





CONTENTS

- 1. Chronicles Of Space
- 2. Space Projects
- 3. The Universe Today Space & Astronomy News
- 4. Movies And Books Recommendations
- 5. Movies And Books Review
- 6. Buzzing Poets
- 7. Space Exploration
- 8. Space Careers
- 9. Science Fun @ Home
- 10. Interstellar Art Gallery
- Spotlight @ PIS
- 12. Astrosnacks
- 13. Brain Play

FROM THE PRINCIPAL'S DESK

At the outset, I express my gratitude to the parents who have put their faith in us to educate their children. This brings with it tremendous responsibilities and I assure you that we are doing our best to live up to your trust in us. Today, the role of a school is not only to pursue academic excellence but also to motivate and empower the students to be lifelong learners, critical thinkers, and productive members of an everchanging global society. Converting every individual into a self-reliant and independent citizen, our school provides an amalgam of scholastic and co-scholastic activities.

At PIS, Shirur we focus on complete development of our students by involving them in both scholastic & co-scholastic activities. I am sure this will help our children to realize, understand & explore their talents. In order to do this, the parents and the school authorities must work together to inculcate certain values in the students. Children learn a lot of values when they are involved in social cause. Some of these life skills & values cannot be taught in the classroom or at home.

The theme for the 1st Volume is 'The Earth & Beyond' has given the students a chance to learn and explore 'Outer Space' in a fun and creative manner. I congratulate the entire team for their hard work and dedication to making this magazine. I am sure that the positive attitude, hard work, sustained efforts and innovative ideas exhibited by our young children will surely stir the minds of the readers and take them to the fantastic world of sheer joy and pleasure.

"Education is a shared commitment between dedicated teachers, motivated students and enthusiastic parents with high expectations" With all my love, best wishes and blessings.

Regards,

Ms. Minal Vaidya, Principal

Editor-in-Chief: Swati Mamidanna | Student Editor: Pratik Wajage - X | Student Editor: Ojas Kulkarni - VII

Visual & Media In-charge: Santosh Shinde | Creative Designer: Ganesh Sirsat



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CHRONICLES OF SPACE





The History of Space Exploration: Since the launch of the first artificial satellite in 1957, astronauts have travelled to the moon, probes have explored the solar system, and instruments up in space have discovered thousands of planets around other stars.

Apollo 11's Astronauts on Moon are less belligerent, but no less competitive. Part of the cold war was the space race. The Soviet Union bested its rival at rearly every turn, until the U.S. beat them to the finish line by landing astronauts on the moon.

We human beings have been venturing into space since October 4, 1957, when the Union of Soviet Socialist Republics (U.S.S.R) launched Sputnik, the first artificial satellite to orbit Earth. This happened during the period of political hostility betweeen the Soviet Union and the United States known as the Cold War. For several years the two superpowers had been competing to develop missiles, called Inter-continental Ballistic Missiles (ICBMs), to carry nuclear weapons between continents. In the U.S.S.R., the rocket designer Sergei Korolenes had developed the first ICBM, a rocket called the R7, which would begin the space race...

This competition came to a head with the launch of Sputnik. Carried atop on R7 rocket, the Sputnik satellite was able to send out beeps from a radio transmitter. After reaching space, sputnik orbited Earth once every 96 minutes. The radio beeps could be detected on the ground as the satellite passed overhead, so people all around the world knew that it was really in orbit. Realizing that the U.S.S.R. had capabilities that exceeded U.S. technologies, that could endanger Americans, the United States grew worried. Then, a month later, on November 3, 1957, the soviets achieved an even more impressive space venture. This was Sputnik II, a satellite that carried a living creature, a dog named Laika.

