Parijna Patrika
Varsha Ritu 2021

विठ्ठल

News from ... Parijnanashram Vidyalaya, Karla

News from ... Parijnanashram Vidyalaya, Karla

YOGA

News from ... Parijnanashram Vidyalaya, Karla

News from ... Ganapathy English Medium School

Covid Protocol Followed Here

President of SES,

Shri Praveen Kadle,

Shri Shankar Mahadevan,

and Shri Sridhar

visit our school

Felicitation of students who got distinction and scored above 90 marks

The Bhoomi Pujan for the next phase at Parijnan Vidyalay was performed on 31st March 2021, by our Secretary Sri Mahesh L Bondal in the presence of our CEO Sri Prashant Rao, Committee Members, staff and students of Parijnan college.

News from ... Parijnan P U College

Parijnana Pradeepah

College E Magazine, Parijnana Pradeepah was released on 6-2-2021 by Shri Shankar Mahadevan, renowned singer and Shri Praveen P Kadle, President of Saraswat Education Society

Ratha Saptami

News from ... <u>Parijnan P U College</u>

Parijnan P U College Girls Team won First prize in Mangalore(Rural) Taluk Level Kabaddi Match held at St. Sebastian College, Thokkottu on 27-2-2021

I ♥ Kabaddi   I ♥ Kabaddi   I ♥ Kabaddi   I ♥ Kabaddi

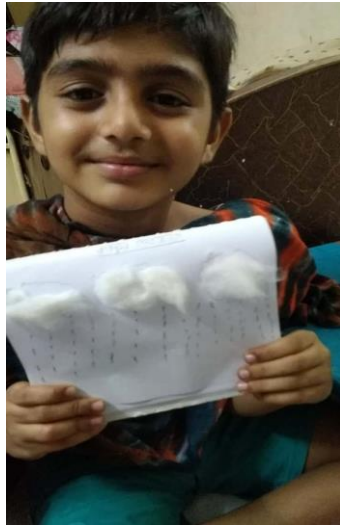**Vocation Students doing chores with aplomb!**

Create YOUR OWN Happiness

News from ... Swami Parijnanashram Educational and Vocational Centre for the Handicapped, Virar

News from ... Swami Parijnanashram Educational and Vocational Centre for the Handicapped, Virar

Siyona Almeida   **Yoga**   Mayank Gupta

Akshata Khopkar Vocation student throwing balls in a bucket

Vaccination Drive

Online Teaching During Covid Times - Teachers Teaching sounds And Omkar

Q4 Using the words above and complete the sentence below:

food	water	Shelter	air
sunlight	Soil		

1) All living things need water to drink.
2) All living things need to eat food.
3) All living things require shelter to live in.
4) All living things need to breathe air.
5) All Plants require sunlight to grow.
6) Plants get food and water from Soil.

Q5 Write if the following statements are True or false.

1) Non-living things grow.
   false
2) Animals need food, water and air.
   True

Cutting	Peeling	Cleaning	chopping
Cutting	Peeling	Cleaning	Chopping
Cutting	Peeling	Cleaning	chopping
Cutting	Peeling	Cleaning	Chopping
Cutting	Peeling	Cleaning	Chopping

Hair	Hands	Apron	Coughing
Hair	Hands	Apron	coughing
Hair	Hands	Apron	coughing
Hair	Hands	Apron	Coughing
Hair	Hands	Apron	Coughing

Wound	cutting board	Sneezing	Mouth
Wound	cutting board	Sneezing	Mouth
Wound	cutting board	Sneezing	Mouth
Wound	cutting board	Sneezing	Mouth
Wound	cutting board	Sneezing	Mouth

Do Not use Sharp Knives
Do Not use Sharp Knives
Do Not use Sharp Knives
Do Not use Sharp Knives
Do Not use Sharp Knives

Clean Dishes After Cooking
Clean Dishes After Cooking
Clean Dishes After Cooking
Clean Dishes After Cooking
Clean Dishes After Cooking

Wash Your Hands Before You Start Cooking
Wash Your Hands Before You Start Cooking
Wash Your Hands Before You Start Cooking
Wash Your Hands Before You Start Cooking
Wash Your Hands Before You Start Cooking
Wash Your Hands Before You Start Cooking

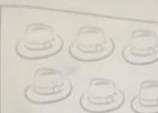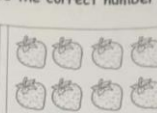**Q1** Circle the living things and cross the non-living things.
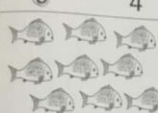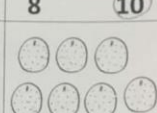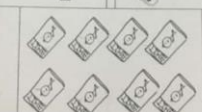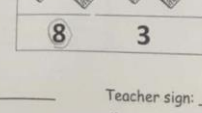
Count and circle the correct number.

Date: _____   Teacher sign: _____

All children Can Learn!

News from ... Swami Parijnanashram Educational and Vocational Centre for the Handicapped, Virar

Shalu Rana, Speech and Hearing-Impaired student participated in an International Level Competition where there were participants from more than 54 countries. She was selected as 3rd runner up. Her name appears in the MERIT list in the Marathon and Flash category

Shalu participated in Maharashtra State & Zonal UCMAS Online Competition (For Centres between Virar to Churchgate - Mumbai region) in which there were 300+ students. Shalu was selected as 1st runner up.

Siddhesh Mahadik has been selected for Floorball Game in a Preparatory Camp organised by Special Olympics Bharat for further selection process of 2022 Special Olympics World Winter Kazan, (Russia).

KUDOS!

Award of the Year

by Jyothi Bharat Divgi

Take a close look at this picture. What do you think this is?

Picture credit: Sally Corte

This is the picture of a brave father who is carrying his four chicks to safety!

Jacana is a bird found at water bodies – walking on water! The fact is, these birds have legs that end with spidery-toes that are very easy for them to walk with on floating plants, as they skim the water looking for food.

