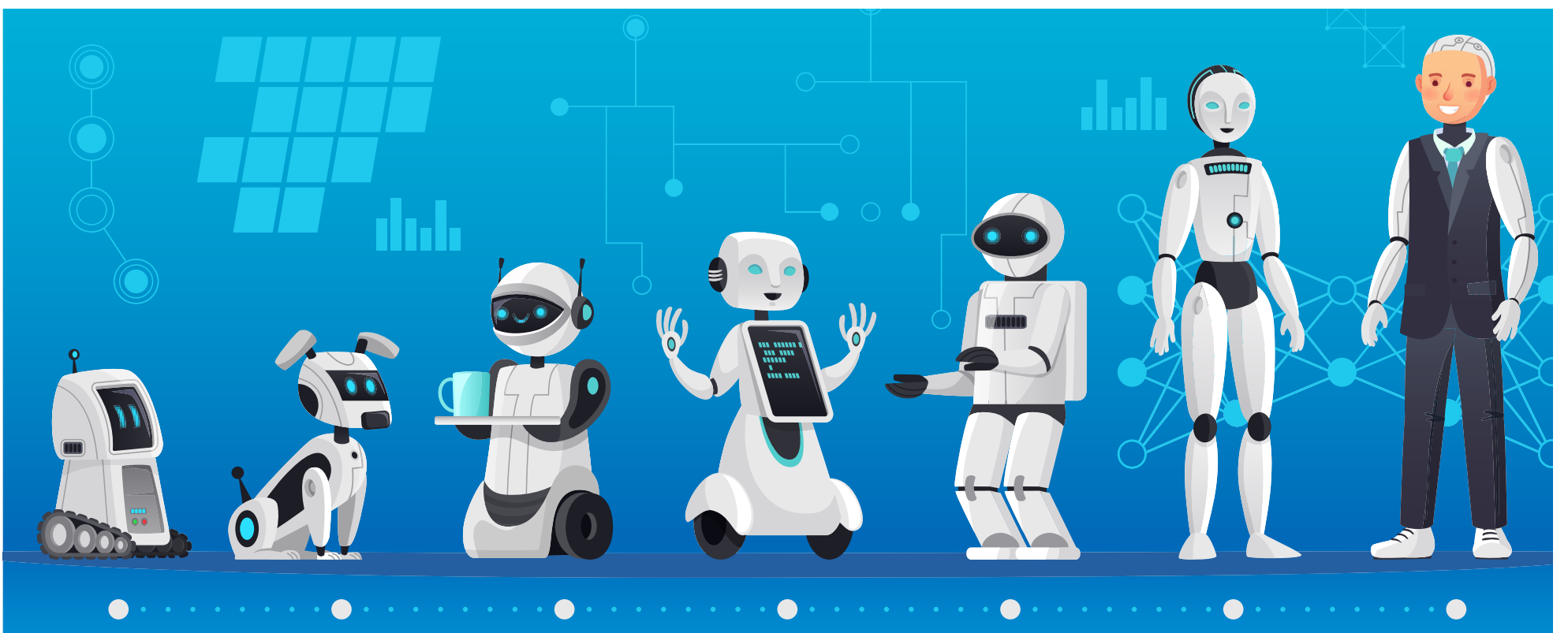
According to robotics engineers, a robot is an intelligent, physically embodied machine. A robot can perform tasks autonomously and can sense and manipulate its environment. Today, robots can perform increasingly complex tasks but the road to such success has been paved by years of hard work, detailed scientific research and a vast extension of human imagination.

A peek into the history of robots leads us to check the Egyptian and Arabian water clocks, which were a precursor to working mechanics. The great painter and inventor, Leonardo Da Vinci, designed a fully-working mechanical knight. In 1960, a robotic arm known as *Unimate* was used in General



Motors to help in the production of automobiles by welding auto bodies. Later, Stanford Research Institute (SRI) gave us a walking, thinking robot named *Shakey*, which could negotiate a path full of obstacles. Shakey became an ancestor to the humanoid robot from Honda, *ASIMO*.