Prior to the launch of Sputnik, the United States had been working on it's over capability to launch a satellite. The United States made two failed attempts to launch a space mite into space before succeeding with a rocket that carried a satellite called Explorer on January 31, 1958. The team that achieved this first U.S. Satellite launch consisted largely of German rocket engineers who had once developed ballistic missiles for Nari Germany. Working for the U.S. Army at the Redstone Arsenal in Huntsville, Alabama, the German rocket engineers were led by Wernher von Braun and had developed the German 12 rocket into a more powerful rocket, called the Jupiter C or Juno. Explorer carried several instruments into space for conducting science experiments. This was for an experiment operated by researcher James Van Allen, which together with measurements from later satellites, proved the existence of what are now called the Van Allen radiation belts around Earth.

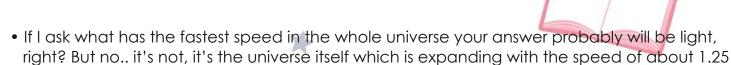
Mast. Krish Patel Std. IX C. V. Raman



CHRONICLES OF SPACE

times the speed of light.





- Galaxies: Everybody knows that the galaxy in which we are living is the Milky Way. But do you know that our galaxy has more than 200 billion stars? The closest galaxy to Milky Way is the Andromeda galaxy. Scientists told that the two galaxies Milky Way and Andromeda would collide with each other. Whirlpool is an example of the same.
- Isn't it amazing to think about the fact that when we see the Moon we see it 1.6 seconds old as light takes 1.6 seconds to reach to the Earth.
- Jupiter's radius is 11 times larger than Earth. As we know Earth complete it's rotation in 24 hours, but Jupiter completes it's rotation in 10 hours.
- Stephenson is the largest star found till now, before it was discovered UY Scuti was the largest star discovered.
- Nebula is a cloud of star dust before forming into a star. For eg. Tulip Nebula, Cat's eye nebula, etc.
- Supernova is a type of destruction of star where the star blasts in the space.
- The space where nothing is present; any planets, stars, dust particles is known as void.
- Hubble telescope is a telescope launched by NASA but now it's replaced by the James Webb telescope.
- Black hole: it takes the entire things close to it with a high gravitational force. And when it explodes all thing are blown out in the form of radiation. A black hole is almost 1 lakh times bigger than our Sun, which is an average sized black hole.
- The universe is created by a big blast known as the Big Bang. As all the planets revolve around the Sun, the Solar System also revolves around the center of the Milky Way.
- On Mars a chemical has been found that is Xenon129 which can't be created naturally but only be created after a nuclear chain reaction.
- The highest peak of our solar system is present on mars about 25 km above the star surface
- Jupiter has a red spot on its surface, it is a storm which goes on continuously. But now its size is decreasing. Energy in the whole universe is always constant.
- Venus is the hottest planet with 48 degrees celsius because of the thick atmosphere.

Mast. Aayush Gulve Std. IX C.V. Raman



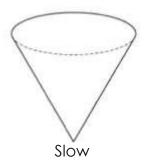




Going down the Atmosphere...

While landing on a planet, our spaceships take advantage of atmosphere along with reverse boosters.

In this picture we can see a student dropping two cones which act as spaceships. Here, the cone with larger surface area falls down slowly as compared to the cone with lower surface area.





This principle is used for safe landings

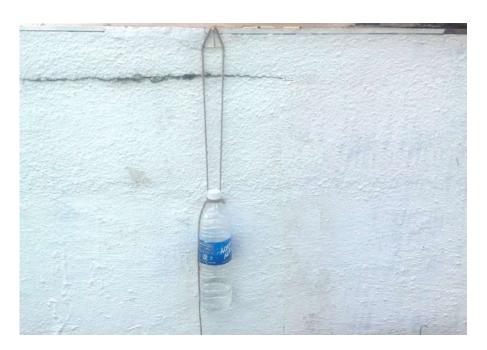








Beauty of Equillibrium..





Stability is supremely important in all cases.

When a rocket or a spaceship is entering the atmosphere there is a chance of getting turbulance.

In the above simple experiment we can see how the bottle is balanced by using match sticks. Can you draw free body diagram of bottle & different sticks?

Mast. Shriram Ware Std. X Archimdes



THE UNIVERSE TODAY

Space & Astronomy News





Earth breaks records by completing rotation in less than 24 hours

Shortest day ever as Earth keeps breaking series of speed records

On 29 September 2022, the Earth's full rotation took 1.59 milliseconds less than 24 hours – the shortest day ever recorded.

