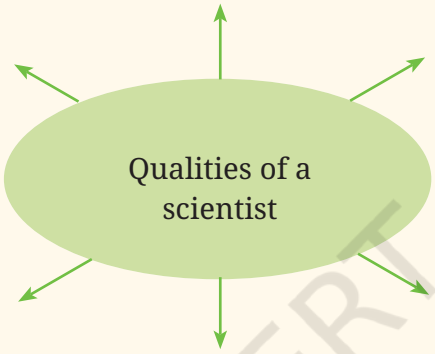
Bibha Chowdhuri

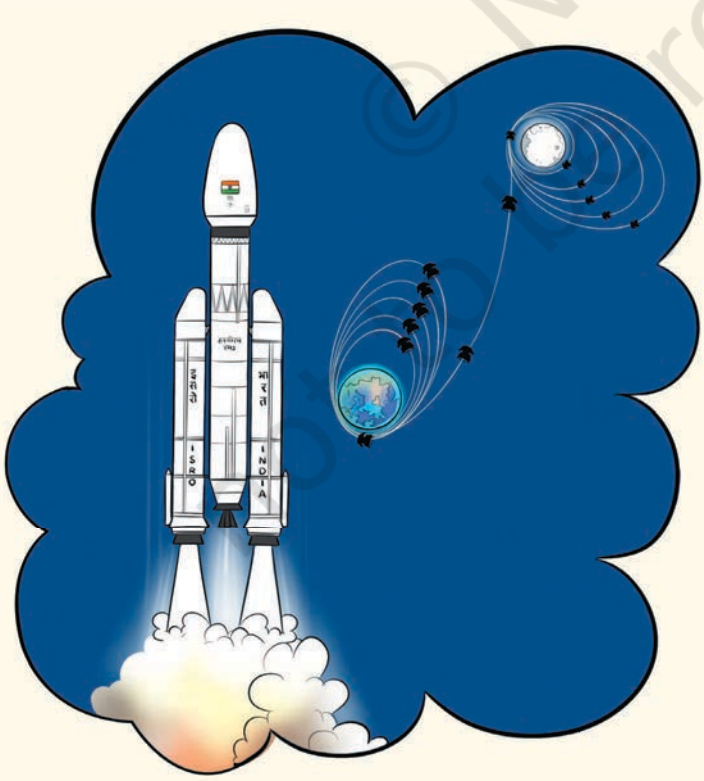
The Beam of Light that Lit the Path for Women in Indian Science

Let us do these activities before we read.

I Work in pairs. What qualities do you associate with a scientist? Share your answers with your classmates and teacher. Complete the word web given below.



II Some pictures of women scientists are given below. What do you know about their work? Share your answers with your classmates and teacher.



Let us read

In a world where women's potential in science, technology, engineering, and mathematics (STEM) is being recognised beyond doubt, India has seen its share of **trailblazers** who paved the way. Today, the women behind ISRO's Mars Orbiter Mission and Chandrayaan-3 are celebrated for their brilliance and achievements. However, the foundation was laid by early pioneers like Bibha Chowdhuri—India's first woman physicist—who carved a path in the male-dominated field of physics.

At a time when Indian women struggled to seek knowledge and **equitable** access to education, Bibha Chowdhuri emerged as a rare beam of light—a woman who **defied the odds** and lit a path for others to follow. Born in 1913 in Kolkata, in an India that still followed the traditional path. Bibha's story was anything but ordinary. She was a scientist who rose not only against the societal expectations of women but also amidst the **towering** giants of science—men whose names the world would come to celebrate, while hers was whispered only in the halls of those who recognised her brilliance.

Bibha's **persistence** eventually earned her a place at the Bose Institute. She had already begun to chip away at the walls of exclusion, becoming the first Indian woman to excel in high-energy particle physics.

Breaking Boundaries

In 1945, Bibha's academic journey took her to the University of Manchester. Under the guidance of the celebrated Nobel Laureate, Patrick M.S. Blackett, she **delved** deeper into the field of cosmic rays. Her Ph.D. thesis on cosmic rays earned local recognition, with newspapers introducing her as 'India's

trailblazers: people who are the first to do something that other people do later

equitable: treating everyone fairly and in the same way

defied the odds: achieved something despite difficulties

towering: very high or great

persistence: ability to keep doing something difficult

delved: examined something in detail to find information

New Woman Scientist—She has an eye for Cosmic Rays'. This title reflected the awe she inspired in a world still **sceptical** of her capabilities.

