

National Children Science Congress -2018 & 2019

Focal Theme

Science, Technology and Innovation for
A Clean, Green and Healthy Nation

Sub-Theme

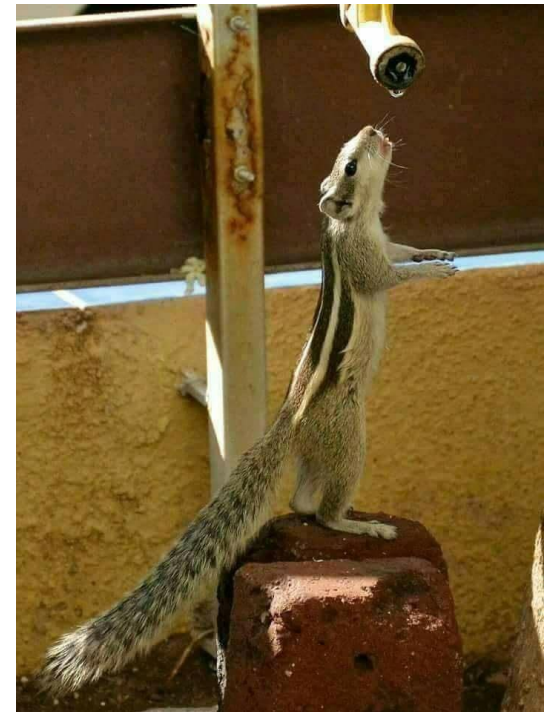
Society, Culture and Livelihoods

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Clean, Green and Healthy Nation.

Why?

- India's population is **NEARLY EQUAL** to that of all teams participated in the Football world cup 2018.
- Population of Indian youngsters with age less than **35** is **65 crores**.
- India's population by 2020 will touch a whopping 1.35 billion.
- *More stomach, Less food. What will happen?*
- So Clean, Green and Healthy environment is a **must** for our future generations.

Environmental Refugees



Everyday in some part of the Planet, there is emergence of a new TRIBE, called **Environmental Refugees** Why ? & How ??



Environmental Refugees

arise on account of

Global Warming

which includes

Atmosphere
Warming

Soil
Warming

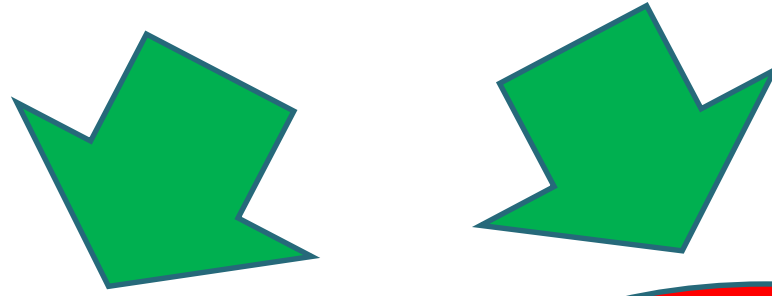
Sea
Warming

Wind
Warming

Of course all due to

MIND WARMING

Mind Warming



Greed

for Money &
Possessions
leading to
non-conservation
& Pollutions

**Answer : Principled
Simplicity**

Hate

Leading to
conflicts , fights ,
violence ,
extremism, civil
wars & wars

Answer : PEACE



It is a question
of who is going
to dominant
RIGHT or
LEFT?
and the
possible
solution is
...

Environmental Scientist – Once upon a time

Various Tamil literatures such as Tholkappiyam, Silapadhikaram, Manimekhalai, Pattupattu, etc. are grouped under the name of Sangam literature. Sangam literature mentions about five ecozones that existed which were forests, hills, deserts, coastal regions and fertile plains - also known as thinai. The five thinai or the eco zones used to have a special tree, an animal, a bird, a flower and a deity of their own.

The thinai also meant behaviour or culture appropriate to each zone and it was believed that the environmental factors influenced the culture and behaviour. The worship of trees was widely prevalent among the Tamils. There are numerous references to the belief that trees were the abode of deities in the extensive Sangam literature. Trees worshipped in the temple and associated either with the village, temple or the deity are known as Sthalavrikshas or sacred trees. When temples were erected for the Gods who had originally existed in the shade of trees, people took special care not to remove those trees which had been preserved and worshipped.

