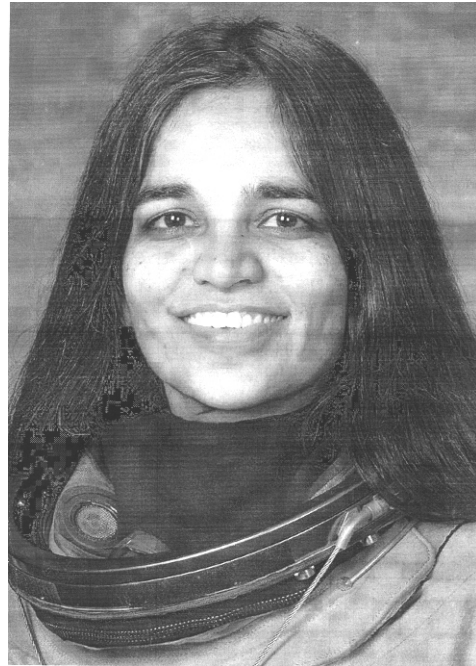


Lesson -9

Kalpana: The Star

1. Who was the first person to travel into space?
2. Who was the first Indian to travel into space?
3. Who was the first Indian woman to go into space?

Kalpana Chawla, the first Indian woman astronaut, was bold enough to make her career in aeronautics. She was a source of inspiration to her friends and colleagues. She is a role model for many young Indian women. This is an imaginary interview conducted in her own school.



Children : Good morning madam. We are from Tagore School, Karnal. We would like to ask you a few questions before you leave for your space mission.

Kalpana : Good morning. Please make yourselves comfortable.

Rohan : Please tell us about your childhood.

Kalpana : Well, I was born on 1 July 1961 in Karnal, Haryana. I had always dreamt about flying when I was a child. In fact, I thought of going farther than the pilots and wanted to become an astronaut at the age of thirteen.

Kavita : Do tell us more about yourself.

Kalpana : (Laughing) Well, I am a strict vegetarian. I respect my teachers. I like reading, flying, hiking and bird-watching.

Aslam : What courses did you have to go through to become an astronaut?

Kalpana : After passing Higher Secondary Examination from Tagore School, Karnal in 1976, I joined the Punjab Engineering College,

Chandigarh, for my Bachelor's Degree in Aeronautical Engineering in 1982. I then moved on to the University of Texas, USA for my Master's Degree in Aerospace Engineering in 1984. I earned my Ph.D in the same subject from the University of Colorado, USA in 1988.

Jeetu : How did you join NASA*?

Kalpana : That's an interesting story. Initially I had joined NASA as a research scientist in 1995 and worked for them at the Ames Research Centre. But then , inspired by the pioneering Indian pilot, J.R.D. Tata, I tried hard and was ultimately selected for my first flight in 1996.

Rohan : How was your first space mission?

Kalpana : I took off for my first space mission in the Space Shuttle Columbia on 19 November 1997. The flight was called STS-87. I worked with my six-member space crew as a mission specialist and prime robotic arm operator. I enjoyed every moment of it.

Aslam : What are your further plans?

Kalpana : Well, my next mission will be in the same Space Shuttle Columbia. The flight is called STS-107. I will take off on 16 January 2003. It will be a mission dedicated to science and research. We hope to perform a number of scientific experiments in space.

Kavita : Thank you, Madam.

Kalpana : You're welcome.

* **NASA** : National Aeronautics and Space Administration NASA is a US government organisation that carries out research into space and organises space travel.

The space shuttle Columbia Flight STS-107 took off as scheduled. The crew successfully performed eighty experiments in space. Unfortunately, 16 minutes prior to landing, their spacecraft developed a snag. Columbia perished with her crew on 1 February 2003. The whole world grieved at the loss.

Kalpana was awarded several honours after her death.

- * A heavenly body (Asteroid 51826) is renamed Kalpana Chawla.
- * A hill on the planet Mars is also named after her.
- * On her death, her brother Sanjay Chawla, remarked, “To me, my sister is not dead. She is immortal. She is a permanent star in the sky”.
- * The Prime Minister of India made an announcement on Feb. 5, 2003 to name the meteorological series of Satellites as Kalpana.
- * A dormitory was established in 2004 under the name 'Kalpana Chawla Hall' at the University of Texas.
- * A super computer was dedicated to Kalpana by NASA.

EXERCISES

Read and Learn

astronaut	aeronautics	inspiration	colleagues	imaginary
vegetarian	research	scientist	promising	specialist
dedicated	unfortunately	perished	grieved	meteorological
dormitory	established	immortal	permanent	robotic

Word Power

- A) The words given in the table are mis-spelt. Correct their spellings and also write their meanings with the help of a dictionary.