In an era marked by towering scientific discoveries, Bibha was often on the cusp of greatness but remained in the shadows of her male counterparts. Her most **notable** contribution was the discovery of pi-mesons, a subatomic particle. Her nomination for a Nobel Prize in 1950 by Erwin Schrödinger, though unsuccessful, reflected her remarkable talent. Her life, full of challenges and struggles, was marked by an uphill battle to be heard and seen in the field of science. Chowdhuri never received any awards during her lifetime, but continued her work tirelessly.

In 1949, upon her return to India, she became the first woman faculty member at the Tata Institute of Fundamental Research (TIFR), personally selected by Homi J. Bhabha. Chowdhuri's contributions spanned across research institutes like the Physical Research Laboratory in Ahmedabad and the Saha Institute of Nuclear Physics in Kolkata. This is where she continued her work on cosmic rays and subatomic particles. Through decades of crucial research, from Kolar Gold Mines to the Physical Research Laboratory under the mentorship of Vikram Sarabhai, Bibha's work went on quietly, as she remained in the **periphery** of Indian scientific **acclaim**. She passed away in 1991, her story untold, her name largely forgotten.

sceptical: doubtful

notable: remarkable

periphery: boundary

acclaim: praise

The Legacy of Bibha Chowdhuri and Today's Women in Indian Science

The stars are not meant to remain hidden forever. In 2019, the International Astronomical Union (IAU) honoured her legacy by renaming a star in the constellation Leo—HD 86081—as 'Bibha,' meaning 'beam of light.' Fittingly, she is now a 'star in heaven,' a symbol of the light she brought to Indian science. A fitting tribute

to a woman whose life was a radiant example of **tenacity**, brilliance, and quiet determination. In 2020, the Government of India declared a chair professorship in her name.

tenacity: determination to continue what you are doing

Fast forward to the present day, and the advancements made by women in Indian science reflect Chowdhuri's pioneering spirit and the progress she helped **ignite**. Women in ISRO, for instance, are no longer participants but leaders in missions that make global headlines.

ignite: arouse

One such luminary is Dr. Ritu Karidhal Srivastava, popularly referred to as the 'Rocket Woman of India.' Her pivotal role in ISRO's Mars Orbiter Mission and subsequent leadership in Chandrayaan-2 and Chandrayaan-3 reflect the leaps women have made in STEM in India. Over 50 women contributed to Chandrayaan-3, and their success is built upon the shoulders of pioneers like Bibha Chowdhuri. Their roles in developing **autonomous** systems for spacecraft and managing mission-critical operations highlight the capabilities of women in pushing India's space programme forward.

autonomous: independent

From Shadows to the Stars

The journey from Bibha Chowdhuri's era to today's women scientists has been long and **arduous**, but it is also inspiring. The struggles Chowdhuri faced are a **stark** reminder of how far we've come—and how much further we have to go. But with every cosmic achievement—be it landing on the moon or reaching Mars—these women prove that the journey is well worth it.

arduous: difficult, needing a lot of effort and energy

stark: clear

Bibha Chowdhuri's legacy lives on. Her story continues to inspire young women to pursue their passions, break barriers, and leave their mark on the world. Whether exploring cosmic rays or sending rockets to Mars, India's women scientists are writing the next chapter in a story that Bibha Chowdhuri helped begin.

As the stars of Indian science shine brighter, Bibha Chowdhuri, the **beacon**-'beam of light,' will always guide the way.

beacon: a good example that gives people hope and encouragement

Let us discuss

I Arrange the following events from Bibha Chowdhuri's life in the correct order of occurrence. Share your answers with your classmates and teacher.

1. The International Astronomical Union (IAU) honoured her legacy by renaming a star in the constellation Leo—HD 86081—as 'Bibha'.
2. She became the first woman faculty member at the Tata Institute of Fundamental Research (TIFR).
3. Bibha Chowdhuri was born in pre-independent India.
4. The Government of India declared a chair professorship in Bibha's name.
5. She joined the University of Manchester under the guidance of the celebrated Nobel Laureate, Patrick M.S. Blackett.
6. She was nominated for a Nobel Prize by Erwin Schrödinger.

Let us think and reflect

I Read the given extracts and answer the questions that follow.

1. *In 1945, Bibha's academic journey took her to the University of Manchester. Under the guidance of the celebrated Nobel Laureate, Patrick M.S. Blackett, she delved deeper into the field of cosmic rays. Her Ph.D. thesis on cosmic rays earned local recognition, with newspapers introducing her as 'India's New Woman Scientist—She has an eye for Cosmic Rays'.*

(i) Why is the mention of Patrick M.S. Blackett, a Nobel Laureate, significant in this extract?

