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## FOCUS ON OUR ONLY HOME

## The Good Earth

A thought just crossed my mind. Scientists in some of the leading universities are in constant search of a new planet, a moon or even a meteor. It seems a desperate bid where everyone is looking for the outer world to find a place where water is found. On the other hand we are doing everything to ensure that all the water we have on our planet is so polluted that we will never go anywhere close to it.

On delving into this thought further a mysterious theory does evolve. Is it that we don't know something others know? Something so sinister that we all might be



caught unawares but it would not matter. Maybe time is up on the Earth and an extreme bid is being made to find another beautiful spot like the earth that we could colonise and start the destructive life cycle once again. Silly of me to talk of the end of the planet Earth on the eve of Earth day, but I still wonder about the mysterious voyages made by mankind desperate to find another

planet as if our days are numbered. Talking to many educated souls and most possessing degrees from Harvard, Yale, IIM and many who have barely finished school, I find the educated are seemingly all in agreement that the forest and trees or at least a large portion of these must go because they are preventing our development. The old trees lining the highway to Shantiniketan, the trees adorning Bangalore city, the Aarey milk colony a part of Borivali National Park of yore in Mumbai, the mangroves, all need to be axed as they are responsible for no development. Alas, I hope better sense prevails. The Earth has tremendous power to regenerate but we need to give it time. The developmental agenda can be both green in thought and action, but in our hurry to match USA dollar for dollar we may do something so drastic that it may be difficult to sustain the population. Yes I did say earth can regenerate but who has the time, leave alone the inclination.

Almost all development plan in India is fraught with selfish interests, emotional interference, little thought for long term goals, high flying egos and very little to no scientific thoughts. Thus all developments are fuzzy. Look at the three stories high footbridges across the freeways and high ways but barely used by pedestrians. Sadly a pedestrian thought. Development needs to be integrated with the environment in a manner where we allow nature to grow and nourish us.

On the eve of Earth day, Trailblazers Adventure Travel Pvt Ltd and Trailblazers Foundation salutes our Mother Earth. She truly is a provider. I wish all earthlings a very Happy Earth Day.



## Spring forth

Dear Readers

The months of March and April are indeed very busy months for all schools. Exams, corrections, next year planning, interviews, holidays, results and so much more. We wish you, your faculty, students and parents every success. These months also happen to celebrate some key environment days. It would be wonderful if you spare some time in activities showcasing the concerns. Do write in to us and we will happily publish.

This issue features the endangered "Gharial" of our river Ganga. A true patron of Swachh Bharat initiative, it cleans up the river! We have gone a step further. We have cleaned up the Gharial and it is now a critically endangered species and the government is planning to use crores of our money to clean up the Ganga. This is what unsustainable development means! We need to be able to make our choice, but do we have it?

Read on and see the journey we have travelled with some of you. We thank you in sending your teachers and student teachers for Multiply the Message workshop and for cleaning the city of Mumbai a wee bit, under the Trailblazers Foundation.

**Ranjan Biswas**

Editor

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# On the Brink....

The Gharial (*Gavialis gangeticus*) is one of the largest crocodiles and classified as a critically endangered species in the IUCN Red List. The major population in India remains in the Chambal and the Girwa Rivers and the Rapti-Naryani River in Nepal.

About 1200 Gharials survive in the wild in India and less than 100 in Nepal. About 1000 Gharials are also being reared in various zoos and captive centres.

Males and females look distinctly different with males being larger than females. Only mature males have "ghara" - a bulbous growth at the end of their snouts ("ghara" meaning pot in Hindi). Ghara acts as a resonator and courtship auditory communication instrument carrying the buzzing sound for great distances across water.



Apoorva Joshi

Image Courtesy: [www.apoorvajoshi.com](http://www.apoorvajoshi.com)

The male Gharial can grow up to 6 meters and females can grow up to 4.5 meters. Adults weigh between 159 to 181 kg. They reside exclusively in river habitats with deep, clear, fast-flowing waters and steep, sandy banks. The primary food source of adult Gharial is fish and small crustaceans like mud crabs. They are generally not aggressive towards each other except during the breeding and nesting season. Females lay their eggs in steep, sandy river banks with a clutch size of 40-80 eggs.

