

தக்நடை <sup>உಂகச</sup>ઇગનાઇટ ૨૦૧૪ ഇഗ്നടെട് ൨ഠ൧ർ ઇગનાઇટ ૨૦૧૪ **ইগনাইট ২০১**৪ ઇગનાઇટ ૨ ગુનાઇટ ૨૦૧૪ દિનારાષ્ટ્રંટ ૨૦૧૪ ઇગુનાઇટ ૨૦૧૪ જ્વર્તા કર્યું હાર્ ૭૦૦૬ ਇਗਨਾਇੰਟ ੨੦੧੪ ਵगनाइट २०१४ ਕਰਨ ਤ੍ਰੀ ਘਟ੍ਹੀ <sub>गनाइट २०१४</sub> ignite 2014 इंगनाइट २०१४ ಇಗರ್ನೈಟ್ ೨೦೧೪ ਇਗਨਾਇਟ ನಿ. ರ್ವನ್ಫೈಟರ್ ೨೦೧೪ இக்நடை ೨೦೩೪ ಇಗರ್ನನ್ಫೈಟರ್ ೨೦೧೪ ignite 2014 ਇਗਨਾਇਟ ೩೦೪೪ ignite 2 எல்லே அல்ல ஆகந்பை உண்டு இராட்டு இத்நடை உண்டு ignite 2014இக்நடை ச gnite 2014ইগ্নাইট ২০১৪ ignite 2014 ഇഗ്നട്ടെ വാഥർ இக்நடை ഉഠക്കളാഗ്നടെ വ്ല இ்க்நடை ഉഠகச **ইগনাইট ২০১৪** ഇഗ്നടൈ ൨**ূ**൧ർ**ইগনাইট** 🞉 ઉત્તંநடை ഉഠക<sup>ա</sup>ઇગનાઇટ ૨૦૧૪ ஹഗ്നടൈ ൨ഠ൧ർ ઇગનાઇટ ૨૦૧૪ **ইগনাইট ২০১**৪ ઇગનાઇટ સ્ ที่การับ ২০১৪ జగానిన్నటో ೨००५ **ইগনাইট ২০১**৪ इगनाइट २०१४ ઇગનાઇટ ২০৭४ इगनाइट *ই*। গনাইট ২০১৪ జగానిన్నటో ೨००५ বিশোধি ১০১৪ হ্রানাइट ২০१४ ઇગનાઇટ ২০৭४ হ্রানাइट *ই*। গনাইট ২০১৪ এবল রব্বু এল ৩০০৬ ১ । । । ১১ ২০৭४ এবল রব্বু এল ৩০০৬ হু गनाइट ২০१४ এবল রব্বু এল ১০৭৮ এবল রব্বু এল ১০৭৮ এবল বিশ্বু এল ১০০৬ হিলাকা হ गनाइट २०१४ ignite 2014इगनाइट २०१४ गनाइट २०१४ ignite 2014हिंग्लाहेट २०१४ ignite 2014हिंग्लाहेट २०१४ ignite 2ा பார்க்கீ யிரி உலக இக்குடை உலக இக்குடை உலக இத்தை ignite 2014இக்கு நைட்கு இத்து விரி பார்களுள்ளது. இது முற்று விரி மார்களுள்ளது. இது முற்று விரி மார்களுள்ளது. இது முற்று விரி மார்களுள்ளது. இது முற்று விரி மாரிகள் இது முற்று விரி முற்று முற்று விரி முற்று வி னെറ്¢്റ്റ്റെ പ്രവേശില് വര്യായ് പ്രവേശില് പ് இக்நடை ഉഠക**് ইগনাইট** ২০১৪ ഇഗ്നടൈ ൨ഠ൧ർ **ইগনাইট ৡ ്ക്** തെட് ഉഠകഴ इगनाइट २०१४ **ইগনাইট** ২০১৪ इगनाइट २०१४ ઇગનાઇટ २०१४ इगनाइट ई રાતારું ૨૦১৪ જ્ઞાનાફ્ટ ૨૦૧૪ **રગનારું** ২૦১৪ ફ્રાનાફ્ટ ૨૦૧૪ ઇગનાઇટ ૨૦૧૪ ફ્રાનાફ્ટ ફેર્ય આનાઇટ ૨૦૧૪ દિનાજાદિટ ૨૦૧૪ ઇગનાઇટ ૨૦૧૪ જ્ઞાનજીતું હાર્જ ૭૦૦૨ ફ્રાનાફ્ટ ૨૦૧૪ જ્ઞાનાફ્ટ ફેર્ય ગાનાઇટ ૨૦૧૪ દિનાજાદિટ ૨૦૧૪ ઇગનાઇટ ૨૦૧૪ દિનાજાદિટ ૨૦૧૪ ફ્રાનાફ્ટ ૨૦૧૪ દિનાજાદિટ ફ્રાનાફ્ટ ૨૦૧૪ દિનાજાદિટ ફ્રાનાફ્ટ ૨૦૧૪ ignite 2014 દિનાજાદિટ જ્ गनाइट २०१४ Ignite 2014 ಕ್ಷಗ್ರಾನ್ಯ ಟರ್ ೨೦೧೪ ignite 2014ਇਗਨਾਇਰ ੨೦৭೪ ignite ರ್ವಸ್ಥೆಟ್ ೨೦೧೪ இக்நடை ೨೦೩೮ ಅವಕ್ ਇਗਨਾਇਰ ੨೦৭೪ இக்நடை ೨೦೩೮ ignite 2014இக்நடை ഇഗ്നട്ടെ് വഠ<sup>ൂർ</sup>ignite 2014 ഇഗ്നളെട് വഠൂർ ക്രക്ട് ഇടെ ഉഠകഴഇഗ്നടെട്**g** gnite 2014 ইগনাইট ২০১৪ প্রக்நனட் ഉഠகள ইগনাইট ২০১৪ প্রত্রেশনাইট প্র อัญนายอรุ ชอ<sup>ช</sup>อภูมา แกร รอง มู อัญนายอรุ ชอ<sup>ช</sup>อ ภูมา แกร รอง ม**ู มูปเรีย รอ?** ช ภูมา เกิร ซึ่ง ը છળ તાલુક ૧૦૦૦ કર્મા કરાવા કરાવા કરાવા કરાવા કરાવા કરાવા કરાવા કરાવા કરે. કર્મા કરે ૧૦૧૪ ક્રાનાફટ ફેર્મ કરાવા કરાવા કરાવા કરે કર્મા કરે ૧૦૧૪ ક્રાનાફટ ફેર્મ કરાવા કરા โกลเก็บ २०१४ lignite ลดจุล อาณาของ เล่า liedaniee ลดจุล รู้การสำนัก อาณา liedaniee สูง เล่า เล่า อาณา liedaniee สูง เล่า เล่า อาณา liedaniee ลดจุล lignite ลดจุล lignite ลดจุล lignite ลดจุล lignite ลดจุล lignite ลดจุล เล่า อาณา เล่า อาณ త్రీఉ్రాయ్ ഉഠക<sub>ా</sub> గ్రామం మండులు కార్యాలులో కంటి కంటి కేసిన్నారు. అంగాలు కార్యాలు కార్యాలులో కార్యాలులో కంటి కేసిన్నారు. కార్యాలులో కార్యాలులో కార్యాలులో కార్యాలులో కార్యాలులో క મુંગતાઓએ પાર્ટા હું માર્ટ ૨૦૧૪ **રેગનાર્ટે ૨૦১**৪ ઇગનાઇટ ૨૦૧૪ **રેગનાર્ટે ૨૦১**৪ ઇગનાઇટ <mark>થું</mark> **રેગનાર્ટે ૨૦১**৪ જ્ઞતું હું ૭૦૦૬ ઇગનાઇટ ૨૦૧૪ ફ્રુગનાફ્ટ ૨૦૧૪ ઇગનાઇટ ૨૦૧૪ ફ્રુગનાફ્ટ રે ઇગનાઇટ ૨૦૧૪ દિશાંત્રાદિટ ૨૦૧૪ ઇગનાઇટ ૨૦૧૪ જ્ઞતું હું ૭૦૦૬ ટ્રુગનાફ્ટ ૨૦૧૪ જ્યાનાફ્ટ ઇગનાઇટ ૨૦૧૪ ਇਗਨਾਇੱਟ ੨૦૧૪ ઇગનાઇટ ૨૦૧૪ જ્ઞાન્ચર્હ કળન્ય ફ્રાનાફટ ૨૦૧૪ જ્ઞાન્ચર્જી હતું હતું. ફ્રાનાફટ ૨૦૧૪ ignite 2014 જ્ઞાનાફટ ૨૦૧૪ દિશાંતાષ્ટર ૨૦૧૪ જ્ઞાનાફટ ૨૦૧૪ જ્ઞાનાફટ ૨૦૧૪ દિશાંતાષ્ટર ફ્રાનાફટ ૨૦૧૪ ignite જ્ઞાનાફટ ૨૦૧૪ હિલાતાષ્ટર વ્યવસ્થાના કર્યો હતા. ૧૦૧૪ હિલાતાષ્ટર વ્યવસ્થાના કર્યા હતા. ૧૦૧૪ હિલાતાષ્ટર વ્યવસ્થાના કર્યા હતા. ૧૦૧૪ હતા. ૧૪ હતા. ૧૦૧૪ હતા. ૧૪ હતા. ૧૦૧૪ હતા চিলাকাহিত ২০৭৪ ভূজ্মভূজ্ ৫০এ৪ (ignite 2014 ভূজ্মভূজ ৫০এ৪ (জুক্ত চুক্ত ১০৯৪ জুক্ত ১০৯৪ ভূজ্মভূজ্ম ১০৯৪ ভূজ্ম ১০৯৪ ভূজ্মভূজ্ম ১০৯৪ ভূজ্ম ১০৯৪ ভূজ্ম ১০৯৪ ভূজ্মভূজ্ম ১০৯৪ ভূজ্ম ১৯৯৪ ভূজ্ম ১০৯৪ ভূজ্ম ১৯৯৪ ভূজ **อีทาโอ้บี ২03**8 ห่วเลเห็ว २०१४ ฆภัตกครั ฉ๐ฏิสั ,

#### **IGNITE 14**

Curiosity | Compassion | Creativity November 2014

Copyright © 2014
National Innovation Foundation - India

National Innovation Foundation - India
Autonomous Body of
Department of Science and Technology, Govt. of India
Satellite Complex, Prem Chand Nagar Road
Near Mansi Crossroads
Ahmedabad 380015
info@nifindia.org
www.nif.org.in



Learning gives creativity
Creativity leads to thinking
Thinking provides knowledge
Knowledge makes you great

Dr. A. P. J. Abdul Kalam



Dr. R A Mashelkar

Creativity is a natural attribute of children. We all have observed them playing for hours with a cap of a bottle or an empty tin. Children invent their own games when young and don't mind changing rules when it suits them. Slowly and slowly they learn to become rule bound. But tendency to be compliant and congruent starts taking a toll. Teachers and parents also reinforce the habit of thinking within a given frame. Children begin to realise that often there is a specific right answer to a question. And this is the one given by teacher.