Modern robotics has progressed in leaps and bounds to give us a very real future, that includes robots as part of normal human society. Robots are being developed to take over a large part of jobs, which are considered too dangerous or too repetitive for human beings. Modern technology has given us robots who are now able to imitate human beings. *Sophia*, a ‘social’ robot can display around 65 facial expressions and converse with human partners. There are many more specialized robots on the anvil, waiting to step into your life. Yes, robots are here to stay.



ROBOTIZED

INDUSTRY

We live in times when robots are being used across several industries such as manufacturing, automobile, health care, education, defence, education and entertainment. The basic premise for leveraging robots in industries was two-fold. One in which they could replace human beings when the tasks were repetitive; this meant that the humans could use their time more effectively in activities that required “human” skills of thinking, creativity and emotional intelligence. The second area in which robots could come in to replace human beings was in tasks, which were considered dangerous to human lives. These included testing for defence purposes or extreme environments such as mining etc.



While General Motors was the first to use *Unimate* in their automobile manufacturing process, many others have followed suit. LEGO in Billund, Denmark, uses robots and precision machines to make 36,000 Lego pieces per minute. That is something that humans cannot compete with! [See this now.](#)



One of the greatest uses of robots is in the health care industry where robots assist in complicated surgeries. One such example is *Da Vinci*, a robot that is assisting in surgeries across hospitals in India. Then, there are robots such as Aethon's *TUG* that help in ferrying medicines, sensitive materials and lab specimen around the hospital. Anybots Inc. has produced telepresence robots, which are designed to work as caregivers to people with disabilities. The term telepresence means “technology that allows one to feel present at a location other than their true location”.

The defence industry has been making use of robots in dangerous environments to keep our soldiers safe. DRDO of India has designed a robot called *Daksh* to help recover explosive devices. Humanoid robots may soon start patrolling our borders and maybe fighting our wars (not a happy thought, that).

Where would you like to see robots next? Do you want one to help with your homework or travel the world?



TECHNews



India is all set to try to conquer the moon yet again. This time, Indian Space Research Organisation (ISRO) has decided to send a half-humanoid robot as part of its moon mission, Chandrayaan-3. The name of this robot is Vyommitra, and she is being equipped with astronaut like functions. Besides being bilingual, Vyommitra can operate switch panels inside the space capsule. She will also be able to chat with her fellow human astronauts. The main objective of this robot on the space mission is to help ISRO learn how astronauts interact with equipment inside a spacecraft.

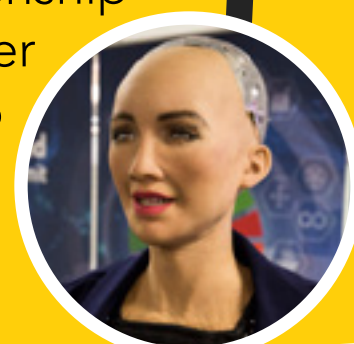


Humanoid robots have captured the imagination of the world.

In 2016, China created a humanoid robot and named her Jia Jia. While she looks very real and human-like, her speaking style and limited motion surely point to her being a robot.

Japan has developed a news-reading robot called Kodomoroid. Not only does she read the news, but is also able to answer questions in a human-like manner. She can speak many languages. Kodomoroid is now working at the Museum of Emerging Science and Innovation in Tokyo.

The latest humanoid robot to have caught everyone's attention is Sophia. She is the first humanoid robot to have been introduced at the United Nations in 2017 and has also been accorded citizenship by Saudi Arabia. Sophia was created by Hanson Robotics; her Artificial Intelligence revolves around human values. She also has a sense of humour! Sophia is busy giving interviews and attending conferences around the globe.



