



### Before you read

Have you heard of the Viking Mission to Mars?

The National Aeronautics and Space Administration's (NASA) Viking Mission to Mars was composed of two spacecraft, Viking 1 and Viking 2, each consisting of an orbiter and a lander. The primary objectives were to obtain images and samples of the Martian surface and soil and search for any possible signs of life. Viking 1 was launched on 20 August 1975 and arrived at Mars on 19 June 1976. Viking 2 was launched on 9 September 1975 and entered Mars' orbit on 7 August 1976.

Besides taking photographs and collecting other science data on the Martian surface, the two landers conducted three biology experiments to look for possible signs of life. As of now, there is no clear evidence of the presence of living microorganisms in the soil near the landing sites.

Now read the story.

- ✧ **Tilloo and his parents live beneath the surface of a planet under artificial conditions.**
- ✧ **Tilloo has heard and read about the sun and the stars. He has never seen them.**
- ✧ **Tilloo's father goes to work through a secret passage, and Tilloo wants to know all about it.**

“TILLOO! How often have you been told not to go that way?”

“But why does Daddy go there every day?”

“Because that’s his job, Tilloo!”

‘That way’ was an underground passage. Tilloo’s father went every day for work along that passage. And every day he came back from that direction. What lay at the end of that forbidden route? Not only Tilloo, but a great majority of the community would have liked to know. Tilloo’s father was one of the select few permitted to go that way. The above conversation invariably took place between Tilloo and his mother whenever he insisted on following his father.

Today, however, was different. Tilloo’s father was enjoying a siesta at home and Tilloo managed to get hold of his security card. Then, evading his watchful mother’s eye, Tilloo made his way to the forbidden passage.

A metal door barred his entry. But Tilloo had watched his father slip the magic card into a slot. He did the same... and the door opened noiselessly . A well-lit passage seemed to beckon him.

Snatching the card which had come out of another slot in the wall, Tilloo started his march along a gentle upward slope—for the passage led from the underground habitat to the surface of the planet. Tilloo looked forward to seeing the sun (if it was daytime) or the stars (if it was night) about which he had heard and read so much.

But alas, that wasn’t to be!

Tilloo had underestimated the security arrangements. Invisible mechanical devices had already detected and photographed the small intruder, sent his picture to the Central Bureau where it was thoroughly checked... And before he had advanced ten paces a strong hand fell heavily on his shoulder. Gently but firmly he was escorted by the

**siesta:** short rest or nap after lunch    **habitat:** shelter or home    **detected:** found out    **escorted:** taken or led



security staff back home to an anxious and angry mother. While he was being scolded he received help from an unexpected quarter.

“Let me explain to him, darling!” said his father who had just got up. “If he is properly briefed, he will not do such a thing again.” He started to explain.

“Listen, Tilloo! I work on a surface where an ordinary person cannot survive because the air is too thin to breathe and where the temperature is so low that you would freeze to death.”

“But, Daddy, how do you manage to survive?”

“Because I go well-equipped, in a special suit with a reservoir of oxygen. I can keep warm and my boots are specially designed to make it easy for me to walk on the surface. What’s more, I’ve been trained to survive and work on the surface.

“There was a time when our forefathers lived on the surface quite naturally. Indeed they did so for millions of years. But times changed. The very sun, which had provided us with sustenance, turned hostile. It changed only slightly but the change was sufficient to upset the balance of nature on this planet.

“First the birds became extinct. The animals followed. The fish couldn’t bear it anymore either. We managed to survive only because of our superior technology, but we were forced to live underground under artificial conditions. Thanks to solar energy, we can generate sufficient power to make our life comfortable. But the machines which make this possible must always be in good working condition. Some of them are on the surface—I belong to the team whose responsibility it is to keep watch on them and to service them.”

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**briefed:** told or informed



“Daddy, can I join the team when I grow up?”

“Of course, if you want to,” said his father.