Mis-spelt word	Correct word	Meaning of the word
strickt
mision
intresting
inspier
entyre
genral
interupt
purfarm

B) Match the columns:

A	B
Rakesh Sharma	telephone
Dr.A.P.J Abdul Kalam	law of gravitation
Sir Issac Newton	astronaut
Alexander Graham Bell	scientist

Comprehension

A) Answer the following questions in one or two sentences.

- When and where was Kalpana Chawla born?
- What were her hobbies?
- Who inspired her to fly?
- When did she first fly into space?
- How many experiments did the crew of Flight STS-107 perform?

B) Answer the following questions in three to five sentences.

- What courses did Kalpana Chawla have to go through to become an astronaut?
- Describe the first space mission of Kalpana Chawla?
- Describe her last space mission.
- Mention some of the honours awarded to Kalpana Chawla after her heroic death.

Let's Learn

A) Read the following sentences carefully.

Santa writes neatly.

The boys are waiting outside.

She left early.

The underlined words tell you how, where or when an action takes place. These words are called **adverbs**. The adverbs add something to the meaning of a verb, an adjective, or another adverb.

Now underline the adverbs in the following sentences:

1. She behaved foolishly.
2. We looked for her everywhere.
3. The children laughed loudly.
4. The school will open tomorrow.
5. The soldiers fought bravely.
6. She wrote to me yesterday.
7. He lives here.
8. The old man walked slowly.
9. She ran fast.
10. The bus stops there.

B) Tick (✓) the correct preposition to complete each sentence:

1. Do not agree about/with/to his proposal.
2. Rohan is popular with /among/to / his classmates.
3. They congratulated the team about / on /from /its success.
4. Hari takes interest about / in / over /his studies.
5. Beware from / about/of /the dog.
6. Mr. Das was late for his work by / in / of /an hour.
7. Jeetu is taller to/than /by /Aslam.
8. He is senior to / than /by / me in service.
9. Good health is necessary for /with/of /success in life.
10. I prefer milk than /to/from/ tea.

Let's Talk

Imagine that you are a reporter of a famous magazine for children. You have to interview one of the children (of your class) as you have come to know that he/she has attained first place in the District Middle Board Examination.

Talk to your partner. Complete the interview with the help of the clues given below:

Reporter : Congratulations, Master Deepak. I am from the Daily Times. I would like to ask you a few questions on your brilliant success.

Deepak : Thank you, Sir. Please have a seat.

Reporter : _____

Deepak : _____

Reporter : _____

Deepak : _____

Let's Read

Read the following passage carefully:

The first computer was built in the early nineteenth century by Charles Babbage . He called it a 'difference engine'. It could carry out long calculations and print the results. Later he invented a better machine called an 'analytical engine'. The computer that you use has been developed by several scientists working independently or as a team. It is being improved everyday.

The computer can work out calculations and provide answers to complicated problems in a flash. A man would take days, or even months, to work the same thing out. But a computer cannot do things on its own. All the information it needs to do something is fed into it. This information is called data. Then it must be given clear and precise instructions about what to do with this data. These instructions have to be in a language that the computer understands. The information and the instructions make up a computer programme . If a computer gives an incorrect answer, something must be wrong with the programme and not with the machine.

The computer also has a memory. It can store information and use it later. It can, therefore, be compared to the human brain. But it can solve problems much faster and more accurately than the human brain. It can be made to play games like chess and translate words from one language to another. (If you like, it can correct your spelling mistakes.) But it cannot take decisions or think up new ideas. That is where it cannot compete with the human brain.

A) Now answer the following questions:

1. What two things could the first computer developed by Charles Babbage do?
2. What is data?
3. What is a computer programme?
4. In what way is a computer like a human brain?
5. In what way is the computer better than the human brain?
6. In what way is the human brain better than the computer?

B) Match words and phrases from column 'A' with their meanings in column 'B'.

Column-A	Column-B
1. in very little time	accurately
2. correctly, without any mistake	complicated
3. long and complex	in a flash
4. who can do something really well	accurate
5. exact	expert

Let's Write

You are Ashok, residing at 3 Ashok Vilas, Indore. Write a letter to your friend, Vinit, telling him that you have been inspired by Kalpana Chawla and want to be an astronaut like her. Take the help of the clues given:

the great astronaut, work hard, study Maths, Science, engineer, reputed institute, fly high, etc.

Let's do it

Collect pictures and information about Kalpana Chawla and Rakesh Sharma from newspapers and magazines and paste them in your scrap book. Read the information in your class.