

Winning the award was completely unexpected. But I am glad that my hard work has been acknowledged by GT.

Lakshay Garg, AIS PV, XI
Best Photography(Winner)



The tale of golden crown

Science is based purely on facts, reasoning and logic. What was the logic Archimedes decoded when he ran down the streets of Syracuse shouting out loud, “Eureka!...Eureka!”

Sanaa Srivastava

AIS Vas 6, XII

Nearly 200 years ago, there lived a king called Hiero nearly 200 years ago. He was admired and loved by all in his beautiful Greek city of Syracuse. His city always flourished with riches of all kind. Hiero was grateful to the Gods for his good fortune and to thank them, he decided to offer them a gift, a crown made of pure gold! King Hiero summoned the town's goldsmith. Handing him a block of gold, asked him to make the most splendid crown in the world. The king had already weighed the block to ensure that the crown does not fall short on magnificence. The king also promised him a good reward for the same.

However, a good reward didn't seem enough for the goldsmith who was allured by the glimmering sight of the gold brick. He thought to himself, “The king and the Gods have enough riches. Even if I keep a little gold for myself and mix some silver in



the crown instead, what harm will it do?” Even the walls of the kingdom were loyal to the king and in no time, the king came to know of the goldsmith's plans. Hiero was agitated at the rumour, but he was also a man of justice. He wanted to confirm the rumour himself and asked Archimedes, who was a Greek scientist, “Find

out how much gold had been stolen?” Archimedes was baffled. “How do I come up with a way to test a goldsmith's malice?” he thought to himself. Days passed by and Archimedes struggled with a solution. One day, lifting his head up from a pile of books, Archimedes decided to take bath to calm himself. As he was busy

thinking, he did not notice the bathtub was already full to brim. He slid himself in the bath tub, and he noticed water splash out of it. The more he lowered himself inside the tub, the more water spilled out of the tub. And then it hit him!

Jumping with joy, Archimedes got out of the tub and ran across

the streets shouting ‘Eureka! Eureka! I found it!’ He straight away went to the king and said, “Majesty, I have found a solution. So, basically, when an object is put in water it displaces it. And, by measuring the amount of water displaced, one can measure the volume of the object. And, all substances have different volume

and density.”

The goldsmith had delivered the crown by now. Archimedes took two bowls and filled them with water till the brim. He then put the crown in one bowl and a block of gold of the same weight as the one that was given to the goldsmith in another. As soon as he placed both the crown and the block of gold in the bowls, water spilled out. Archimedes collected and measured the amount of water spilled. The quantity of water spilled differed. Explaining the science behind it, he said, “Gold is denser than silver, which means the silver has more volume. And because of this it will displace more water. This clearly shows that the goldsmith has mixed some other metal in the crown.” The goldsmith was ashamed of his wrong doing as he had never thought that he would be caught.

This way, the king found out about the goldsmith's betrayal and punished him. Archimedes, on the other hand, was hailed a hero and the story of his discovery became a legend. 🇮🇳

The mysteries of SPACE

Our solar system is a fascinating wonderland whose mysteries are being continuously unraveled. There is no end to the unexpected and intriguing facts that lay hidden in our solar system. **Harsukh Singh**, AIS PV, IV takes us on an exciting journey around mysteries that envelope the outer space.

Universe

- There are more than 100 billion galaxies and 400 billion stars in the universe.
- There are an estimated 100 billion stars in the Milky Way.
- It will take you around 3000 years, i.e., one star per second, if you try to count all the stars in just our galaxy.

Mercury

- Mercury has been known to mankind since ancient times, almost 3000 BC by the Sumerians.
- Due to its low gravity and lack of atmosphere, it has no moons or rings.
- Because of its tilt in the axis, this planet experiences no seasons.

Venus

- Venus is the only planet that rotates clockwise.
- The Venera series space probes was first launched on Venus by the Soviets on Feb 12, 1961.
- Venus is the slowest rotating planet with a speed of only 4 miles per hour.

Mars

- It is home to ‘Olympus Mars’, solar system's tallest volcano.
- Martians, also known as extraterrestrials from Mars, are a common character in science fiction books and movies.
- The two moons of Mars, ‘Phobos and Deimos’, were written about in the book ‘Gulliver's Travels’ by author Jonathan Swift – 151 years before they were discovered.

Uranus

- Uranus rotates in a retro-grade direction on its axis, which is opposite from Earth and most other planets.
- It is often referred to as the ‘Ice Giant’. The upper atmosphere of water, ammonia and methane ice crystals gives it's distinctive pale blue color.

Jupiter

- It is not just largest but also the fastest rotating planet. A day lasts for 9 hours and 55 minutes.
- It is so big that all the planets could fit inside it.
- Jupiter has 62 moons. One of the moons, Europa is completely covered in ice.

Neptune

- Neptune was discovered by Jean Joseph Le Verrier.
- Neptune spins very quickly on its axis.
- It has an extremely active climate. The largest storm was the ‘Great Dark Spot’ in 1989 which lasted for around five years.

Saturn

- Saturn, the second largest planet, is also the lightest one in the solar system.
- The density of the planet is so low that it can float in water.

Earth

- Earth is the only planet where water exists in all three states – liquid, ice and vapour.
- It is actually two planets cojoined, based on the Giant Impact Hypothesis. Theia a planet was knocked out of her orbit and collided with the Earth.

Moon

- The moon is moving 3.8 cm further away from the Earth and because of this, the Earth is also moving slowly.
- Every century the earth's rotation will be 2 milliseconds slower. In 100 years, the day will become 2 milliseconds longer.

Sun

- Our star, the Sun makes up 99% of all mass in the solar system.
- 1.3 million Earths can easily fit in the sun.