

http://gdb.org.in/  
cattle\_breed\_gujarat.php



Cattle species specific to this region are the world-renowned Gir cattle breed, known for its high yield of milk, with less feeding and resistance to various tropical diseases. Despite difficult climatic conditions, Gujarat is one of the top milk-producing States in India.



Some areas in Kutch are famous for salt marshes, which provide almost 20% of the country's salt needs. As the land dries up during intense heat of the summers, one can see salt deposits in the soil (as in the picture on the left). Most water sources in Kutch are saline, with sodium chloride as the main constituent.



Gir is also a place in Junagadh district of Gujarat, famous for the harmonious relationship between the Asiatic Lion and the Maldhari people, whose name means "owner of animal stock". They are followers of Islam or Hinduism, and were once nomadic tribal herdsmen.

The semi arid region that we spoke of now, falls very near the Tropic of Cancer (Epoch 2012: 23° 26' 16"). The coordinates of the Kutch district are 23.9150° N, 70.3670° E.



Do you think all the regions where the Tropic of Cancer passes, have the same type of biogeography? Why or why not?  
The soil salinity in Kutch is due to Sodium chloride (NaCl). But salinity can be due to salts of K, Ca, Mg etc. Does your country have saline soil? If so, which salt contributes to its salinity?



Think

Think

Write to us

Can you name the countries through which the Tropic of Cancer passes? One who names the maximum number of countries gets a prize! [Refer to the world map above.]  
Does the semi-arid region of India remind you of any place you have seen? If yes, write five lines about it and drop it in the box, at the help desk. We may publish some of your interesting experiences.

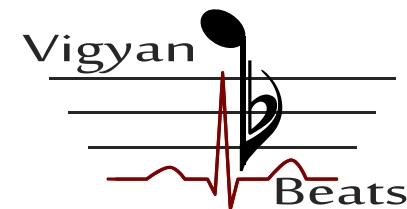
Image source: Eacz12, Saravask, Linuxerist, Rursus, J. Wilson, WikiLaurent, Hopelessxl, Chris from commons.wikimedia.org  
Akshat from www.ncra.tifr.res.in

### Editorial team

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## 10<sup>th</sup> International Junior Science Olympiad

All the best for your exam!



### Today's attraction: Aga Khan Palace and GMRT



You must be looking forward to an opportunity to explore Pune! So here's a little to get you geared up for the experiences awaiting you.

Depending on your route, today you may cross at least one bridge (called pul in Marathi) over the small river Mutha that flows through the city.



The bridges built in black stone include the Sangam bridge, and Nava pul. Holkar Bridge from the British-era is nearly 150-year-old, with a modern multi-lane bridge right next to it.

We are sure you will notice this and much more! And these places might remind you of something back home. We would love to hear from you of what you enjoyed on the excursion, and of things that reminded you of something from your town or country. Do 'write to us' students, and we'll try to share it with everyone in the next issue of Vigyan Beats. Leaders can mail us at [vigyan.beats@gmail.com](mailto:vigyan.beats@gmail.com)!

### Today @ IJSO

MCQ exam - Visit to Aga Khan Palace



- After breakfast, to examination venue with team guide.
- Back at hotel for lunch.
- Post lunch, board bus to Aga Khan Palace.
- If you want to take pictures inside the museum or shoot videos, buy the ticket for camera (less than 2 USD).
- Remember to carry Indian currency. Foreign currency exchange is available at your hotel's reception desk.

Visit to GMRT - IB meeting

- Buses leave from hotel for GMRT at 09:00 hrs.
- The journey takes about 3 hours each way.
- GMRT visit is mostly outdoors and there is little shade. Remember to wear your cap.
- Water bottles will be provided. Lunch at GMRT.
- GMRT campus is a radio silence zone. Mobile signals interfere with data collection. Put your communication devices on the 'flight' mode when instructed.
- Dinner at Sabha. Breakfast on 6<sup>th</sup> December at Sabha.



# Snapshots



Glimpses from the Opening Ceremony

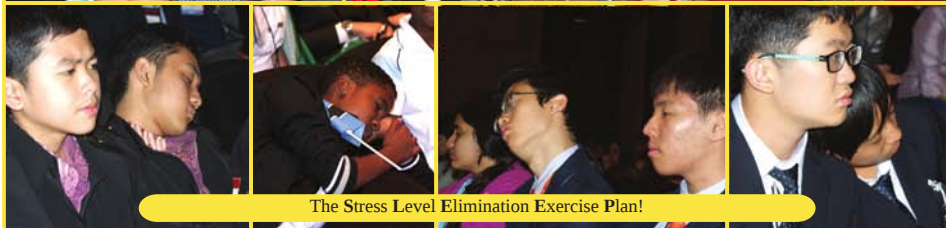


'Aarohan' - Ascent, the musical concert

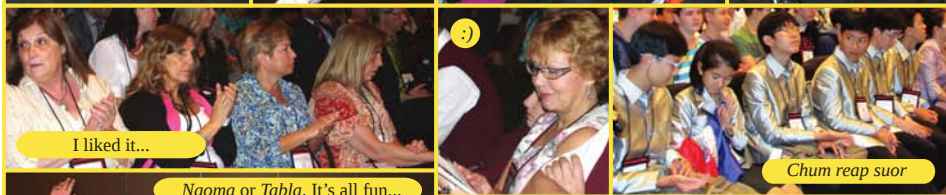


clapping to the rhythm

full house



The Stress Level Elimination Exercise Plan!



I liked it...

Ngoma or Tabla. It's all fun...

Chum reap suor



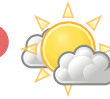
Brazillll... La la la lalala...

## Student Speak @ musical programme and lunch

Cake was delicious!  
In Zimbabwe, we have similar kind of drums like the Ngoma!  
Food was too spicy...  
Music was good... but the programme was too long...  
Indian food was good. We liked the tempered whole green gram bean 😊

Sunrise: 06.53AM

Sunset: 05.57PM



Max Temp: 30° C

Min Temp: 17° C

Sky would be partly cloudy.

Source: [www.imdpune.gov.in](http://www.imdpune.gov.in)

## Zoom In

### Winner of yesterday's Write to us

Thank you for all your responses! The most interesting response was from Monika Hruska of Slovakia. She says- "Humming birds need a lot of energy for the fast movement of their wings. It will be changed in to warmth energy, resp. .. a rise of temperature, and to a small part to potential energy sometimes." (sic). Monika, you win a special prize not only for your answer, but also because you attempted all the questions! Congratulations! Collect your prize during lunch tomorrow.

### Glimpses from the Semi-arid Region

Some regions in India are semi-arid and have hot and dry summers from February to June. Winter temperatures from October to February can drop as low as 5° Celsius. Rainfall is scanty and droughts are common.



The endangered Asiatic Wild Ass are watching you. The Prosopis plants in the background are an introduced species, in the region called the Little Rann of Kutch. Adapted to tolerate the extreme climate and saline soil conditions, they are now a dominant plant species in the region.



The Prosopis is a source of supplementary income for the local communities, who collect pods, gum and honey from the tree, apart from using it as fuel-wood and for charcoal. Due to unreliable weather conditions, locals have multiple livelihoods which sustain them throughout the year: rain-dependent agriculture, drought crops, salt-panning, animal husbandry and pastoralism.



Pearl millet is well-adapted to drought prone areas with low soil fertility and high temperature. This forms the primary diet of people in Kutch.