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by the **The KK Times**

**Dream,  
Draw,  
Design,  
Discover.**

**Mysteries  
of the  
Moon**

## **Moons of Space**

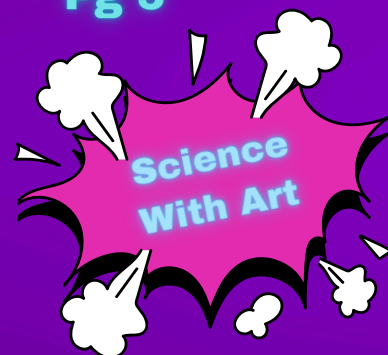
There are 243 moons  
orbiting planets in our  
solar system.



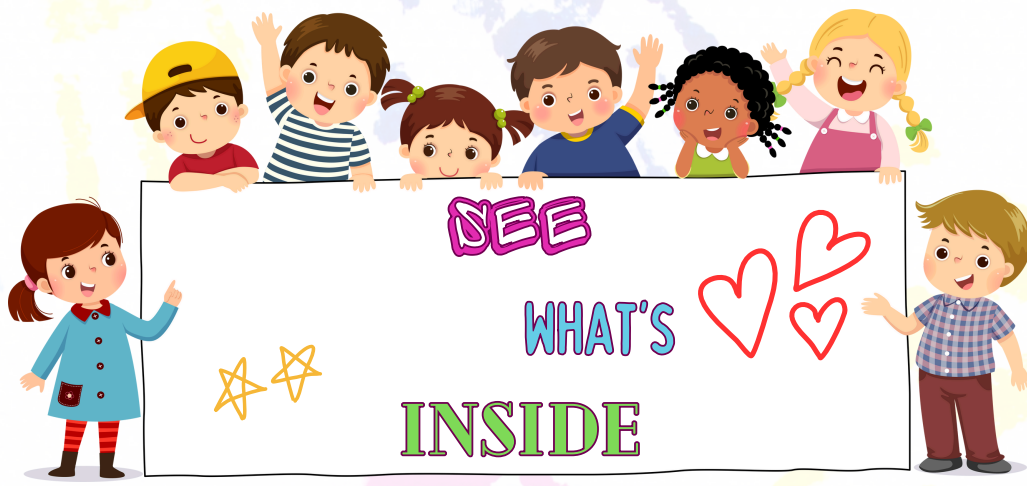
## **ABOUT THE COVER**

*This edition of The Quirious  
Atom showcases the  
fascinating moons of our solar  
system. Explore the wonders of  
these diverse and intriguing  
natural satellites!*

**Pg 5**







**The Qurious Atom | Issue 12 | 31 July | Monthly | Ghaziabad | ₹30**

## Note from the Editor:

Hey explorers! Welcome to the latest edition of our science magazine, where we embark on an exciting journey through the 'Moons of Space'! This issue is packed with fascinating articles that will ignite your curiosity and expand your knowledge about the incredible moons in our solar system.

Explore the mysterious Moon Phobos of Mars and learn about the Deep Space Network (DSN) and its vital role in space communication. Dive into a whimsical story of animals on a galactic moon adventure, and discover fun moon facts about each planet.

We also take a closer look at 'Maria', the seas on our very own moon, and delve into some earthly topics like the respiratory system and the magnificent world of tigers, celebrating International Tiger Day. Additionally, we'll explore vital elements that keep our jungles and forests thriving.

Don't miss the exciting science activities. Happy reading, and may your imagination soar to new cosmic heights!

Your friend, Kanira  
World's Youngest Chief Editor

Next Issue of The Qurious Atom:  
31 August 2024

Theme : Battling Diseases- The Science of Cures

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# A Potato in Space: Mars' Moon - Phobos

3

The Red Planet has 2 moons- Phobos and Deimos. Phobos is the larger of the two. Lumpy in shape, it is 17 x 14 x 11 miles in diameter.

