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For notice board

for students of standard 4th to college

Objectives : ISO-ICO exams develop children's attitude towards science - maths, Computer and logic and cultivate creativity amongst them and help them in comprehensive development.

To get ready for competitive exams like UPSC, GPSC, RBI, SBI, IPS, SSC, LIC, INDIAN RAILWAY etc., gain confidence and achieve success.

ISO fees: Rs.70

Date : 03-12-2020 (changes can be made)

Section : 7 section of std 4th to 10th

Time : 90 minutes - 10:00 am to 11.30 am

Structure : Science-Environment based MCQ

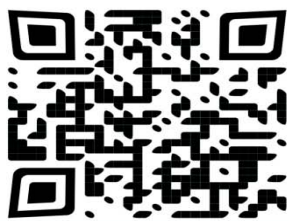
ICO fees: Rs.70

Date : 10-12-2020 (changes can be made)

Section : 7 section of std 5th to 12th and college

Time : 90 minutes - 1:30 pm to 3.00 pm

Structure : Computer, IT, IQ and Maths based MCQ



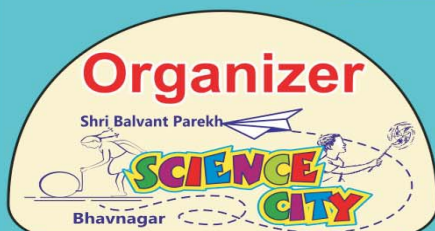
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GoodFood

Tridax Procumbens

With the onset of monsoon, many viral diseases have started spreading. So nature has given some medicinal plants in the environment around us to protect against these diseases. Today we will discuss one of the most important plant i.e. vanarpuchh / panafad / pardesi bhangro (Gujarati).

This plant is called vanarpuchh in Gujarati. The scientific name of this plant is *Tridax Procumbens* (L). This herb is a member of the Compositae Asteraceae. It is believed to have originated in Central America and spread throughout the world. It is also found in India in the form of weeds up to a height of 2400 meters. In English it is called Coat Buttons, Mexican Daisy; Kalal in Hindi, Kanfuli, Kumra, Shavatti in Kannada, Gabdu Shavanti, Kachgani, Iliyu and Jayanti in Sanskrit.

This plant grows as a weed in a rocky area in the fields in the forest. They range in height from 5 inches to 15 inches as herb. Its leaves are plain, sandalwood, fleshy (thick) and evenly spaced. The

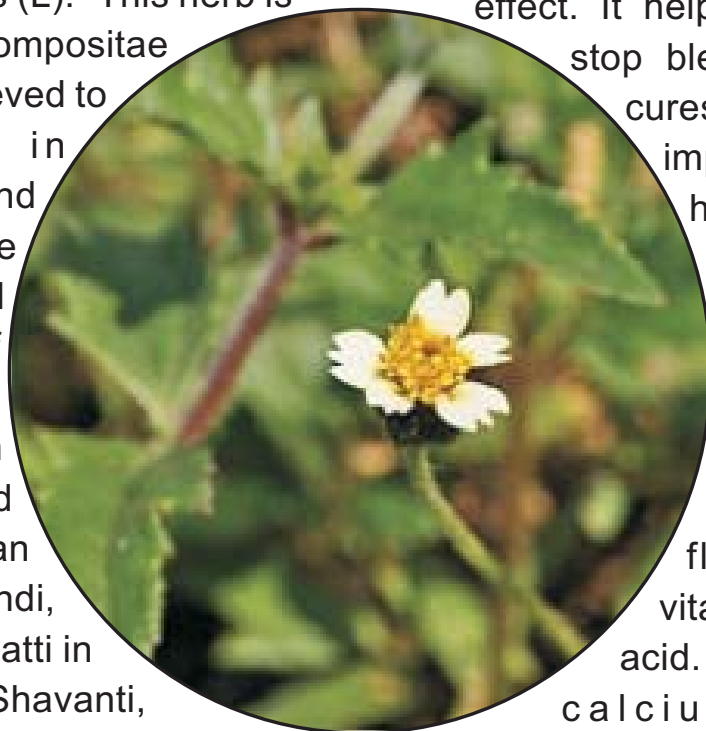
edges of the leaves are zigzag and have hairs on both surfaces. The flowers bloom in a staggered inflorescence at the front over a long inflorescence fin, with a yellow base in the center and a white petal-like structure on the outside. The inflorescence of about 1500 leaves from a single plant is as long as a fine monkey's tail that's why it is called Vanarpuchh.

