

A BUCKET OF WATER ON YOUR HEAD

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So, pressure is a force pushing on a surface. And like a balloon, the more you press it, the smaller it gets. That was what Fred had understood from the explanation given by his friend. But, Skubba still didn't understand what all that had to do with his pear-shaped bag.

"What does pressure have to do with my bag?" asked Skubba, a little confused.

Fred took a bucket and asked Skubba to put it on his head. With eyes wide open Skubba did what his friend asked.

"What do you want to prove with this?" he asked as he held the bucket steady with his hands.

"Wait," Fred replied. He stood a little higher and poured water into the bucket. Skubba felt the weight on his head increase. After a while, the muscles in his neck and arms started to stiffen up. This thing was heavy.

"Why Fred?"

"Underwater, you also have weight

above your head. The water may not be in buckets, but it is there above your head."

Skubba thought about it. His friend was smart, but something didn't seem quite right. "Why don't I feel that weight on my head when I'm in the water?".

"The water isn't only above you, but it also pushes you from the right, the left, the front, and the back. It pushes you all around. According to Pascal, water presses against you from every spot of your body. That's why you don't feel it!".

"Did my cousin Pascal tell you that?".

"No. Not your cousin, but the researcher Pascal. He showed that pressure pushes in all directions. Therefore, you not only feel the pressure on your head, but also on your stomach and your back."

"Ah," replied Skubba doubtfully. "But what has that to do with the pearlike shape?".

"On your head there is only one bucket of water, but your feet are deeper in the water, therefore there are more buckets pushing on them. More buckets is....".

"...more pressure!", replied Skubba quickly. Skubba began to see the connection. "Top, little pressure. Down, more pressure. At my feet, the bag is pressed more tightly together than at my shoulders."

"Yes, yes."

"So, when I lay down, the pressure will be the same everywhere. I will no longer look like a pear. I will look like, uh, a tube."

"Yes, you really have understood it."

"Let's try it!", shouted Skubba as he started getting ready. Completely dressed, he jumped into the water, but... whatever he tried, he stayed at the surface. He wasn't a diver, but a float on the water.

What had gone wrong this time?