## Why is it Irregularly Shaped?

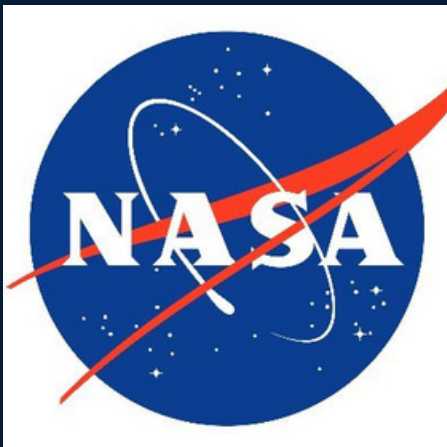
Phobos has achieved a lumpy shape due to its weak gravity which can't shape it into a sphere. It is commonly known as a "potato-shaped moon."

## Key Features of Phobos:

**1. Stickney Crater:** This large impact crater, about 10 kilometres wide, is one of the most prominent features on Phobos's surface.



Stickney Crater



NASA Logo



Photograph by NASA's High Resolution Imaging Science Experiment (HiRISE)

**2. Surface Grooves:** Phobos has long, narrow grooves and striations that likely resulted from stress and impacts.

**3. Fast Orbit:** Phobos orbits Mars very closely and completes a revolution in just 7 hours and 39 minutes, causing it to rise in the west and set in the east.

**4. Tidal Forces:** The gravitational pull from Mars is slowly pulling Phobos inward, causing it to spiral closer to the planet. In the distant future, it may either collide with Mars or break apart.

In conclusion, the potato shaped moon, Phobos provides opportunities for space research. With unique features like its fast orbit, craters and its shape, this moon is an interesting topic for scientists to explore.



# Inside the World of Tigers: From Habitat to Diet

International Tiger Day is celebrated on 29 July each year to raise awareness about saving tigers on our earth.

(Read clockwise from the red square)

**“Roar!”** Tigers are majestic creatures who play an important role in the ecosystem. With about 5,600 left today, they are one of the world’s most endangered animals.

Tigers are generally found in rain forests, Savannahs, grasslands and swamps. They are also present in protected tiger reserves and national parks. Did you know, India is home to around 75% of tigers worldwide?

Tigers are carnivores and eat meat. Some animals commonly consumed include wild boar, deer, antelopes, cows, goat etc. Although tigers are strict meat-eaters, they will consume grass and other plants like bamboo to aid their digestion.

As Michelle Yeoh said, “We must protect tigers from extinction. Our future depends on it.” So this International Tiger Day, let’s pledge to protect these beautiful creatures from extinction.



There are 9 subspecies of tigers. Unfortunately, 6 subspecies are endangered and 3 are already extinct. The subspecies include-

## Extinct Species:

Javan Tiger  
Caspian Tiger  
Balinese Tiger

## Endangered Species:

Bengal Tiger  
South China Tiger  
Sumatran Tiger  
Indo-Chinese Tiger  
Siberian Tiger  
Malayan Tiger



# SCIENCE WITH ART<sup>5</sup>



Artwork by Kanira Gupta

## What is the DSN?

The Deep Space Network (DSN) is a giant communication system used by NASA to talk to spacecrafts far, far away in space. Think of it like a super-powerful walkie-talkie, but for space! The DSN has huge antennas spread across three places on Earth—California, Spain, and Australia. These antennas send and receive signals to and from spacecraft exploring our solar system and beyond.

The DSN helps us get pictures, data, and even videos from places like Mars, Jupiter, and other distant worlds. Without it, we wouldn't know nearly as much about space as we do today. So, the next time you see amazing photos from space, remember the DSN played a big role in making that possible!

Send your science related poems, art, articles etc. at [submissions@curiobuddy.com](mailto:submissions@curiobuddy.com).



# The Curious Chronicles of Jungle Grove

## Ch-11 "Mandy's Galactic Moon Adventure"

As summer vacations ended, Mandy the Monkey was back at school, eager to dive into the world of science. Being the curious monkey she was, her excitement grew even more when she learned that in honour of Moon Day, the school was taking the Grade 5 students on a special field trip to the Space Kids Centre once again, this time with a focus on the Moon.

At the Space Kids Centre, the students headed straight for the Moon Museum, a newly added attraction. Inside, Mandy and her classmates marvelled at detailed models of different moons from around the solar system. They learned fascinating trivia, such as the fact that Saturn is the planet with the most moons, with 146 moons.

