



Ladakh's current population of around 150,000 live in scattered hamlets. Though cultivation is possible only in summer, agriculture is a livelihood for many. Some of the highest fields in the world – at 4600 m asl – are located at Korzok near Tso-Moriri Lake. Crops grown include normal and naked barley, wheat, mustard, lentils, potatoes, peas and onions. Weather favours growing apple and apricot. There is a marked influence of the Tibetan Buddhist culture.

The Himalayan blue sheep of this region can flexibly switch to herbs and shrubs during scarcity of grass. The Tibetan Antelope, once seen in abundance, has almost been hunted to extinction for its light and warm wool. The physiology of the long haired Yak, with lungs and heart that are larger than in normal cattle, is well adapted to high altitudes. Persistence of foetal haemoglobin throughout life, increases their capacity for transporting oxygen through their blood. Yaks have been domesticated for centuries, primarily for milk, fibre and meat, and transport. Even their dried droppings are an important fuel.



The wild apricot growing abundantly in the Trans-Himalayan region yields bitter kernels. Indigenous communities extract from them apricot oil, which is used for cooking, religious rites, cosmetics and medicines. Every region's diet is influenced by what is grown there. Just as Kerala State people use coconut oil in their cooking (See Issue 3), some trans-Himalayan people use apricot oil for cooking.

It is important to match the cooking oil's heat tolerance with the cooking method. At the smoke point temperature, the oil begins to break down to glycerol and free fatty acids, producing smoke. At this point both flavour and nutrition begin to degrade. Prolonged consumption of burnt oils leads to atherosclerosis, inflammatory joint disease, and other health problems. Following is some information about a few cooking oils used in India.

Oil Type	Smoke point (°C)	Most suitable for
Coconut Oil (unrefined)	177	Commercial baked goods, candy, sweets, whipped toppings, rarely frying
Rice bran oil	254	Deep frying, cooking, salads, dressings.
Flax-seed oil	107	Salad dressing, nutritional supplement
Sunflower oil (refined)	227	Cooking, frying
Apricot kernel Oil	257	High-temperature frying, cooking



Guess what the following cooking oils may be most suitable for? Why do you think so?

Oil Type	Smoke point (°C)	Used mainly for
Olive oil (Extra virgin)	207	?
Olive oil (Extra light)	242	?

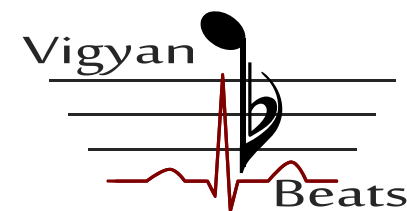
Name any other oil used in your country in cooking.

This is the last "write to us" feature and your last chance to submit your entries. If you have figured out the answers of any of the previous "write to us" questions, drop your answers at the Help Desk box.

Image source: Saravask, Linuxerist, Rursus, Valadrem, Eacz12, Nirmal Dulal, Balachandran Chandrasekharan, Steve Evans, McKay Savage, Miteshbhodia from commons.wikimedia.org. The Hamptons Diet by By Fred Pescatore.

Editorial team

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10th International Junior Science Olympiad

Today's attraction: Fort Jadhavgadh, Raja Kelkar Museum



You must be eager to explore more of Pune and surroundings, now that all the exams are over! As you travel to Fort Jadhavgadh, or to the famous Kelkar Museum, you will have more glimpses of Pune.

Your excursions will take you to some of the old and new parts of Pune. The old city has smaller lanes and a mix of traditional 'wadars' (residences for large and extended families), as also many modern apartment buildings. The newer suburbs have glass-lined high-rise buildings, multiplex movie theatres, and shopping malls.

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 leaders can mail us at vigyan.beats@gmail.com.

Outreach

Outreach activities are planned today as a part of IJSO 2013. About a hundred school students from the Maharashtra State, who are winners of the Homi Bhabha Young Scientist Award, along with their mentor teachers, will have an opportunity to attempt some of the challenging experimental and theoretical problems developed for the IJSO competition. The experimental activities will be conducted at the Shri Shiv Chhatrapati Sports Complex, Balewadi. Students will also have a chance to discuss their queries with experts at IISER, Pune.

Today @ IJSO

Visit to Fort Jadhavgadh



- Buses will leave from your hotel at 09.00 hrs.
- The journey takes about 90 minutes each way.
- Remember to wear your cap.

Moderation - Visit to Kelkar Museum or shopping

- Pre-lunch hours are assigned for moderation at Sabha1.
- Post-lunch, you may visit a museum showing the cultural heritage of Pune, or go for shopping in the old city.
- Buses will leave from your hotel at 14.30 hrs.
Lunch and dinner at Sabha1.
Breakfast on 11th December at Pool Deck.



Snapshots



the last hurdle



a taste of culture



a field day



Happy Birthday
subha upandinayak veva!

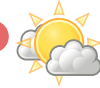


Praveen
Sumanasekara
(Sri Lanka)

Today's weather

Sunrise: 06.56AM

Sunset: 05.59PM



Max Temp: 29° C

Min Temp: 08° C

Sky condition would be clear

Source: www.imdpune.gov.in

FRIENDLY FOOTBALL MATCH

WINNERS (GIRLS)

Laura Van Schie (Zimbabwe), Leticia Pereira DeSouza (Brazil), Keena Rashnesh Patel (Kenya), Zahra Knights (Australia), Jacinta Macginley (Australia), Isabel Heinel (Kenya), Kyela Antonia Brennan (Kenya), Amy Brooke (Zimbabwe), Otsilegape Thebeng (Botswana).

WINNERS (BOYS)

Kabelo Beja (Botswana), Aone Mogorosi (Botswana), Stelios Stylianou (Cyprus), Ali Shaterian (Iran), Sam Brakarsh (Zimbabwe), Alireza Darziramandi (Iran), Nadun Anjanaka Gallage (Sri Lanka), Shane Kavinda Amabhashana Dalumura Hettige (Sri Lanka), Carel Kuusk (Estonia), Airon Johannes Oravas (Estonia), Oveznepes Orazgeldiyev (Turkmenistan).

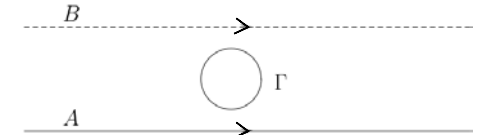


Winner of Weave a Story Contest

Marien Raat (The Netherlands), Ethan Van Woerkom (The Netherlands), and Simon Matthias Lichtinger (Germany)

The winners featured in today's issue are all cross-country teams! Keep it up :)

Try one more



Can you move the directed (infinite) line A continuously in the plane to the directed (infinite) line B such that at no point of time it is tangent to the circle Γ ? Can you prove your answer?

Tejaswi N (Semi Complexity)

Zoom In

Winners of Write to us

Congratulations to Eoin Caffrey of Ireland - you were able to list quite a few factors that one would consider while building a bridge.

Thanks to Po Han Lin and Ching Wei Huang of Chinese Taipei for writing to us again, the full explanation of the 'Wire Connection' problem from Issue 6. Your answer was spot on, great work!

Ladakh: the Trans-Himalayan Region of India

At an altitude over of 3000m above sea level, close to the Great Himalayas, Ladakh is the highest plateau of the Jammu and Kashmir State. With an average annual rainfall of only 102 mm, this cold desert has very little vegetation. The main source of fresh water is the winter snow. Most major towns are located close to the Indus river, the backbone of Ladakh and once the life line of the Harappa and Mohenjodaro's civilizations.