Gharials, which once almost became extinct because of hunting for their valuable skins, are today threatened by destruction or intense human pressure on their habitat.

## STRIDES IN SCIENCE



Bertrand Piccard and Andre Borschberg both pioneers, innovators and pilots, are the driving force behind @solarimpulse, co-founded 12 years ago. [www.solarimpulse.com](http://www.solarimpulse.com)

## World's first solar flight lands in India

Solar Impulse is the only airplane of perpetual endurance, able to fly day and night on solar power, without a drop of fuel. A way for Bertrand Piccard, André Borschberg and their team to demonstrate how pioneering spirit, innovation and clean technologies can change the world. The first round-the-world solar-powered flight landed in India on March 10, on the second leg of a 35000-kilometer-long journey after a flight of about 15 hours over the Arabian Sea from Muscat in Oman.

Hundreds of school children flocked to the Ahmedabad Airport to see the plane which seeks to demonstrate that flying long distances is possible with renewable energy. It began its journey in Abu Dhabi

in the United Arab Emirates on Monday, as it makes its way around the globe in about 25 flight days at speeds of between 50 and 100 kilometers per hour. The aircraft is as heavy as a family car at 2,300 kilograms, but has a wingspan as wide as the largest airliner. The design and construction of the Solar Impulse took 12 years. A first version of the craft rolled out in 2009 and broke records for height and distance travelled by a manned solar plane.

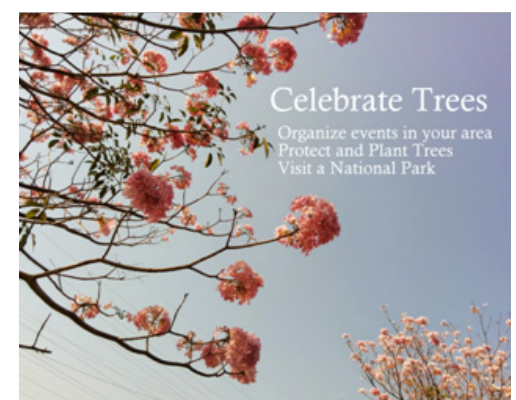
After leaving India, the plane will make stopovers in Myanmar and China before crossing the Pacific Ocean and flying across the United States and southern Europe to arrive back in Abu Dhabi by late July.

## Species of peacock spiders discovered

Two new species of peacock spiders were found in Queensland, Australia by Madeline Girard, a graduate student at the University of California, Berkeley and her friend who went with her on the field. Girard affectionately gave the nickname Sparklemuffin to one of the species, *Maratus jactatus*, which has bluish and reddish stripes on its abdomen and the other *Skeletorus* for its white markings on a black background making it look like a skeleton.



## International Day of Forests and the Tree



This global celebration of forests provides a platform to raise awareness of the importance of all types of forests and of trees outside forests. Forests cover one third of the Earth's land mass, performing vital functions around the world.



