



Panipuri inside a Spaceship

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Level 3

"Dinner time!" called Daddy.

Chikki and Ninu, who were playing outside, came running in. Daddy was already at the table.

"What are we having?" asked Ninu.

"Mooli parathas," said Mummy. "And raita."

Chikki wrinkled her nose. "Yuck!" she said.

Daddy frowned. "Never say that about food, Chikki."

"It smells," said Chikki.

"Chikki, Chikki, don't be picky!" chanted Ninu, as he gobbled up a paratha. He loved all kinds of food but his sister was fussy.

"Chikki, don't you want to be an astronaut?" asked Mummy.

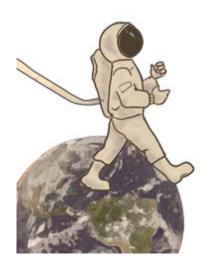
"Yes," agreed Chikki.

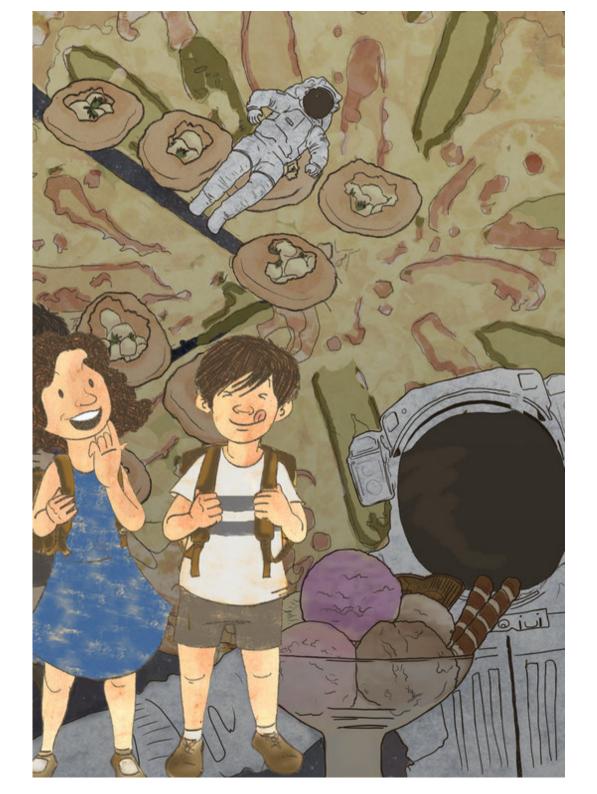


Mummy was a scientist and Daddy had been a fighter pilot. Chikki wanted to study science. And then some day fly higher than Daddy! She wanted to be like the people who fly high into space and are called 'astronauts' or 'star sailors'.

"Well," said Mummy, "I have an idea. If you eat your parathas today, I'll make astronaut food for you tomorrow."

"Okay!" said Chikki happily and wolfed down her paratha.





The next day, Chikki and Ninu came back from school for lunch. They were eager to see what Mummy had made.

"I hope astronauts eat cake and ice cream," said Ninu.

"And pizza and panipuri," piped Chikki.

Instead, they saw a tube on their plates.

"Toothpaste!" cried Ninu. "Is that what astronauts eat?"

"Not toothpaste," Mummy smiled. "I mashed up rice and dal and put it in the tube. You can squeeze it into your mouth."



"Why can't we have rice and dal on the plate instead?" asked Chikki. Daddy had some on his plate. And it suddenly looked delicious.

Daddy pointed to his food. "See how it stays on my plate? In space, it would float away."



Chikki and Ninu imagined bits of rice floating in the air.

"Nom-nom-nom," said Ninu as he pretended to catch the grains. "Watch out, rice, I'm coming for you!"

"It looks like fun, but it would take very long to finish eating. And titbits could end up in the spaceship's engines and make a mess," said Daddy.

"But why does food float in space?" asked Chikki. "It doesn't float down here!"

"On Earth, we have a force called gravity. It keeps not just food but all of us from floating into space," explained Daddy. "That is why when we throw a ball up into the air, it falls back down."