பொருள்	மக்கும் நாட்கள்
வாழைப்பழத் தோல்	2 முதல் 10 நாட்கள்
பருத்தித் துணி	1 முதல் 5 மாதங்கள்
<u>பேப்பர்</u>	<u>2 முதல் 5 மாதங்கள்</u>
தேங்காய் நார் கயிறு	3 முதல் 12 மாதங்கள்
ஆரஞ்சு பழத் தோல்	6 மாதங்கள்
கம்பளி துணி வகை	1 முதல் 5 ஆண்டுகள்
<u>டெட்ரா பாக்</u> <u>அட்டை வகை</u>	5 ஆண்டுகள்
தோல் பொருட்கள்	25 முதல் 40 ஆண்டுகள்
நைலான் துணிகள்	30 முதல் 40 ஆண்டுகள்
தகர டின்	50 முதல் 100 ஆண்டுகள்
அலுமினியம்	80 முதல் 1,000 ஆண்டுகள்
டயர், நாப்கீன்	500 முதல் 800 ஆண்டுகள்
<u>ப்ளாஸ்டிக் பாட்டில்</u>	<u>டெத் கிடையாகு</u>

- என்றென்றும் அன்புடன் அங்குராசு.

25/07/2018

Mount Everest, the high-altitude rubbish dump



This handout picture taken on May 20, 2018 and released on June 12 by Damian Benegas shows discarded climbing equipment and rubbish scattered around Camp 4 of Mount Everest. | Photo Credit: [AFP/DAMIAN BENEGAS](#)

Environmentalists are concerned that the pollution on Everest is also affecting water sources down in the valley.





RED ALERT

World will be destroyed not by **ATOM BOMBS but by
PLASTC BAGS**

25/07/2018



Animals are killed by eating Plastics



P3 by M3
Plastic Pollution Prevention
by
Minimum Use ,
Maximum Reuse &
Mandatory Recycling / Safe
Disposal of Plastics

To make plastic – free

- Basic steps to make “plastic free” are
 - Awareness about plastics
 - Alternative source for plastics
 - Banning /stopping production of plastics
- People consumes **over one million plastic bags per minute** all over the world.
- 40 tonnes of plastic waste each day in Chennai.
- 8 to 15% percentage of garbage by weight is plastic. Remember plastic is light and occupies lot of space.
- Sanitary workers in Madurai corporation earn 1.5 crores from plastic waste in the last 14 months

Project suggestion - I

Alternate source for plastics/carry bags

Ask the student/staff to carry a
Plate, Tumbler, Spoon

in a jute bag and also some cloth bags
additionally.

Courtesy – WhatsApp Video

According to a survey, government servants remain at the top place among all category of Peoples, in using carry bags.

Project suggestion - I

Alternate source for plastics/carry bags



Project suggestion - I

Alternate source for plastics/carry bags



Ask them to note down how many times they have avoided the usage of plastic/ carry bags in a month by doing so.

Project suggestion - 2

Ground water level - Impact of plastic carry bags and Flex

Spray water regularly in equal interval on the sand for one week



Carry bag

Flex

- Measure the mass of the sand taken from each pot after one week – sand with moisture has more mass.
- Do soil test.

Project suggestion - 3

- Documentation about the flex culture



Enquire about the different types of flex (usage of chemicals)
Method of discarding after the functions/weddings/festivals are over

Impact of flex on environment

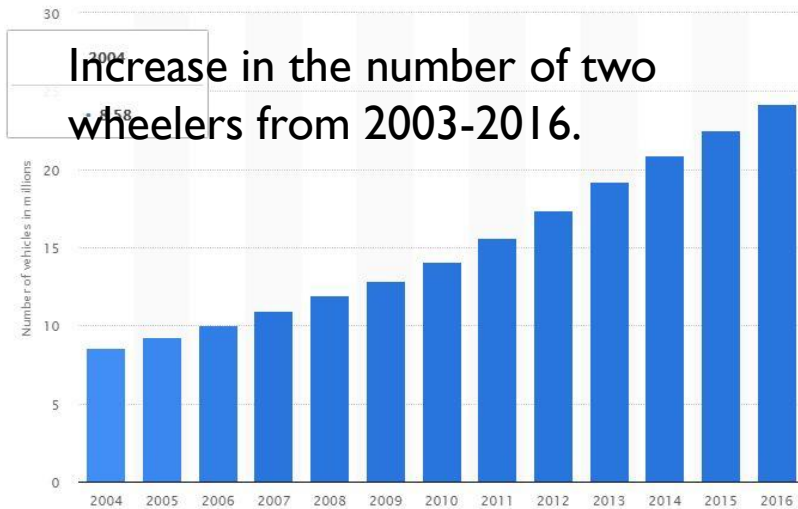
Scope of reuse

Prior permission?