# Building Thought Leaders

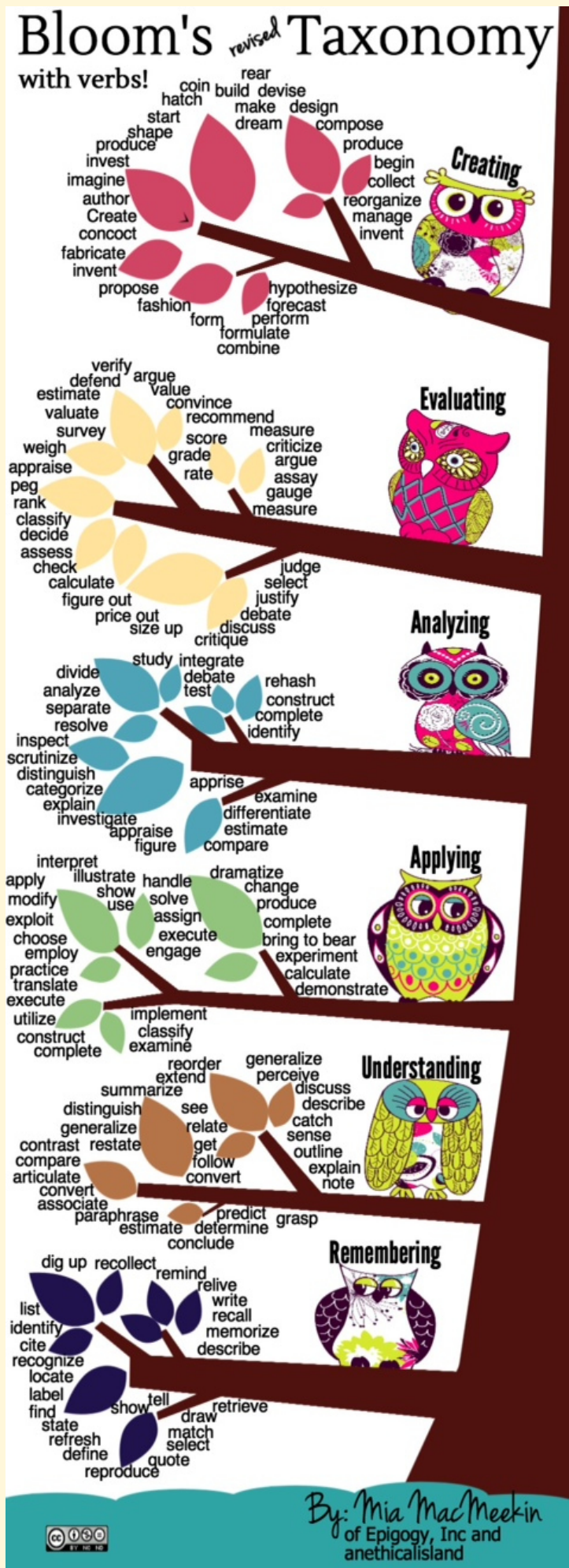
*"The mind is not a vessel to be filled, but a fire to be kindled."*  
-Plutarch

Today's educators have the daunting task of preparing students for a world one can only dimly imagine. This is because, most students entering school today will work in job categories not yet created and all will work with technology not yet invented. If the facts and tools our students will work with, have not yet been discovered and invented, then the teacher's greatest gift is to prepare students with thinking skills—how to understand, analyze, organize, apply, and evaluate new information. Most faculties would also agree that academic success should be measured not just in terms of what students can remember, but what students are able to do with their knowledge. An indispensable educational foundation can be provided to students just by equipping them with a full range of thinking skills. Therefore to craft a successful 21st century citizen, a thoughtful educator will have to work on the child's thinking skills.

For half a century, thinking about "thinking" among educators has been dominated by a hierarchical model. This view of thinking has its roots in the work of Benjamin Bloom and his associates as illustrated in- 'Bloom's Taxonomy'. This refers to a classification of the different learning objectives that educators set for students. It describes six types of thinking arranged in a hierarchy and has become the foundational knowledge for all teachers. It has motivated educators to develop activities and lessons that foster the acquisition of a wider range of thinking skills.

Bloom's is a well-defined and broadly accepted tool for categorizing types of thinking into six different levels: knowledge, comprehension, application, analysis, synthesis, and evaluation. A revised version of Bloom's, further subcategorizes the original taxonomy and converts the different category titles to their active verb counterparts: remember, understand, apply, analyze, create, and evaluate. Seen alongside is a beautiful infographic developed by Mia MacMeekin, an innovative teacher herself. As the taxonomy reflects different forms of thinking and thinking is an active process, verbs were used rather than nouns.

Bloom's Taxonomy is used across grade levels and content areas. By using it in the classroom, teachers can assess students on multiple learning outcomes that are aligned to local, state, and national standards and objectives. Within each level of the taxonomy, there are various tasks that move students through the thought process. In order for teachers to develop lesson plans that integrate Bloom's Taxonomy, they write their lessons in the language that focuses on each level. This approach is very promising because it aligns with the needs of our students as they prepare to live and work in a world being shaped by uncertainties. In the process teachers become more effective educators and better equipped to impart skills for success.