It does not take long then for such children to stop asking uncomfortable questions, and thinking beyond conventional boundaries. National Innovation Foundation has been scouting creative children with the help of Honey Bee Network volunteers. These children have an unusual ability to perceive unmet needs at home or in neighbourhood or in the larger society. Every year, NIF recognises outstanding children from all

over the country. It is a great privilege for us to have Dr APJ Abdul Kalam, former President of India to honour Ignite award winners year after year. He has a special connect with children having interacted with millions of them.

NIF is proud to be a part of this social movement which has created global benchmark in uncovering creativity of the children as well grassroots innovators from informal sector. I congratulate all the winners of the Ignite 2014 competition and hope that they will continue their creative pursuits in the service of society and humanity.

May God bless you all

R.A. Mashelkar F.R.S., Chairperson, National Innovation Foundation - India



Prof. Anil K Gupta

#### Empathetic education: India 2025

Indian aspirations for shaping the global discourse and developmental trajectory are becoming more pronounced as its economic growth is picking up. Recent agreement between the two of the super powers, USA and China on curbing their pollution levels for arresting the climate change impacts has increased expectations from the third largest contributor to the matter. Cleaner cities and greener areas are in India's own interest. These have a direct measurable impact on the health expenditure of common people whose ability to insulate themselves from these effects is limited. How can children play a role in shaping Indian policies, institutional design and mindset? The creative ideas of children being awarded under IGNITE competition of NIF at the hands of Dr. APJ Abdul Kalam indicates a considerable empathetic incline towards addressing the unmet social needs. Can we amplify this bias even more? Can we engage our children at an early age with the

challenges confronting India today and in future so that their imagination becomes the motive force of a transformative nation building process? Nobody will deny the fact that such children have the maximum stake in shaping the future of our society because they will live longest and suffer the consequences of our persistent indifference the longest.

When Chhaya, student of class seven thought about an inclined pipe fitted with water taps in a primary school, she questioned seven decades of inertia in not providing drinking water taps in the school at different heights for the shorter and the taller children. Ram Nikash from Kanyakumari does not like the habit of the adults for getting down or climbing from a moving train at railway platform. He suggested retractable railings which will prevent such hazardous carelessness. Modifying bicycle for physically challenged riders with one leg occurred as something very obvious to Shub Dholakia. Adarsh,

class ten, Bihar had noticed the wastage of energy and accumulation of anger when people get caught up in the traffic jams. He suggested in addition to the red, yellow and green lights at corssroads, an additional blue light to indicate traffic jam ahead. People can change their course without accentuating the problem for them and others. Imagine if the traffic police worldwide accept this suggestion, a small idea from Katihar, Bihar would have changed the way traffic jams are managed world over. This is an indication how children's ideas can influence not just local problems but even global problems. Bio-fertilizer from cockroaches might appear strange and annoying to some. But we should not forget the fact that these insects have probably been longest surviving worms on the earth. Why not harness their sturdiness for meeting an important need for rejuvenating soil and other production systems. Ananya from Chandigargh didn't hesitate in thinking odd. Swapnanil from Assam was bothered that people without hands have difficulties in turning the pages of books and he designed a machine for the purpose. Similarly, Preyansh and Karan may not have visited any mine but were saddened by the plight of workers trapped in damaged mines. If their location could be accurately mapped from outside, the relief measures could be targeted more accurately. On November 19, 2014 Dr. Kalam will inspire and encourage many kids like these to make India a

developed and empathetic nation.

There are certain fundamental changes required to make a society samvedhansheel [empathetic]:

- a) I don't have to personal suffer from a problem to experience the pain that somebody else suffers from;
- b)The increasing uncertainty in the world can put me in a situation when I may be even more vulnerable than the people whose pain I may ignore today. God forbid, if there is a train accident in a remote area, the question of who lives and dies will depend upon how well the nearby primary health centre works and how much of voluntary spirit communities in the nearby villagers have to save life. We can ignore the conditions in primary health centres assuming we can afford the best hospitals in the world. We may also ignore an immigrant worker who might have met with an accident on the road because we don't suspect ever to be in a similar situation; c) I have received so much help from strangers in my life who I have no way to reciprocate. I am not the only one; d) We have all enjoyed resources, the shade of an old tree on the roadside or other services for which we have not paid anything and in creation of which, we have no contribution; e) The creative ideas and innovations are seldom completely original. Any new building needs a lot of bricks, many of which were not baked by me, or for me, or based on my ideas. Open source sharing of ideas has helped society to solve so many of its problems;

and f) We can balance or compare our personal ambitions, desires and aspirations with the unmet needs and desires of those who may seldom be able to dream a flight in an open sky of freedom.

Our children can do wonders. They should not be tutored too much, trained too tightly and must be allowed to develop. Many of us have forgotten the word 'develop' comes from the word 'envelop'. To develop is to uncover. The word 'training' comes from the practice of guiding a vine or a creeper around a supporting stand. The education is expanding the horizon of thinking and extending the timeframe of imagination. After Meiji's restoration, Japan decided to set up a working group to make educational plan for the country. They sent delegations to different parts of the world to understand how children are educated. After a year and half when the delegations came back, they wrote a 200 year perspective plan for education in Japan. It is not surprising therefore that Japan was the first Asian country to become 100 per cent literate at the turn of the century. India still lags behind despite constitutional commitments to do otherwise. The mandarins in Shastri Bhawan have to wake up and realize that our children deserve much more than what they are getting and they will be surprised by the playful, irreverent and spontaneous ways in which our children will rise to the occasion. We should stop sermonizing them. I

will repeat what my grandfather said: don't ever try to teach children. They observe you all the time. We have to create a culture of co-learning every time a child/student asks a question I cannot answer, I feel blessed. My day is made. I learn. We all learn. I hope that our educational system will not remain committed to age old theories of learning without responsibility, inducing love without empathy and showing a dream of life which lacks long term vision. India will transform only with the help of its children.



Prof Anil K Gupta
Executive Vice Chairperson,
National Innovation Foundation - India





Dr. Vipin Kumar

With every passing year, the response to IGNITE competition has been growing. Starting with a few hundred submissions in 2008 nationally, the campaign has been able to mobilise over 27000 submissions in 2014. With increasing response, NIF has had to bring about suitable changes in its processes to be able to review each entry appropriately within the stipulated time. Many colleagues have had to stretch themselves more. But then IGNITE has never been considered simply as a competition by NIF. It is a nation building process where we urge the children to remain impatient with the inherent societal inertia and come up with creative solutions to persistent problems. We want to send a clear message to the children that to be the leaders of the nation tomorrow, they will have act today. We are very happy with the kind and range of ideas received from the children. The future does appear bright, the IGNITE experience amply demonstrates.

My sincere gratitude to Dr RA Mashelkar, Chairperson NIF, Prof Anil K Gupta, Executive Chair NIF and Governing Board Members for their continued motivation, guidance and support. Central Board of Secondary Education (CBSE), Directorate of Higher Education, Himachal Pradesh, Goa Board of Secondary and Higher Secondary Education, Council of Higher Secondary Education, Manipur, Haryana Board of School Education, Nagaland Board of School Education, Mizoram Board of School Education also deserve our deep appreciation for supporting the IGNITE campaign actively. I also take this opportunity to thank all my colleagues at NIF, SRISTI, GIAN and HBN for the wonderful support to the campaign.

I congratulate all the award winners and hope they will remain courteous, compassionate and creative, and serve our society in the best possible way. With my good wishes to them and all others.