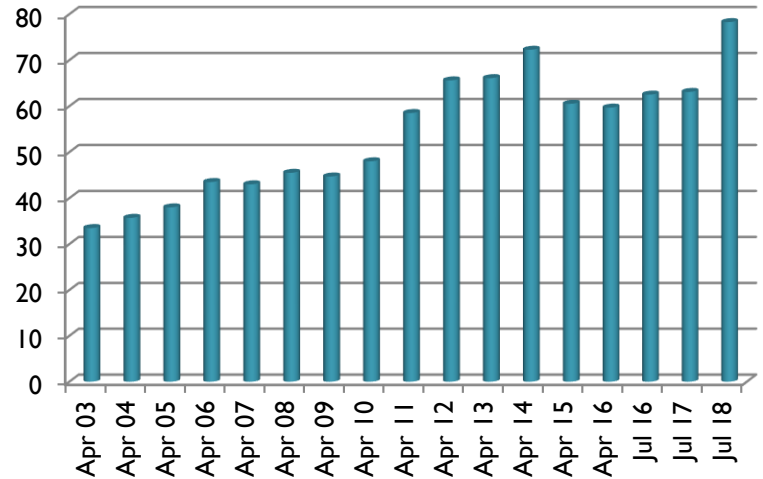
Is there any advantage/use in placing a flex?

Project suggestion – 4 – impact of petrol on environment

- Hike in the number of two wheelers.



Petrol (Rs/Litre)



Zooming Ahead

Sales In Metros	2015			2016			2017(YTD)		
	Total	Scooters	Motorcycles	Total	Scooters	Motorcycles	Total	Scooters	Motorcycles
Chennai	3,32,031	51%	49%	3,78,812	53%	47%	88,258	51%	49%
Bengaluru	4,26,019	56%	44%	4,70,507	59%	41%	1,10,546	61%	39%
Delhi	3,91,106	47%	53%	4,41,044	48%	52%	1,15,836	44%	56%
Mumbai	1,27,312	47%	53%	1,64,662	55%	45%	50,897	60%	40%
Kolkata	1,58,258	25%	75%	1,82,570	29%	71%	37,221	36%	64%

Project suggestion – 4 – impact of petrol on environment

Honda 2Wheelers India sales up 3%, sold 551,601 units in May'18

TIMESOFINDIA.COM | Jun 2, 2018, 18:38 IST

✉ 🖨 A- A+

37 Kmpl

Royal Enfield Classic 350 gives a mileage of 37 Kmpl in city, as claimed by the company.



NEW DELHI: Honda Motorcycle and Scooter India Pvt Ltd (HMSI) reported over 5.5 lakh unit sales in May 2018, registering a growth of three per cent in the month.

Overall sales of the company stood at 551,601 units in May 2018 compared to 537,035 units in May 2017.

Registering identical volumes month-on-month, Chennai-based motorcycle maker Royal Enfield posted strong sales of 74,477 units in June 2018, a growth of 18 per cent over 63,160 units sold during the same period last year. The motorcycle maker has



Project suggestion – 4 – study on effective usage of petrol/diesel



FOR CLEANER ENVIRONMENT

Recommendations

- Government should frame regulations for stopping re-registration of vehicles older than 20-year old
- Count-down timer should be provided at traffic signals
- Make vehicle fitness mandatory for vehicles above 10 years
- Strengthen PUC norms
- Awareness campaigns should be carried out



What was the court order in 2012?

The high court had ordered all vehicles plying on state roads to be shifted to natural gas. It also directed the administration to levy extra tax on vehicle owners to provide relief to those who use public transport. It said that if vehicles are allowed to run on fuel other than natural gas, the government should impose stringent restrictions for reducing pollution by fixing level of permissible emission to minimum - in



Project suggestion – 4 – effective usage of petrol/diesel



Count the number of bicycles on road during peak hours.