New measurements by the UK's National Physical Laboratory show that the Earth is currently spinning faster than it was half a century ago.

NASA shows off amazing new cosmic views

Five spectacular images captured by the James Webb Space Telescope show the universe as we've never seen it before







Pet rock hitches ride on Mars rover NASA's Perseverance rover has picked itself up a pet rock as it explores Mars, carrying the rocky hitchhiker for about 8.5km and counting.





Mast. Ojas Kulkarni Std. VII Edison

MOVIES AND BOOKS RECOMMENDATIONS

Movies

1. Apollo 13 (1995)

NASA must devise a strategy to return Apollo 13 to Earth safely after the spacecraft undergoes massive internal damage putting the lives of the three astronauts on board in jeopardy.

2. The Martian (2015)

An astronaut becomes stranded on Mars after his team assumes him dead, and must rely on his ingenuity to find a way to signal to Earth that he is alive and can survive until a potential rescue.

3. Interstellar (2014)

A team of explorers travel through a wormhole in space in an attempt to ensure humanity's survival.

4. First Man (2019)

A look at the life of the astronaut, Neil Armstrong, and the legendary space mission that led him to become the first man to walk on the Moon on July 20, 1969.

5. Gravity (2013)

Two astronauts work together to survive after an accident leaves them stranded in space.

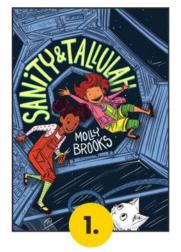
6. Fly Me To The Moon (2009)

Three young house flies stowaway aboard the Apollo 11 flight to the moon.

7. Mission Mangal (2019)



Books



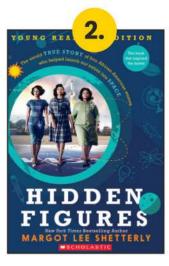
Sanity & Tallulah Molly Brooks



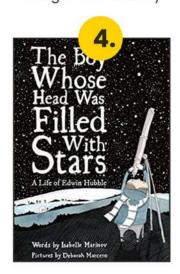
Galaxy Girls: 50 Amazing Stories of Women In Space Libby Jackson



The Kid Who Came From Space - Ross Welford



Hidden Figures Young Readers' Margot Lee Shetterly



The Boy Whose Head Was Filled with Stars: A Life of Edwin Hubble



How To Be A Spcae Explorer: Your Out Of This World Adventure By -Lonely Planet Kids



Title of the Book/Movie: Gravity

Movie/Book Summaru:

This movie starts with the story of two astronauts on an expedition to space with the motive of maintainance of the International Space Station (ISS). As the story goes on, our astronauts are warned about some debris from an old damaged satellite which was advancing towards the ISS. The story then goes on showing how they survive which is very heart touching and moving. I strongly suggest that you watch this movie along with your friends and family.

How many hearts do you give this movie?



(Draw a heart to rate - 1 heart means the movie was really bad. 5 hearts means it was great!)

Mast. Aditya Zambar Movie/Book Reviewed By: Std. X Archimedes







Title of the Book/Movie: First Man

Movie/Book Summary:

Hoping to reach the moon by the end of the decade, National Aeronatics & Space Administration plans a series of extremely dangerous missions in the early 1960s. Engineer Neil Armstrong joins the space program, spending years in training and risking his life during test flights. On July 16, 1969, the nation and world watch in wonder as Armstrong and fellow astronauts Buzz Aldrin and Michael Collins embark on the historic Apollo 11 spaceflight.

How many hearts do you give this movie?



(Draw a heart to rate - 1 heart means the movie was really bad. 5 hearts means it was great!)

