A Fruit or a Veggie?

What was once considered poisonous is now an ingredient that cooks cannot do without. The tomato, which originated in South America, today owes its worldwide spread and usage to the Spanish colonisers

by Aanandika Sood

Somewhat like that constant debate in the world about whether the chicken came first or the egg, the tomato's identity has also been quite debated. More about that debate later, but first let us discover about this mass of red pulp.

This species is said to have originated in the South American Andes, in the region that is marked as Chile, Bolivia and Peru today. Initially it was known as the Peruvian apple, while the French later termed it the love apple.

The Mexicans are credited with the beginning of its usage in food and we owe it to the Spanish colonisation of the Americas for taking it far and wide across the world. Can you believe that a long time back it was looked at with great deal of suspicion and thought to be poisonous (the leaves are)? Here is another nugget from history books — somewhere around the year 1544, an Italian botanist and physician suggested that it was just a new type of eggplant which was red or golden in colour. As a result in Iran the earliest name given to the tomato was closer in meaning to eggplant. What were they called? Armani bademjan or the Armenian eggplant.

Are you wondering how it came our way? Well, for that the credit must be given to the Spaniards again, who distributed it among all their colonies in the Carribean and took the tomato to the Philippines from where it made its way to south east Asia and from there to the whole of the Asian continent. The English word — tomato comes from the word *tomate* in the Spanish language.

Another interesting fact about the tomato is that it was initially grown for its ornamental value in Italy. The Britishers began to use tomatoes only around the mid 18th century before which they were largely considered poisonous as mentioned earlier.

Today the culinary world seems to be unable to do much without tomatoes. The rich history and the various ways in which it is used — eaten raw, used in dishes, drinks, soups and salads give the tomato a certain charm.

Now we move on to some health benefits of tomatoes:

- They are a rich source of lycopene, the carotenoid pigment which gives tomatoes and many others their red colour. Lycopene is considered to ward off the risk of certain kinds of cancerous growth in human bodies.
- Tomatoes are hailed for the high content of anti-oxidants in them.
- Scientists have associated tomato consumption with decreased levels of cholesterol declaring it heart-friendly.

I am sure the scenes of the La Tomatina festival that you must have seen in a film some years back must be in your mind now.

La Tomatina is held every year on the last Wednesday of August in the town of Bunol in Spain where people throw squashed tomatoes at each other for fun.

And now before I sign off, let me tell you about the debate that I mentioned at the beginning of this article.

Back in 1893 an importer contended that it was a fruit because it is pulpy and has seeds. He argued so to save a tax of 10 per cent that the Port Authority of New York levied on vegetables as tariff and, as you must have guessed, tomatoes were considered veggies. The matter reached the Supreme Court where it was decided that tomatoes — owing to their use as a vegetable and not a fruit, which is used in desserts — counted as vegetables, and the importer had to keep paying the tariff.

Yet botanically speaking tomato remains a fruit!

The Intersection of Social Media, Gaming and Education

Welcome to the future, where social media, gaming and education intersect to engage students and reinforce what they learn in the classroom, to improve their cognitive skills and to improve their collective intelligence in a social environment by making learning fun!

It is no secret that students spend considerable time online, especially on social media sites such as Facebook, and the trend is only growing. While the jury is still out on the effects of spending time on social media platforms, the reality is that students do hang out on Facebook, and companies are looking for new ways to engage them while they are there and provide them with a fun learning experience.

Studies have shown that students improve their cognitive skills and decision making ability by playing games. For example, most games have a time element associated with them and players have to make split-second decisions, not dissimilar to an entrance exam where they have to choose one out of four multiple choice options in a minute.

Clay6.com, an online education company based in Chennai, has developed a game called the Clay6 Premiere League with which they believe students can hone the math and science skills required for board and entrance exams in a fun, gaming environment. The game, free to access and available currently on Facebook, offers students a chance to rise through levels of mastery, from Beginner to Grand-Master by answering questions and gaining points. Questions are drawn from the Plus Two syllabus to test their understanding of math, physics, chemistry and biology.