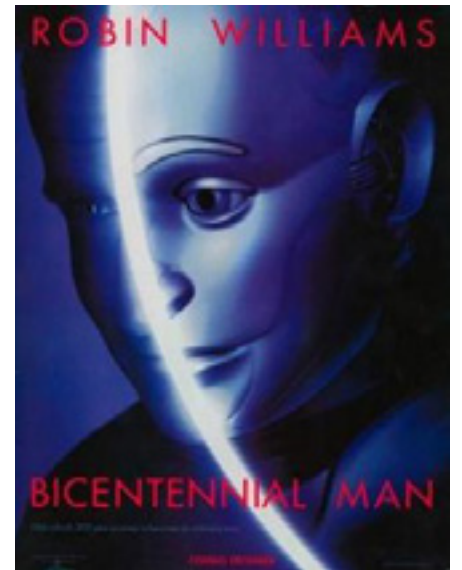
Robots in Popular Culture

Robot as a word came into existence in the play written by Karel Capek. While that was the beginning, the magic of cinema gave robots a whole new dimension. Their initial appearance in cinema was more as slaves to humanity, which evolved into a level where robots started to take over the human world and became our nemesis. The silver screen journey of robots has had a beautiful evolution, and all thanks to the lovely imagination of these magic makers.

Who can forget NDR, the unusual robot who is the “hero” in Hollywood’s *Bicentennial Man*? NDR stands out because he has something akin to humans and that is the ability to be creative. T1000 is the robot in *Terminator 2* who helps humans in times of danger. Walt Disney’s lovable, quirky, garbage shifter robot *WALL-E* spins a story of sweetness and love in an unlikely environment of apocalypse Earth. Another unforgettable robot is R2D2, also known as Artoo-Detoo, the little beeping robot on wheels who has made an appearance in 10 of the 11 *Star Wars* movies. A different aspect of robot-human interaction is presented in the film, *I, Robot*, whose protagonist Sonny is framed for breaking the three laws of robotics and is helped by the human detective to clear his name.

Even the TV industry has not been spared the robot mania. If you love *The Simpsons*, you must have seen Lingua, who keeps correcting Homer Simpson’s horrible grammar.

Japan’s anime industry has created a comic niche for robots like Astro Boy and Mecha. Marvel comic books are responsible for creating a whole arsenal of robots: Red Tornado, Human Torch, Optimus Prime and many more who have entertained millions with their adventures and continue to do so – in the comic book avatar and in movies alike. So, how do you like your robots?