2640

Dr. Vipin Kumar, Director & Chief innovation Officer NIF India



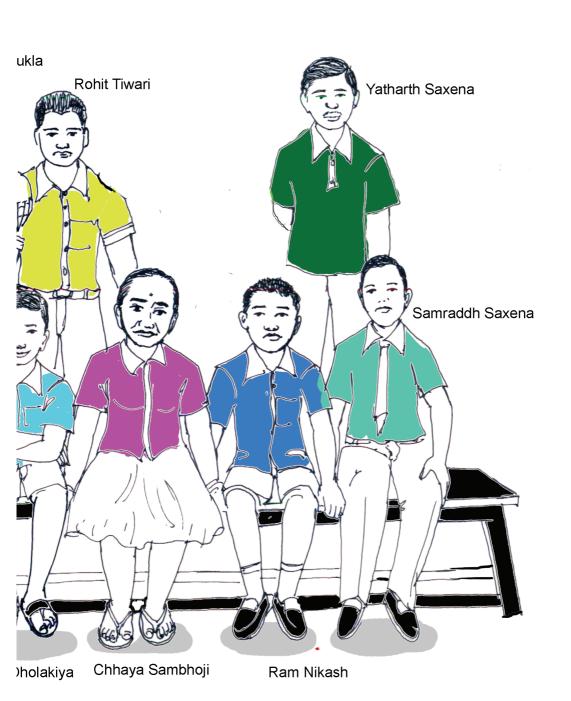


#### 7 point oath for students

- I realize, I have to set a goal in my life. To achieve the goal, I will acquire the knowledge, I will work hard, and when the problem occurs, I have to defeat the problem and succeed.
- As a youth of my nation, I will work and work with courage to achieve success in all my tasks and enjoy the success of others.
- I shall always keep myself, my home, my surroundings, neighbourhood and environment clean and tidy.
- I realize righteousness in the heart leads to beauty in the character, beauty in the character brings harmony in the home, harmony in the home leads to order in the nation and order in the nation leads to peace in the world.
- I will lead an honest life free from all corruption and will set an example for others including my home to adopt a righteous way of life.
- I will light the lamp of knowledge in the nation and ensure that it remains lit for ever.
- I realize, whatever work I do if I do the best, I am contributing towards realizing the vision of developed India 2020.

(Source: http://www.abdulkalam.nic.in/address\_airindia\_pres.html)





## Modification in shoe to alleviate knee pain

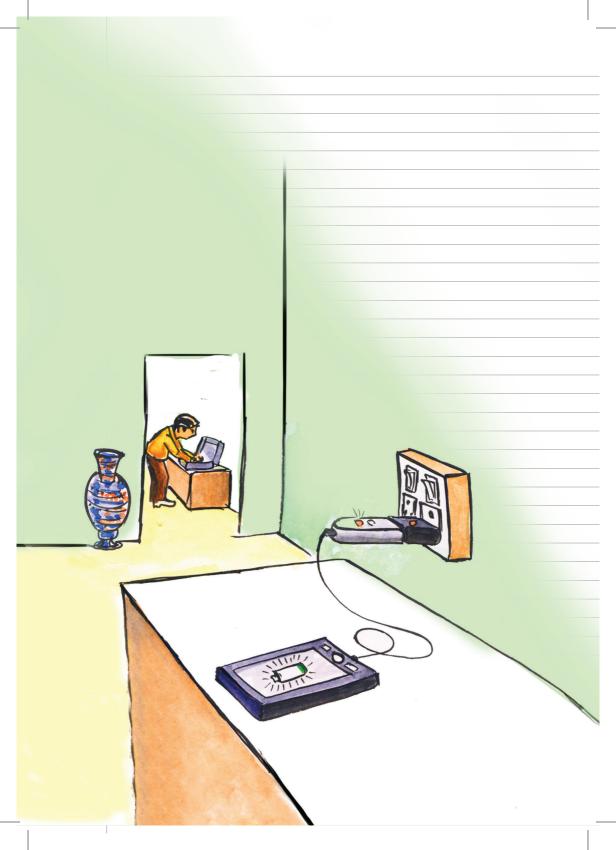
Shaik Muzammil Pasha, Class 6, Castle Town High School, Hyderabad, Telangana

Young Muzammil has built upon the concept of negative heels at a particular angular incline for designing shoes that alleviate knee pain. In addition, he has added arch for support and made few other design changes.

He conceived the idea after noticing his uncle visit a doctor frequently to consult for his knee pain. Besides having a great interest in science, Muzammil also likes cycling and painting. He does yoga and meditation regularly.









### Mobile charger/laptop adapter with inbuilt power backup

Md. Aabid Khursheed Raina, Class 6, Jawahar Navodaya
Vidyalya, Kulgam, Jammu & Kashmir | Rohit Tiwari, Class 12,
PTJM Saraswati Vidya Mandir, Bokaro, Jharkhand

The idea is to have an inbuilt battery in the mobile charger or a laptop adapter, which gets simultaneously charged with the device when it is plugged into an electricity source. Having such a charger adapter would thus not require a separate power pack or a battery to be carried along.

Shy in nature, Aabid has been a good student and likes playing Kho-Kho and carom. He loves to play harmonium and congo. He wants to become an agricultural scientist. Wanting to become an engineer, Rohit likes reading books and periodicals and plays volleyball. While Aabid thought about this idea during a school picnic, Rohit conceived this during an electricity outage for a couple of days at his home.



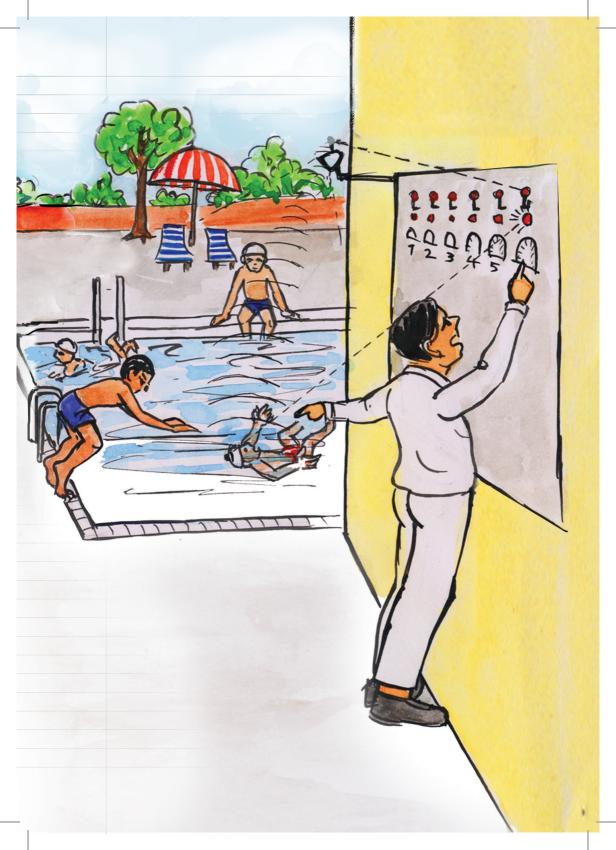
### Modified life saving device for swimming learners

Samraddh Saxena and Yatharth Saxena, Class 6 &10, Campus School, Pantnagar, Uttarakhand

This is a head worn device, which alerts lifeguards once a swimming learner stays under water beyond a preset time.

The brothers came up with this device after hearing about the death of one of their fellow school mate due to drowning. This devices gets activated once the user goes under water and starts an alarm if s/he stays under water beyond a set number of seconds, which can be changed as per user's capacity to hold his/her breath.

Young Samaraddh has interest in science and maintains a diary to note various ideas that come to his mind. Yatharth first received IGNITE award in 2009 for his triangular wheel arrangement for carrying luggage over a staircase he has grown up to be a good orator. He loves computers and wants to become a software engineer.



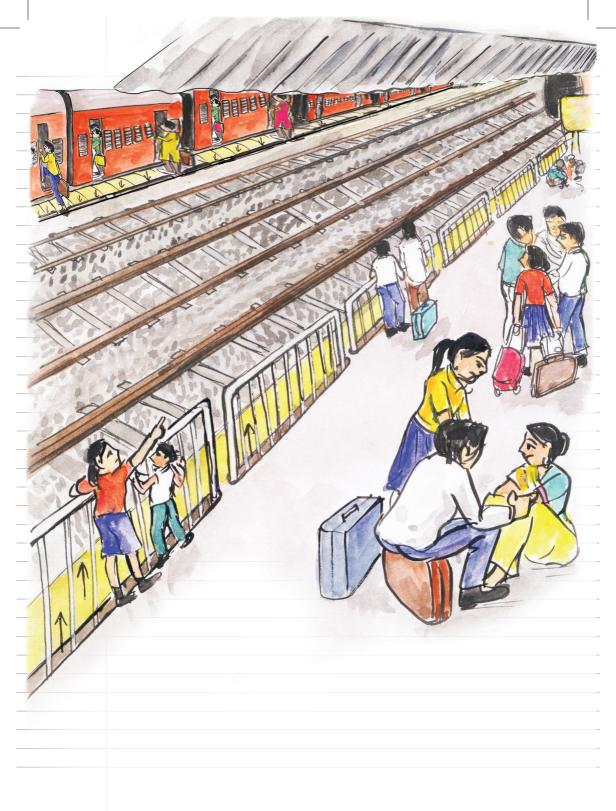


# Automatic railings at railway platform edge

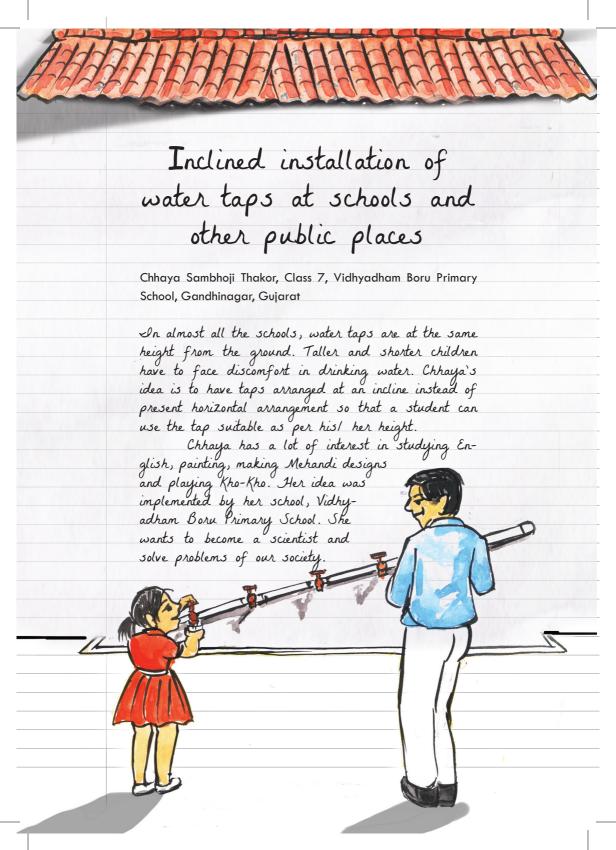
Ram Nikash, Class 7, Excel Central School, Kanyakumari, Tamil Nadu