While the mother is out, the father takes on the responsibility of taking care of his babies. In this picture, perceiving danger, the father quickly packed his four chicks under his wings and is walking swiftly to a safer place! Now zoom in and see the four pairs of legs under the warm, protective wings of the father!

So, do you agree that the 'Best Father of the Year' Award should go to this feathered dad?

A Sweet Sacrifice

by Sadhana Kaikini

Tyāga or sacrifice is the act of letting go of things that you would prefer to have, for the sake of a higher purpose. It leaves us stronger from the inside. Our Beloved Swamiji always speaks highly of this beautiful quality. Stories of *Tyāga* are so inspiring! It is a lovely quality to have, but a difficult one to practise! Whoever said that only adults can sacrifice? Let's learn something from a young boy in an ice-cream parlour!

The old man at the 'Ice N Nice' ice-cream parlour looked at the clock on the wall. He had two more hours of work and he was already so tired! He looked at a young boy, around 9 years old, entering the parlour. He hoped that he would not sit at the table assigned to him. He was in no mood to deal with children that day! His bad luck - the boy sat at exactly his table!

Reluctantly the old waiter asked him, "What do you want?" The boy seemed to have come on his own for the first time! Uncertainly he asked, "Uncle, do you get ice-cream here?" The old man retorted, "I suppose so, as this is an ice-cream parlour!" "Oh yes! Okay, Uncle! Do you have chocolate ice-cream?" "Yes!", answered the waiter. "What does it cost?", asked the boy. "50 rupees!", answered the old man. "Oh! Hmmmm..... Do you have vanilla ice-cream?", asked the boy again! Clearly irritated, the old man said, "Yes! Shall I bring it?" The boy again asked, "How much does it cost, Uncle?" "40 rupees", said the old man, as he just walked away from the table, fuming inside.
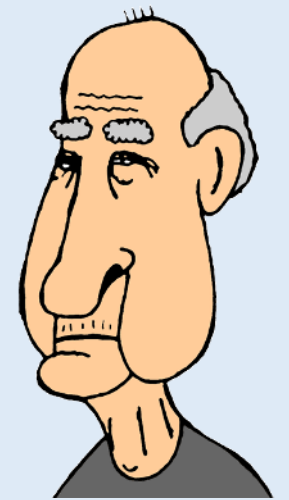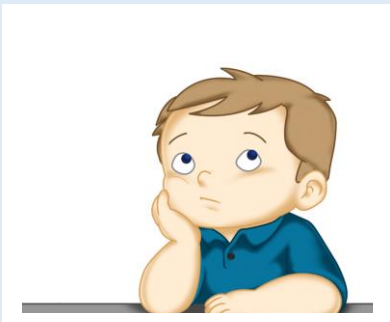
Returning after a little while, the old waiter again asked in an obviously irritated tone, "Hmmmm... so have you decided what you want?" The boy smiled and said, "Yes, Uncle! Please get me the vanilla ice-cream."

Soon a bowl of vanilla ice-cream was placed in front of the boy. If the bowl could speak, it would definitely have said "OUCH!", for the frowning waiter had literally banged it on the table while keeping it down.

The waiter walked away, relieved that he didn't have anything more to do with the boy. The young boy thoroughly enjoyed the ice-cream just as much as the experience of having come all by himself to eat it!

A little later, the old waiter glanced at the table - the boy had gone. Thank God, he thought, as he wound his way to the table to pick up the empty bowl. What he saw there startled him! A 10-rupee coin lay beside the bowl, smiling up at him. The boy had been considerate enough to leave a tip for him!

Tears welled-up in the waiter's eyes as he realized that the boy had sacrificed the chocolate ice-cream just so that he could give the 10 rupees as a tip to the old uncle who was serving him in the parlour!

His heart dropped as he remembered how badly he had treated the boy! It was too late to even thank him for the sweet gesture! Wiping away his tears, he walked away from the table. As he did so, he promised himself to smile and serve from then on, no matter how tired he was!

The young boy's *tyāga* had deeply influenced him and taught him a huge lesson! He would now respect everyone whom he met and never allow himself to even admit that he was tired until his duty was over.

'Sevā with a smile', as we often hear people in sevā at our Math saying!

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Gems Of Ancient India

Shree Jagannath Temple – Puri
by Chandrima Kalbag

Puri is a seaside temple town in Odisha, or the ancient kingdom of Utkal, also known as Kalinga and Odra Desha. Ancient scriptures of *Skanda Purana - Utkal Khanda*, *Brahma Purana*, *Narad Purana* and many others refer to it as the eternal abode of Purushottam, Shri Jagannath. The Bay of Bengal (*Mahodadhi*) and the tributaries of river Mahanadi, had carved out the *shankha* shape of this holy city.

The *Skanda Purana* attributes the establishment of the Shree Jagannath Temple to King Indradyumna of Malva Kingdom, in the *Satyug*. He was a devotee of Vishnu and had heard about the worship of Nilamadhab by the Sabara (tribal) clan in the Niladri mountains, hidden away from civilisation. So, he deputed Vidyapati, the brother of his Chief Priest to the task of discovering the location of Lord Nilamadhab.

Legend says that try as he might, Vidyapati could not discover the whereabouts of the esoteric deity. However, he fell in love with Lalita and married her. He observed that his father-in-law Vishwavasu (Chief of the Sabara-s) returned from the caves on the hills, aglow with *Tej* and smelling of sandalwood and camphor. This led him to believe that Vishwavasu was performing the *puja* of Nilamadhab, a blue-sapphire form of Lord Vishnu. Upon Vidyapati's insistence, the reluctant Vishwavasu took him on a circuitous route to the cave temple, blindfolded. Vidyapati had quietly taken a handful of mustard seeds with him and dropped them along the way. After a few weeks, when the bright yellow flowers bloomed, Vidyapati could trace his way back to Nilamadhab. Elated, he returned to King Indradyumna.