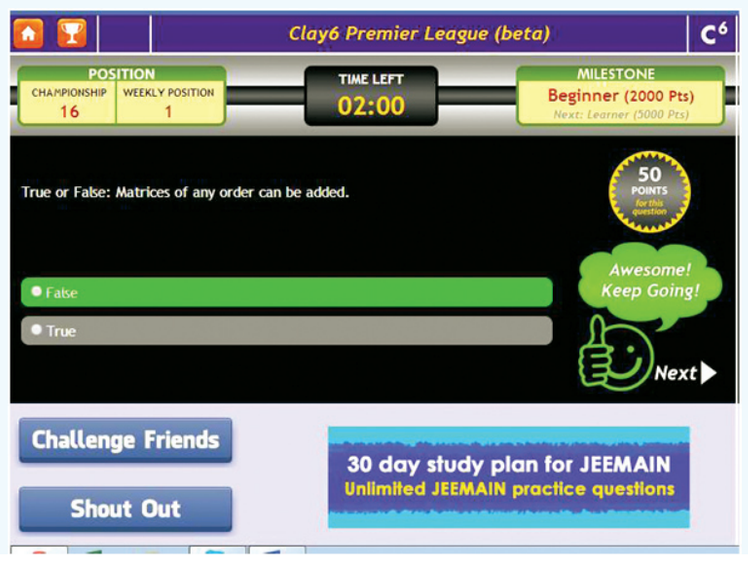
Clay6 was founded by two technology veterans, Balaji Thirumalai and Pady Srinivasan, who have spent 20+ years in the high-tech industry in the US. They believe that gaming in education will provide students with an environment without any pressure to test and hone their skills.

Students are far less likely to give up on learning when they are playing a game than in the real world where peer and social pressure plays a part. In their gaming avatar, they can practise till they get better, challenge friends and improve their skills.

The game allows self-paced learning. Students earn badges and can compete for weekly and overall prizes. It serves up a random array of questions that put the students in a situation where they have to make decisions in the specified time and increase their analytical ability by switching context between a math problem and a physics puzzle. There are dashboards and reports that can help teachers use this game to test a student's understanding and improve the areas of weakness.

The game is free for everyone to use, but prizes are awarded to school students only. You can access it at https://apps.facebook.com/claysixpl/. The company website, www.clay6.com, provides a complete analytics-backed practice environment for high-school math, and engineering and medical entrance exams.

Interested schools can contact the company directly — Balaji Thirumalai (balaji@clay6.com or +91-9840188654) for business enquiries.



Inanna Goes to the Underworld

by Reeja Radhakrishnan

Inanna was the Sumerian goddess of love and cosmic laws. Besides this, she was the patron deity of fertility, grain, healing and even war.

Inanna, the beautiful goddess of love, had a twin sister Ereshkigal. While Inanna was the goddess of light, of the Heavens, her sister was the goddess of darkness and thus the Underworld. One day, Inanna decided to pay her sister a visit, for she was missing her.

None in the Heavens approved of her plan, for those who descended into the netherworld were never known to return. But Inanna had made up her mind to go. Her father Nanna was the Moon god and her mother Ningal was the goddess of the reeds. Inanna had been given in marriage to Dumuzi, a shepherd, not exactly her choice but that of her brother the Sun god, Utu, for he alone had the power to decide who should wed his sister. Marriage had elevated Dumuzi's position and he was now the king of Uruk.

Inanna began preparations for her journey. Deserting the seven temples where she was worshipped, she abandoned both Heaven and Earth to descend to the Underworld. Before her journey she adorned herself in royal attire which had the power to protect her. Before she left she confided in her confidante and maid Ninshubur. "I'm going down to visit my sister Ereshkigal . If I do not return in three days, you must seek help from the other gods."

And bravely she departed to the land that no one ever wished to go. When she reached the outer gates of the Underworld, she called out to the gatekeeper Neti. "Open the door, gate keeper, this is Inanna, the Queen of the Heavens! Let me enter!"

"But why would you wish to enter a land from which no traveller returns, O Queen?" asked Neti.

"I wish to see my sister Ereshkigal who is your mistress. Now go tell her that Inanna is waiting at the gates." replied Inanna.

"Okay, wait! I shall inform her," said Neti and went in to confer with Ereshkigal.