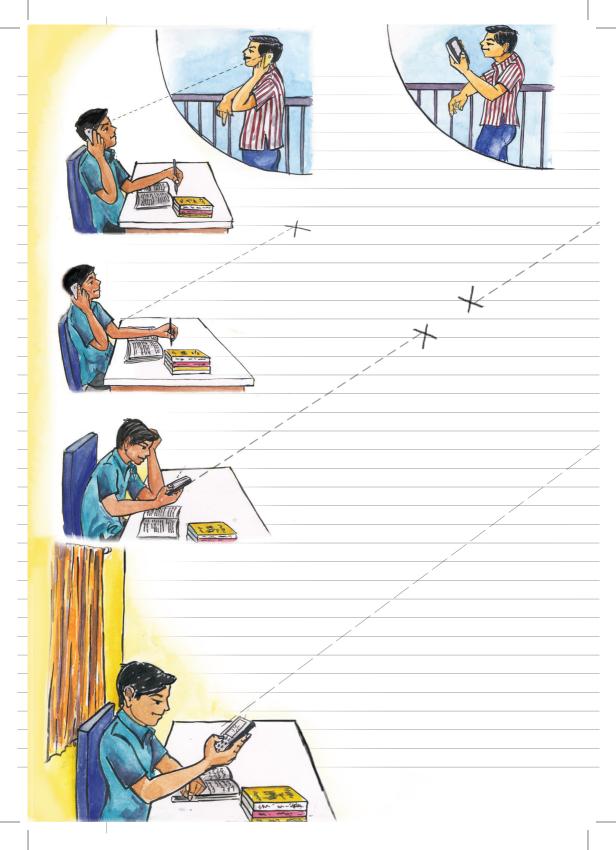
The idea is to have railings at the edge of the rail-way platform to prevent people stepping down or boarding in a running train. This also prevents people from jumping on the railway lines to cross over to the other side. This railing comes down when a train arrives so that passengers can board the train or disembark easily.

The idea stemmed from an accident witnessed by Ram Nikash. He likes reading Enid Blyton and watching Hollywood movies. His favorite artist is Jeremy Lee Renner. He also likes chess and wants to become a space scientist.











Jenish Shah, Class 8, Tapti Valley International School, Surat, Gujarat

Many a time when a call gets disconnected, the two phone users start calling the other person. As a result the phone remains busy and the call does not go through. Jenish's idea is to have a mobile app, which intimates the other person that the first person is calling and she need not dial back.

The idea struck Jenish while preparing for his science project one night. It was late and he was on call with his friend. Once the call got disconnected due to network congestion, both persistently kept on trying to call each other and thus lost much time. He thought if such a situation arose during an emergency, problems may arise and came up with this idea. Bood in studies, Jenish likes sports as well.

Technology especially robotics interests him a lot. He already speaks four languages and is learning German and French. He wants to grow up to become a knowledgeable person.

# Detachable device for the bicycle enabling user to ride with one leg

Shubh Dholakiya, Class 8, Shree G.K Dholakia High School (Eng.), Rajkot, Gujarat

This is a retro fitting device, which when attached to the crank set of a bicycle, can enable the user to ride the bicycle using one leg.

Shubh got the idea to develop this device while watching a physically challenged person driving a car. With bicycles being the most common medium for travel and cars being not accessible to everyone, he

thought of modifying the bicycle for the purpose.

A keen observer, Shubh likes to know all the new things happening around. He likes to read books, play cricket and make craft items. He aspires to become an aeronautical engineer.





### Cylindrical shaped refrigerator with rotatory trays

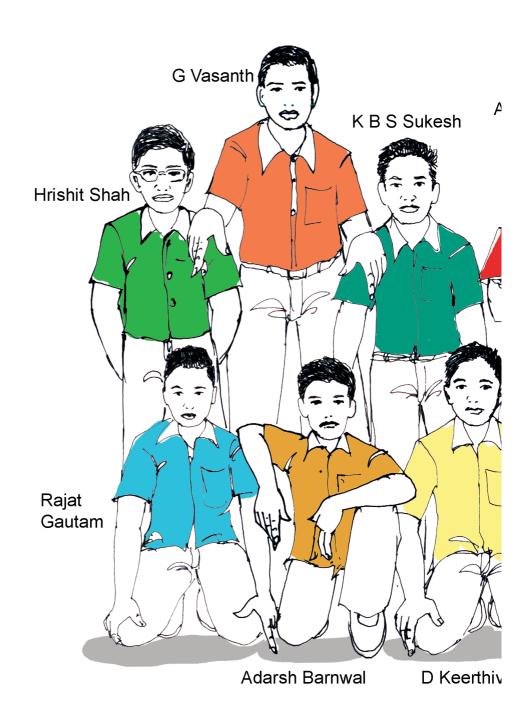
Sarthak Shukla, Class 8, Indirapuram Public School, Ghaziabad, Uttar Pradesh

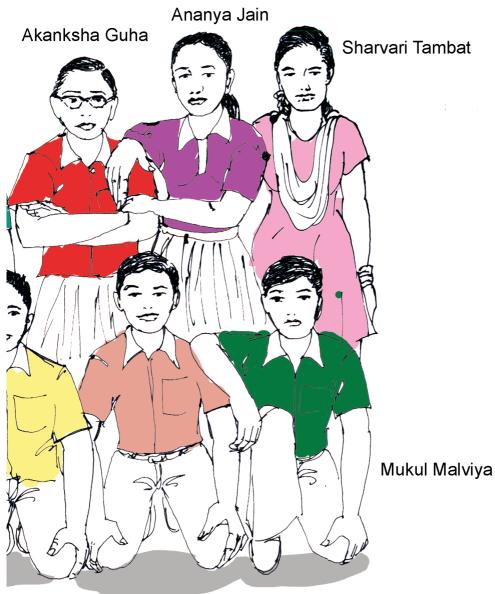
To take out food items kept at the back side of the tray in a refrigerator, one first has to take out things kept in the front. This triggered the idea of a cylindrical refrigerator where the trays can be rotated for easy access of the items kept at the back.

In addition to his regular studies, Sarthak likes extra co curricular activities as well. He reads books, play football and badminton, participates in essay competition, debates, etc. He wants to pursue research in the field of defense related devices and become a scientist.

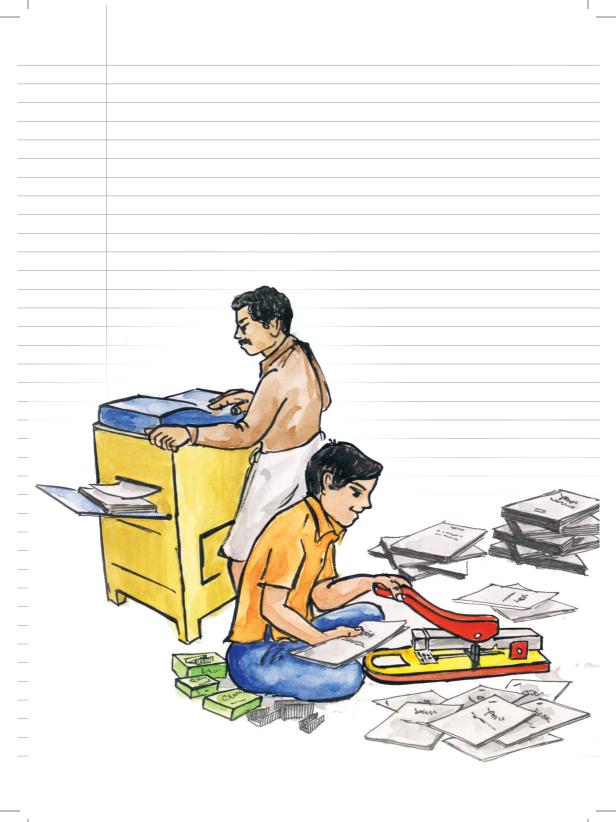








thivasan Diptanshu Malviya





# All in one stapler (for all size of pins)

G. Vasanth and D. Keerthivasan, Class 9, Government Boys Higher Secondary School, Thiruvarur, Tamil Nadu

Their idea is to have a stapler, which can accommodate pins of different sizes and hence eliminate the need to have different staplers.

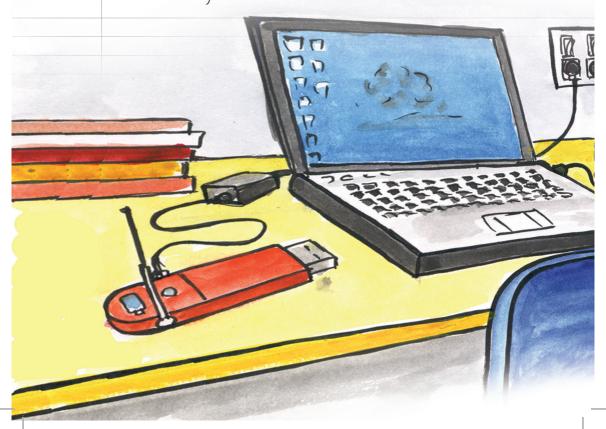
Vasanth likes gardening and playing with motors and dynamos. His friend Keerthivasan likes to indulge in drawing and painting. While Vasanth wants to become an engineer Keerthivasan wants to become an artist.