(ii) What can be inferred about the public perception of women scientists in the 1940s from the title given to her by the press 'India's New Woman Scientist'?

A. Women scientists were widely accepted and celebrated at that time.
B. The world was still doubtful about the capabilities of women scientists.
C. Women scientists were as common and renowned as men in the 1940s.
D. Women were not allowed to study sciences or pursue scientific careers.

(iii) In the phrase 'celebrated Nobel Laureate,' the word 'celebrated' refers to all of the following EXCEPT someone who is

A. famous and highly respected
B. frequently seen in public
C. renowned for their achievements
D. well-regarded in their field

(iv) Complete the following sentence suitably.

The phrase 'She has an eye for Cosmic Rays' suggests that _____.

2. *The journey from Bibha Chowdhuri's era to today's women scientists has been long and arduous, but it is also inspiring. The struggles Chowdhuri faced are a stark reminder of how far we've come—and how much further we have to go. But with every cosmic achievement—be it landing on the moon or reaching Mars—these women prove that the journey is well worth it.*

Bibha Chowdhuri's legacy lives on. Her story continues to inspire young women to pursue their passions, break barriers, and leave their mark on the world. As the stars of Indian science shine brighter, Bibha Chowdhuri, the beacon–'beam of light,' will always guide the way.

(i) What can be inferred about the challenges faced by women scientists today, as compared to Bibha Chowdhuri's era?

A. Women scientists no longer face any barriers.
B. The challenges remain, but progress has been made.
C. The struggles have become more difficult over time.
D. The struggles are the same as they were for Chowdhuri.

(ii) The phrase 'Bibha Chowdhuri's legacy lives on' suggests that _____.

(iii) Why is Bibha Chowdhuri referred to as a 'beacon' and a 'beam of light' in the extract?

(iv) State whether the following sentence is a fact or an opinion.

Bibha Chowdhuri was the beacon, the 'beam of light' whose story continues to inspire young women.

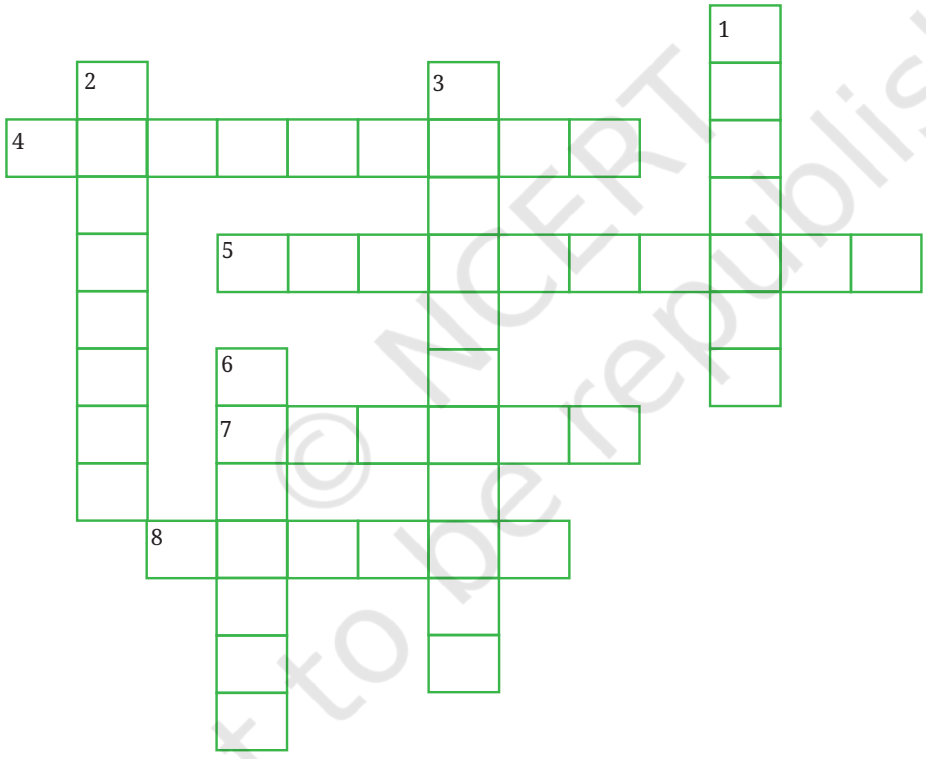
II Answer the following questions.

1. Why is Bibha Chowdhuri considered a pioneer in the field of science?
2. What does Bibha Chowdhuri's nomination by Erwin Schrödinger tell us about her abilities?
3. Bibha Chowdhuri never worked for awards or recognition. Support this statement with evidence from the text.