## Rural trail



Trailblazers Rural Trail to Karnala was a refreshing outdoor experience for the students. Through a nature trail at Karnala Bird sanctuary students were introduced to the flora and fauna of the forest. As we entered the sanctuary, the first sighting was a crested serpent eagle spiralling up in the sky welcoming us into their habitat. In the wildlife orphanage, we saw peacock with its amazing display of feathers, parakeets, rabbits, and black shouldered kite among many others that had taken refuge in the orphanage. Trailblazers helped students identify Copper pod, Indian Glue berry, Indian Ebony and many other trees and plants in the sanctuary. After the trail, students visited the local NGO where they saw various cottage industries including the oil ghani, soap factory and the pottery unit. Children were quite inquisitive and asked questions on the processes, yield, machinery and cost. They also explored bio gas and vermi compost unit at the NGO. All enjoyed simple village food and appreciated green lifestyle of the village.

## Cave trail



A Cave Trail was conducted by Trailblazers for the students at Sanjay Gandhi National Park (SGNP), a miraculously preserved green oasis in the center of urban sprawl. The trail started with the sighting of Red Silk Cotton tree in its full bloom. As the trail progressed, the forest slowly started unwinding its secrets in front of the students. Pagoda, Harvester ant nests, White hibiscus, Sun birds and calls of Bulbuls all were surprises awaiting the students. The fascinating symbiotic relationship between Rufous Woodpecker and the Crematogaster ants enthralled the students. From where the trail ended students caught a panoramic view of the National Park and Mumbai city in the backdrop. After spending some time immersed in the scenic beauty, we proceeded to the Kanheri caves nestled within the National Park. It was time to relax inside the tranquil environs of the Buddhist caves. Students were told that these 1st century caves were used



as Viharas and Chaityas by the Buddhist monks. Here, students also witnessed the earliest attempts at rainwater harvesting by ancient Indians. The fact that the caves of Kanheri were carved from basaltic rocks was shared with the students. They were amazed that these were just built by simple tools like hammer and chisel. We bid adieu to Kanheri caves and SGNP after taking a pledge that we will conserve our forest and cultural heritage.



## Discover Western Ghats



With its lush green forest on the rugged laterite terrain and the winding trails, Amboli presented an enchanting visit experience to the students. All were spellbound by the beauty of the verdant forest. One of the hotspots of Biodiversity, Amboli had lots in store for the curious students to learn. With the help of Trailblazers field experts, students spotted rare butterflies, birds and trees on the trail. It was encouraging to see children interested and engrossed in observing and learning about the flora and fauna of the region. Students understood that we should conserve these forests as these are source of food, medicine, wood, oxygen and other natural resources. They were also told about the threats faced by the forests from humans. The trek ended at a point where they had splendid view of the ravines and undulating hills. Students grabbed this opportunity to take photos and we returned with refreshing memories of this fascinating trail

## Camp Riverside

Excited and curious students from 1st to 4th grade joined Trailblazers to the Riverside Camp at Karjat. It was a fun and learning camp covering various team games and creative activities.

Nature trail to the Pej river was the highlight of the camp. During the walk to the river, students were introduced to the vegetation of the region.



The art session offered students an opportunity to express their creative talent. Team challenges and group activities not only kept the energetic students engaged but also helped build bonding among them. Everyone had an excellent camp experience and for many it was their first time away from home. The wonderful memories of this camp is sure to last in the young minds of students for years to come.