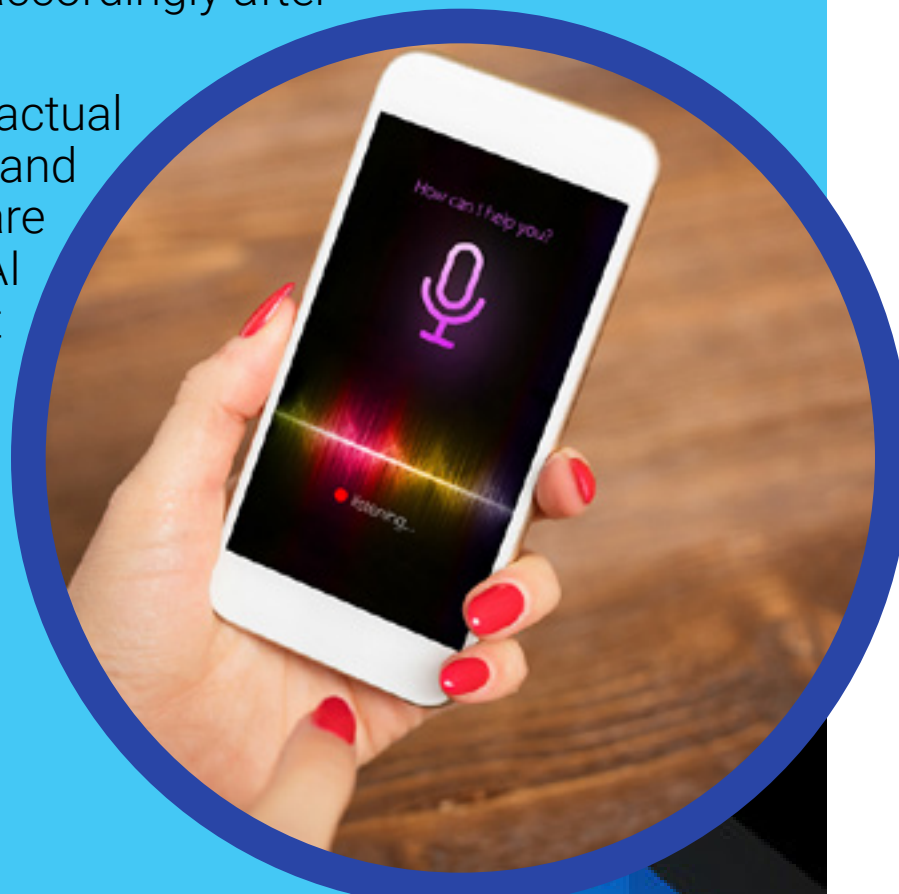


AI and Robots – Same, same or different?

Artificial Intelligence (AI) when combined with Robotics creates a huge world of possibilities and this world is very much alive, right now. While earlier, the development of robotics was focusing on making industries and factories better and more efficient, AI has changed the game completely. With the advent of AI in recent years, robots have gained flexibility and learning capabilities.

What really is AI? Think of when you ask Siri on your iPhone to play the last song you heard or when you ask Alexa to tell you the latest on your favourite hero. All of these are examples of AI at work. They have become commonplace very soon, haven't they? AI refers to a machine, which has thinking capability like that of humans. So, not only do they take in data but are able to adapt themselves and respond accordingly after learning with the data.

Now, you can well imagine how AI can become the actual brain for robots. The combination is sheer magic and beyond imagination. When working together, robots are smarter, more accurate and more profitable. While AI has yet to come close to reaching its full potential, but its advancement is closely linked to that of robotics. Even though AI is still in its nascent stages, it has already become a transformative technology in the manufacturing sector. And this immense possibility has only just begun... think Tesla and driverless cars!



Word Search

Where is my Robot?

You have come across names of some popular robots in this issue. Go ahead and find them below. You are looking for six of them!

L	S	Z	V	W	H	S	U	Y	M	N	U	X	F	Y
H	G	U	C	T	O	Y	T	P	W	E	N	N	P	O
A	G	X	Z	R	D	Z	I	O	A	X	Q	Y	O	G
O	C	I	A	R	A	S	I	M	O	N	W	B	S	Z
L	W	M	Y	Y	K	J	M	S	H	O	H	L	P	X
H	H	H	Q	R	S	P	P	O	K	J	C	N	X	G
K	W	Y	X	A	H	O	G	X	N	J	A	D	I	L
S	M	M	U	B	H	R	W	X	V	M	N	R	L	Z
I	X	V	B	S	X	X	S	G	T	W	N	P	M	A
I	S	G	Y	Y	S	W	W	R	U	Y	M	U	Z	S
W	U	N	I	M	A	T	E	O	G	H	V	Q	F	H
W	H	M	U	J	O	B	I	Y	S	O	P	H	I	A
R	D	H	R	U	R	Y	Y	E	Q	C	V	E	K	K
P	J	M	S	A	U	R	F	Z	U	S	M	A	R	E
F	Y	R	I	J	J	R	Q	W	K	G	F	W	H	Y

❑ See the answers on page 9





**GUESS THE NAME OF THE
SCI-FI BOOKS!**

- 1. I. Asimov wrote it; Hollywood made it. It gave three laws of the robot world.
.....
- 2. Aliens and automations, made alive by Wells, declared war on humanity.
.....
- 3. Douglas Adams hitched his funny wagon and made for another galaxy.
.....
- 4. The autobiography of an intelligent robot, whose name rhymes with that of its author, Sladek.



- Word Search
- Answer
- Uimate
 - Daksh
 - Sophia
 - Shakey
 - ASIMO
 - TUG

JOKES



Knock, knock
Who is there?
Art
Art who?
R2D2

What is a robot's favourite music genre?
Heavy metal!

Why was the robot tired when it got home?
It had a "hard drive".

Why was the robot angry?
Because people kept pushing its buttons.