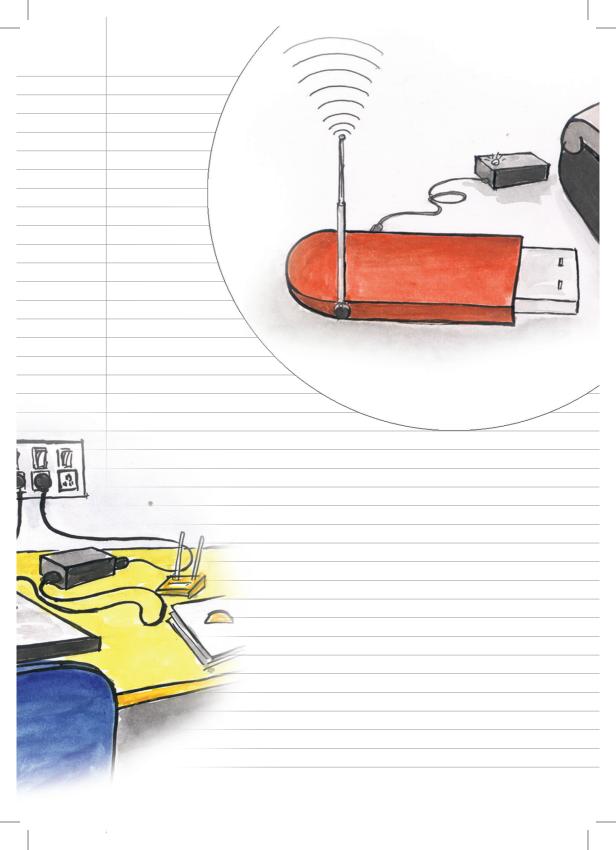
### Portable wi-fidongle with rechargeable batteries

Hrishit Shah, Class 9, Navrachana School, Vadodara, Gujarat

Normally wi-fi dongles use power from an electric source or device like laptop to which they are attached. The idea is to have a self-powered (using rechargeable batteries) wi-fi dongle to create a wi-fi zone at any place.

Jacing connectivity issues at his home, Hrishit came up with this device. He likes playing cricket and is undecided about what he would do further in life. A self-professed lazy individual, Hrishit, likes to lay back and think of ideas that can make life easier.





#### Height adjustable wash basin

Akanksha Guha, Class 10, Army Public School, Pauri Garhwal, Uttarakhand

The idea is to have the entire wash basin, drain and mirror assembly vertically adjustable so that people of different heights can easily use it without any problem.

Akansha's father had a lot of discomfort bending forward and using the basin when he had a spine inquiry. She noticed this and recalled that she also faced a lot of problem as a young child trying to reach the basin at a higher level.

Her hobbies include reading fiction, adventure and mystery stories and books, playing synthesizer and quilling (kind of paper art). She wants to pursue a career in computer science.





#### Wrapper picker

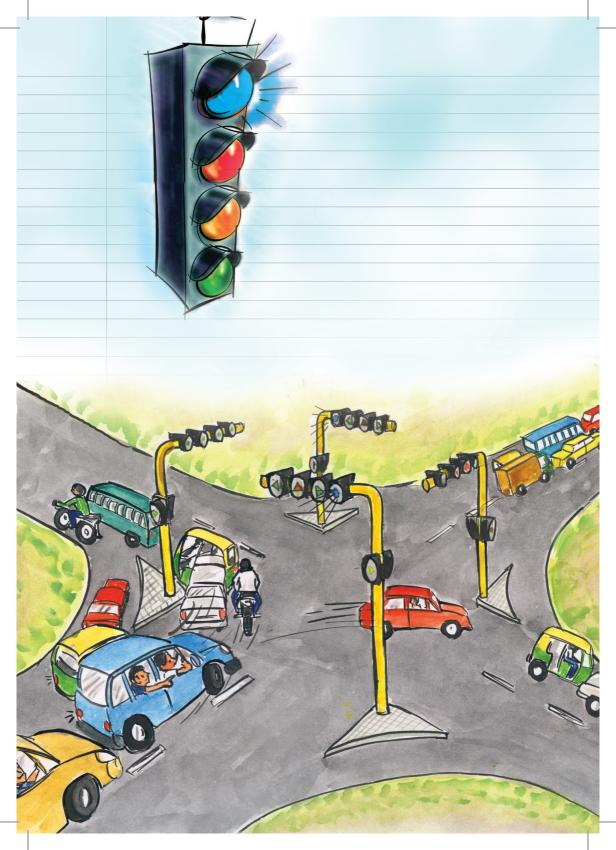
Diptanshu Malviya and Mukul Malviya, Class 9 & 12, St. Paul's Sr. Sec School, Sirohi, Rajasthan

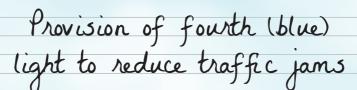
This is a motorized device, which picks up littered pieces of wrappers, papers, pouches, etc., and collects them in a storage bin.

The brothers thought about this device when they saw a sweeper picking up waste pouches/ paper littered across a bus station. They realised how difficult it must be for him to bend every time to pick up such pieces.

With keen interest in science, both the brothers participate in a lot of science competitions and exhibitions. Diptanshu likes reading biographies of scientists and inventors and wants to serve ISRO when he grows up. His brother, Mukul also has similar interests and wants to become an engineer.







Adarsh Barnwal, Class 10, Ramkrishna Mission Vidyamandir, Katihar, Bihar

The idea is to have a fourth (blue) light at traffic signal to indicate traffic jam ahead. This would help vehicles to divert at the signal before they hit the jam thereby easing the congestion ahead.

The idea struck Adarsh once when he got stuck in a big traffic jam while returning from his school. He likes to read books, play cricket and watch television. He aspires to join the Indian Administrative Service after he grows up.



#### Hygienic cloth hanger

K.B.S Sukesh, Class 10, ST. Mary's Public School, Nellore,
Andhra Pradesh | Rajat Gautam, Class 12, Bakshi's Springdales Sr Sec. School, Kota, Rajasthan

The idea is to have a cloth hanger, which would release UV or any other germicidal rays that will kill bacteria keeping our clothes always fresh & germ free.

Sukesh likes to read books and play cricket. He wants to be a scientist and serve the nation. Rajat suggests having a dryer as well to keep clothes dry and germ free. He thought of this idea after visiting a hospital and realised the need to have germ free clothes to prevent the spread of infection. He likes gardening, reading science books and undertaking science based projects, learning new



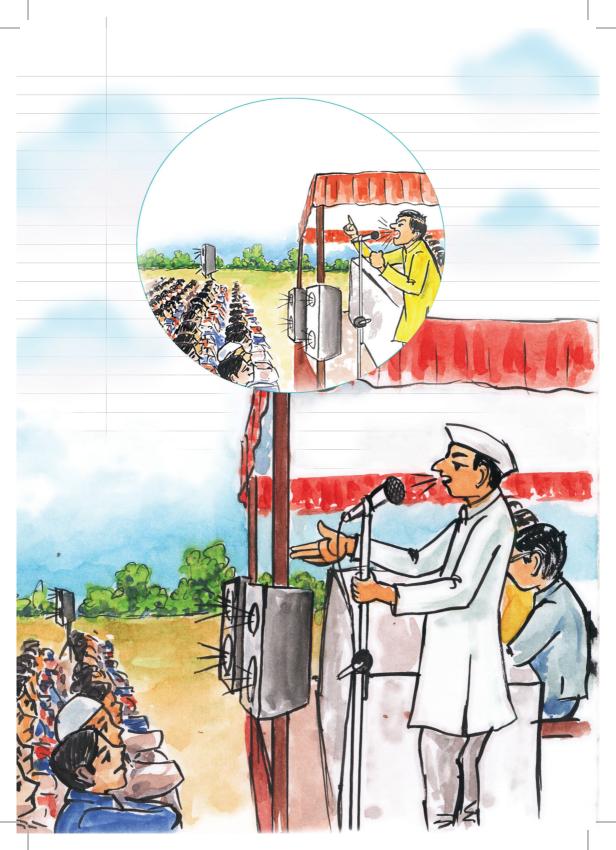
# Microphone that adjusts the volume according to user's voice

Sharvari Tambat, Class 10, Wisdom High International School, Nashik, Maharashtra

The idea is to have a microphone that automatically adjusts up/down the sound output of our voice to a preset decibel level. This is to say that whether one speaks softly or loudly, the audience would hear at a uniform sound level.

This idea struck her when Sharvari attended a stage program where she found some artists too loud and some too soft to follow. She has a keen sense of observation and likes to analyse problems and solve them. She is member of MENSA India, a society of people having high IQ and wants to train as a psychologist. She has been learning Kathak for over a decade and doing stage shows as well.