4. How does the renaming of a star as 'Bibha' serve as both a literal and symbolic recognition of her contributions to science?
5. How do the roles of women in ISRO today reflect broader changes in societal attitudes towards women in STEM in India?
6. What is the writer's purpose of highlighting the contributions of Bibha Chowdhuri and other modern women scientists?
7. How might this text help shape people's perception of the role of women in other traditionally male-dominated fields?

Let us learn

I Complete the crossword puzzle by filling in the antonyms from the clues given below in the table. You may refer to the text.



Across	Down
4. core	1. effortless
5. dependent	2. weakness
7. extinguish	3. neglect
8. terrestrial	6. trivial

II Substitute the underlined phrase in the sentences with the suitable words from the box given below.

physicist	luminaries	pioneers
peers	barriers	persistence

1. They are considered to be <u>the first people to start</u> the online markets.
2. A <u>scientist who studies matter, energy, light</u>, etc.
3. Most of my <u>friends are my classmates and are my age</u>.
4. We first welcomed all the <u>famous and important people</u> in folk song for the award ceremony.
5. My brother finally succeeded in his business because of his <u>continuous efforts and determination</u>.
6. We should remove all the <u>things that block our way</u> in achieving success.

III The words 'professorship', 'mentorship', and 'leadership' are used in the text. These words are made by adding the suffix '-ship' to the words 'professor', 'mentor' and 'leader'. Similarly, we can make words by adding -ment and -hood to certain words.

Now, make words by adding suitable suffixes -ship, -ment, and -hood to the words given below. One example has been done for you.

achieve + ment = achievement

1. member + _____ = _____
2. govern + _____ = _____
3. partner + _____ = _____
4. child + _____ = _____
5. citizen + _____ = _____
6. entertain + _____ = _____
7. brother + _____ = _____
8. agree + _____ = _____

IV The abbreviations—ISRO and STEM—used in the text are called acronyms because they are read or pronounced as full words.

The grid given below has acronyms for the following. Circle the acronyms in the grid.

1. National Aeronautics and Space Administration
2. All India Institute of Medical Sciences
3. Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homoeopathy
4. National Institute of Pharmaceutical Education and Research
5. World Health Organization

A	C	B	G	A	I	I	M	S
Y	R	T	H	A	I	T	A	W
U	S	W	H	O	C	M	T	J
S	A	R	O	F	G	C	R	T
H	B	N	I	P	E	R	B	I
D	G	N	O	J	T	O	N	M
E	F	N	A	S	A	J	E	E

Clipping

The short form of laboratory is lab. In making this short form, the front part of the word is retained and the end part is removed or clipped.

Clipping is a method of making words from larger words in English. There are three clipping methods.

1. Back clipping: a word is made by removing the end part of a word and retaining the front part (exam—**exam**ination, ad—**ad**vertisement, gas—**gas**oline, memo—**memo**randum, gym—**gym**nasium, photo—**photo**graph, etc.).
2. Front clipping: a word is made by removing the front part of a word and retaining the end part (phone—tele**phone**, net—inter**net**, bike—motor**bike**, net—inter**net**, etc.).
3. Middle clipping: a word is made by removing the front and the end parts of the word and retaining the middle part (flu—in**flu**enza, fridge—re**frige**rator, etc.).

V Read the following sentence from the text and the table that follows.

..., the foundation was laid by early pioneers like Bibha Chowdhuri...

Subject	Verb	Object
The foundation	was laid	early pioneers like Bibha Chowdhuri...

Here the verb is expressed in passive form.

Verbs can be expressed in either active voice or passive voice.

When the subject performs the action, the sentence is said to be in active voice. On the other hand, when the subject receives the action, the sentence is in passive voice.

Generally, sentences written in active voice are considered effective. However, passive voice is used when the

- action is more important than the doer,
  A cure for the disease was discovered.
  (The focus is on the discovery, not on who discovered it.)
- doer of the action (agent) is obvious,
  The national anthem is sung at the beginning of the event.
  (It is clear that people sing it, so mentioning the doer is unnecessary.)
- doer of the action is unknown.
  The car was stolen last night.
  (The identity of the thief is unknown.)

Now, complete the following news report with the passive form of verbs given in the box below. (Remember that the verb must agree with the subject.)

discover test measure publish record take

Last year, significant advancements in medical science 1. _____ in leading medical journals when a new vaccine for malaria 2. _____. The vaccine 3. _____ through several clinical trials and results 4. _____ in those journals. During the trials, blood samples 5. _____ regularly from participants to monitor their immune response. The amount of antibodies produced 6. _____ carefully to assess the effectiveness of the vaccine.