Mummy added, "Far, far away from Earth, there is almost no gravity. So, astronauts and other things in space weigh next to nothing. They float!"

"And food out there has to be easy to eat and not float away every time someone tries to have lunch!" said Daddy.

Chikki thought about that for a bit.

"If gravity pulls everything closer to the ground then, don't we also need it to make our food go from our mouths down to our stomachs? So how do astronauts eat? Won't the food float back to their mouths when they try to swallow?"





"Good question!" said Daddy. "When human beings started going into space, scientists wondered about that too. The first experiment they did was to have John Glenn, an astronaut, swallow some water."

"And could he?" asked Ninu. 'Imagine not being able to drink water!' he thought.

"Yes!" said Daddy. "It turns out that we can swallow because of the muscles in our food pipe-between the mouth and the stomachand not because of gravity. That is why we can even eat upside down, though the muscles have to work harder against the gravity."



Chikki and Ninu looked at each other. This was an experiment they had to try!

"Be careful," warned Daddy, who knew what they were planning. "You should not eat or drink too much when you are upside down. Gravity is a pretty strong force."

Chikki looked at the tube on her plate.

"So this is what astronauts eat?" She was disappointed.

Mummy smiled. "When they first started going into space, astronauts ate meat and fruit pastes from tubes. This was not very tasty. So they complained, like you!" she said.

"So scientists tried to come up with options that looked and tasted more like regular food. Today, astronauts get canned food, nuts, granola bars...anything they can eat in a single bite without leaving pesky crumbs. Space shuttles also have small kitchens with ovens where the food can be reheated. So Indian astronauts take fish and paneer curry, and other tasty dishes."



"What about pizza and ice cream and soda?" asked Ninu.

"Scientists have been trying to send pizza to space for a long time. Making and baking dough in space is difficult, but a team of astronauts made pizza by using flatbread, sauce, and toppings. There are no freezers in space for ice cream," said Daddy.

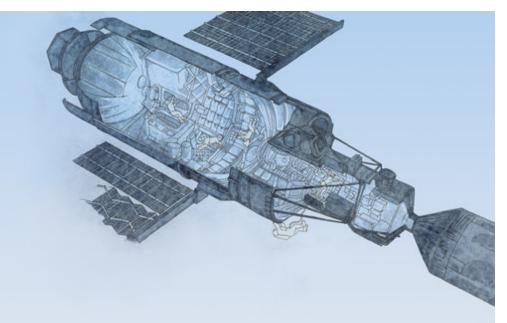
"And the bubbles in soda behave in strange ways because of the lack of gravity," said Mummy.

"But astronauts eat lots of different foods," said Daddy, "even fruit like apples and bananas. And scientists are trying to figure out a way to grow vegetables in space."

"And now," said Mummy, with a twinkle in her eyes, "you have to try these gobi parathas."

"Oh no!" said Chikki. "But when I become an astronaut, I'm going to take panipuri along!"





Did you know?

- Cosmonaut Yuri Gagarin's first meal in space in 1961 was beef and liver paste. Then he had chocolate sauce.
- Astronauts in Russia are called cosmonauts, and Indian astronauts are called vyomanauts!
- Astronauts live in space stations that orbit the earth. A space station is about the size of three houses and has a kitchen, bathroom, study and sleeping areas.

- Salt and pepper are used in liquid form in space!
- Astronauts attach containers to special trays using Velcro. They also fasten their trays to their laps, so they can eat while sitting down.
- Astronauts drink from pouches with special nozzles. If they used cups, their coffee, tea or juice would become a ball and float around the cabin.
- Since we don't make a lot of saliva in space, food tastes bland. That is why astronauts love spicy food!
- Astronauts choose what they eat. Food packages are labelled so they do not get mixed up.





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A Corporate Social

Panipuri inside a Spaceship (English)

Chikki is fussy about food. She dislikes mooli paratha because she thinks it smells. She wants to explore space. But she wonders if she will get pizza, panipuri and ice cream in a spaceship. Join Chikki and Ninu for lunch as they discuss what astronauts eat while on a mission and why.

This is a Level 3 book for children who are ready to read on their own.



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