"Hi, Megha Chattopadhyay here.
Human form of punctuation."
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Page Editor

Contest Edition

It's a team effort!

When Your Organs Are Attending Their Own Board Meeting To Play The Best

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Board meetings are a must before any match. And why not? It helps the team to strategise and win. Here's a sneak peek into the board room where Captain Brain has called an urgent meeting with other organs before the beginning of the match!

Brain: Neuron, you are one of the best bowlers in the team. We'll have you on the pitch first. You need to start functioning at a higher level, release neurotransmitters, specially endorphins and dopamine to get those arms and legs moving. Don't forget to play your best move by releasing the prohibitive neurotransmitter GABA to slow things down, or else everything will get out of control and the system will freak out.

Neurons: Yes Captain. I can't afford to lose the match by forgetting to release GABA.

Brain: Heart and lungs, you both need to do the fielding while neuron does bowling, you need to work faster and supply blood to the muscles rapidly.

Lungs & Heart: Yes, we know that Captain! We'll have to pump oxygenated blood at a much quicker pace, so that cardiac output will rise. Well, I'm thankful to the physical exercises done before this because of which my system has become very efficient and new blood vessels have grown too.

Kidneys: (very enthusiastically) Captain, like we've done in every practice, may I trigger better water reabsorption, resulting in less urine, in what is likely an attempt to help keep the system as hydrated as possible? I also have to take care of the blood osmotic balance.

Brain: Yes Kidneys, that would be awesome! Coming to the batsmen now, you remember what I'd told you in the last practice right?

Blood Vessel: (with a sigh) Yes, blood will be flowing at an immense speed and I'll literally have to do multi-tasking. At some parts I'll have to dilate, at others I'll have to constrict.

Muscles: Captain, I think I should call upon glucose for energy that I require to contract and for spur movement. I'll also be needing adenosine triphosphate, of which I have very limited reserves. After it gets finished, I'll need extra oxygen to create more ATP. Without enough oxygen, lactic acid will get formed and its accumulation will lead to painful cramps. I remember the last time I got cramps. Ugh! That's a painful memory.

Brain: Yes muscles, I won't let that happen again. Our other ace player, Gut will help you in getting extra oxygen when you'll need it.

Gut (includes Stomach & Intestines): Poor me, because the body is pumping more blood to the muscles, I'll have to compromise my share of oxygen. This happens every time, even during the practice! It's so painful to be an ace player…

Brain: Pancreas, you'll have to secrete glucagon to allow conversion of glycogen into glucose. Liver, you'll have to do this glycogenolysis faster. I know it's difficult since Gut would've to compromise with its share of oxygen and you both are accessory glands of the Gut only, so you know, you'll have to manage…