VI Read the following report of an experiment. Rewrite the report using passive verbs wherever necessary.

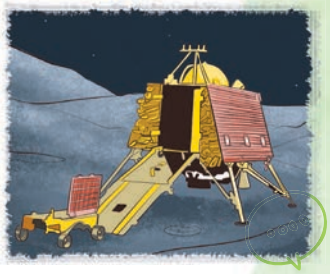
I conducted an experiment to investigate the effects of light on plant growth. I placed various plants under different light conditions and measured their growth over several weeks. I recorded data daily to track the height of each plant. At the end of the experiment, I analysed the results and found that plants exposed to natural light grew significantly taller than those under artificial light. I concluded that sunlight plays a crucial role in plant development. I presented my findings to the class, highlighting the importance of light in enhancing photosynthesis and overall plant health.

You may begin like this.

An experiment was conducted...

VII Read the instructions given in the box on landing of Chandrayaan. Complete the passage by choosing the correct answer from the options given.

- Launch the spacecraft towards the Moon from Earth.
- Position the spacecraft to enter the Moon's orbit.
- Adjust the spacecraft's path for landing.
- Slow down the spacecraft as it nears the Moon's surface.
- Release the rover to explore the surface and collect valuable data.



Chandrayaan's landing mission involves several key steps. First, the spacecraft 1._____ towards the Moon from the Earth. Then, it 2. _____ to enter the Moon's orbit. After reaching the Moon's orbit, the spacecraft's path 3. _____ for landing. Next, the spacecraft 4. _____ as it nears the Moon's surface. Finally, the rover 5._____ to explore the surface and collect valuable data.

(i) A. launched B. were launched
C. was launched D. is launched

(ii) A. position B. was positioned
C. is positioned D. has positioned

(iii) A. adjusted B. was adjusted
C. is adjusted D. were adjusted

(iv) A. slowed down B. was slowed down
C. is slowed down D. were slowed down

(v) A. is released B. has released
C. were released D. was released

Let us listen

I You will listen to a podcast about Artificial Intelligence. As you listen, answer the following questions by selecting the correct options. (Transcript for teacher on page 251)

1. What is one of the key benefits of AI in the healthcare sector?
   (i) Helps doctors communicate faster with patients.
   (ii) Provides personalised treatments and faster diagnoses.
   (iii) Focuses on cosmetic surgeries to improve appearance.

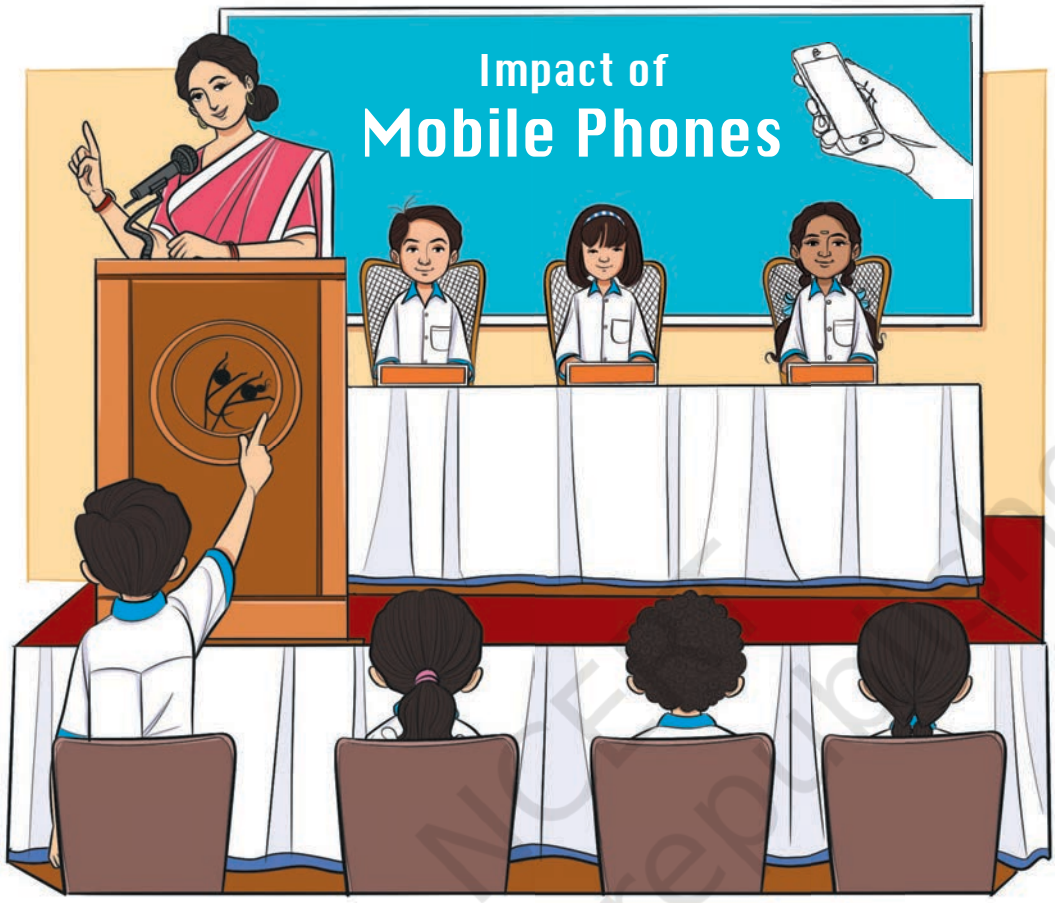
2. How did AI play a crucial role during the global pandemic?
   (i) AI robots monitored patient behaviour in hospitals.
   (ii) AI assisted in speeding up the discovery of new medicines.
   (iii) AI developed different types of vaccines by itself.