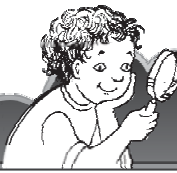
Tridax Procumbens bitter in taste, cool in effect. It help to reduce swelling, stop bleeding of wounds. It cures bowels, disinfectant, improves immunity and helps in excretory system.

It has antipyretic and diuretic properties. It contains ingredients called procumbatin, flavonoids, tannins, vitamin-A and lanolinic acid. Its leaves contain calcium, magnesium, potassium, selenium, sodium and blood elements. Leaf juice contains carbohydrates, proteins, tannins, ceroids, alkaloids and purine.

In Indian medicine, it is used as an anticoagulant, antidiscentic,

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Nano News

Namaste

The recent scam in which China tried to occupy India's borders, to protest this



Indian people removing Chinese App from their mobiles. Recently, online works are in progress, **Namaste** is an Indian video conferencing app. In this App, there is mild network connectivity problem. You can easily start and join this app. You can organize current events, classes, job interviews, meetings etc. with this app. Size of this app is 16-17 MB only, which is very small and useful. In addition, this app can be easily logged in and can be said to be very reliable as the data is not transferred to another country.

Smart Belt

Fitness belts are currently being found by many people who have smart technology. But recently, there is a belt with a unique smart facility, in which you can do everything, from your exercise to office work. You can also see notifications from Facebook, WhatsApp, Instagram in

Robotic Finger

your belt. Thus, this unique belt is very useful.

Robotic Finger

Usually five fingers are there in each human hands. But after fitting a robotic finger you will get six



fingers in your hand. This finger is used especially when doing physically very hard work. Thus, with this extra finger you can do more extra work.

Ear Cleaner

It is very hard to clean the ears. Because it can damage the eardrum if you don't pay attention while cleaning it. If you will clean ears with the help of ear cleaner, the lens in it will go inside the ear and you can see where the waste is. Thus, this ear cleaner is very easy even for children it is very safe.



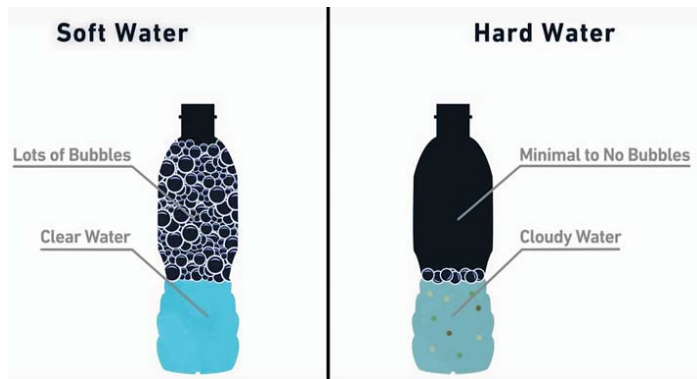


Alchemist

Water occupies about 70% of the Earth's surface; it is an essential compound for humans as well as for the entire ecosystem which is found abundant in nature. In nature, it is available in the form of humidity in atmosphere, in its liquid form on Earth's surface and also can be found in the Earth's core. Water is must for all biological forms; humans can survive without food for certain days but they cannot survive without water for a few hours. Disputes over water can extend from an area to even starting a world war!

Let us see some important properties of this life saving compound. Its chemical formula is H_2O which indicates it has 2 atoms of hydrogen and one atom of oxygen. It has an atomic weight of 18 and an atomic density of 19. Water has an unusual property from $0^{\circ}C$ to $4^{\circ}C$ which is known as anomalous expansion of water; this is because when water is heated from $0^{\circ}C$ to $4^{\circ}C$, its volume decreases. The pH level of pure and distilled water is 7. Due to its repulsive action of lone electron pairs in oxygen atom, the angle between hydrogen-oxygen-hydrogen of a water molecule is 104.45° which makes it polar. It is one of the unique compounds which can be found in its solid, liquid and gaseous state on Earth.