## Bountiful Kutch

Trailblazers programme to Ahmedabad and Kutch was a voyage of discoveries where students got to learn things out about themselves, about each other and about the natural world. The programme offered an opportunity to experience peace and tranquility at Sabarmati Ashram, visit the Sun temple at Modhera, birding and safari at the sanctuary and explore the UNESCO world heritage monument Rani ki Vav. Students also got a chance to interact with the local community and learn different traditional weaving, and exquisite embroidery and bead work techniques. All enjoyed the traditional dance form of the local tribe. The visit to kite museum was an eye opening experience for students where they got to understand the evolution of kite making and kite flying as an art. Shopping, team games and fun activities kept the active students engaged and entertained. The trip was an amazing chance to be with nature, explore history, learn and bond with friends. Overall the trip was challenging and rewarding outdoor experience in a safe and nurturing environment.



## Tipu's Trail



A visit filled with experiential learning could enhance an Outdoor programme and that is exactly what Trailblazers R & D team did to a very typical destination like Bangalore and Mysore which is very frequently visited by thousands of tourists as well as schools. A recent educational outdoor programme organized by Trailblazers to these places with visits to some very interesting places like Banerghatta National Park, Ranganthitto Bird Sanctuary, Sericulture and Silk Unit, a unique wooden toys factory combined with team games, visit to the Mysore Palace and shopping kept the children engaged and interested. It is very important to gauge what the children want in their outdoor programme and being able to devise an outdoor visit which is child-centric can create wonders.



# Teacher Training Workshops



A path breaking activity is on for the last six years in the academic fraternity in Mumbai, Navi Mumbai and Thane. Talked about in whispers it has now grown into a crescendo, far away from the media! Many schools and almost all B.Ed. colleges are part of it. We have barely finished the 6th edition of "Multiply the Message" and calls are coming from schools and colleges alike to be a part of this training initiative. What is surprising is that individual teachers from schools and students from B.Ed. colleges who for some reason could not attend, want to be a part of it. Even more interesting is the number of applications from teachers for jobs in Trailblazers, willing to take a cut in salary but want to be part of the movement of ethical teaching and environment education. It is indeed overwhelming.

Below pic - from L to R: Ranjan Biswas, M.D. Trailblazers Adventure Travel Pvt. Ltd., Ruby Thapar, Director, Corporate Affairs, Dow Chemical International Pvt. Ltd.; Mala Biswas, Trustee, Trailblazers Foundation; Meena Nair, Environment Education Officer, Trailblazers Adventure Travel Pvt. Ltd.



Dow Chemical International (India) is spearheading this amazing initiative of training teachers on simple and inexpensive modules to make children understand complex environmental concepts. The last year saw a shift from doing environment modules to focusing on a single but significant resource "Water".

Over 600 B.Ed. students and 200 in-service teachers underwent the course outside Mumbai. Through these teachers we multiplied the message to 14,000 children in the first year alone. The follow up session which was conducted after 3 months of the workshop was refreshing and one could see their innovative work uploaded on our site.



The teachers and student teachers went out of their way and conducted the workshop for all teachers of their school where the management also participated. Most school teachers then were asked to conduct the workshop for the entire school students. Some schools converted their sports day and annual day into a theme on water. It was indeed both touching and spell binding to see the result of our efforts. Kudos to all teachers.

The student teachers used our modules for their practice class and lesson plans.



Others conducted events in their localities. The message is spreading indeed far and wide. Trailblazers would like to thank all the teachers for their commendable work and initiative. Multiply the message a CSR initiative conceived and executed by Trailblazer Adventure Travel Pvt Ltd Environment & Education Division and Trailblazers Foundation with financial and manpower support from Dow International has won national and International award for its simplicity and reach.



# Cleanliness and Awareness Drive by Trailblazers Foundation

All over the world, 2 February is celebrated as World Wetlands Day to raise public awareness about this ecosystem and promote its conservation. This day marks the anniversary of signing of the Convention of Wetlands in Ramsar (also called the Ramsar Convention) in Iran in 1981.

Trailblazers Foundation celebrated February as Wetlands month and conducted a series of cleanliness and awareness programmes in the coastal and marine wetlands of Mumbai. Events were conducted at Girgaum Choupatty, Versova Beach, Juhu Beach, Bandra Bandstand and Sagar Vihar. Students from various colleges actively volunteered for the event. Through this programme we were able to sensitize about 500 individuals on the importance of wetlands, its conservation, the consequences of littering and responsible tourism.