3. What example was given regarding AI's role in renewable energy?
   (i) AI is optimising the placement of wind turbines and solar panels in cities.
   (ii) AI is promoting alternative energy from wind turbines and solar panels.
   (iii) AI is improving the performance of wind turbines and solar panels.

4. What does AI offer to teachers in the field of education?
   (i) Helps teachers assign grades more quickly.
   (ii) Allows teachers to communicate better with students.
   (iii) Helps teachers analyse student performance.

5. What is one of the user-friendly features that AI is enhancing for people with disabilities?
   (i) Helps them find better jobs in the mainstream.
   (ii) Improves speech recognition and voice command technologies.
   (iii) Trains individuals to interact with robots.

Let us speak



I Form a group of five. Conduct a panel discussion on the topic, 'Evaluating the Impact of Mobile Phones—Beneficial or Harmful'. Each student will take on one of the following roles.

- Moderator (initiates and directs the flow of the discussion inviting the speakers to share their views on the subject; at the end sums up the points of discussion and thanks the members of the group)
- Principal (opposed to—focus on discipline in school)
- Teacher (in favour of—partially in favour, educational use with limitations)
- Parent (opposed to—concerned about health and social effects on children)
- Student (in favour of—highlighting the benefits like connectivity and learning)

You may use the cues given below and add your own ideas when speaking.

Principal
As a Principal, I strongly believe mobile phones are largely disruptive because...

Teacher
From an educator's perspective, I think mobile phones can be valuable but...

Parent
As a parent, I'm concerned that mobile phones pose certain risks to children's health and social development...

Student
As a student, I feel mobile phones are essential because...

Let us write

I Your school recently hosted the Zonal Science Exhibition, in which teams of students from 25 schools participated enthusiastically. As the student editor, write a report on the exhibition to be published in your school magazine. Use the cues given below with your own ideas to compose this report.

- Who was the organiser and who hosted the exhibition?
- When (date and time) and where was it held?
- Why was it held?
- Who participated?
- Who was the Chief Guest?
- What were the competitions held? For example: Science Quiz, Science Models, etc.
- What were the topics of models exhibited? Give details.
- Which team got the trophy for best exhibit?
- What were the observations of the Chief Guest and other visitors?

Points to remember:

1. Write the report in past tense, passive voice, and third person.
2. Follow proper format with a headline, reporter's name, and three paragraphs.

Let us explore

I In the recent times, Augmented Reality and Virtual Reality are changing the way students learn. Let us know more about them.

- Augmented reality (AR) enhances a person's environment by adding digital elements to what can be seen in real time, usually through a smartphone camera.
- Virtual reality (VR) offers a fully immersive experience, replacing the real world with a simulated one.
- Through AR and VR, the students can see and interact with things that they could not interact with in real life. This enables younger students to understand difficult ideas easily.
- To keep up with the times, NCERT has developed the e-Pathshala AR (Augmented Reality) App under the aegis of MHRD, Government of India.
- This App aims to enable students to go beyond textbooks and four walls of the classrooms and learn concepts by directly experimenting rather than only through reading and memorisation.
- This revolutionary effort will change most students from passive listeners to active learners.
- This effort is in line with the Prime Minister's Digital India vision to empower varied sectors using technology and addressing the triple need of skill, scale, and speed.