“But for that you must be a good boy and do as your parents tell you.” His mother had, as usual, the last word.

## Comprehension Check

1. How does Tilloo manage to find his way to the ‘forbidden passage’?
2. What did Tilloo hope to see once he emerged from his underground home?
3. Why did Tilloo’s father advise him not to try to reach the surface of the planet?
4. What changes had occurred, which forced people to live in underground homes?

- ✧ The big TV screen in the Control Room shows an alien spacecraft.
- ✧ The question whether there is life on other planets exercises everybody’s mind.
- ✧ The President of the Central Committee is about to make an important statement.

Next day when Tilloo’s father went to work, he found the Control Room full of excitement. People were crowded round the big TV screen. It showed a dot in an otherwise clear background.

“It isn’t a star—for it’s changing its position. Our computer has given a trajectory for this ‘thing’. It’s heading towards us.” The Supervisor of the last shift explained.

“A spacecraft?” Tilloo’s father asked. By now he was joined by his teammates on the new shift.

“So we think; but it needs watching.”



A spacecraft? Where from? The solar system wasn't known to have any life anywhere else except on their planet. Tilloo's father recalled the ancient days recorded in the archives at the Central Bureau when their ancestors had a well-developed space programme and had searched the solar system with manned and unmanned spacecraft and found that they were indeed 'alone'. Now, in the days of energy shortage and underground life, they had no space programme. They could only watch impotently from their vantage point. Who were these strangers?

The conference room in the Central Bureau was so quiet that an outsider would have thought it was empty. Far from it. It was full to capacity but the members of the Central Committee were unusually quiet. They knew that the President was going to make a momentous announcement.

"Colleagues! I will give you the report as I have it. While I speak there may be a change in the situation," the President paused to get his papers in order and then continued. "Two spacecraft are approaching us. One is in fact orbiting our planet while the other is still far away. We guess that they are coming from our neighbouring planet. How should we react? Number One, your views please."

Number One was in charge of defence. He was known for his courage and wisdom. "Sir, if we wish we can totally destroy these spacecraft with our missiles. But that won't make us any wiser. We do not have the capacity to render these craft unoperational in space; but should they land we can render them ineffective anytime we choose. Our reports say that they do not contain living beings, they only have instruments."

"Number Two, your opinion please," the President asked the scientist on the committee.

"I recommend non-interference and passive observation. Since we do not know the power of the senders of these



spacecraft, and we are still in the dark about their intentions, it is wise not to reveal our existence. If we destroy these spaceships or render them ineffective, we might reveal our existence.”

The President looked at Number Three, a social scientist. He rarely agreed with Number Two. But this was one of those rare occasions when he did.

“I agree with Number Two, sir. In fact I will go so far as to say that we should keep our surface activities to the minimum, thus creating the impression that there’s no life on this planet. Fortunately, our surface conditions do give that impression.”

Before the President could speak his personal telephone rang. He lifted the receiver and listened quietly for a minute.

“Colleagues!” he announced, “the first spacecraft has landed.”

### Comprehension Check

1. Why was everyone in the Control Room greatly excited?
2. Was the spacecraft manned or unmanned? How do you know it?
3. What did Number One and Number Two suggest should be done about the alien spacecraft?

- ✧ **Tilloo accompanies his father to the Control Room.**
- ✧ **In his excitement, he presses the all-important red button on the panel, and the mechanical hand from the alien spacecraft stops working.**
- ✧ **The mechanical hand is activated again, but it finds no signs of life on that planet.**

It was a red letter day in Tilloo’s life—the day he was waiting for. For his father had at last taken him to the





Control Room. From here he could see the alien spacecraft on his TV screen.

“What a funny looking thing, Daddy! What does it contain?” Tilloo asked.

His father shook his head, “Can’t say for sure. We are only allowed to observe it from far. But we control all its parts and can exercise our power if it is up to any mischief.” He pointed to an impressive panel with several coloured buttons on it. Tilloo looked at them wistfully.