King Indradyumna set out with his army to conquer Odra Desha and its tribals, to obtain the deity for himself. After numerous trials and travails, when they reached the spot, the deity had vanished. His wife Queen Gundicha Devi beseeched him to control his avarice and *ahamkar*. So, the penitent King spread a mat of *kusha* grass and went on a fast unto death unless the Lord gave His *Darshan*. The Blue Lord appeared in the King's dream and commanded him to build a temple, with the idol being carved out of a log of *neem* tree, bearing the *shankha*, *chakra*, *gada* and lotus markings on it. In this tradition, the idols are made anew in the ceremony of *Nabakalebara* even today. Vishwavasu agreed to let King Indradyumna build the temple, favouring the greater good of the people. The Lord revealed the location of the temple to Vishwavasu in the vicinity of *Rohini Kunda* and *Kalpa Vata* (Divine Banyan Tree). King Indradyumna performed *yajna*, *puja* and other ceremonies, which were conducted by Lord Narada and as ordained, the *neem* log was found floating in the sea. However, the King's priests and army could not drag it ashore. Only when the Sabara clan joined hands could they carry it to the high altar, or *Maha Bedi* to carve the idols. Even today, members of this clan serve at the temple.

Lord Brahma consecrated the temple dedicated to Lord Jagannath, Lord Balaram, Devi Subhadra and the *Sudarshana Chakra*. The *puja*, *seva*, ceremonies, ornamentation, *vesh-bhusha* and all the other *niyama*-s and *upchara*-s were ordained by Lord Brahma Himself. According to the legend of King Indradyumna in the *Purana*-s, the temple was lost in the sands of time.

Ancient temple records, inscriptions on other contemporary temples, and literature, like poems, odes and plays written by Odiya and Sanskrit scholars establish that the temple was in existence since ancient times. Numerous Kings and Queens have since ruled over Utkal and it is believed that the temple has existed in some form, throughout. However, it has been epigraphically (from the inscriptions and symbols) established that the current gigantic structure was built in 1112-1148 CE by King Anantavarmana Chodaganga Deva and has since been repaired and resurrected a few times, but is essentially the same, though later kings have added to it.

The huge temple complex covers an area of over 400,000 square feet (37,000 m^2), and is surrounded by a 20 ft (6.1 m) high fortified wall known as *Meghanada Pacheri*. The inner wall, known as *kurma bedha* surrounds the main temple, which contains more than 120 temples and shrines dedicated to various deities. The temple, which stands in the centre of the inner courtyard, has the following main components:

1. *Vimana / Deula* – the *Garbhagriha*, is built on a raised platform in the *Rekha Deula* style, characteristic of Kalingan architecture. The walls of the temple rise straight (like a line or *rekha*) up to a considerable height, before curving to form the *shikhar* or the curved top. Atop the temple is the unique *Nilachakra* made of *Ashtadhatu*. The temple rises to 214 ft or 65 m from the ground level to the top of the *Garbhagriha*.

2. *Jagamohana* – the porch or visitors' area, is built in the *Pidha Deula* style, with its distinctive square *shikhar* or crown and the *mastak* on top

3.*Natamandapa* - the audience hall, with a pyramidic top

4. *Bhogamandapa* - the offerings hall, which also has a pyramidic *shikhar*

The unique feature of this temple is that it employs different styles of architecture in the distinctive Kalingan style, blended harmoniously. The tops of the temple and their height are arranged such that it appears to be a mountain range, with its highest peak at the Shree Jagannath temple. Exquisite carvings, architectural marvels and mystic phenomena that defy the realms of science can all be experienced even today, here at the temple, which has stood for over a thousand years.
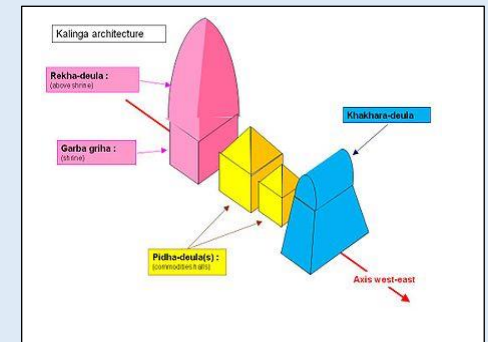
Utkala has been conquered and ruled by many kings and clans with varying beliefs and *Ishtadevta*-s, including Shaivites, Shaktas, Buddhists, Jains and again, Vaishnavites. All the customs and rituals, from Pauranic to Tantric and Buddhist have melded into unique rituals and festivals for Lord Jagannath at Puri, the most famous being the *Ratha Yatra*.

During the *Ratha Yatra*, the deities are taken in a chariot from the Shree Jagannath temple to Mausi Maa temple or Gundicha Devi temple, some 3 km down the road.

Shree Jagannath of Puri is considered to be a living God, accepting the *bhakti* of His followers and entrancing them with His *Leela* too. There are numerous fables which describe His *Mahima*. Some are steeped in *bhakti* and *jnana*, while some are characteristic of naughty Krishna. Shree Jagannath is not just the Lord of the World, He is also the Lord of the people - beloved since time immemorial.

Fitness First - Marjarasana

by Deepti Anil

As a yoga practitioner, a line to remember is - a stretch in time keeps the spine fine. The ongoing pandemic has all of us working and studying online. On practicing *Marjarasana,* we can easily release the muscles of the neck, upper back and lower back, which are overused due to long online office or school hours. *Marjarasana* (Cat pose) is derived from the Sanskrit words *marjar,* meaning cat and *asana*, meaning posture, or pose. It is also known as the Cat-stretch pose. The flexibility of the spine and back muscles is maintained with the help of this *asana*. The *Marjarasana* (Cat Stretch) is a movement that combines forward bends with back arches, giving your back the complete movement it needs. Thus, your vertebrae become mobile and the movements in your cervical, thoracic, and lumbar spine release all the tension trapped in them. It assists in the better movement of the spine and provides the well-deserving mobility to it. Additionally, it regulates the internal organs and digestive system to enable proper function.