Movie/Book Reviewed By: Miss. Vaishnavi Bandal

Std. X Archimedes





Mission Manaal

Movie/Book Summary:

The story revolves around brilliant scientists Rakesh Dhawan & Tara Shinde. The movie shows us how our Indian Space Research. Organization (ISRO) team made the impossible Mars Orbiter Mission possible in a limited budget of Rs. 400 Cr. in a limited amount of time. Vidya Balan played the role of Tara Shinde & successfully portrays a space scientist along with a housewife who manages her home very good. Every character has its own significance It narrates the story of success after failure & inspires people to not give up.

How many hearts do you give this movie?



(Draw a heart to rate - 1 heart means the movie was really bad. 5 hearts means it was great!)

Movie/Book Reviewed By: Miss. Tanushree Munde Std. VIII Finstein





Interstellar

Movie/Book Summary: This movie is about a professor namely Professor Brand, searching for planets where mankind could live in because of a crop blight and second dust. In his research, he found three planets which were habitable for humans & plans to transport the earth's population through a wormhole. He sends a research team to these planets leaded by a NASA pilot named Cooper. They travel through the wormhole across the galaxy to reach and find that the planets are habitable for human beings. I personally liked the movie because of the research and exploration.

How many hearts do you give this movie?

(Draw a heart to rate - 1 heart means the movie was really bad. 5 hearts means it was great!)

Movie/Book Reviewed By: Mast. Devendra Padwal Std. VII Edison













अनोखी दुनिया (अंतरिक्ष)

अँधेरा होता है रात में,
तब तारे निकल आते है।
तारो के पीछे छुपी है एक अनोखी दुनिया,
इसे कहते है अंतरिक्षा।
अंतरिक्ष मैं रहता है,
एक तारों का परिवार।
जिससे जुडी पृथ्वी हमारी,
और ग्रहों का संसार।
वह है एक बड़ा आग का गोला,
जिसे कहते है सूरज।
वह आता है दिन में,
और जाता रात में।

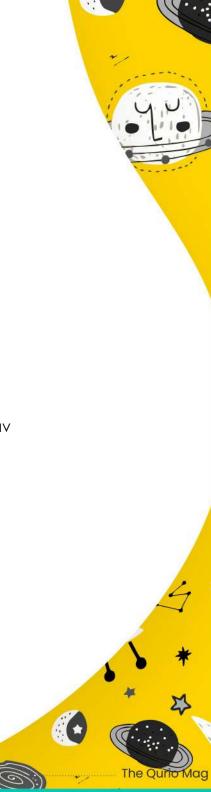
Miss. Rutuja Phalke Std. VII Edison





जमीं से आसमान तक होकर अनंत में चूर अमावस से पूनम तक बदले कितने रूप और एक है वह सूफियाना चाँद मेरा सोला कलाएं खुद में सिमटे चुप चाप है बैठा