Water Essential for life



Did you know that ice floats on water? Do you know why? Water has an interesting property; its liquid form is denser when compared to its solid. Due to this property, ice is 9% less dense when compared to liquid water and due to this reason ice floats on water.

Ideally, rainwater is the purest form of water as during vaporization of water from Earth's surface, salts and impurities are left behind. However, due to pollution in recent times, rain water also brings down the impurities in air; it reaches earth and further mixes with other organic and inorganic particles and becomes impure. Salinity of water is based on its location and depth from where it is extracted. Lake or pond water is less saline when compared to ocean water which is very salty. On the basis of mineral content of water, it can be divided into two types:

Soft water: When the concentration of magnesium and calcium is relatively low, it is known as soft water. If using soap, lather

forms very quickly without using excessive soap, then the water is soft water.

Hard water: When soap doesn't give lather easily, this indicates that the water is hard in nature. Such water contains carbonates, sulphates and chloride compounds of magnesium and calcium. Further, depending on hardness of water, it can be classified into two sub-categories:

Temporary Hardness of water: When water hardness is due to bicarbonates of magnesium and calcium [$\text{Ca}(\text{HCO}_3)_2$ and $\text{Mg}(\text{HCO}_3)_2$], it is known as temporary hardness of water. It is temporary as it can be removed from water by boiling it. Boiling the water facilitates carbonate formation from bicarbonates and precipitates calcium carbonate from the solution which can be removed by filtration.



Permanent Hardness of water: If water hardness is due to presence of calcium chloride, magnesium chloride, calcium sulphate or, magnesium sulphate, it is called as permanent hardness of water. Unlike soft water, this type of hardness cannot be removed by simple boiling and would require many chemical processes to make it usable.

We use tonnes of water in our daily life; it is also used for the production of many day-to-day products used. **For example :** paper, grains, crops, medicine, electricity, etc. Let's see into a comparison of water consumption done by a few industries in developed countries and our country. In developed countries, for producing 1 MW

of electricity, about 10,000 liters of water is used; whereas, in India, we use about 80,000 liters of water. In textile industry, for making clothes,

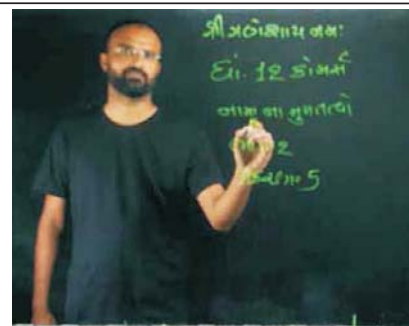


developed countries use about 100,000 liters of water; India uses about 200,000-250,000 liters of water for the same. For making 1 tonne of paper, developed countries use about 50,000 liters; while for the same, India uses almost 150,000-200,000 liters of water. Do you think, are we trying to improve water conservation in India?

In Aurangabad, Maharashtra, there are about 10 factories for alcohol & beer production; each of these factories use about 3.5 Crore liter of water for production. In Maharashtra, approximately 2 lakh hectare of land is used for sugarcane production which is mainly used for the production of sugar. There are about 200+ factories which are used for manufacturing sugar each one of these using 25 lakh liters of water every day. These are just statistics of one state; imagine the water consumption of other states as well. Dear Readers, it is time to wake up and try to limit water consumption in daily life and be more cautious about it.



Digital Mirror Board



The Corona pandemic has driven many people around the world to use digital technology. In the current scenario of education, the proportion of digital technology in schools and government institutions is also increasing. The main thing is how to solve the problems by looking at one aspect in the characteristic of a teacher and how to give better and effective education to the children. As part of this, a "Digital Mirror Board" has been developed by the team of Principal Shri Chetanbhai Chauhan under the guidance of the Managing Trustee of Shri Dakshinamurti Gijubhai Vidyarthi Bhavan.