How To Do It

- Start with positioning your body onto your hands and knees on the floor.
- Make sure your knees are directly below your hips and perpendicular to the ground. Your wrists, elbows, and shoulders should be in a line, while being perpendicular to the floor.
- Your back and hands should be straight, positioned parallel to the floor.
- Slowly relax your spine downwards and as you breathe in, take your chin upwards, towards the ceiling. Keep your eyes closed or fix your gaze at the centre of your eyebrows *(Bhrumadhya Drishti)*. Hold for 7-10 breaths.
- Now contract your core and exhale while pushing your spine towards the ceiling and bending your neck downwards to keep the body's natural posture.
- Make sure that your knees and hands do not move and they stay in the original starting position.
- Hold for 5-10 seconds.
- Now bring your body back into the starting position, maintaining normal breathing.
- Practice this *Marjarasana* (Cat Pose) 6-8 times every day.

Marjarasana (Cat Pose) helps in the proper stretching of muscles and vertebrae for better blood flow, increasing height, toning abdominal muscles, relieving a backache and improving posture. One of the most common contributing factors of lifestyle diseases is bad posture. People are losing their natural posture by sitting at the same place for long hours. This stretch helps in stabilizing and stretching the vertebrae, which leads to better posture.

Marjarasana

Nutrition Nugget

What can add more to the flavour of an Indian monsoon than a hot *bhutta* (corn on the cob) dusted with yummy *masala* and a dash of lime! Corn is considered both a vegetable and a cereal grain. Sweet corn that you eat off the cob is usually considered a vegetable in the culinary world, whereas the dry seeds that are used for popcorn are classified as whole grain. It is highly nutritious with carbohydrates, fiber, vitamins and minerals. It is also relatively low in protein and fat.

One cup (164 grams) of sweet yellow corn contains:

- Calories: 177 calories
- Carbs: 41 grams
- Protein: 5.4 grams
- Fat: 2.1 grams
- Fiber: 4.6 grams
- Vitamin C: 17% of the daily value (DV)
- Thiamine (vitamin B1): 24% of the DV
- Folate (vitamin B9): 19% of the DV
- Magnesium: 11% of the DV
- Potassium: 10% of the DV

Most of the carbohydrates in corn come from starch — which can quickly raise your blood sugar, depending on how much you eat. However, it is also high in fiber that can help balance your blood sugar levels. Corn can be had steamed or roasted on the cob or as separate kernels with your favourite flavourings and *masala*-s, for a healthy and yummy snack. Corn flour made from cornstarch is often used as a thickener for curries and soups.

Healthy corn *chaat* Corn *chaat* is an Indian snack made using sweetcorn kernels, onions, tomatoes, and a few herbs and spices. It is very healthy and filling and great to serve as an evening snack. With a little pre-preparation, this healthy *chaat* takes just 5 minutes to come together. If the corn kernels are not tender, then you will have to cook them. You can use either frozen corn, or corn on the cob. You can cook the kernels or the cob in a pressure cooker or in a pot over the stovetop. Pressure cooking saves time and energy, so add the kernels or the cob to a pressure cooker. Add 1 cup of water and pressure cook for 2 whistles on high heat. Remove the cooker from the heat and let the pressure release naturally. Open the lid and drain the corn. If using a cob, then shuck it using a knife.

In a large mixing bowl, mix together 2 cups of tender corn kernels, ½ cup chopped onions, 1 tsp chopped green chili peppers, ¼ cup chopped tomatoes, ½ tsp *chaat masala*, ½ tsp black salt, ½ tsp red chili powder, 1 tbsp lime juice, 2 tsp tamarind *(imli) chutney*, 2 tsp green *chutney* and 2 tbsp chopped coriander. Serve this *chaat* as a tea-time snack with your evening cup of *masala chai* or filter coffee. It can be enjoyed   especially on rainy days, when you are carving for something healthy, tangy and spicy.

SPORTS - Archery - World Cup: Deepika helps India win three gold medals

by Dilip Basrur

Olympic-bound archer Deepika Kumari helped India claim three recurve gold medals in the Archery World Cup Stage-3 on Sunday

PARIS (FRANCE) 27 JUNE, 2021

Archers Komolika Bari, Ankita Bhakat and Deepika Kumari with coach Purnima Mahato

Olympic-bound archer Deepika Kumari helped India claim three recurve gold medals

in the Archery World Cup Stage-3. Thanks to Deepika's consistent efforts, India took the top honour in women's team, mixed team and women's individual events. With one compound gold, the country gathered four gold medals here. Deepika first joined hands with Komolika Bari and Ankita Bhakat to beat Mexico's Alejandra Valencia, Ana Vazquez and Aida Roman 5-1 in the final and take the women's team title.

After sharing honours in the first set (57-57), the Indian trio won the next two (55-54, 55-52) to add four more points and seal a victory.

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The use of bow and arrow has been recorded extensively throughout the history of the Indian subcontinent. Vedic hymns in the _Rigveda_, _Yajurveda_, and _Atharvaveda_ lay emphasis on the use of the bow and arrow. The second _veda_, the _Yajurveda_ contains **Dhanurveda** (_dhanush_ "bow" and _veda_ "knowledge"), which is an ancient treatise on the science of archery and its use in warfare. The existence of _Dhanurveda_ or 'Science of Archery' in antiquity is evident from references made in several works of ancient literature. The _Vishṇu Purāṇa_ refers to it as one of the eighteen branches of knowledge taught, while the _Mahābhārata_ mentions it as having _sutra_-s like other _veda_-s. The _Dhanurveda_ enumerates the rules of archery and describes the use of weapons and the training of the army. Besides providing the account of the training of the archers, Vasishṭha's _Dhanurveda_ describes the different types of bows and arrows, as well as the process of making them.

