Honey Bee Network

Dr A P J Abdul Kalam Ignited Mind Children Creativity and Innovation Awards 2022

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SRISTI Innovations
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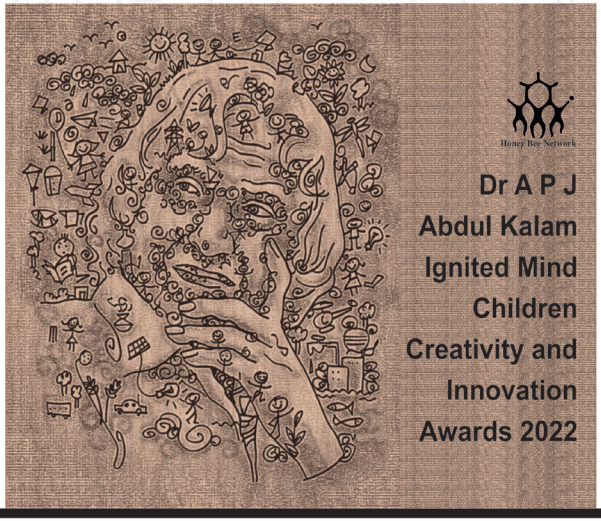
Creativity is seeing the same thing but thinking differently

-Dr. A.P.J. Abdul Kalam



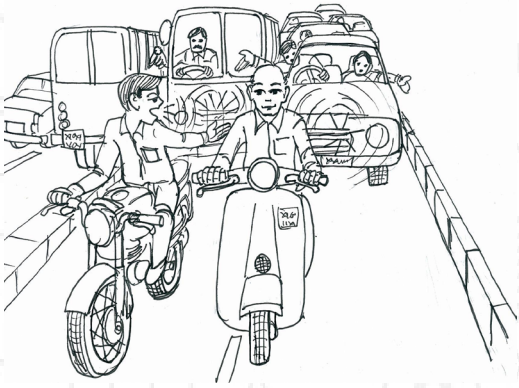
Honey Bee Network

Awards

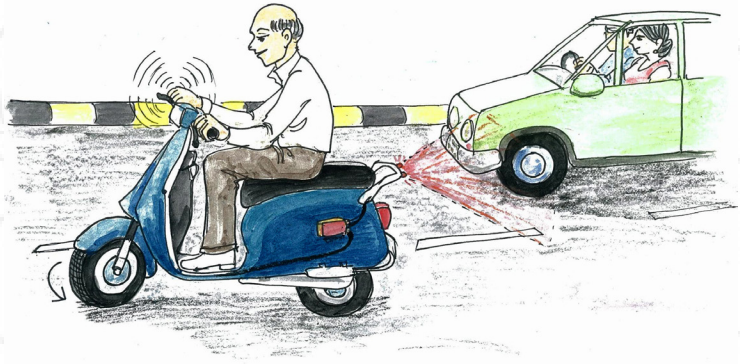
CONFY AID – A driving Tool designed for the two-wheeler drivers suffering from hearing Impairment

R. MADHUMITHA
Class: 12th
Devangar Girls Higher Secondary School,
Tamil Nadu

Problem



The problem is that hearing-impaired two-wheeler drivers are at risk of accidents on the road due to their inability to hear approaching vehicles from behind, leading to difficulty in driving safely. There is a need for a solution that can enable these drivers to be alerted of vehicles approaching them from behind, in order to reduce the risk of accidents and ensure their safety on the road.



Solution

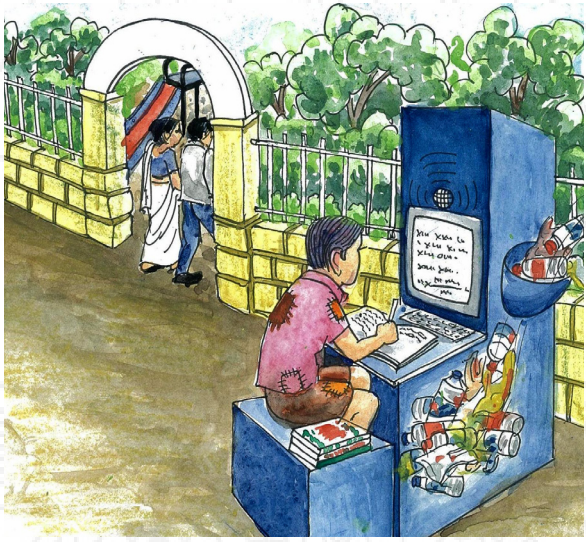
"The device has sensor to identify the side from which a vehicle is approaching the two-wheeler. The handlebar will vibrate on the left or right side depending upon the side from which a vehicle behind is approaching the two-wheeler. A hearing-impaired two-wheeler driver can thus drive safely using this tool."