> Mast. Shivraj Jadhav Std. X Archimedes





सैर अंतरिक्ष की

सपनों का है गांव , तारों का हैं आंगन ।

मैं नन्हीं सी गुड़िया घूमने,

निकली इन सितारों के गगन।

चलों घूमने दोस्त मेरे, रॉकेट की जरा सैर करे।

सूरज की है बात बड़ी,

अंतरिक्ष का है स्वामी।

बुध, शुक्र को देखें जरा धरती का है रूप हरा।

चाँद सितारे दोस्त मेरे, शुक्र शनि लगते हैं प्यारे।

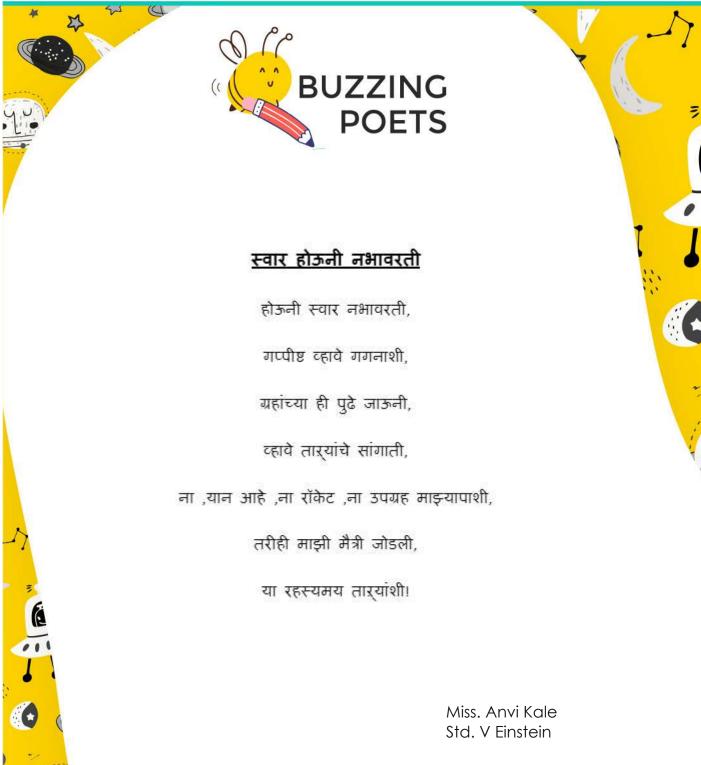
धरती से जरा दूर चले मंगल, बुध से आओ मिले।

मौका अब मिला है, खगोल यात्री मैं बन जाऊं।

पढ़ लिखकर मैं, सपना साकार कर दिखलाऊं।

Miss. Ananya Sale Std. V Newton











History of Space

Human space travel is 60 years old this year, and in those six decades it has helped us discover much about the universe. But it has also delivered many practical benefits back home.

From monitoring climate change to connecting people through satellites, space exploration has created solutions to some very down-to-Earth problems. Space technology is vital to global security and even helps to stop illegal logging, illegal fishing and illegal wildlife trade.

Space is also a vital part of the global economy, accounting for \$366 billion of economic activity every year, data from the World Economic Forum's 2020 briefing paper, Six ways space technologies benefit life on Earth, shows.



Satollites cover the entire globe enabling high capacity connectivity over wide & hard-to-reach areas including deserts, mountain ranges, islands, rainforests or wetlands



Quality of solar energy forecasts can be improved by 30% using space technology

(+50%)
Over half of essential climate variables can only be measured from space



Space technology provides spatial information regarding water and food production, precision irrigation and farming techniques



\$73 billion

Satellites help stop illegal logging, illegal fishing and illegal wildlife trade that account for more than 73 B\$ per year



Earth Observation and Global Positioning tools have been developed to display realtime cartography of infectious disease locations, identifying hotspols.



1. On 12 April 1961, Soviet cosmonaut Yuri Gagarin became the first human to fly in space. His single orbit of the Earth ushered in a new age of human space travel. Tragically he was killed in a plane crash just seven years after his pioneering space mission.



2. Neil Armstrong, who stepped off the Apollo lunar lander on 20 July 1969 with the famous words "That's one small step for a man, one giant leap for mankind", took this shot of fellow astronaut Buzz Aldrin walking on the lunar surface shortly afterwards.



Mast. Pratik Wajage Std. X Archimedes





Which are the top Space Science colleges in India?

- Indian Institutes of Technology (IITs)
- · Indian Institute of Science, Bangalore
- Indian Institute of Science Education and Research (IISER-TVM)
- Indian Institute of Space Science and Technology, Kerala
- Centre for Earth and Space Sciences, (University of Hyderabad)
- Aryabhatta Research Institute of Observational Sciences, Nainital
- Indian Institute of Astrophysics,
 Bangalore
- Inter-University Centre for Astronomy and Astrophysics, Pune
- National Centre for Radio Astronomy, Pune

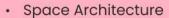


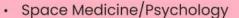
Reaching for the Stars

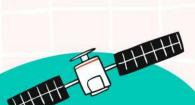
If you're among those who dream of making their mark in the field of space, you're in luck. Space exploration and related careers is an ever-expanding area with great potential for numerous future career specializations. If your answer is yes there are many careers that you can opt to be a part of space such as:

- Astronauts
- Space Technology
- Engineering
- Space Researchers/ Scientists (Astrophysicists, Biologists, Biochemists, Biophysicist, Geoscientists, Astrobiologists)
- Space Law
- Space Tourism









What are the courses you can opt for in Space Science after 12th?