The composite bow in India was being used by 2nd millennium BCE. The bow was used extensively on foot as well on chariots.

The Javelin

The javelin-throw was added to the Ancient Olympic Games in 708 BC. It included two events, one for distance and the other for accuracy in hitting a target.

Throwing javelin-like poles into targets was revived in Germany and Sweden in the early 1870s. In Sweden, these poles developed into the modern javelin, and throwing them for distance became a common event there and in Finland in the 1880s. The rules continued to evolve over the next decades.

The men's javelin was introduced as an Olympic discipline at the 1906 Games.

Women's javelin throw was added to the Olympic program in 1932.

For a long time, javelins were made of solid wood with a steel tip, but later models were made entirely of metal. The hollow javelin was introduced in the 1950s.

The size, shape, minimum weight, centre of gravity and throwing technique of the javelin are all defined by IAAF rules.

Paralympics

The **Paralympic Games** or **Paralympics**, also known as the **Games of the Paralympiad,** are a periodic series of international multi-sport events involving athletes with a range of disabilities.

There are Winter and Summer Paralympic Games, which since the 1988 Summer Olympics in Seoul, South Korea, are held almost immediately following the respective Olympic Games. All Paralympic Games are governed by the International Paralympic Committee (IPC).

Given the wide range of disabilities that Para athletes have, there are several categories in which the athletes compete. The allowable disabilities are broken down into ten eligible impairment types. The categories are impaired muscle power, impaired passive range of movement, limb deficiency, leg length difference, short stature, hypertonia, ataxia, athetosis, vision impairment and intellectual impairment. These categories are further broken down into classifications, which vary from sport to sport.

There are currently 28 Paralympic sports sanctioned by the IPC: 22 summer and six winter.

Paralympic Values

by Namrata Herenjal

The Paralympic Movement has adopted and follows athlete-focused values, which act as the underlying reference for all those involved in Para sport:

Courage: Para athletes through their performances showcase to the world what can be achieved when testing your body to its absolute limits.

Determination: Para athletes have a unique strength of character that combines mental toughness, physical ability and outstanding agility to produce sporting performances that regularly redefine the boundaries of possibility.

Inspiration: As role models, Para athletes maximise their abilities, empowering and exciting others to be active and participate in sports.

Equality: Through sport, Para athletes celebrate diversity and show that difference is a strength. As pioneers for inclusion, they challenge stereotypes, transform attitudes and break down social barriers and discrimination towards persons with disabilities.

Science and Technology - Space Exploration and Telescopes -1

by Dr. Khurshid Bharucha

Space exploration is carried out by both — astronomers who study space through telescopes and unmanned and manned space flights. Both are equally important to explore space.

**How does a telescope work?** A telescope is a device that makes faraway objects appear much closer.

A **light (optical) telescope** needs to have two features:

- Light gathering ability: This is usually determined by the size of the aperture of the telescope. The bigger the mirrors or lenses that make the telescope, the more the light the telescope can gather. The more light the telescope gathers, the better one is able to see far away stars and faint objects in the night sky.
- Magnification: The magnification of a telescope describes how much larger the telescope can make objects appear.

Telescopes can be of two types

- **The refracting telescope**, which uses glass lenses.
- **The reflecting telescope**, which uses mirrors instead of the lenses.

The first telescopes focused light by using pieces of curved, clear glass, called lenses. However, today most telescopes, especially large telescopes use mirrors. This is because mirrors are lighter and they are easier than lenses to make perfectly smooth. **A refracting telescope** is a tube with one or more lenses at each end. Light from a distant object enters the far end of the tube. The lens or lenses at that end, called objective lenses, bend the light. They focus it at a point near the other end of the tube. The light forms an image, or picture of the object, at this point. The lens (or lenses) at the near end is called the eyepiece, and it magnifies the image.
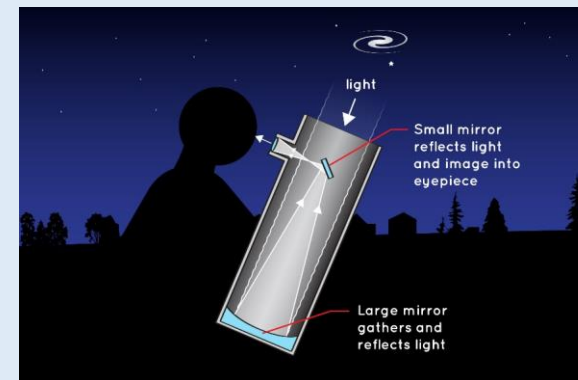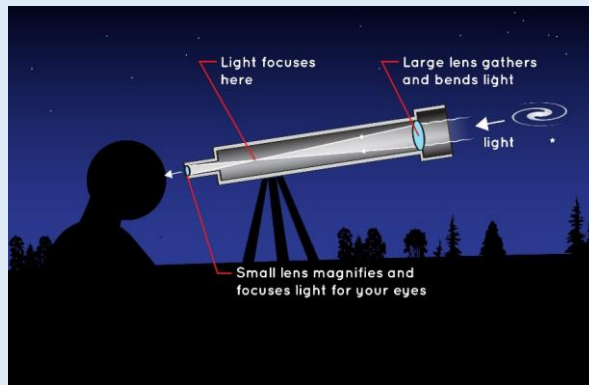
Reflecting telescopes are much more powerful than refracting telescopes. A reflecting telescope has a large curved mirror at the bottom of the tube. Light from an object reflects, or bounces off the mirror. The mirror focuses the light at a point in the tube. A second mirror sits in the way of this focused light. It sends the light out from the side of the tube, through an eyepiece. A lens in the eyepiece magnifies the image formed by the light. Light telescopes can be small tubes that are mounted on a stand and can be carried around easily. Larger and more powerful light telescopes are housed in buildings called observatories. Light telescopes have also been sent into space.