Source: <http://www.jokes4us.com/peoplejokes/robotjokes.html>

FUN FACTS



- The term **Humanoid** is for robots, which replicate human beings, and yes, gender has also been considered. **Android** is used to refer to robots, which are masculine while **Gynoid** is used to refer to robots with feminine features.

- The world's smallest flying robot is the **RoboBee** developed at the Wyss Institute, Harvard. It is the size of a fingernail but needs to be tethered to a cable to power its wings.
- There is actually a society that has been formed to safeguard robots. It is the American Society for the Prevention of Cruelty to Robots (ASPCR). Founded in 1999, it is based in Seattle, USA.
- Seoul, Korea, wants to have the world's very first museum dedicated to robotic science. And the city authorities have decided on the best possible way to build it: Use robots, of course!



1. Robot
2. The War of the Worlds
3. The Hitchhiker's Guide to the Galaxy
4. The Complete Roderick

ACTIVITY SHEET

Activity 1

Let's make our very own robot. Presenting the Art Bot!

What do you need:

- Large, disposable paper cup
- 2 x AA batteries
- Battery holder with switch
- Hobby motor 130 size (3 to 6 volts)
- Paper cutter
- Double-sided tape
- Electrical tape (the black/red ones)
- Coloured and fun tape
- Markers – 3 to 4
- Stickers and glitter and stick-on stones – For decoration
- Large sheet of paper stuck to a board (for the bot to move on)

What to do:

1. Measure the large paper cup and check where to attach the markers. The markers will work as the legs and they need to be evenly distributed around the cup for balance.
2. After marking the places, attach the markers to the cup using tape. Make sure that they are securely fastened to the cup and won't come off later. All the tips of the markers should also be aligned.

3. Now, make two small slits on the bottom of the cup using a paper cutter.
4. Attach the motor on top of that slit area using double-sided tape. Ensure that the leads from the motor slip through the slits (inside the cup).
5. Now, open the battery holder, place the 2 AA batteries inside the battery (follow the instructions). Close the battery holder and ensure that for now, the switch is set to Off.
6. Attach the battery holder to the inside of the cup using double-sided tape.
7. Now, use the electrical tape to attach the leads from the motor to the leads from the battery holder.
8. Your artistic robot is ready to draw you a masterpiece.
9. Decorate your paper cup to turn it into the Art Bot of your imagination. Add stickers, glitter, a crown!
10. Now, position the Art Bot on the large piece of paper and turn the switch on. Woooooahhhh! Your Art Bot is in action! Enjoy as a masterpiece is created.



Activity 2

Reading about so many robots must have surely got your imagination going. Let's put that to good use, shall we?

Here is the start to a story...

Dr. E. Livingstone is a renowned robotics engineer. He spends all his time at the lab and hardly has any time left for any social interaction. He created a robot friend for himself to solve his loneliness problem. But today all he can find in his cabin is a note left by his robot friend. His robot friend is nowhere to be seen.

Go ahead and weave your magic and write your own story to say what happens next.