About the difference in the maintenance in tire pressure recommended by the two wheelers company and at petrol bunks



If possible look for Oneway path



Air pollution



More than 12 other studies in the US, Brazil, Europe, Mexico, South Korea and Taiwan have established links between air pollutants and low birth weight premature birth still birth and infant death. Thus the

Project suggestion - 5

- Comparison between the construction styles of traditional and modern homes



Project suggestion - 5

- Construction cost (traditional home)

Vs

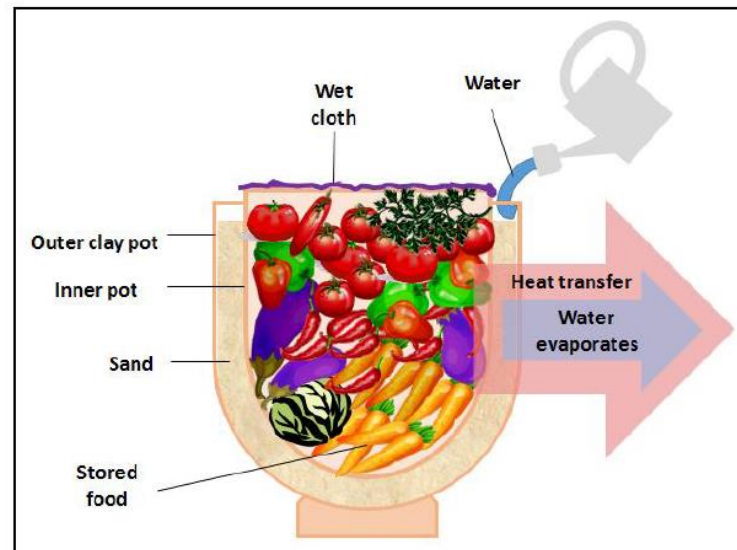
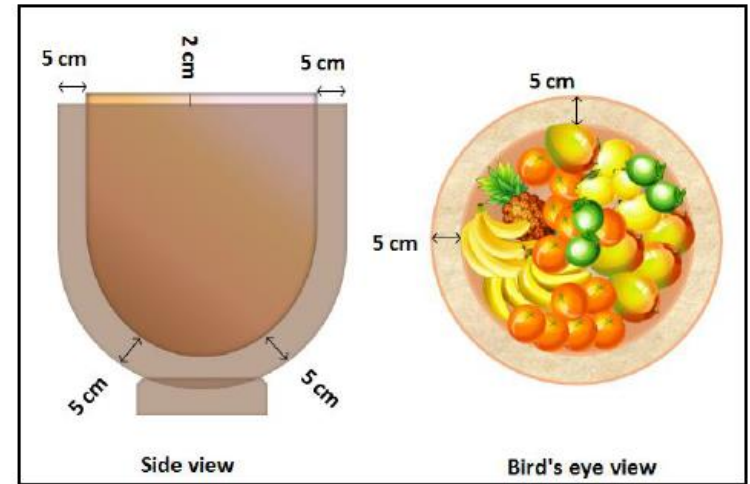
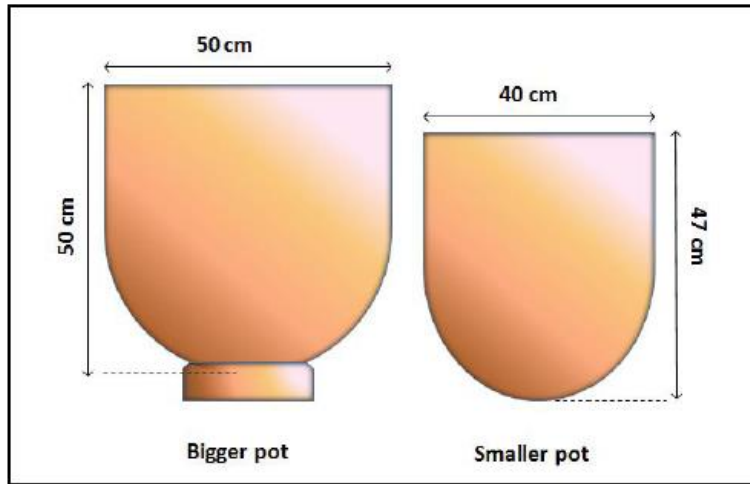
- Cost of AC
- Maintenance of AC
- EB Bill
- Health problems