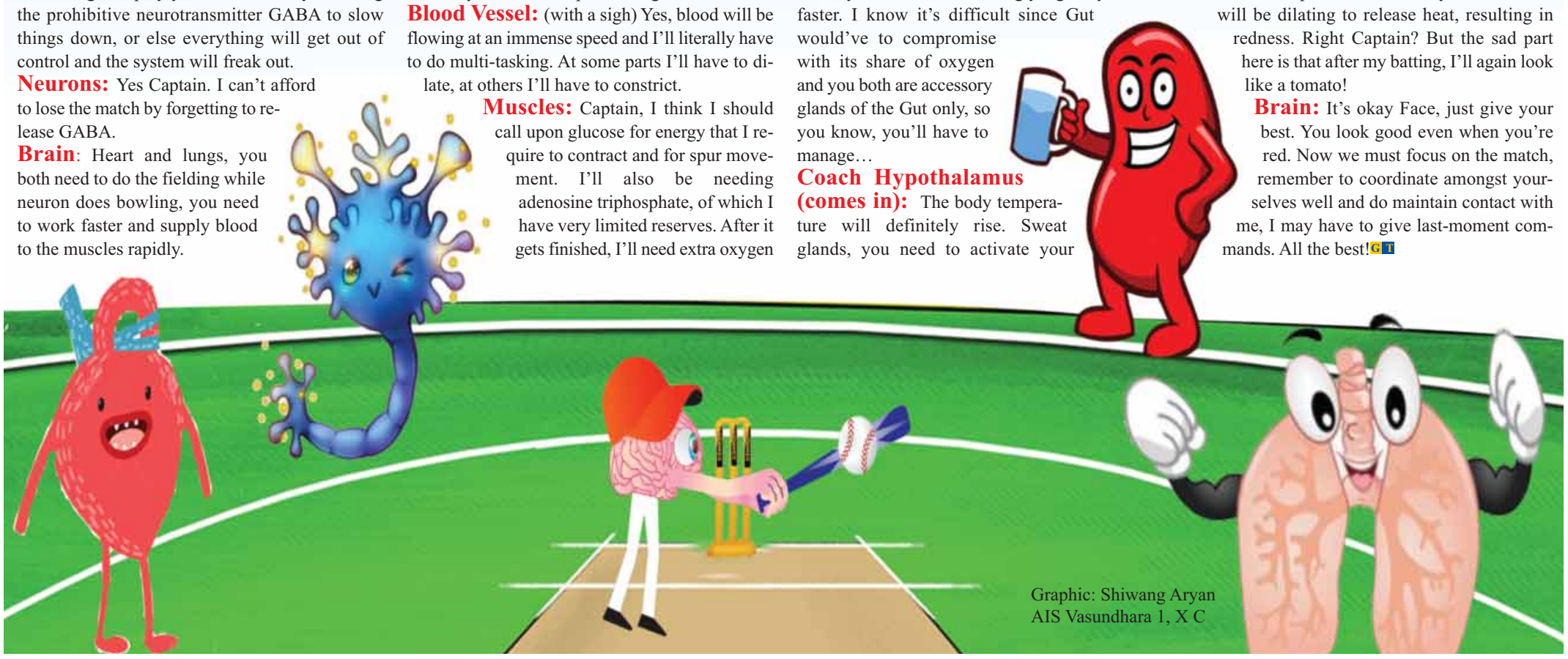
Coach Hypothalamus (comes in): The body temperature will definitely rise. Sweat glands, you need to activate your coiled tubular secretory unit, produce and release more sweat to keep the body cool. Oh yes, Brain you'll have to take care of the salt and water balance too; kidneys will help you in that.

Merocrine Sudoriferous Gland: I will produce odourless perspiration, i.e water and electrolytes directly onto the skin's surface. When this sweat evaporates into the air, the body temperature will drop.

Apocrine Sudoriferous Gland : (almost crying) Oh my God! I'll have to produce the fatty sweat again, bacteria on the skin will begin to break down on it soon and I will begin to stink! Captain, I deserve a warm fragrant bath after this.

Face: The capillaries close to my skin's surface will be dilating to release heat, resulting in redness. Right Captain? But the sad part here is that after my batting, I'll again look like a tomato!

Brain: It's okay Face, just give your best. You look good even when you're red. Now we must focus on the match, remember to coordinate amongst yourselves well and do maintain contact with me, I may have to give last-moment commands. All the best! GT