Gear up for the new age education!

https://ciet.ncert.gov.in/ar-vr

II The Government of India has come out with a new set of National Awards in the field of Science, Technology, and Innovation known as 'Rashtriya Vigyan Puraskar'.

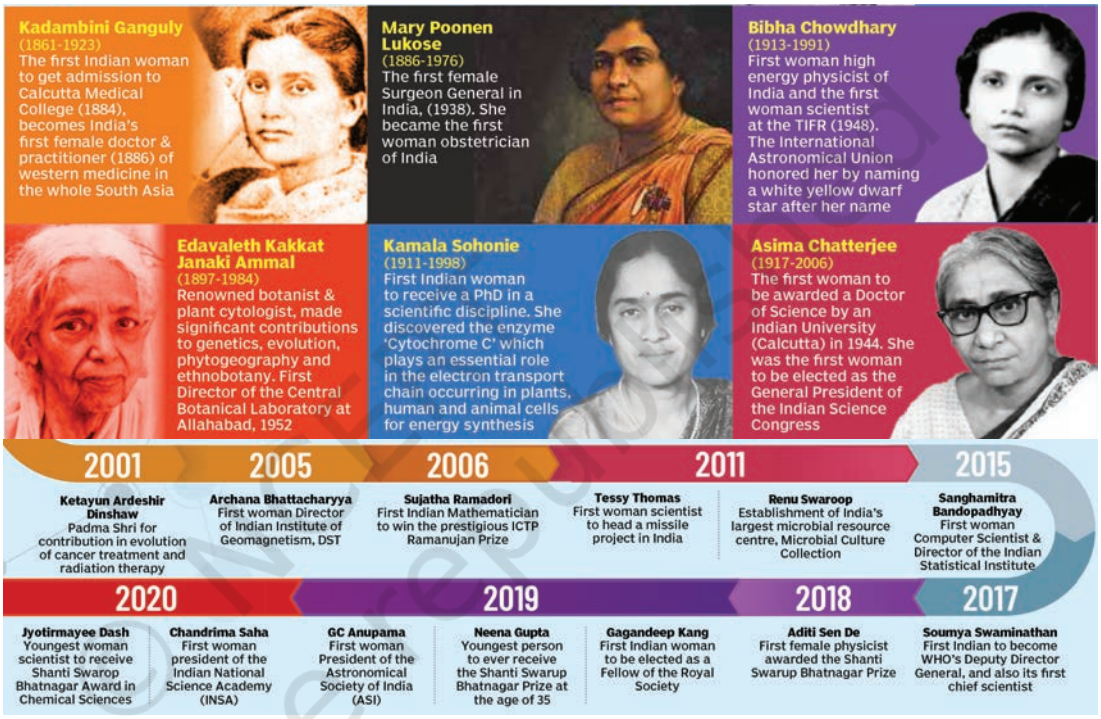
The objective of the Rashtriya Vigyan Puraskar (RVP) is to recognise the notable and inspiring contribution made by the scientists, technologists, and innovators individually or in teams in various fields of science, technology, and technology-led innovation.

1. Vigyan Ratna (VR) award will recognise lifetime achievements and contributions made in any field of science and technology.
2. Vigyan Shri (VS) award will recognise distinguished contributions in any field of science and technology.

3. Vigyan Yuva-Shanti Swarup Bhatnagar (VY-SSB) award will recognise and encourage young scientists up to the age of 45 years, who have made an exceptional contribution in any field of science and technology.
4. Vigyan Team (VT) award to be given to a team comprising three or more scientists/researchers/innovators, who have made an exceptional contribution working in a team in any field of science and technology.

https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1959262

III A glimpse of women pioneers from different fields.



Source: https://www.indiascienceandtechnology.gov.in/sites/all/themes/vigyan/images/Women's_Scientist_Brochure_Low_Res.pdf

TRANSCRIPTS

Feathered Friend

Let us listen *(refer to page 217)*

I You will listen to a conversation between Monika and Toby. Toby is a Martian and is stranded on Earth. He has become Monika's friend. As you listen, put a tick mark against the correct statements and a cross against the wrong ones.

MONIKA : Hi, Toby! Do you miss your planet?

TOBY : Very much, Monika! I miss my people and home.

MONIKA : Oh! I wish I could do something about it! But I am happy to have you as my friend.

TOBY : Thank you, Monika!

MONIKA : Er... could you tell me something more about yourself?

TOBY : Why not! What do you want to know about me, Monika?

MONIKA : What do you eat for breakfast?

TOBY : Well, we Martians don't need to eat anything. We get our energy from the Sun.

