

Stop trying to make everyone you meet happy. After all, you aren't a classic read and they aren't avid readers.

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# A floating fiasco

## To Fathom The Mechanism Behind The Principle Of Buoyancy

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Plodded the Tennis Ball; thud went the Cricket Ball, as a pack of kids indulged in both the sports in a town called Bedford Falls. As both the balls thus flew high up in the air, nearing the close by the lake, a conversation ensued thus. More like a challenge, they dared each other for a duel in an effort to test and see who could float for a longer period of time. "You know who's going to win. Give up already!" exclaimed Cricket Ball, while the other one sufficed with a "Well, we'll see!" in as mockful a tone as there could ever be. As they squabbled thus, Miss H<sub>2</sub>O could hear it all. She couldn't help but laugh at their stupidity, for she already

knew the outcome. So as both hit the water and dived in next, to their surprise, Tennis Ball kept floating on the surface, while Cricket Ball was completely engulfed by the water body, as if lost in its depths forever, to be never found. Laughing it off at first, Tennis Ball realised the seriousness of the situation as time passed, for there was no sign of Cricket Ball now. "Where are you, Cricket Ball? Stop scaring me. Come out this instant," yelled Tennis Ball at the top of its voice. "It cannot come out," responded a voice, unknown and unheard of before this instance. "Who's this?" asked Tennis Ball, scared out of its wits. "I am Miss H<sub>2</sub>O. Does it ring any bell? Ha ha ha!" "But I am out so, why can't Cricket Ball come out?" asked Tennis Ball angrily. "Well, because I could easily push you up. Buoyancy? My up-

ward force?" replied Miss H<sub>2</sub>O. "Wh-what now? Never mind! Just please use that force and try and push Cricket Ball up and out, too. Please help us!" requested Tennis Ball. "Well, there's only so much I can do. I cannot push up someone or something that displaces only a small amount of me and weighs more than what's displaced. You weighed less than the amount of me you displaced so my upward force worked on you. Simple!" "But you can keep large ships afloat. What's a Cricket Ball to you?" added Tennis Ball. "That's because a ship has the capacity to displace a large amount of me, an amount either equal to its weight or much more than it. It makes it easier for me to push it up. Because the more I get displaced, the more actively I apply my upward force. Cricket Ball and you cannot displace me much so,

your weight makes all the difference in this situation." "Ugh! I knew this day would come. This couch potato needed all those exercising sessions it skipped!" exclaimed Tennis Ball out of sheer innocence. \*Distress call from Cricket Ball\* "But what should I do now?" hollered Tennis Ball nervously. "Go and ask someone to dive in and take Cricket Ball out. Hurry up!" answered Miss H<sub>2</sub>O, sensing Tennis Ball's cluelessness. And so it did. As the kids came running, Tennis Ball asked them to dive in and take out Cricket Ball. And that is exactly what they did. As Cricket Ball was rescued, Tennis Ball shed a tear, happy to have his friend back and happy about the

lessons it learnt today, lessons that were learnt the hard way, but valuable nonetheless!

### The science of it

Buoyancy is an upward force exerted on an object that is partly or wholly submerged in a fluid and causes objects to float.



SCIENCE  
BEDTIME STORIES

Illustration: Sohini Srivastava, IX A & Gouri Srivastava, IX B, AIS VYC Lucknow

# Berry-licious

Fruits and vegetables make up the largest chunk of our nutrition. However, their role is not just limited to a wholesome diet. Their significance permeates across economy, environment, health and social sectors, proving how they are, in fact, essential commodities to attain a sustainable world. Keeping the same in mind, the United Nations has designated 2021 as the International Year of Fruits and Vegetables to make us cognisant of the diverse roles that they undertake. Shaking hands with this goal, GT brings you a brand-new series, wherein each part will explore the various facets of one fruit or vegetable, highlighting why it is important to preserve these precious gifts of nature.



Karan Kapoor, AIS MV, VII D

Hey! My name is: Raspberry  
I am also known as: Rubus idaeus

### About me

- I belong to the Rosaceae family and was first cultivated in 1600s in England and France.
- I have perennial root structure, and canes that are woody and shrub-like.
- I am known to produce beautiful white and pink flowers, with five petals that are surrounded by green sepals.
- After pollination, each of the flowers produce many tiny bead-like fruits called 'drupelets' clustered around a core. Each drupelet contains one seed and in total I have around hundred to one hundred and twenty seeds.
- Interestingly, in Philippines, people hang me outside their homes to keep evil spirits away.
- I am consumed as a fresh fruit and can also be processed into various other products like puree, frozen candy, jam, canned berry, juice, herbal tea, and sometimes even wine.

### What I offer

About 100 grams of my consumption will provide you:

- Calories: 52 kcal
- Carbohydrates: 11.94 grams
- Protein: 1.2 grams
- Fat: 0.65 grams
- Sugar: 4.42 grams
- Fiber: 6.5 grams
- Water content: 85%
- Vitamin C, K, B, & E
- Other minerals like iron, manganese, copper and calcium

### I can help you with

- Lowering blood pressure
- Fighting inflammation
- Preventing heart disease
- Improving eyesight
- Regulating blood sugar
- Weight loss
- Improving skin with my anti-ageing properties
- Promoting feminine health

### Where you can find me

I am a commercial crop and can be grown in a wide range of climate conditions. However, I thrive best in



### My different avatars

- Amber
- Akhain
- Latham
- Heritage
- Indian summer
- Bristol
- Allen
- Clyde

### Why I fear climate change

I am as vulnerable to the erratic climate changes as any other fruit. I cannot survive extreme weather temperatures; at the most, I can tolerate mild winters and cool summers. Acid rain, resulting from global warming, is a major problem for me and to solve that, regular soil tests need to be conducted along with usage of rich manure. The pH of acidic soil can also be corrected by adding lime juice. Other than that, I require adequate rainfall or irrigation for you to enjoy my luscious taste! So, help me before it's too late.

colder regions with ample sun light. Rich soil, sandy loams and silts with good water drainage, having pH maintained between 6.0 to 7.0, is ideal for my best yield quality. In the year 2018, more than 822,493 tonnes of my varieties were produced worldwide. Russia is my biggest cultivator and supplies 21% of the world's total supply, followed by Mexico, Serbia and USA.