- B.Tech in Aerospace Engineering B.Tech in Avionics Engineering
- B.Tech+M.S./M.Tech (B.Tech. in Engineering Physics + M.S. in Solid State Physics, Astronomy, Earth System Science / M.Tech. in Optical Engineering)
- M.Tech in Electronics, Electrical,
 Mechanical and Computer Science
- · PhD in relevant disciplines.









Materials:

- · An old CD
- HOT GLUE gun/fevikwik
- · Thumbtack/pin
- · Bottle cap
- · Balloon

Steps to make a Hovercraft:

- Make holes in the plastic bottle top.
- Use a hot glue gun/feviquick and fix the bottle top over the hole of the CD. (Please Note: Students can take help of adults while handling the fevikwik and pins.)
- Blow up the balloon.
- Twist the neck of the balloon to keep it inflated and pull the lip of the balloon over the edges of the bottle cap.
- Let it Go Set on a flat surface like a counter top or floor. Release the balloon and watch it glide along without any effort just over the surface.







All you need to make these easy-to-assemble Fruit Rockets are:

- watermelon
- banana
- kiwi
- strawberries
- cantaloupe
- skewers



Some foods like
bread, fruits and nuts
stay the same in
space. Other foods
have to be vacuum
packed to keep their
shape and save
space.

All you need to make these easy-to-assemble
Martian snackers are:

- Monaco biscuits
- Cherry tomatoes
- Cucumber
- Cheese
- Mayonnaise or Tomato sauce



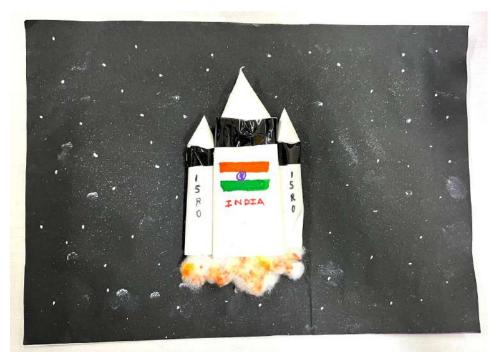


INTERSTELLER ART GALLERY



Mast. Adwait Patil Std. VI Einstein

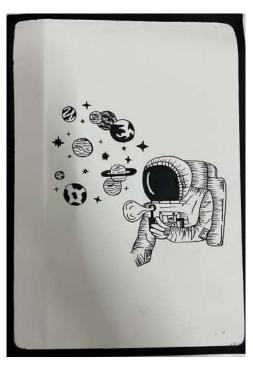
Miss. Trisha Bhandari Std. IV Newton







Miss. Tejashree Zambare Std. VII Edison



Miss. Gargi Sutar Std. VI Newton

Miss. Mukta Jadhav Std. VII Newton















Mast. Aryan Kadam Std. VII Edison

Miss. Sanskruti Sakore Std. X Archimedes





Miss. Gargi Nawale Std. VI Newton





Miss. Sonakshi Jadhav Std. VI Einstein





Mast. Ayush Varal Std. IV E

Miss. Swarnima Adhav Std. VII Newton







Miss. Akshada Jagdale Std. VI Einstein

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Miss. Pranjali Rajdev Std. IV Einstein



Mast. Priyesh Rao Std. IV Newton





Miss. Swara Borhade Std. III Einstein

Miss. Riddhi Mujgond Std. III Einstein



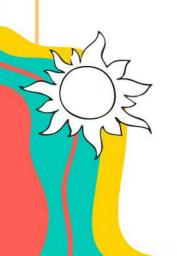
SPOTLIGHT @ PIS



Podar International School, Shirur has been named the #1 Co-ed Day School in Shirur in the EducationWorld India School Rankings 2022-23

CBSE grade X board exams 2021-22 top 10 students





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Our teachers Mrs. Tejaswini Padale & Mrs. Priyanka Singh have received best teacher award by I.I.H.M. Pune

Our Principal at Podar International School, Shirur Ms. Minal Vaidya has received the Future-ready school award at the MIMASA principal conclave.