“Look, it’s up to something, Daddy,” Tilloo suddenly noted some movement in the spacecraft. Others in the Control Room saw it too. All eyes were now glued to the screen.

A mechanical hand was emerging from the spacecraft. It was approaching the surface of the planet. It bent and touched the soil. What was it up to? People crowded towards the screen for a closer look. The telescopic lens of the TV camera zoomed in to the tip of the mechanical hand.

Tilloo was staring at the control panel and its attractive buttons. An irresistible desire got hold of him to press the most prominent of all buttons, the red one. He moved...

There was a shrill whistle and Tilloo found himself the centre of attention. His father pulled him away roughly and restored the red button to neutral position. But the damage was done.

The mechanical hand from the spacecraft ceased to work.

At a press conference held by NASA, a scientist was briefing the world press:

... Everything has been going on smoothly with the Viking Mission. There is a small hitch. The mechanical hand which was to dig out the Martian soil for examination has developed a malfunction... We don’t know the cause but our technicians are confident they’ll sort it out...



And shortly afterwards there was another press release from NASA:

... The mechanical hand is working again, thanks to the efforts of our technicians. Soil samples are being collected and examined... Soon we will know the answer to the question whether there is life on Mars.

Life on Mars? Of all the planets in our solar system, Mars is nearest in location and physical conditions to our Earth. So the scientists behind the Viking Mission were hopeful of finding life on Mars. But they were in for a disappointment.

The Viking Mission found no signs of life on Mars.

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### Comprehension Check

1. What do you think the mechanical hand was trying to do?
2. Tilloo pressed the red button and “the damage was done”. What was the damage?
3. Where had the spacecraft come from?
4. On which planet do Tilloo and his parents live?

### Exercises

*Discuss the following topics in groups.*

1. If you had to live in a home like Tilloo’s, what parts of life would you find most difficult? What compensations might there be?
2. What, if anything, might drive mankind to make their homes underground?
3. Do you think there is life on other planets? Can you guess what kind of people there may be on them? In what ways are they likely to be different from us?

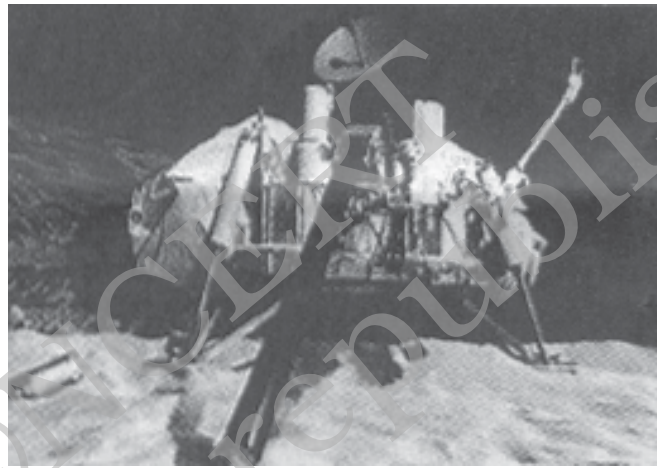




## MARTIAN PROBES MAY HAVE KILLED MICROBES

Two NASA space probes that visited Mars 30 years ago may have stumbled upon alien microbes on the Red Planet and inadvertently killed them, a scientist has theorised in a paper.

The problem was the Viking space probes of 1976–77 were looking for the wrong kind of life and did not recognise it, the researcher said in a paper presented at a meeting of the American Astronomical Society in Seattle on Sunday.



This news report, based on a more expansive view of where life can take root, may have NASA looking for a different type of Martian life form when its next Mars spacecraft is launched later this year, one of the space agency's top scientists told reporters.

Last month, scientists excitedly reported that new photographs of Mars showed geologic changes that suggest water occasionally flows there — the most tantalising sign that Mars is hospitable to life.

*(From a recent newspaper report)*