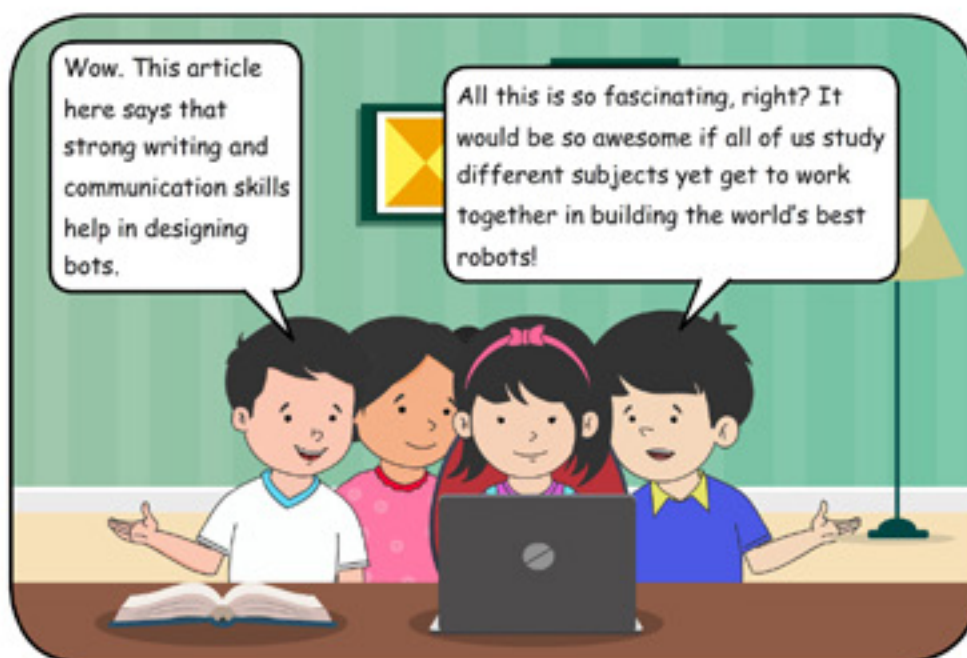
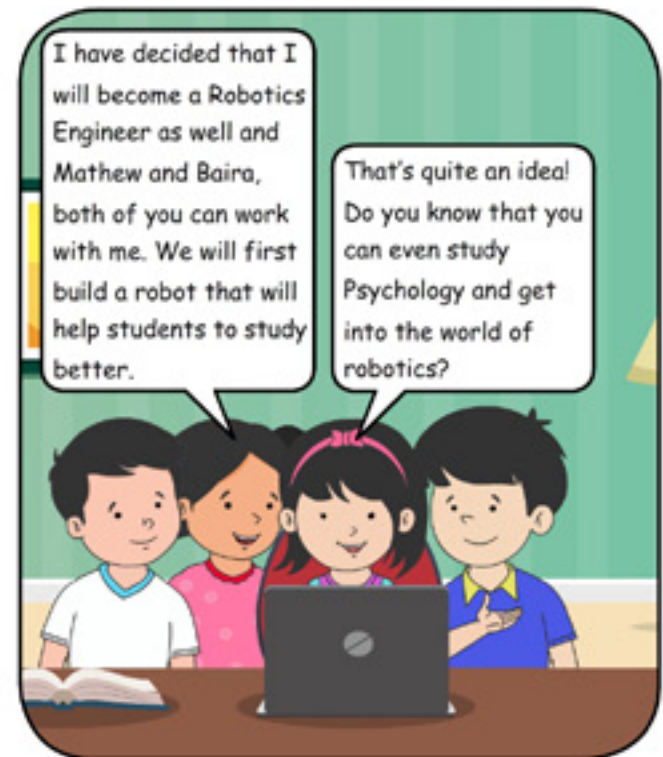
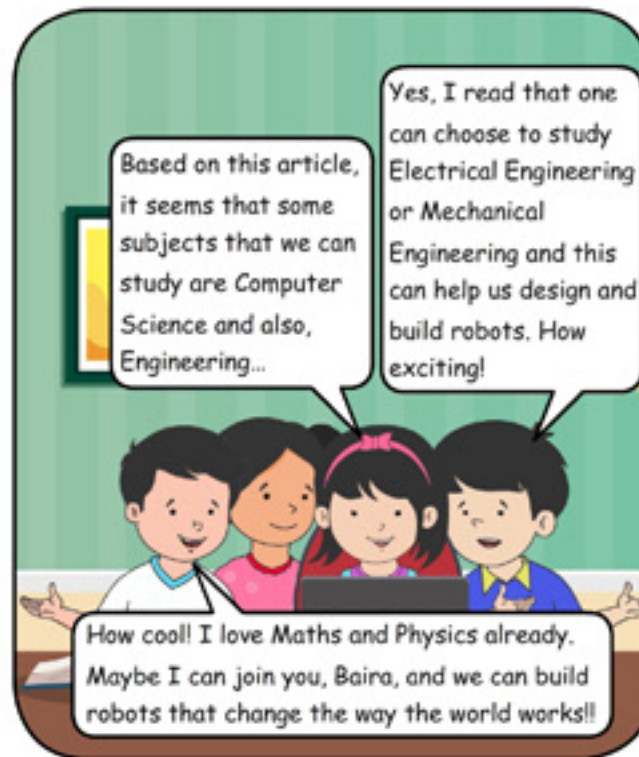