Respected principal Ms.Minal Vaidya getting felicitated with an award at I.I.H.M., Pune

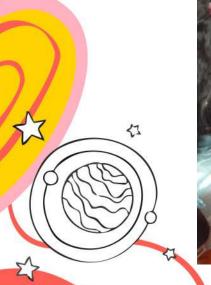




SCI-HI EVENT









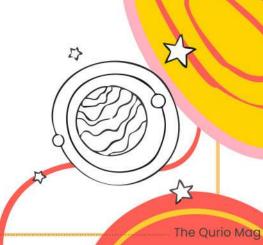
SCI-HI EVENT























FANCY DRESS COMPETITION

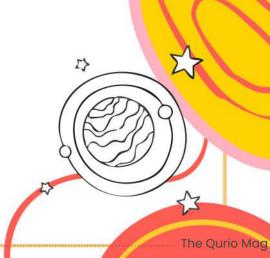






























GURU PURNIMA











INTERNATIONAL YOGA DAY







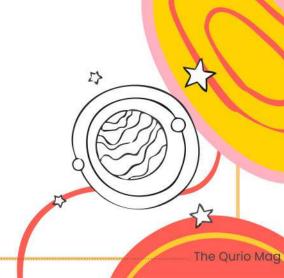
INVESTITURE CEREMONY











JUMPSTART ACTIVITY















NELSON MANDELA DAY



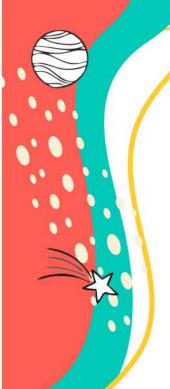












REVITALIZE



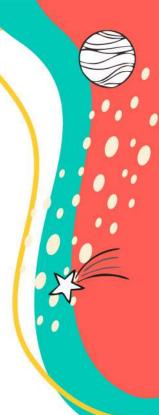






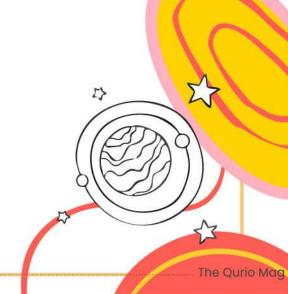
CHANGEMAKER

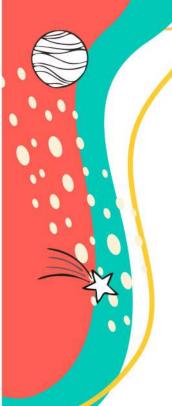












DR. B.R. AMBEDKAR AND MAHAVIR JAYANTI









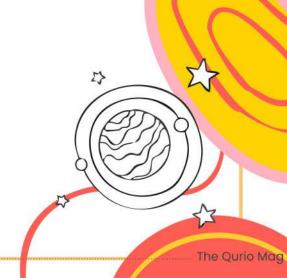
WORLD AGAINST CHILD LABOUR DAY









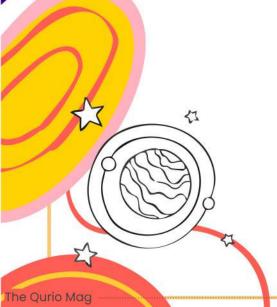




GOOD TOUCH BAD TOUCH WORKSHOP

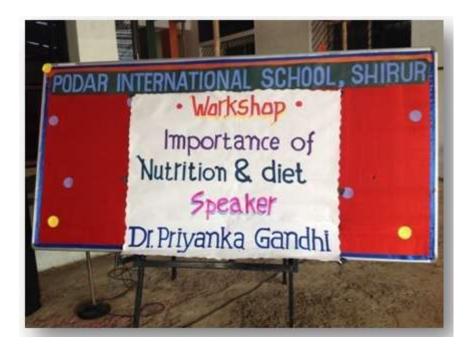








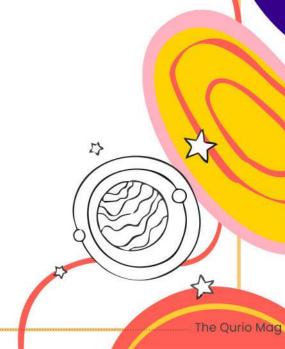
IMPORTANCE OF NUTRITION AND DIET WORKSHOP