The excitement didn't stop there. The students were split into groups for a thrilling escape room challenge. Each room was filled with puzzles and clues about the moon, testing their knowledge and problem-solving skills.

After the escape room, they settled in for a short movie titled "Mysteries of the Moon." The film explored various aspects of the moon, including its phases, craters, and its role in space exploration. Mandy was captivated by the stunning visuals and intriguing facts presented in the movie.

When the day ended, the students returned to school just before their science period. Coincidentally, they received the latest edition of The Curious Atom, which was themed "Moons of Space." The newsletter was filled with articles and activities related to the moon, perfectly complementing their field trip experience.



### STORY

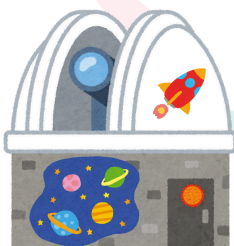
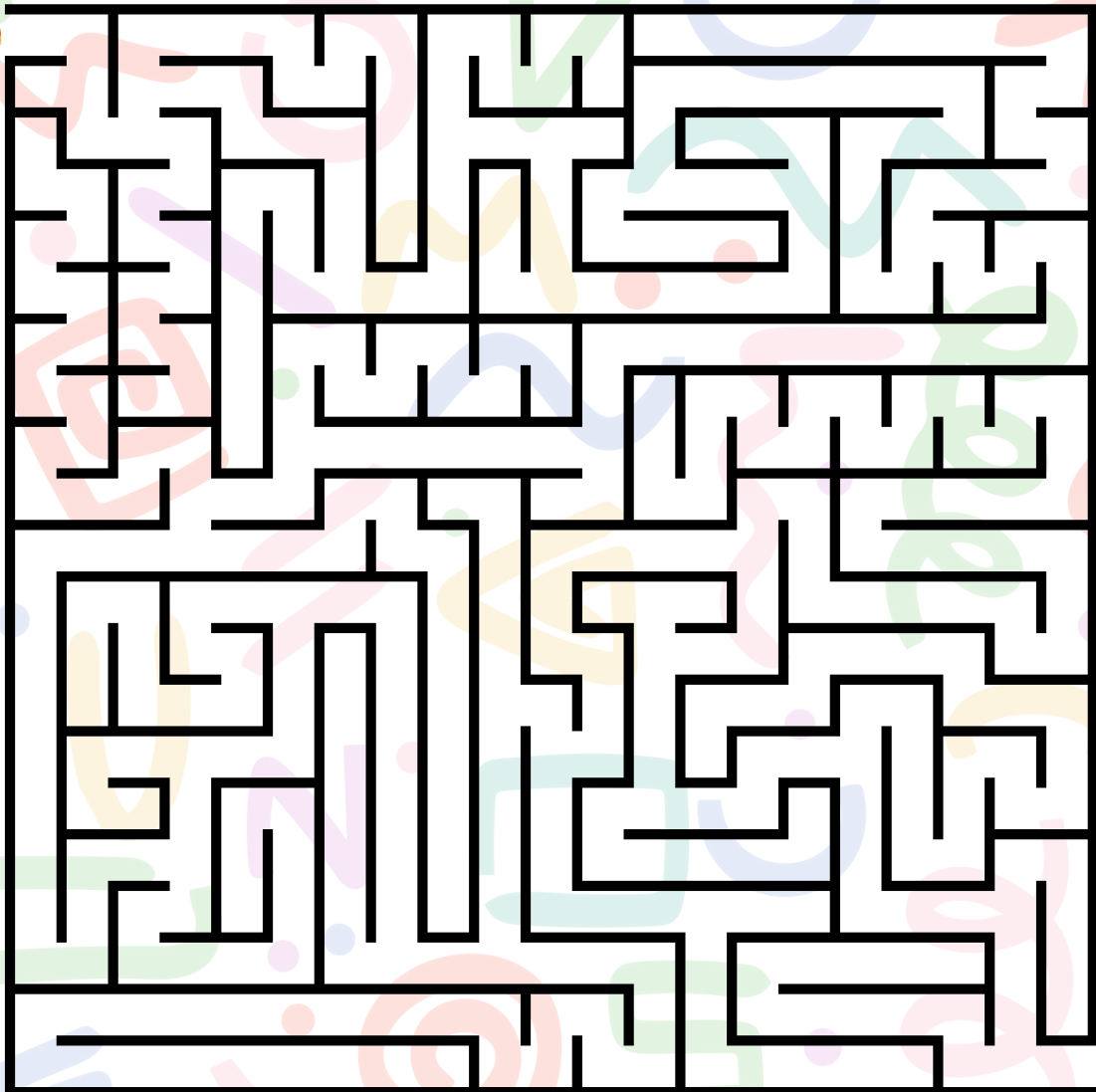
Mandy and her friends worked together to solve the mysteries and had a blast in the process.