History of Telescopes in Space Exploration:

1609: Galileo, an Italian physicist and astronomer became the first person to point a telescope towards the sky. The telescope was small and the images were fuzzy, but Galileo was able to make out **mountains and craters on the moon, satellites circling Jupiter, and spots on the Sun**. He could also see a ribbon of diffuse light arching across the sky. This was later identified as our **Milky Way Galaxy**.

Keppler, Isaac Newton and many others improved on Galileo's pioneering work. They developed increasingly powerful optical telescopes and observed the skies through these.
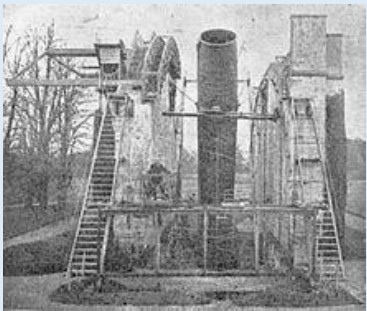
1845: 'Leviathan of Parsonstown' was built by an Irish nobleman - the 3rd **Earl of Rosse**. This was an enormous telescope with a mirror 6 ft in diameter. The telescope was placed in a pit near his home, Birr Castle, and consisted of a giant tube, at the bottom of which was a large metal mirror. It had a restricted range. However, some remarkable discoveries were made using this telescope, such as the first **spiral nebulae**.

1897: The Yerkes Observatory in Wisconsin was founded by **George Ellery** and was the **world's largest refracting telescope** at the time. This facility was used by many famous astronomers in history including Edwin Hubble, Subrahmanyan Chandrasekhar, Otto Struve, Gerard Kuiper, and Carl Sagan.

Trees, Plants and Traditions

by Dr. Gaurish Padukone

Man has been fascinated by nature ever since he evolved from his primitive ancestors—the primates and apes. No doubt, to start with, he hunted for food mainly by killing wild animals, but if there was anything he could depend on with any confidence regarding its availability, it was the plant. Not only the fact that a large number of plants provided him with food, but also the fact that they provided him with curative medicine and shelter, might have led him to worship them.

It is difficult to understand the reason behind a large number of plants with no apparent commercial use being associated with myths and traditions. The only explanation for their association with religious beliefs could be that their resemblance to the emblem of a particular deity, or the name of a Sage being associated with them,which made these plants holy. For this reason alone, a large number of plants are considered sacred in India. There are a large number of trees, popularly called the *Bodhi* trees, that are associated with the name of Sages who received enlightenment under them, thus making the trees sacred. For instance, the *Aswattha* (Ficus religiosa) or Peepul is the *Bodhi* tree of the Buddha; *Nyagrodha* (Ficus bengalensis) or Banyan of Kashyapa Muni; *Audumbara* (Ficus glomerata) of Kanaka Muni; *Sirisha* (Albizzia labbek) of Krakuchhanda; *Sita Ashoka* (Saraca indica) of Vipaswi and *Pundarika* (Lotus) (Nelumbium speciosum) of Sikhi.

Aswattha *Nyagrodha* *Sirisha* *Sita Ashoka*

The local availability of a plant can be another reason for its traditional use. Yet, here again, reasons defy explanation. Rice, for instance, is considered a 'fertility symbol'. Its use at religious and marriage ceremonies can be understood in areas where rice is available in plenty. But what defies human understanding is the fact that rice is used for the same reason and purpose even in areas where it is not cultivated. The only explanation for such a tradition can be that, when the migration of the human race from one corner of the earth to another took place, people took their traditions with them even when those plants were not easily available and they often had to be procured from great distances for the said purpose.

Though the idea of identifying plants with the deities, such as the association of the *Soma* plant with the moon, belonged to the *Vedic* tradition, yet a large number of plants that are associated with the deities belong to the traditional flora of India such as the *Tulasi* (Ocimum sanctum) and *Amalaka* (Embelka myrobalam) which are associated with Lord Vishnu; *Bilva* (Aegle marmelos) which is associated with Lord Shiva and the Lotus, which is associated with Godesses Saraswati and Lakshmi.

The utility of trees in a hot country was recognised by people from very early times. The merit of planting trees is explained in many old texts. In *Matsya Purana*, a legend says that Goddess Parvati planted an *Ashoka* sapling and the Gods asked her the merit that would accrue from planting trees. To this, Goddess Parvati replied: "A *Vapi* is equal in fruit to 10 wells, a pond to 10 *Vapi*-s, a son to 10 ponds and a tree is equal in merit to 10 sons." The merit of the performance of the rite of consecration of trees and fruit gardens is also mentioned in *Agni Purana*.

To the Hindus, all plants having the trifoliate arrangement of leaves i.e., a leaf with 3 parts like Crataeva religiosa of Family Capparidaceae, called *Varuna* in Hindi, are associated with the *Trimurti*: Brahma, Vishnu and Shiva. In South India, its trifoliate leaves are offered to Gods. Also, *Bilva* (Aegle marmelos) and *Pangara* (Erythrina indica) have the trifoliate leaf arrangement and are offered to Lord Shiva.

Apart from the above associations, a large number of plants are considered auspicious and their flowers are offered at temples, or their wood used for the sacred fire ceremony—*Homa*.

Below are given the names of a few of such plants:

The flowers of *Shankha Pushpi* (Clitoris ternate), called *Aparajita* in Hindi, are used in religious ceremonies. Flowers of the very commonly seen *Dasvala* (Hibiscus rosa-sinensis) are the favourite for offering to Lord Ganesha and Goddess Kali. The wood of *Aak* (Calatropis gigantea) of Family Asclepiadaceae is used in *Homa*-s, and its flowers as well as those of *Dhatura* (Datura fastuosa) of Family Solanaceae are offered to Lord Siva. *Neem* (Azadirachta indica) or *Margosa* has been a part of Indian medicine since long. It is known as *sarva roga nivarini* – a cure for all illnesses.