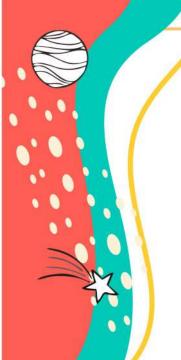












MENTAL WELL BEING WORKSHOP









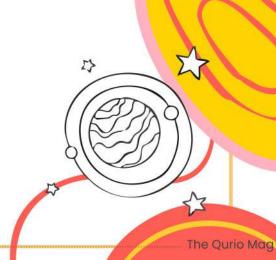
POSITIVITY WORKSHOP













SPACE PUZZLE

Complete the word search

 Y
 W
 A
 Z
 X
 H
 D
 G
 U
 F
 O

 X
 E
 G
 S
 T
 A
 R
 J
 Z
 W
 Y

 A
 A
 Y
 T
 A
 G
 M
 A
 B
 R
 Y

 S
 R
 H
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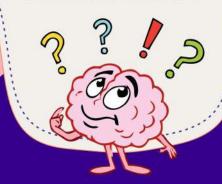


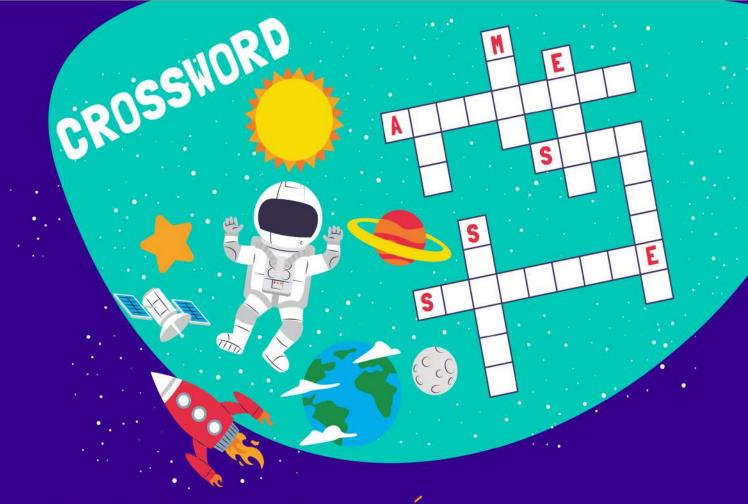
STAR SUN ALIEN ASTRONAUT MOON UFO ROCKET PLANET TELESCOPE EARTH

What Am I?

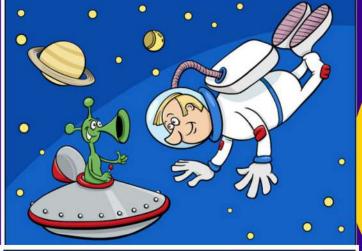
I can be looked through but
I'm not a window,
I have your eye pressed to me
but I'm not a door peephole,
I'm often placed on a tripod
but I'm not a camera,
I help you see things that are
far away but I'm not a pair of
binoculars,

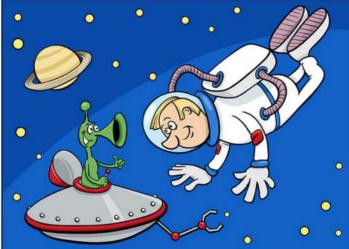
I'm often pointed at the sky but I'm not a satellite dish!





Find 6 differences







Using just the letters in the word below, can you make atleast 12 new words?

RULES: You may only use a letter as many times as it is shown in the key word. Each word must be atleast 4 letters long.

GOOD LUCK!

ASTEROID

Riddle

I am bigger than Venus but smaller than Uranus. I am a living rock. What am I??