Shri Gijubhai Vinay Mandir managed by Shri Dakshinamurti Vidyarthi Bhavan have adopted, accepted and implemented the online education system keeping in view that all the students studying in Std. 9 to 12 will continue to get effective education even these days and students will not be detached from education.

This digital mirror board is based on the principle of light, which is somewhat different from ordinary glass boards. If the teacher does the writing on one side of the transparent glass board, the writing on the board does not become a hindrance to the children. This makes online learning more effective. Coloured figures can also be

created with different coloured pens. Teaching in this board maintains transparency between the teacher and the students, as well as the 'eye contact' of the student and the teacher. All kinds of colourful writing materials can be provided in this board. Students can be inspired by the beauty and elegance of teachers' signatures. You can see digital lessons with the help of this link (https://youtu.be/6Gwu5_vO6v8) Our school invite you to visit and see this 'Digital Mirror Board' so that more children can be benefitted. Thank you.

Shri Balvant Parekh Vignannagari

has been specially started this column for the purpose of maximizing the innovative work of Science and Mathematics teachers to benefit children and to encourage teachers. Teachers who wish to write an article for this, are requested to send their written or typed article on the letter head of the school. Selected articles will be published in Science Express Magazine. In which the name of the teacher and the school will be mentioned.

In this way, articles based on science and mathematics can also be sent to the students through the school.

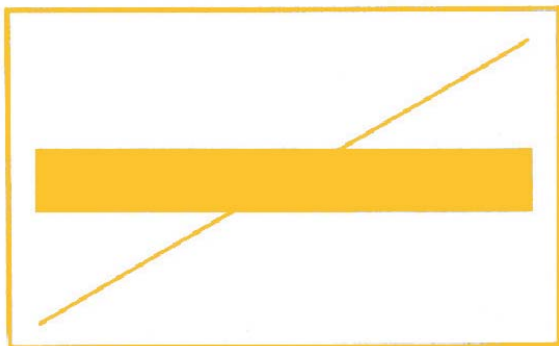




Focus

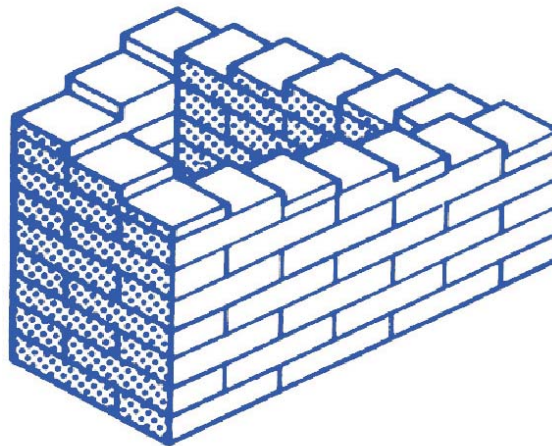
Mandarin's Scroll

1.



Is the upper thin diagonal line, lined up directly with lower diagonal line ?

3.



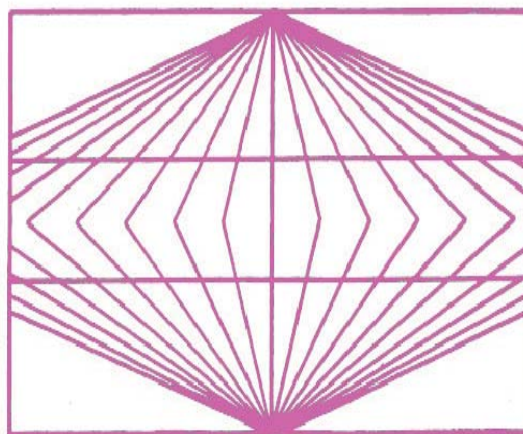
Point to the top step. Now point to the bottom step. What's the matter ?

2.



Can you decipher the Mandarin's scroll ?
Clue: It has to do with playing cards.

4.



Are the two horizontal lines bending towards Each other ?

Answer are somewhere in this issue