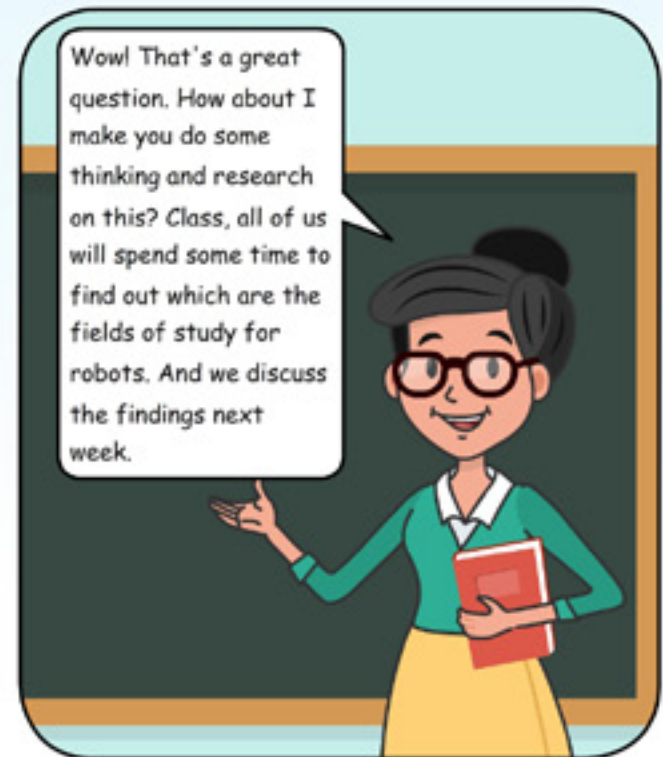
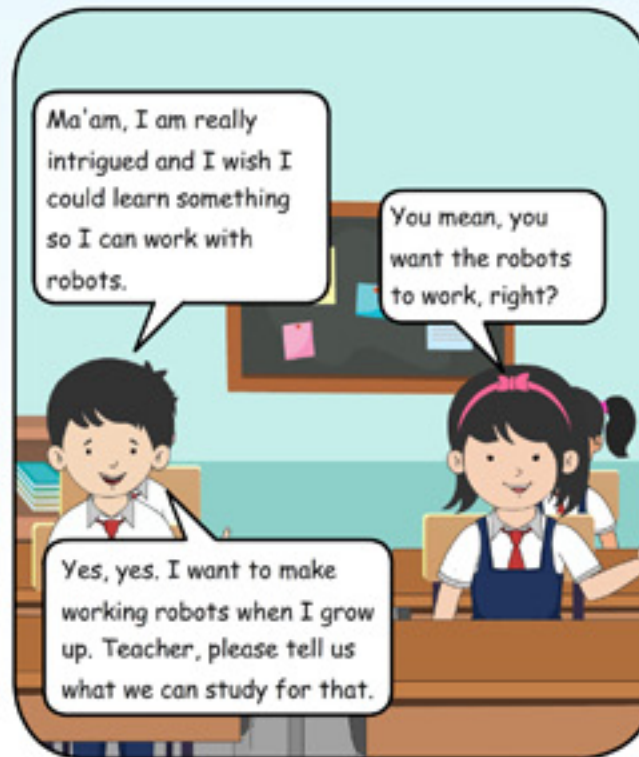