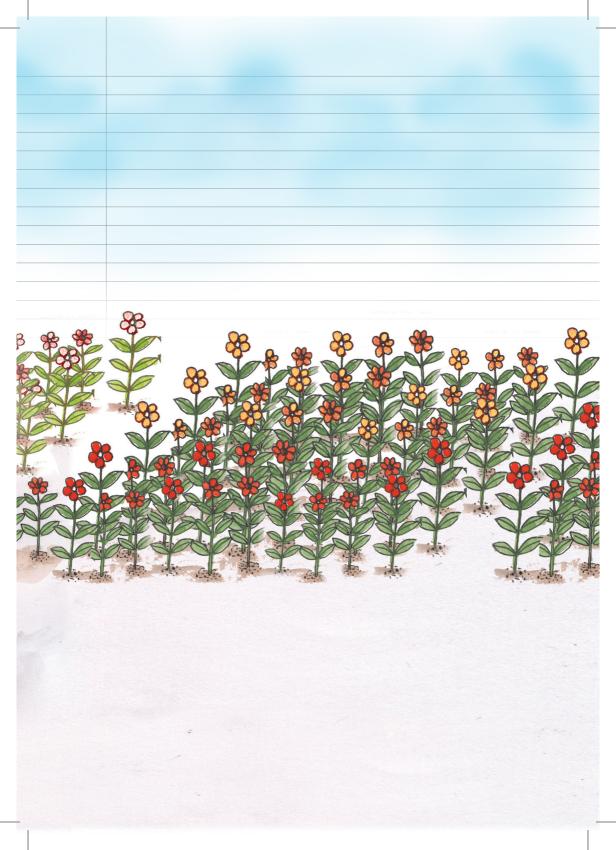
### Bio-fertiliser from cockroaches

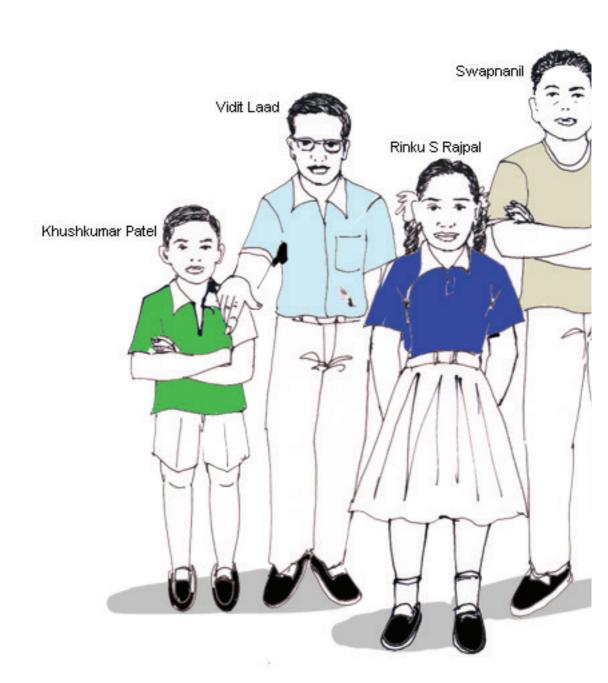
Ananya Jain, Class 10, Carmel Convent School, Chandigarh

In this experimental setup, better growth of potted plants was observed where cockroach excreta was used as fertiliser.

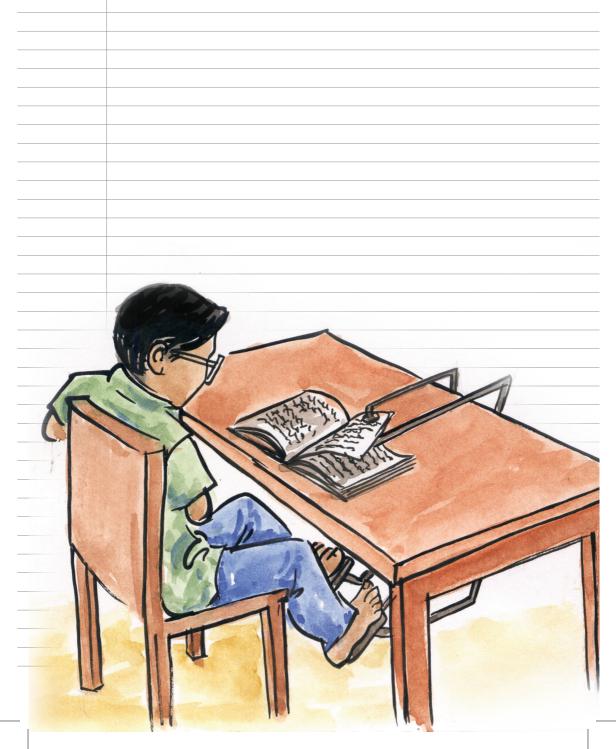
This idea struck Ananya when one day her friends were complaining about the cockroach problem in their homes. She then wondered whether this pest could be used for productive purposes and then carried out this experiment. Reading books is Ananya's favorite past time. She plays tennis and soccer and also plays guitar. She wants to grow up as a good human being and inspire others too!















## Foot operated manual page turning machine

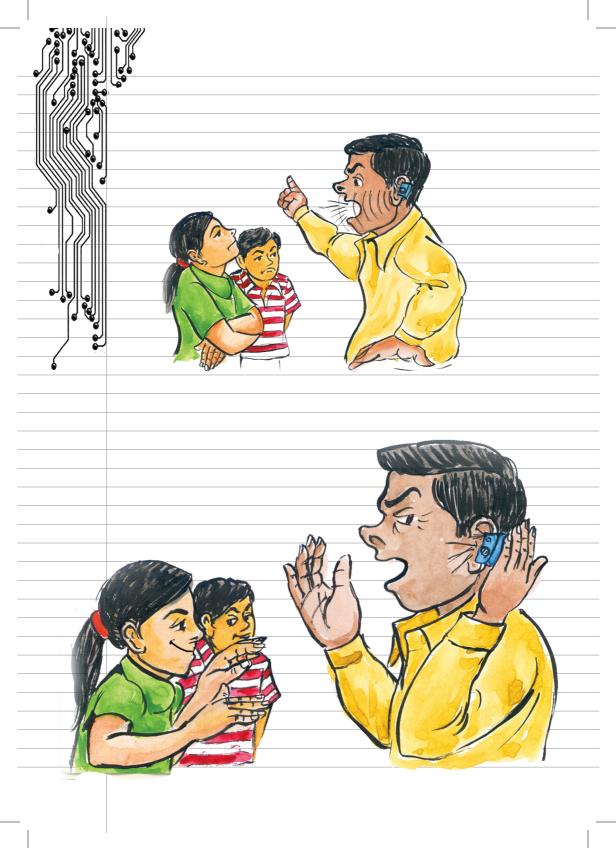
Swapnanil Talukdar, Class 11, Maharishi Vidya Mandir, Guwahati, Assam

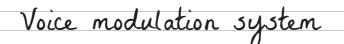
This is a lower limb operated manual device to assist upper limb impaired or those which an injury to turn/flip the pages of books easily.

This idea originated out of his own laziness.

Once after his tuition class, Swapnanil felt too tired to even turn pages of his text book. He then thought of this idea and later realised that it could be used by many other physically disadvantaged persons as

A foodie, he likes travelling to scenic places, gardening, watching science based programs and dancing. He is a philatelist with a collection of over 1000 stamps. He wants to become a chemistry or a physics professor and promote out-of-the-box thinking in his students.





Gujarat

The idea is to have a voice modulation system that

Rinku S Rajpal, Class 12, Adani Vidya Mandir, Ahmedabad,

can be fixed near our mouth and neck so that if we speak loudly beyond a certain level in anger (or shout) then it pinches our ears, bringing our voice back to the normal.

Rinku used to get irritated by people who talked loudly always so she thought if there can be any such device that could help them regulate their voice. She is a national level chess player and her hobbies range from reading books, photography, singing, dancing to travelling, skating, sketching and drawing. Biology is one subject, which she really likes and wants to take up medicine as her profes-

Sion.

### Movable seat for physically disabled in cars

Khushkumar Patel, Class 12, Nutan Vidya Vihar Higher Secondary School, Ahmedabad, Gujarat

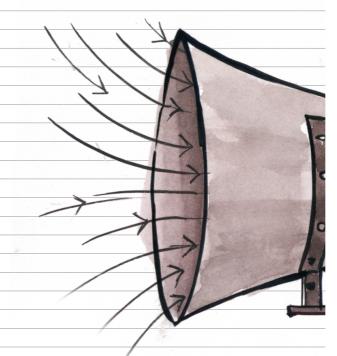
The idea is to have movable seats in four-wheelers so that they can be rotated on their axis and pulled outside. Person can then sit on it easily, push the seat inside and rotate back to the normal position. Such a seat may be useful for a physically disabled person or an obese person.

Khushkumar has keen interest in new and emerging technologies and wants to join IIT after his class 12. Spiritualism also appeals to him a lot. He reads biographies and plays football. He plays softball at the national level and baseball at the state level. He participates in a number of science and technology based events.