Refrigerator **Vs** Mud pot



shutterstock.com · 672201943

Clay pot cooler



Additional project outlines

- Awareness about environment in films/social media.
- Compare the number of comedies/scenes supporting green environment Vs modern culture.
- Censor board should be concerned about cutting/chopping of trees while shooting like it is preventing cruelty to animals while shooting.
- Frequency of articles about the green environment in newspapers.
- Importance of environmental science in our syllabus
- Popular faces (players/artists) in advertisement which is not good to our health/ culture.
- Water purification by mud pot in an around karaiudi
- Houses with and without trees or plant in your locality.
- Count the number of trees with placards on it in your locality.
- Government ban carry bags from January 1st 2019. Document the response from the public right from now by observing the number of carry bags people carrying in a main place/market in a given location.
- Particularly watch the response in the government offices/institutions.
- Visit to the places where public meetings were conducted by the leading political parties. Collect the garbage related to plastic items.

Air conditioning could add to global warming woes: Study

PTI | Jul 4, 2018, 11:48 IST



A-

A+



WASHINGTON: The increased use of air conditioning in buildings could add to the problems of a warming world by further degrading air quality and compounding the toll of air pollution on human health, a study warns.

Researchers from the University of Wisconsin-Madison forecast as many as a thousand additional deaths annually in the

Eastern US alone due to elevated levels of air pollution driven by the increased use of fossil fuels to cool the buildings where humans live and work.

Climate change is making night-shining clouds more visible

Date: July 2, 2018

Source: American Geophysical Union

Summary: Increased water vapor in Earth's atmosphere due to human activities is making shimmering high-altitude clouds more visible, a new study finds. The results suggest these strange but increasingly common clouds seen only on summer nights are an indicator of human-caused climate change, according to new research.

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FULL STORY



The connection between tsunami & climate change . The water that melts in Antarctic reaches the lower gradient of the sea & causes pressure on the plates beneath which succumbs and causes earthquake which in turn causes tsunami.



And the possible solution is we have to move from



23/07/2018

The research says

18 MADURAI TUESDAY 10.07.2018
www.indianexpress.com

EARTH COULD BE TWICE AS HOT AS PREDICTED

Large areas of the polar ice caps could collapse and sea levels may rise six metres

CONCLUSION The earth is now warming twice as fast as predicted by climate models, even if the world meets the targets of limiting global warming to under two degrees Celsius, according to findings of a study.

The study published in the journal *Nature*, described how it found that sea levels may rise six metres or more even if the world meets its goals.

The findings are based on ice core samples from Antarctica that were drilled over the past 5,000 years. When the world was 5-6 degrees Celsius warmer than the pre-industrial temperature of the 18th Century.

The study revealed the largest amount of the polar ice cap could collapse and significant changes to ecosystems could occur in the Sahara Desert because of more and the edge of tropical rainforests.

"Over periods of past warming events, the amount of sea level rise was about 5-6 metres, which is exactly what we are predicting today," says lead author.

The study also revealed that the amount of sea level rise was about 5-6 metres, which is exactly what we are predicting today.

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GIVING PEACE A CHANCE

Persepolis, the ancient city of the Achaemenid Empire, is being excavated in Iran. The site is one of the world's largest and most important archaeological sites.

CONTEST AND WAR

- For the past 50 years, archaeologists have been excavating the site, but the war between Iran and Iraq in the 1970s and 80s stopped the work.
- Exploration of the site at the start of the 20th century had to be stopped due to the war.

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By contrast, today our planet is warming much faster than any of these periods as human caused carbon dioxide emissions continue to grow.

Even if our emissions stopped today, it would take centuries to millennia to reach equilibrium.

(Bohnen et al., 1993, p. 415). There is an 'attitude-behaviour gap' where 30% of consumers report that they are very concerned about environmental issues but they are struggling to translate this into purchases (Young, Hwang & Caroline J Oates, 2010). This gap is even larger in emerging economies like India. Realizing this gap the present



Thank You