Bilva patra   *Pangara*   *Shankha Pushpi*   *Dasavala*   *Arka*   *Dhatura*

Neem trees are considered divine in many communities in India. It is a tree prescribed for every Indian garden. The inflorescence of Areca catechu is used in *puja* ceremonies of the *Devi* and *Naaga*, and on auspicious occasions like marriages in South India and Gujarat. *Darbha* or *Kusha ghas* i.e., Eragrostis cynasuroides is sacred to the Hindus and is used in religious ceremonies all over India. In fact, it has the powers to ward off the harmful effects of solar and lunar eclipses on food .

The odorous roots of Dolomiaea macrocephala or *Dhup* are used as incense and its flowers offered at shrines and temples. This plant is mostly found in Nepal and in the states of Uttarakhand and Himachal Pradesh.

Probably because of its sweet scent alone, the wood of *Chandana* or Sandalwood i.e., Santalum album is extensively used in religious ceremonies. The paste made from the wood has a cooling effect and it is believed to remove sins, miseries and sorrows. The wood of the sandalwood tree is extensively used in carving idols and artefacts and in boxes used to store religious objects and jewelry.

The *Veda*-s have endowed the *Shami* tree with the property of creating fire. According to a legend, Pururavas generated the primeval fire by rubbing together two pieces of wood from of the *Shami* and *Ashwatta* trees. There are several mythological stories associated with the *Shami* tree. It is also a valuable medicinal plant. In *Garuda Purana*, there is a mention of the ritual use of plants: the twigs of such sacrificial trees or plants as *Arka* (Calatropis gigantea), *Palasa* (Butea monosperma), *Khadira* (Acacia catechu), *Aparmarga* (Achryanthese aspera), *Pippala* (Piper longum), *Audumbara* (Ficus glomerata), *Shami* (Acacia suma), blades of *Durva* (Pao cynasuroides) and *Kusha ghas* (Eragrostis cynasuroides) soaked with curd, honey and clarified butter are repeatedly cast in the sacrificial fire during *Homa* ceremonies performed for the propitiation of the planets, the Sun and others.

Plants have been repeatedly mentioned in connection with customs, traditions and beliefs. In fact, no ceremony was complete without some sacred plant being used. For instance, in the *Mahabharata*, Sakra says: 'Rubbed with the astringent powder of the hanging roots of the Banyan tree (Ficus bengalensis) and anointed with the oil of *Priyangu* (Panicum italicum), one should eat the *Shashika* paddy mixed with milk. By doing so, one gets cleansed of all sins."

The merit of offering flowers, incense and lamps to deities was explained to the *Daitya* king Vali, son of Virochanu, by Shukra when he was the priest of the *Daitya*-s. "Flowers gladden the mind and confer prosperity. The man, who in a state of purity offers flowers unto the deities, finds that the deities become gratified with him and bestow prosperity upon him."

The plants that were sanctified reveal the socio-economic and health concerns of ancient people. Today, the importance of certain plants with and without their religious significance stares is rising, even as alternative medicine is gaining more acceptance and popularity.

| *Neem* | *Darbha* grass | *Shami* leaves | *Khadira* | *Apamarga* |

Source: 1.Our Trees by R.P.N. Sinha

2.Sacred plants of India by Nanditha Krishna & M Amrithalingam

3. Plant Myths & Traditions in India by S.M. Gupta

The Magic of Varsha Ritu

- **by Vaishali Heblekar**

Vedant looked out of his window as he sat for his online school. His classmates were all logging in and wishing the teacher. However, Vedant was looking at the rain drops pitter patter on his window sill. When he had woken up that morning, it had not felt like it was daytime. The dark clouds had loomed up in the sky and Vedant had wanted to go deeper under his blanket instead of waking up to attend online school. He remembered the monsoons when they used to get wet in school or make small paper boats to float in the water puddles. That felt like a truly long time ago!

Rains were always special. The dark clouds, the rumble of thunder and the flash of lightening. He remembered how his mother had made up a story when he was barely 2 years old. He had wondered what the lightening and thunder was all about and she had told him that 'the sky clicks photos of the people on Earth. The flash is from the camera used by the clouds.' So he used to look up and smile whenever that happened. But now, he had grown up and had discovered the actual *funda* behind thunder and lightning. As you grow older, so many of your myths get busted and then you become an adult and stop living in your world of imagination.

The monsoons brought along their special moments – eating '*bhutta*' or freshly roasted corn on the cob with lime, salt and chilli powder. Eating *garma-garam vada pav* or *bhajiya* with piping hot tea or chocolate milk. Just then, Vedant's Mumma entered the room and his day-dreaming ended suddenly. She handed him his hot cup of chocolate milk and left. The downpour had become so loud by now that the teacher could barely be heard.

The class ended abruptly since the teacher seemed to have lost her network connection. Vedant could now smell the wonderful earthy fragrance of rain wafting into his room. This coupled with the smell of hot chocolate was indeed heavenly!

Later that day, at the lunch table, Vedant continued his discussion about the rainy season. He missed wearing his raincoat and the squishy gum boots. He asked his mother – "Mumma! When will we get a chance to become wet in the rain and play in the rainwater again? It has been 2 years since we did that!" His mother smiled at him and assured him that the time would come soon when he could go out and play with his friends in the rain. She recollected her own childhood days – "When we were kids, the rains used to first affect the electricity. Back then, we didn't have an inverter or anything like that at home. We used to manage with candle lights or battery-operated lights. The dinners around the candle light with the entire family sitting around and chatting used to be so much fun.