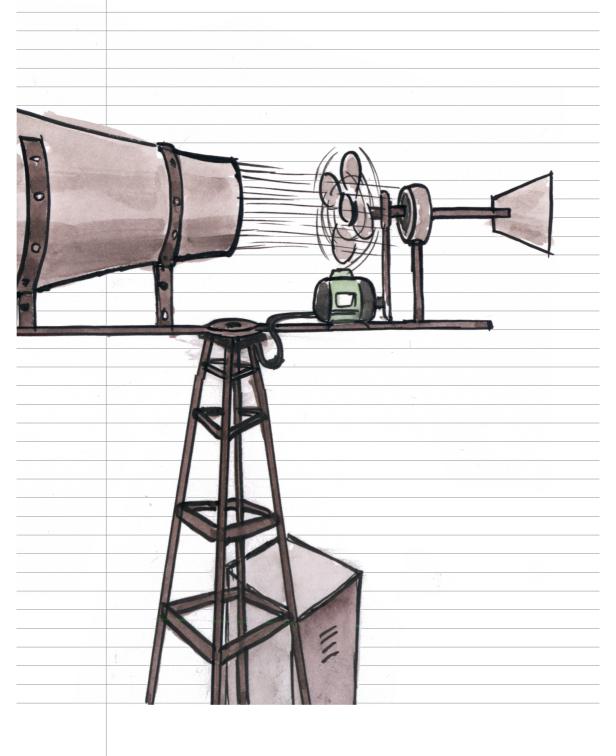


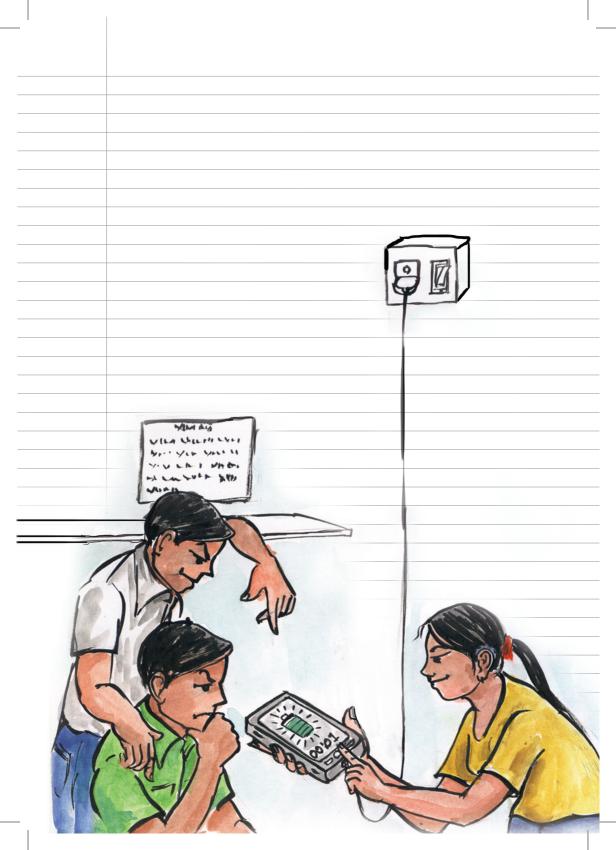
#### Advance wind turbine

Vidit Laad, Class 12, Lokmanya Vidya Niketan, Indore, Madhya Pradesh

It is an omni-directional windmill, which has a wind concentrator to increase wind speed. It is claimed to work at low cut-in speed as well.

Vidit has always had interest in non-conventional sources of energy. He came up with the idea of this windmill while reading his physics text book. He has a habit of doing experiments and trying out things practically. He likes playing outdoor sports to keep him healthy and stress free. He wants to become a defense scientist to develop arms for the nation.







### Improved batteries with fast charging

Yash Vardhan Goenka, Class 12, Calcutta International School, Kolkata, West Bengal

The project involves developing batteries, which can be easily charged at a much faster rate than the conventional ones by using super capacitors having fast charge discharge rate and high charge density.

charge rate and high charge density.

The idea came to Yash's mind while staying at his grandparents' place where electricity would come for an hour or so; not even sufficient time for an inverter to get charged. Yash is an ardent technology follower. His interests range from neutrinos to graphene to spacecrafts and stellar space. He also enjoys trekking, travelling and painting. He wants to become an engineer with a keen sense of design and entrepreneurship. Yash also wants to invent solutions for a better life all around.

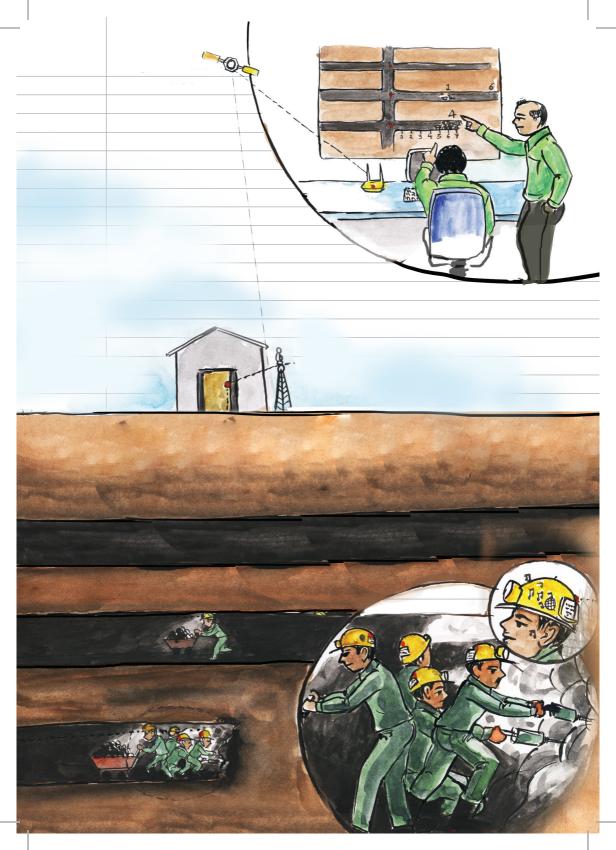
### Advance helmet for mine workers

Preyansh Kotecha and Karan Khatri, Class 12 & 11, Anand Vidya Vihar, Vadodara, Gujarat

The idea is to have a helmet for mine workers, using which their location inside the mine can be identified. The same can also be used for communication purpose if required.

Frequent news about accidents in mines and loss of the lives of the miners prompted the two friends to think about the problem and come up with this helmet. Karan has a passion for photography and football. He loves to make new friends and explore new places. Like his father, he wants to be a businessman but also wants to invest some money in fulfilling his scientific pursuits. Preyansh is very curious about new things and tries to innovate different things. He may become an entrepreneur to take forward his own ideas and innovations.







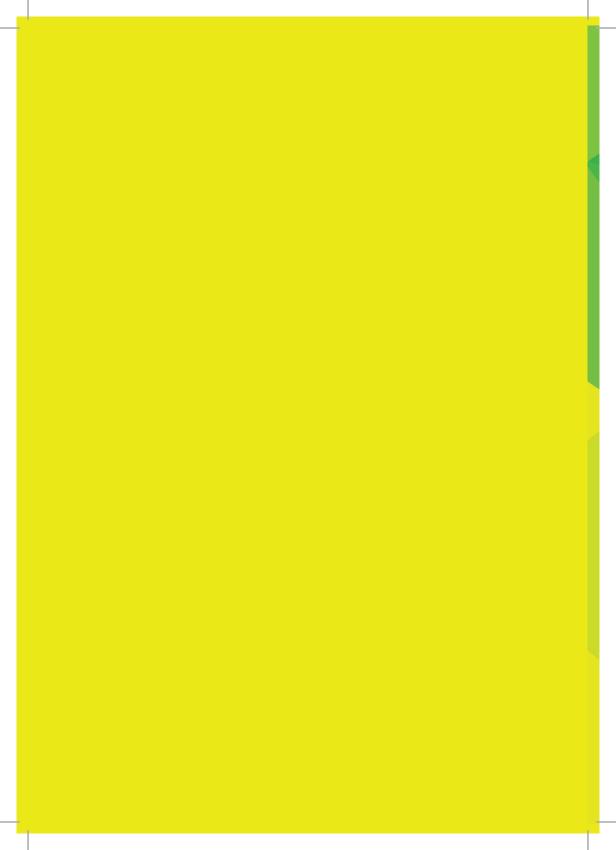


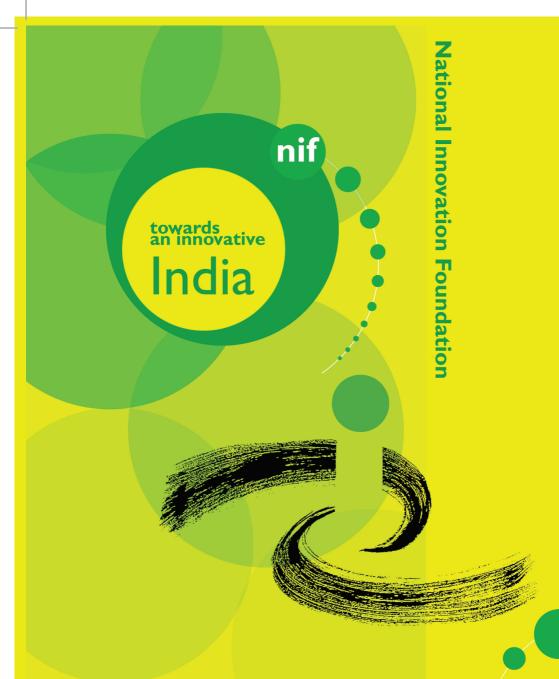
There are many other variations of these simple innovations. Should we ignore them...because they are simple

simple?

Is simple always sustainable?





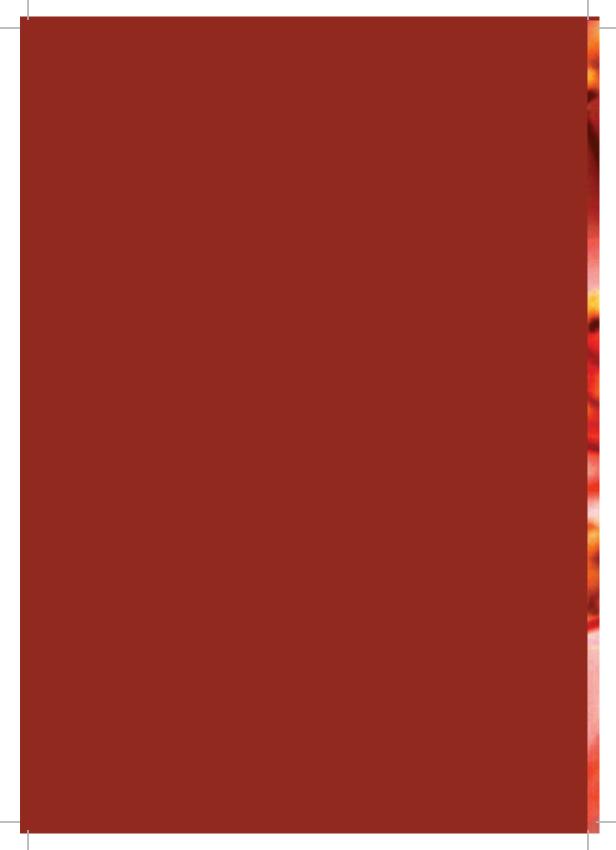


National Innovation Foundation is pursuing the mission of making india Innovative and a global leader in sustainable technologies. The idea is to build upon Honey Bee philosophy, and provide a nurturing platform to unusung heroes and heroines of our society who have solved a technological problem through their own genius without any outside help. The Department of Science and Technology of Government of India has established National Innovation Foundationin March 2000. The purpose is scouting, documenting, spawning, augmenting, adding value, protecting intellectual property rights, disseminating on commercial as well as noncommercial basis. Focus is on the contemporary unaided technological innovations as well as outstanding examples of traditional knowledge from individual and communities.

