

S a l t

'n'

P e p p e r

It was lunchtime. But Grandpa had not yet returned. Grandma was a little worried because he had left in the morning itself. She was waiting at the window. Suddenly Mihir shouted, "Grandpa is back."

As soon as Grandpa entered, he brought out a box from his bag. He looked at Grandma and showed her the box. "A special surprise gift only for you! Please accept it."

He removed two shiny new containers from the box and gave them to Grandma. Both looked the same. Before Grandma could say anything, Grandpa said, "Salt and pepper containers."

Grandma took them and said, "Here I was, getting all worried because you were late and now you are busy rubbing in the salt... Really!"

Just then Mihir came running. "What are these small containers for? And what's this? They have tiny holes. I can fill the containers with water and use them to sprinkle everyone with water! Nice new toys for me. Identical containers!"

Grandpa snatched the containers from Mihir and said, "Hey, they are not toys! And they are not identical either. One of them has small dots. That one is for pepper. The one which does not have dots is for salt. Get it?"

Mihir started pulling at the containers in Grandpa's hands to have a look at the dots. Grandpa held on to them quite tightly. At that moment Grandma loudly scolded them both. Startled, Grandpa and Mihir let go of the containers.

The containers fell in the plate. As the containers fell their lids came off. The salt and pepper got completely mixed with each other. Grandpa and Mihir looked first at the salt and pepper mixture and

then at each other. Both were quite sure that Grandma would now lose her temper and yell at them.

But Grandma calmly said "First, let us have lunch while it is still hot. Afterwards both of you can separate the salt and pepper."

"Oh my God! That will be too tough." said Grandpa.

Mihir was sugary sweet as he said to Grandma "My dear Grandma, tell me some idea which will separate the salt and pepper automatically."

Grandma laughed and told them, "Comb the mixture and the salt and the pepper will separate automatically."

"What!" shouted Grandpa? "What do you think the mixture is, your hair or my moustache? How can we comb it? Next you will ask us to shampoo the mixture! Really, you are too much!"

"First finish your lunch. Then I will show you how to comb the mixture." said Grandma and kept aside the plate with the mixture.

During lunch, Grandpa and Mihir were whispering among themselves.

"We will separate them with a sieve." said Grandpa softly.

Mihir whispered, "Salt dissolves in water, pepper does not. Let us put the mixture in water. The pepper will float on the water and

then we can strain it. We can keep the salt solution in the sun and try to make salt from it." Grandpa nodded happily when he heard this.

After lunch, Grandpa declared, "We too have an idea to separate salt and pepper."

So Grandma said, "Okay! Then let us have a race. If I comb the mixture it will take me just five minutes to separate the salt and pepper. How long will you take?"

When he heard this, Grandpa signalled to Mihir.

Mihir said, "Grandma, let us try your idea first."

Grandma mimed the action of combing her hair and Mihir ran to get a comb. Grandma vigorously rubbed the comb against her sweater. And then she brought the comb near the mixture. Then what a miracle!

The grains of pepper jumped and stuck to the comb! Grandpa and Mihir stared at the comb. Grandma quickly took the comb near another plate. She shook the comb a little. All the pepper particles fell into it. In this manner Grandma quickly started separating the pepper. The salt continued to lie in the first plate.

Mihir took the comb from Grandma.

She said to him, "Don't rub the comb on my sweater. Rub it on your Grandpa's head."

Mihir did as instructed by Grandma.

He rubbed the comb on Grandpa's head and took it near the mixture. The same miracle happened again! Grandpa scratched his head and started thinking hard.

"If we rub the comb on cloth or wool or if we move it vigorously through dry hair then a static electric charge is created on the comb. If we bring such a comb close to another object, then the 'principle of attraction' comes into force. That is, similar charged articles repel each other whereas the opposite charged articles attract each other. Pepper sticks easily as it is very light. After a while the electric charge gets absorbed into the atmosphere and the thing stuck falls down. How is my electric idea?" asked Grandma.

"This is really magic." said Grandpa. "I was quite worried with the idea of separating pepper and salt. My mouth had turned dry."

Grandma rubbed the comb on her sweater and said, "If you are planning to drink water directly from the tap then I know exactly how to turn the water away!!

"I know how! Just..." Mihir shouted.

Grandpa stopped him in mid-sentence and said, "Time for tea. We don't want anybody turning that away from us!"

Can you change the direction of water from the tap without touching it?

Can you pick up small pieces of paper without touching them?

Make balloons dance?

Yes. You can do it, just by 'combing.'