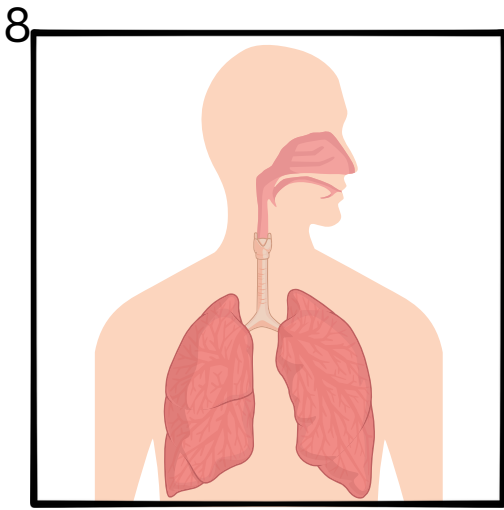


In their science class, Ms. Dorothea Deer asked the students to share their favourite moments from the visit. Mandy eagerly recounted her experience at the Moon Museum, the fun escape room, and the educational movie. Her classmates shared their thoughts as well, creating a lively discussion about the wonders of the moon.

Mandy left school that day feeling inspired and excited. She couldn't wait for more trips to the Space Kids Centre and was thrilled to share her newfound knowledge about the moon with her friends and family. Her adventure at the Space Kids Centre had made her appreciate the mysteries of space even more, and she looked forward to learning more about the universe in the future.

**Mandy's school bus is lost. Help them reach the Space Kids Centre.**





# THE RESPIRATORY SYSTEM 101

Lung 1: Hey kids! Have you ever wondered how you breathe? Today, we're going to tell you about the **Respiratory System!**

Lung 2: **Oxygen** enters your body through your **Nostrils**. They have tiny hair and mucus which trap dust particles from entering your body.

Lung 1: Let's not forget, air also enters through our **Mouth**.

Lung 2: Yes! Then it heads over to our friend, **Pharynx**. He's way up there. We like to call him '**Throat**.'

Lung 1: Following this, it goes through our **Larynx**. Pharynx and Larynx are best friends. They are neighbours too. He is commonly known as '**Voice Box**' because he gives you your voice.

Lung 2: Then comes **Trachea**. She lives closer by. You might know her as **Wind Pipe**.

Lung 1: Trachea is further divided into two parts. They are called **Bronchus** ( Plural: Bronchi ). They both are twins, just like us. But they are not identical either.

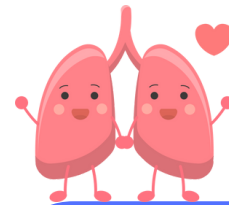
Lung 2: Then are your **Bronchioles**. They are tiny tubes inside of us carrying air to **Alveoli**.

Lung 1: Allow me to explain. Alveoli are super small air sacs. They fill up with oxygen and let go of **Carbon Dioxide** which goes back through all the other organs that we told you about.

Lung 2: And last but not least is your **Diaphragm**. It's right below your **Lungs** (AKA: Us). He is a dome-shaped muscle which moves down when you **Inhale** and up when you **Exhale** giving space for your lungs to expand.

Lungs: We hope you had fun learning about us and our friends. ( AKA: The Respiratory System ) Bye!

Puff-Puff Puns



What did one lung say to the other?