National Innovation Foundation Bungalow No. 1, Satellite Complex Jodhpur Tekra, Premchand Nagar Road Satellite, Ahmedabad - 380 015 Gujarat, India

Ph. (079) 26732095; Fax (079) 26731903

Email: info@nifindia.org Website: www.nifindia.org







રૂળંભાગાર ૧૦૧૪ કેંગનાइટ ૨૦૧૪ કેંગનાઇટ ૨૦૧૪ કેંગનાઇટ ૨૦૧૪ કેંગનાઇટ ૨૦૧૪ કેંગનાઇટ ૨૦૧૪ કેંગનાઇટ ૨૦૧૪ ફોર્માઇટ ૨૦૧૪ ફોરમાઇટ ૧૦૧૪ ફોરમાઇટ ફોરમાઇટ ૧૦૧૪ ફોરમાઇટ ૧ हिवाठाहिट २०१४ <sup>भ्रतिक</sup>र्दु धर्ण नेनाइट २०१४ ignite 2014 इंगनाइट २०१४ s ynite 2014ইগ্নাইট ২০১৪ ignite 2014 ভূত্ত লভ্ডেই ৫০ এটি প্রক্রিক জেন ৩০ ৪৮ এটি ২০১৪ তি ক্রিক্রিক ভূত্ত লভ্ডেই இக்நடை ഉഠക**ൗ ইগনাইট ২০১**৪ ഇഗ്നടൈ ৫০.৫৫ **ইগনাইট**্ हे క్షేಹ్ర్యం ഉറക്കുട്ടാപെട്ട ૨૦૧૪ <u>ഇ</u>ഗ്ന്ടൈ ൨ഠ<sup>൧ർ</sup> ઇગનાઇટ ૨૦૧૪ **ইগনাইট** ২০১৪ ઇગનાઇટ ર रूपॅत्ता कार्ड २० ณ के कार्ता विकास के कार्ता के प्राचार्थ २०१४ हे भूमाइट २०१४ है भूमाइट २०१४ हे भूमाइट २०१४ है भूमाइट २०१४ हे भूमाइट २०१४ र् उद्यानार्थेट २०१४ हिनाराहिट २०१४ श्रीनार्थेट २०१४ वर्गनार्थेट २०१४ वर्गनार्थेट २०१४ वर्गनार्थेट ३०१४ वर्गनार्थेट ट रीनार्ट्य २००५ innite 2014 इंगनाइट २०१४ हिनाराहिट २०१४ वर्गनार्थेट २०१४ वर्गनार्थेट र्गिनाइट २०१४ ignite 2014 इंगनाइट २०५४ ऋार्च विकास क्षेत्रका कार्य कार्च कार्च कार्च कार्च कार्च कार्च कार्च कार्च कार्च कार्य कार्च कार् ट गैनाइट २०१४ ignite 2014 इंगनाइट २०१४ ಇಗರ್ನ್ಫ್ಟ್ ೨೦೧೪ ਇਗਨਾਇਟ \_. புள்ளிய a o 98 ஹ்ற்ள்ளை ் o டிரி ভূতান্ত্ৰত বৃত্তুৰ ignite 2014 প্ৰতান্ত্ৰত বৃত্তুৰ ভূতান্ত্ৰ প্ৰতান্ত্ৰত বৃত্তুৰ ভূতান্ত্ৰত বৃত্তুৰ ভূতান্ত্ৰত বৃত্তুৰ ভূতান্ত্ৰত বৃত্তুৰ ভূতান্ত্ৰত প্ৰতান্ত্ৰত বৃত্তুৰ ভূতান্ত্ৰত বৃত্তুৰ ভূতান্ত্ৰ বৃত্তুৰ ভূতান্ত্ৰত বৃত্তুৰ বৃত্তুৰ ভূতান্ত্ৰত বৃত্তুৰ ভূতান্ত্ৰ বৃত্তুৰ ভূতান্ত্ৰত বৃত্তুৰ বৃত্তুৰ ভূতান্ত্ৰ বৃত্তুৰ বৃ இக்நடை ഉരക**ം ইগনাইট** ২০১৪ ഇഗ്നടൈ ൨൦൧ർ **ইগনাইট** 🕏 🏂 க்நடை ഉഠക്ഷ (വിധാരം ഉപ്പുള്ള) കൂട്ടു കൂട്ടു പുള്ള പു इंगनाइट २०१४ **ইগনাইট ২০১**৪ इंगनाइट २०१४ ઇગનાઇટ २०१४ इंगनाइट ઝુંગુનાઇટ ૨૦૧૪<del>િટાતાદિટ ૨૦૧૪</del> ઇગનાઇટ ૨૦૧૪ <sup>જ્ઞતજંત</sup>ું હજે ૭૦૦% हिंगताहर २०१४ वर्गताहर २०१४ वर्गताहर हिंगताहर २०१४ वर्गताहर वर्गताहर २०१४ वर्गताहर ट ग्रानाइट २०१४ ignite 2014 इंगनाइट २०१४ ഇഗ്നടെട് വഠ<sup>ൂർ</sup>ignite 2014 ഇഗ്നളെട് വഠൂർ ക്രമ്മല് ഉഠകഴഇഗ്നടെട് signite 2014 ইগনাইট ২০১৪ প্রুக்நனட் ഉഠக ইগনাইট ২০১৪ প্রত্রেশ ত্রু বত এই ইগনাইট 5 ชูเท้าการ รอง ชียา เกรา รอง ชียา เกรา ของ เกา เกรา รอง ชียา เกรา รอง ชียา เกรา รอง ซียา รอง ซียา เกรา รอง ซียา เกรา รอง ซียา เกรา รอง ซียา รอง ซียา เกรา รอง ซียา รอง ಇಗರ್'ನ**ೈಟರ್ ೨೦**೧೪ ਇਗਨਾਇਟ ट्यानाइट २०१४ ignite 2014इंगनाइट २०१४ ลูกซัลซู่ผูซ ๑๐ก๛ ignite 2014 โยสเกเย็น ล0 98 ignite প্রিক্তির প্রত্যান্ত দেব বিষ্ণান্ত দিবার দিব বিষ্ণান্ত ব টুৰ্জুக்நடை ഉഠക്കുറ്റുപുറിട്ട ২০৭४ ഇന്നുള്ള २०१० ઇગનાઇટ ૨૦૧૪ ইগনাইট ২০১৪ ઇગનાઇટ <sup>2</sup> ফুর্গনাইট ২০১৪ খনলাইট ২০১৪ হ্র্যনাইট ২০১৪ হ্র্যনাইট ২০১৪ হ্র্যনাইট ২০১৪ খন। গৈ ২০৭४ হ্র্যনাইট ২০১৪ খনলাইট ২০ ย์ช่วเ-เช่ट २०१४ Eਗਨਾਇਟ २०१४ วาก ล่อย ข้อมายะ ลด จะ ลักตัวสั่นตั ๑๐๓๗ โย สกายะ ลด จะ ลักตัวสั่นตั ๑๐๓๗ โย สกายะ ลด จะ เล่า เล่า ลด จะ เล่า ลด

∍ɨgnite 2014ইগনাইট ২০১৪ প্রভিচ্চলেন্ ইত্তল ইগনাইট ২০১৪ ভ্রতল্লভাই ব০্এ৫ ইগনাইট

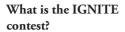
ট্ইগনাইট ২০১৪ গ্রানাগ্ত ২০৭४ গ্রুপেল্ডার ১০এ৫ , .....

क्रिक्रका २०१४ २०१४

ত্রি দ্রান্ত হত প্রত্যার কর্ম হার্থ বিশ্ব হিন্ত হত প্রত্যার কর্ম বিষ্টা বিশ্ব কর্ম বিশ্ব কর্ম বিষ্টা বিশ্ব কর্ম বিষ্টা বিশ্ব কর্ম বিশ্ব কর্ম বিষ্টা বিশ্ব কর্ম বিশ্ব ক

જ્યાં ભારત ૧૦૧૫ કે માર્ચ ૧૦૧૪ **ટેંગનાર્કેટ ૧૦૪** કે ઇગનાઇટ ૨

ignite 2014ഇഗ്നളെട് ൨ഠ൧ർ ക്ക്ക്ക്ക് ഉഠക്കളാഗ്നളെട്



IGNITE is a national competition to harness the creative and innovative spirit of school children. Students are invited to send their original technological ideas and innovations for the same.

#### Why the IGNITE contest?

Creativity among children is almost in-born, every child is creative, degrees may vary, but not the basic manifestation. Then what happens during growth and maturation? Why should children

stop asking basic questions? Why do they agree to do repetitive science projects instead of being original? Why do they learn to live with unsolved social and professional problems? We should not allow our children to live with such problems rather urge them to come up with solutions to these. We want to promote originality, creativity and innovative spirit among our children so that when they become leaders of our society, they ensure an imaginative, inclusive and an innovative future for the country. We want our children to be more sensitive to the problems faced by not just them and their families or neighbors but also other socially disadvantaged sections of the society.

The IGNITE '14 contest (September 1, 2013 to August 31, 2014) saw participation of students from 359 districts of 35 States and Union Territories of the country with 27123 entries being received. The awards were announced on October 15th, the birth day of children's favorite Dr A.P.J. Abdul Kalam, celebrated as the Children's Creativity and Innovation Day by NIF. These were given by Dr. Kalam on November 19th, 2014 at IIM Ahmedabad.











dst.gov.in

gian.org

sristi.org

cbse.nic.in