Comic Strip



BAIRA AND BELA



CURRENT EVENTS UPDATES

January 2020

1 January 2020

General Bipin Rawat assumes charge as the first Chief of Defence Staff (CDS) of India.



2 January 2020

A US missile strike in Iraq kills Qasem Soleimani, an Iranian Major General of the Islamic Revolutionary Guard Corps.

5 January 2020

The 77th Golden Globe Awards are given out at a ceremony held in Beverly Hills, California. 1917 wins the Best Picture Drama award while Renée Zellweger and Joaquin Phoenix win the Best Actor awards.



8 January 2020

A Boeing 737-800 crashes while taking off from Tehran, killing all 176 people on board. It is later reported as an accident caused by a missile fired by Iran on US forces.

9 January 2020

Prince Harry and his wife Meghan announce their decision to step away from their roles as senior members of the British royal family.

January 2020

11 January 2020

Oman names Haitham bin Tariq al-Said as its new head of state after the death of Sultan Qaboos.

The Citizenship Amendment Act (CAA) comes into effect in India, as protests against and for it continue throughout the country.

15 January 2020

Virat Kohli wins the ICC Spirit of Cricket award while Rohit Sharma wins the ICC Cricketer of the Year 2019 award.

22 January 2020

Greece elects Katerina Sakellariopoulou as its first woman president.



26 January 2020

Popular NBA player Kobe Bryant, his daughter and seven other people are killed in a helicopter crash in California.

27 January 2020

Billie Eilish's Bad Guy wins the Record of the Year at Grammy Awards.

30 January 2020

The World Health Organization (WHO) declares a global emergency in light of the coronavirus epidemic death toll.



February 2020

3 February 2020

Novak Djokovic wins the Australian Open 2020 title for a record eighth time while Sofia Kenin wins the title for the first time.



6 February 2020

US President Donald Trump is acquitted of all impeachment charges against him.

10 February 2020

Parasite wins the Best Picture award at the Academy Awards, becoming the first foreign language film ever to win this award at the Oscars.

16 February 2020

Arvind Kejriwal is sworn in as the Chief Minister of Delhi for the third time.



17 February 2020

The Supreme Court of India rules for women officers in the Indian Army to be considered eligible for permanent commission.

19 February 2020

Sachin Tendulkar wins the Sporting Moment of the Year Award at the Laureus World Sports Awards 2020.

CURRENT EVENTS UPDATES

February 2020

24 February 2020

US President Donald Trump and First Lady Melania Trump visit India on a much talked-about three-day visit.



Violent clashes surrounding the Citizenship Amendment Act (CAA) turn communal in Delhi; leading to loss of life and property.

26 February 2020

Malaysian Prime Minister Mahatir Mohammad resigns and withdraws from the ruling coalition government.

Hosni Mubarak, former Egyptian President, passes away in Cairo.



27 February 2020

Maria Sharapova, five times Grand Slam winner, announces her retirement from tennis.



March 2020

05 March 2020

Javier Pérez de Cuéllar, Peruvian diplomat and two times UN Secretary General, passed away.

06 March 2020

The coronavirus epidemic has been declared a global pandemic. Several countries have taken measures of limiting domestic and international travel. The total number of Coronavirus cases worldwide tops 100,000.

09 March 2020

Australia beat India in the ICC Women's T20 World Cup Final to win the trophy for a record fifth time.



11 March 2020

UNSC approves the US-Taliban peace deal and US begins withdrawal of its troops from Afghanistan.

17 March 2020

Women officers of the Indian Navy granted permanent commission; this comes a month after Indian Army decided on the same.

20 March 2020

All four convicts accused of the rape in the Nirbhaya case in India were executed, after the Supreme Court's decision.

March 2020

24 March 2020

The International Olympics Association decides to postpone the Tokyo Olympics 2020 to 2021 in the face of the COVID-19 pandemic, which has impacted the entire world.

26 March 2020

Almost 20% of the world's population is under lockdown as a measure to fight the COVID-19 pandemic. Many measures are being taken across the world.

27 March 2020

Noted artist, architect, sculptor and writer Satish Gujral passed away at the age of 94.

International Monetary Fund (IMF) chief, Kristalina Georgieva, shared that the COVID 19 pandemic has pushed the global economy into a recession, much worse than the one in 2009, and massive funding will be required to get out of this crisis.



28 March 2020

Dadi Janki, the chief administrator of the Brahma Kumaris spiritual organisation passed away at the age of 104.