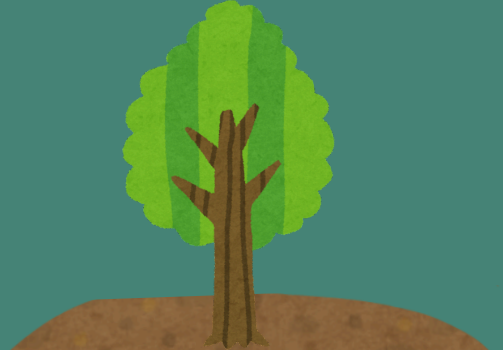
"We be-lung together!"





# Jungle Explorers

## Part 4 Vital Elements



The rainforest relies on several vital elements to sustain its rich biodiversity. The soil, teeming with organic matter from decomposed plants and leaves, provides essential nutrients for the diverse flora. This fertile ground supports the growth of both towering trees and dense underbrush. The high levels of humidity and consistent rainfall create a moist environment, crucial for the survival of numerous species. These interactions between soil, moisture, and climate are fundamental to maintaining the vibrant and complex ecosystem. Preserving these vital elements is key to ensuring the continued health of this dynamic environment.

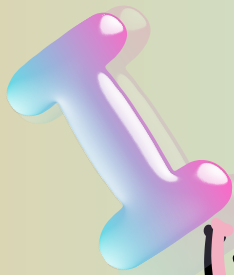


### Fun Fact



**FORESTS ARE HOME TO  
OVER 80% OF THE  
WORLD'S LAND-BASED  
SPECIES OF ANIMALS,  
PLANTS AND INSECTS.  
LET'S SAVE FORESTS.**





# WONDER WHY?



**WE FLOAT  
ON WATER**



We float on water because our bodies are less dense than water. When we get in, the water pushes us up with a buoyant force that can support our weight, so we stay on the surface instead of sinking.

We have different time zones because the Earth rotates, so different places experience day and night at different times. Time zones help us keep track of local time based on the position of the Sun.



**WE HAVE  
DIFFERENT TIME  
ZONES**



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# MOON

## FACTS

- Ganymede, one of Jupiter's moons, is the largest moon in the solar system and even bigger than the planet Mercury.
- Titan, Saturn's moon, is larger than the planet Mercury and has a thick atmosphere, making it the only moon with such a dense atmosphere.
- Triton, Neptune's moon, orbits in the opposite direction to Neptune's rotation, which is unusual for moons.
- Mars has two small moons named Phobos and Deimos, which are thought to be captured asteroids.
- Uranus has 27 known moons, named after characters from Shakespeare's plays and Alexander Pope's poetry.
- Europa, one of Jupiter's moons, is covered by ice, and scientists believe there might be an ocean of liquid water underneath that could support life.
- Enceladus, a moon of Saturn, has geysers that shoot out water vapor and ice particles into space, hinting at an underground ocean.

### What are Maria?

On the Moon, "maria" (which means "seas" in Latin) are large, dark, flat areas. They're called this because early astronomers thought they were actual seas. In reality, these maria are made from ancient volcanic lava that spread out and cooled. They look different from the Moon's other surfaces, which are covered in craters and mountains. Some famous maria include Mare Imbrium and Mare Serenitatis.

## SPOT THE DIFFERENCE

Spot the differences between the two scenes.  
Answers in the next edition.

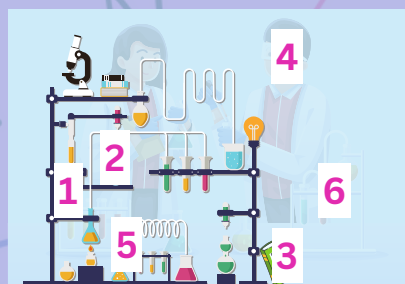


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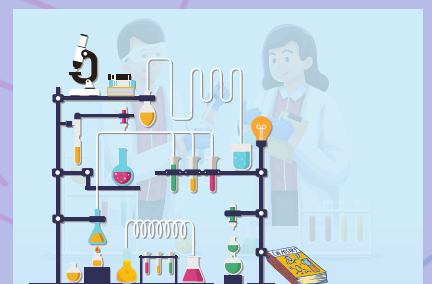


B

Spot The Difference.  
Answer of June Issue



A



B



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