As part of the Cleanliness awareness drive a comprehensive survey questionnaire was designed and the general public was asked to complete it. Though people were curious they participated enthusiastically. This helped in understanding the attitude of people towards littering in public places. Furthermore it will assist us in future to take appropriate measures to combat this global issue. Along with the survey, the college students and Trailblazers Foundation also conducted a cleanup drive.



Trailblazers Foundation distributed certificate of appreciation to all volunteers who actively participated and helped make this event a grand success. We believe that the programme has left a lasting impact on the volunteers and the community. Many were so motivated that they expressed a keen desire in setting up a similar programme in their own locality.

## Acts of Compassion

As part of its objective, Trailblazers Foundation sponsored a girl child in a village in Maharashtra for her education. It is also happy to be able to serve the elderly by paying for the surgery for a senior citizen lady.



# Action and Service Camp in Sri Lanka

Students of an international school in Mumbai experienced a beautiful trip to the Emerald Isle of Sri Lanka, focussing on action and service element of CAS. The highlight of the programme was service wherein games and interactive activities were organised for orphanage children. The language barrier was bridged and it was heartening to see smiles on children's faces while they played and enjoyed with our students. At the end of interaction, students presented gifts to the children. Students had action packed adventure with white water rafting on river Kalani at Kitulgala. It was a perfect team building activity. The programme also included visit to Pinnewala elephant orphanage which is shelter to young elephants that have lost their natural habitat or are abandoned. The sight of herd of elephants bathing in the

river Maha Oya was a visual feast. A cultural flavour to the programme was added with the visit to one of the most sacred Buddhist temple at Kandy, a UNESCO world heritage site. Students also experienced traditional Sinhalese dance. Another refreshing visit was the verdant tea estate where students were explained about tea processing right from plucking of leaves to the finished products. All relished a cup of the aromatic world famous Ceylon tea. The programme also offered students an opportunity to learn about traditional method of mining gems and making jewellery. All enjoyed shopping for Sri Lankan handicrafts, gems, jewellery, brass, batik fabric, leather items as well as branded garments and accessories synonymous with style and quality.



3 MARCH - WORLD WILDLIFE DAY

8 MARCH - INTERNATIONAL WOMEN'S DAY

21 MARCH - INTERNATIONAL DAY OF FORESTS & THE TREE

22 MARCH - WORLD WATER DAY

7 APRIL - WORLD HEALTH DAY

22 APRIL - INTERNATIONAL MOTHER EARTH DAY

23 APRIL - WORLD BOOK & COPYRIGHT DAY

23 APRIL - ENGLISH LANGUAGE DAY

28 APRIL - WORLD DAY FOR SAFETY & HEALTH AT WORK

30 APRIL - INTERNATIONAL JAZZ DAY

## Observe Earth Hour

28 March 8:30 pm till 9:30 pm



Earth Hour is a worldwide movement uniting people to protect the planet, and is organised by WWF. Engaging a massive mainstream community on a broad range of environmental issues, it was famously started as a lights-off event in Sydney in 2007.

Join hundreds of millions of people around the world and turn off your lights for one hour to show your commitment to climate change action now. It's time we speak up and demand a better future for our planet.

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## UNESCO listings

India has submitted a list of 46 monuments for their inclusion in UNESCO World Heritage Sites.

The list includes ancient Buddhist sites such as Sarnath and Varanasi. Lakes and National Parks like Chilika Lake in Odisha and Kangchendzonga National Park in Sikkim. Harmandir Sahib in Amritsar and Mughal Gardens in Kashmir. Golconda Fort and Charminar are also in the list.

## Two-seater flying cars

A two-seater flying car which can take flight from any clear road could go on sale as early as 2017, potentially changing personal transport on a global scale, its manufacturers say.

The Czech-built vehicle can hit over 160 kph on the ground and it flies at 200kph on twin propellers. The car can land on just 150 ft of grass and fly for up to 690km. It can be used in road traffic anywhere in Europe, and needs just 750 ft of clear road to take off.