Once, your *Ajja* (grandfather) added sugar to the *dal* thinking it was salt and we had sweet *dal* that night!", she laughed. She told Vedant about how she had walked in chest-deep water during the Mumbai floods in the 1980s. She was barely in second grade and she recollected that the school had sent the students back home early. "My *Ajja*, your great grandfather, had come to pick me up from school and as we started walking down the lane, we realized that the water had already reached my chest. *Ajja* had then lifted me and walked till we reached home safely." Those experiences of excitement and fun, coupled with the suspense of whether we would make it safely back home, are now only a memory. But these are what form stories to be told generation after generation.

The croaking frogs in the staircase passage, the squishy earthworms seeping in from the bathroom tiles, the damp musty smell of clothes that never dried for days together, the crunch of the jackfruit and sweet potato *papad*-s garnished with freshly grated coconut, the shadow play on the walls in the candle light…..all these are such vivid memories that are sure to tingle your senses even today. Rains have always had a special place in our lives.

Vedant was lost in deep thought as his mother narrated incident after incident of the rainy season. The *Varsha ritu* definitely had an enchanting effect on him, one that would stay with him for years.

Pictures Of A Sunny Day ☀ And A Rainbow 🌈
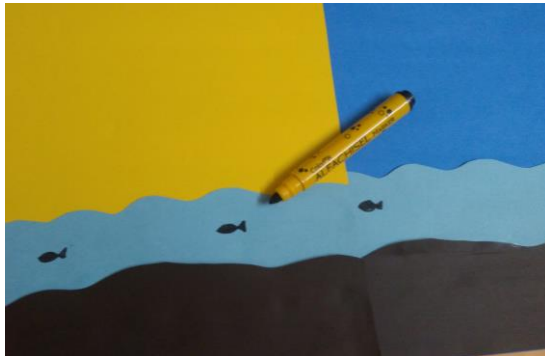
by Smita Nagarkatte

Things required:

Tinted papers (dark blue, light blue, black, yellow, white, orange and purple), 7 strips of rainbow colours, a black sketch pen, 2 straws, Fevicol and scissors.

Instructions:

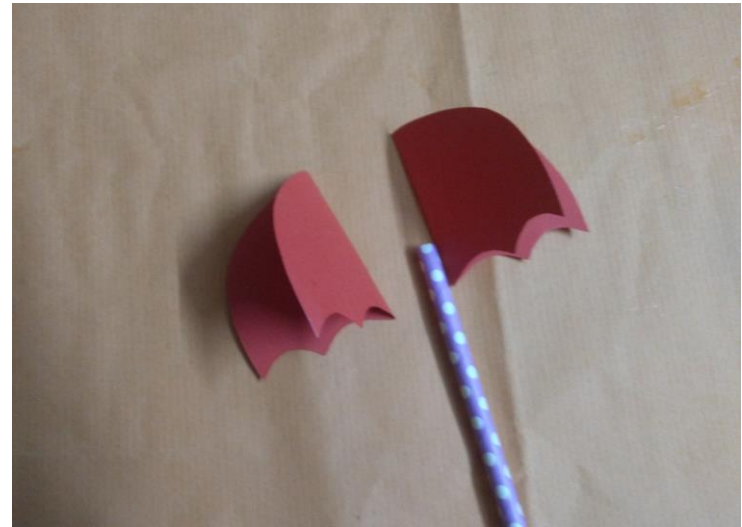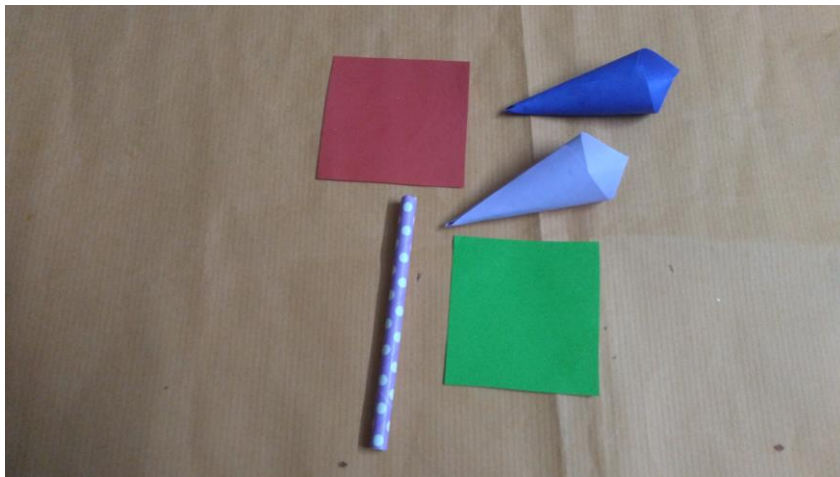|	
1. To create a background scene of the sea and sky, take blue- and black-coloured tinted papers and cut them, as shown in the picture, for a wavy effect. Draw fish in the water with the black sketch pen	3. Cut white paper in the shape of clouds. Now stick the Sun and clouds over the tinted paper, as shown in the picture.
2. Now stick them in 1/2/3 layers over 2 tinted papers, as shown in the picture. Cut a yellow circle ◯ and stick yellow strips all around it to make the Sun.	4. . Make another circle of ◯ yellow paper and cut it into 1/4th. Now stick small orange triangles along the curved edge of this cut piece.

5.Stick the 1/4th Sun on the top left-hand corner of the other tinted paper, with all the 7 rainbow-coloured strips in VIBGYOR order below the Sun's rays. Stick the other end of the rainbow loosely below the clouds for a 3-D effect. 	7. To make the open umbrella, cut 3 semicircles of coloured paper. Fold them in half and stick them at end of the other straw.
6. To make the closed umbrella, cut small squares of coloured paper. Make cones out of these squares and stick them at the end of one straw. 	8. Paste the umbrellas, as shown in the picture, to complete your pictures. Your pictures are now ready to be pinned on the board.

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