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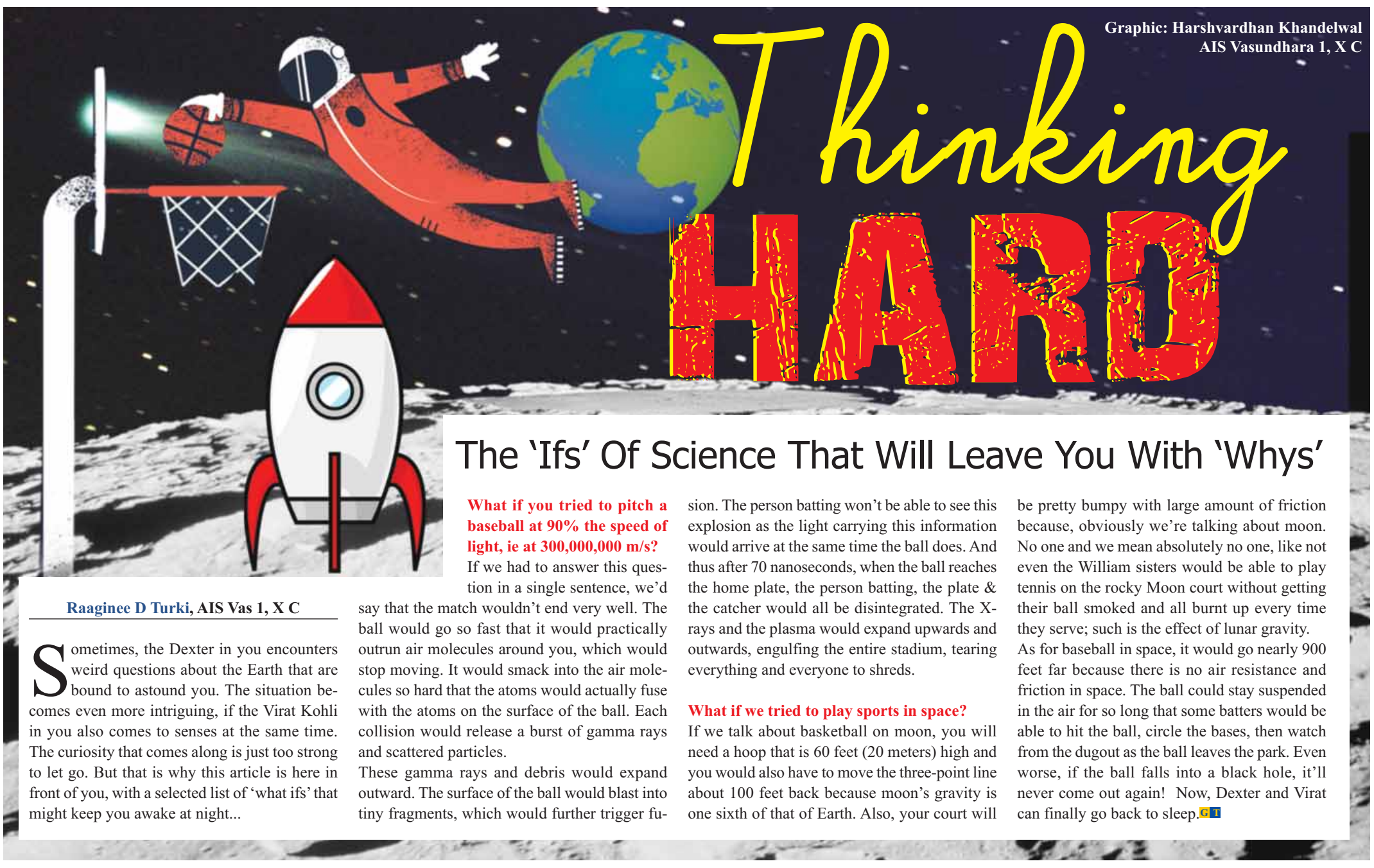

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The 'Ifs' Of Science That Will Leave You With 'Whys'

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Sometimes, the Dexter in you encounters weird questions about the Earth that are bound to astound you. The situation becomes even more intriguing, if the Virat Kohli in you also comes to senses at the same time. The curiosity that comes along is just too strong to let go. But that is why this article is here in front of you, with a selected list of 'what ifs' that might keep you awake at night...

What if you tried to pitch a baseball at 90% the speed of light, ie at 300,000,000 m/s?

If we had to answer this question in a single sentence, we'd say that the match wouldn't end very well. The ball would go so fast that it would practically outrun air molecules around you, which would stop moving. It would smack into the air molecules so hard that the atoms would actually fuse with the atoms on the surface of the ball. Each collision would release a burst of gamma rays and scattered particles.

These gamma rays and debris would expand outward. The surface of the ball would blast into tiny fragments, which would further trigger fusion. The person batting won't be able to see this explosion as the light carrying this information would arrive at the same time the ball does. And thus after 70 nanoseconds, when the ball reaches the home plate, the person batting, the plate & the catcher would all be disintegrated. The X-rays and the plasma would expand upwards and outwards, engulfing the entire stadium, tearing everything and everyone to shreds.

What if we tried to play sports in space?

If we talk about basketball on moon, you will need a hoop that is 60 feet (20 meters) high and you would also have to move the three-point line about 100 feet back because moon's gravity is one sixth of that of Earth. Also, your court will be pretty bumpy with large amount of friction because, obviously we're talking about moon. No one and we mean absolutely no one, like not even the William sisters would be able to play tennis on the rocky Moon court without getting their ball smoked and all burnt up every time they serve; such is the effect of lunar gravity.

As for baseball in space, it would go nearly 900 feet far because there is no air resistance and friction in space. The ball could stay suspended in the air for so long that some batters would be able to hit the ball, circle the bases, then watch from the dugout as the ball leaves the park. Even worse, if the ball falls into a black hole, it'll never come out again! Now, Dexter and Virat can finally go back to sleep. GT