"Worshipful Queen Ereshkigal! There's a maiden at the gates, waiting to enter, claiming to be your sister Inanna. On her head she wears a shugarra, the crown of the steppe. Her dark locks are carefully arranged across her forehead and around her neck she wears lapis lazuli beads. On her breast she wears another double strand of beads and a breast plate. On her wrist she wears a ring of gold and holds a lapis sceptre in her hand. Her body is wrapped in a royal robe and she is tall as Heaven and wide as the Earth." When Neti was finished with his description of her heavenly counterpart, Ereshkigal sat silent for a while. Then she slapped her thigh and bit her lip. She was not entirely sure what her twin wanted.

"Lock the seven gates of the Underworld and open them one by one just a crack to let Inanna enter. But remember, she has to shed one by one her royal garments, when she passes each gate. And when she does enter the final gate to reach here, let her head be bowed low!" Neti faithfully reported these instructions to Inanna waiting at the gate.

"But why?" questioned Inanna, "I come to meet my sister, my counterpart. Why these rules for me?"

"Quiet, Inanna! The ways of the Underworld are perfect. They cannot be questioned," replied Neti dispassionately. Inanna removed her shugarra, her crown and handed it to Neti. "Okay, let me enter now."

She passed through the first gate, opened just a crack to let her through. At the second gate she took her lapis beads from her neck, at the third the double strand on her chest and her breast plate at the fourth. At the fifth gate, she removed her gold ring from her wrist and at the sixth she gave up her lapis sceptre. Finally at the seventh and the last gate she shed her royal robe.

Inanna entered her sister's throne room, naked with her head bowed low as instructed.

As she moved towards her sister seated on her throne, in order to embrace her, the *Annuna*, the judges of the Underworld, surrounded her and fearing an attack on their goddess Ereshkigal, passed judgment against her. Perhaps they feared that Inanna would take her sister back to the Earth or the Heavens.

Ereshkigal, who obviously didn't share her sibling's tender feelings, spoke harshly against her and turned Inanna into a corpse and hung her from a hook on the wall.

To be continued.....

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ILLUSTRATION| TAPAS RANJAN

VEDIC MATH

Cube root of a perfect cube

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The cube root of a perfect cube is very easy to find, once we have had some practice with this method.

We need to know the facts we used in the last article. We must be thorough with the cubes of numbers 1 to 10. And we must remember the final digit (the units digit) of these cubes. This can help us find the cube root of any perfect cube without too much trouble.

Let us take another look at the table. The units digits are highlighted.

1^3	2^3	3^3	4^3	5^3
1	**8**	27	64	125

6^3	7^3	8^3	9^3	10^3
216	343	512	729	1000

The first step in our calculation is to find out how many digits the root has. For this we need to split the given number into three-digit groups from the right.

Example 1: $\sqrt[3]{21952}$

Step 1: We split the number into groups of three from the right 21 / 952. We have two groups, so our answer will have 2 digits.

Step 2: The units digit in **952** is **2**, and from the table above we can conclude that the cube root will have **8** in the units place.

Step 3: Next we find the tens digit. We have **21** in our second group From the table we find that **21** lies between 2^3 **(8)** and 3^3 **(27)**. We take the lower cube, which is **2**. Our answer will have **2** in the tens place.

The cube root of 21952 is 28.

Example 2: $\sqrt[3]{117649}$

Step 1: We group the digits from the right. 117/649. Two groups, so the answer has two digits.
Step 2: 649 ends in **9**, so the answer will have **9** in the units place.
Step 3: 117 lies between 4^3 and 5^3, so the cube root will have **4** in its tens place.
The cube root of 117649 is 49.

Example 3: $\sqrt[3]{884736}$

Step 1: Grouping 884/736. Answer has two digits
Step 2: Number ends in 6, so 6 is the units digit of the answer.
Step 3: 884 lies between 9^3 and 10^3 so 9 is the tens digit.
The cube root of 884736 is 96
Simple, isn't it?!

Example 4: $\sqrt[3]{970299}$

Step1: 970/299
Step 2: It ends in 9, so the units digit of the answer is 9
Step 3: It lies between 9^3 and 10^3 so the tens digit is 9
The cube root of 970299 is 99

Now try these:
a) 531441
b) 614125
c) 778688
d) 357911
e) 74088