MONIKA : Oh! Don't you ever feel like having ice creams and chocolates? I can't think of life without them!

TOBY : No, Monika! We are made of different stuff.

MONIKA : Okay, tell me one thing. How are you able to see with only one eye? I see only one big eye in the centre of your face.

TOBY : My friend, we Martians need only one eye to see clearly. In fact, I can see even with my eye closed. I can see beyond mountains and clouds, wood and even metals. I can see that you are carrying a toy in your pocket. It's a blue aeroplane. Isn't it? And yes! That apple you just had for breakfast is going round-and-round in your stomach right now!

MONIKA : *(gasps in disbelief)* Oh my goodness!

II Listen to the conversation again and fill in the blanks with the exact words you hear.

Magnifying Glass

Let us listen *(refer to page 227)*

I You will listen to a conversation between a father and daughter about lesser-known Indian inventions. As you listen, mark the four true statements from 1–6 given below.

DAUGHTER : Papa, everyone talks about how yoga and the concept of zero came from India, but I recently found out there are so many more inventions that people don't really know about!

FATHER : Oh really? Like what?

DAUGHTER : Well, did you know that radio broadcasting has roots in India? We usually credit Marconi, but Jagadish Chandra Bose, a Bengali scientist, actually conducted an experiment using microwaves before Marconi.

FATHER : Wow, I didn't know that! That's incredible. I can recollect something about fibre optics.

DAUGHTER : Yes! You're absolutely right Papa. Can you imagine life without fibre optics? No fast internet, no clear communication... And guess what? It was pioneered by Narinder Kapany, an Indian physicist from Punjab. He's called the 'father of fibre optics.'

FATHER : That's something I use every day, but I just had an idea that the origins were in India. What about fun things? Any of those that you've found out about?

DAUGHTER : Yes indeed! You'll love this one—Snakes and Ladders! It was actually invented as a game to teach children values, with ladders representing virtues and snakes representing evil. It wasn't just a board game like we think today. It had a spiritual meaning in ancient times.

FATHER : So even that simple game had such deep roots. Let me tell you about one that I just remembered.

DAUGHTER : Of course! I'd love to know.

FATHER : Well, the USB port, something we rely on all the time to connect devices, was invented by Ajay Bhatt. He's an Indian-born engineer who helped revolutionise the way we use technology.

DAUGHTER : That's amazing. USB is such a basic part of life now. It's hard to imagine a time without it.

FATHER : That's incredible. And all this from India. I definitely learned a lot from this conversation.

Adapted from— https://www.bbc.co.uk/programmes/articles/5rnsYs1QcP-B7CsyjzvTcmjf/7-surprising-things-india-has-given-the-world

BIBHA CHOWDHURI
THE BEAM OF LIGHT THAT LIT THE PATH FOR WOMEN IN INDIAN SCIENCE

Let us listen *(refer to page 244)*

I You will listen to a podcast about Artificial Intelligence. As you listen, answer the following questions by selecting the correct options.

Hello and welcome to Tech Talks, the podcast where we explore how technology is shaping our world! I'm Faizy, your host, and today we're diving into the fascinating topic of artificial intelligence, or AI, and how it's benefiting humankind.

AI is often seen as futuristic, but it's already making everyday tasks easier and more efficient. Let's look at some of the incredible ways AI is improving our lives in four of the many segments.

Let's begin with **Segment 1: Healthcare Transformation**

AI systems can analyse medical data much faster and more accurately than humans, leading to quicker diagnoses and personalised treatments.

AI-powered robots are also assisting in surgeries, making them more precise and less invasive. And during the global pandemic, AI played a crucial role in speeding up the discovery of new medicines.

Let's now talk about **Segment 2: Environmental Sustainability**

AI is helping us fight climate change. It helps in predicting natural disasters, and managing resources like water and agriculture more efficiently.

In renewable energy, AI is improving the performance of wind turbines and solar panels, pushing us toward a greener future.

Next, we have **Segment 3: Enhancing Education**

In education, AI is offering personalised learning experiences to students.

Teachers also benefit from AI, which helps analyse student performance and manage administrative tasks, giving them more time to focus on teaching.

Segment 4: Accessibility and Inclusion is the final segment of the podcast today.

You see, AI is also improving accessibility for people with disabilities. Technologies like speech recognition, text-to-speech, and voice commands make communication easier and faster.

Now you know how AI is improving life for humankind. AI is a powerful force for good but we need to use it responsibly.

Thanks for tuning in to Tech Talks. Join us next time for another deep dive into the world of technology. Until then, stay curious, and keep exploring!