EduBox – An innovative learning system using token-operated screens designed for students unable to afford online class

KARTIK GAURANG JOSHI
Class: 12th
New Era Senior Secondary School,
Gujarat

Problem

Many students from underprivileged backgrounds are unable to afford online classes, which hinders their learning opportunities. This problem can be addressed through EduBox, an innovative learning system that uses token-operated screens and can be easily deployed in public spaces to provide access to education.



Solution

EduBox can be easily deployed in public spaces as an automated system with a token-operated screen so that anyone can learn effortlessly. The used plastic bottle can be used as a token to grant 10 minutes of video-based instruction on basic subjects.

Mouth Operated Vacuum Page Turner for people with upper Limb deformities

SUFIYAN MOHAMMED HANIF PATEL
Class: 7th
Tapti Public School, Jalgaon,
Maharashtra

Problem

Individuals with upper limb deformities face difficulties in turning book pages and often have to rely on others for help. This limitation affects their learning opportunities, making it imperative to find a solution

Solution

People suffering from upper limb deformities have to depend on others to turn the pages of the book hence they are usually left bereft of learning. This tool will make it easier for those with limb related impairments to flip a book's pages. Eds: A pedal operated book page turning device by Swapnil Talukdar has already been recognized earlier by HBN and NIF

https://nif.org.in/innovation/foot-operatedmanual-pageturning-machine/733.

Smart Chapati Maker: A futuristic solution to reduce the possibility of getting burned while using a griddle.

RICHA PANDEY
Class: 8th
VidyaGyan School, Sitapur,
Uttar Pradesh

Problem

Cooking chapatis on a griddle can be hazardous, as it often leads to burns. Eliminating the need to repeatedly remove the griddle from the stove and reducing the chances of getting burned is a pressing need.

Solution

This smart chapati maker will have two-layered stove. It will eliminate the need to repeatedly remove the chapatti griddle from the stove. The chapatis will be baked on the bottomlayer and will be heated on the top layer hence reducing

SWAASKRAM: A wearable device to detect an asthma attack before the physical symptoms appears.

KANIKA CHOWDHRY
Class: 12th
Delhi Public School, Rohini,
Delhi

Problem

Asthma patients often experience sudden attacks, making it difficult to take precautionary measures in time. The device that alerts the patient using sensors, detectors, analyzers, and an effector is yet to be identified.

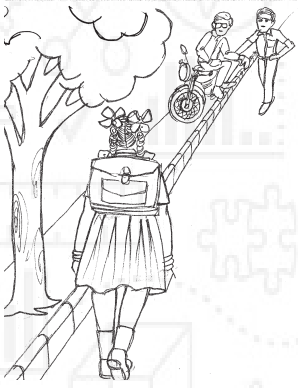
Solution

By using this wearable device SWAASKRAM, an asthma attack can be detected before any symptoms appear so that the precautionary measures can be taken. The device uses sensor, a detector, analyzer, and effector to alert the patient. The gadget is guided by the GPCR (G Protein Coupled Receptor) signaling pathway and biotelemetry

App & Letter Box for women: A tool designed to ensure Women safety.

PRIYANKA SINGH THAKUR
Class:11th
Government Girls Higher secondary School,
Masturi, Chhattisgarh

Problem



Issue of safety of the girl child/women.

Many girls have to bear the taunts of bullies while leaving or coming from school. While going to school or college, teasing the girls on the road and misbehaving with the girl, to avoid all this, the dignity of the woman and the girl is solid and she feels insecure.

Solution

The issue of a girl's/women's safety is addressed by following two-pronged strategy: The first part involves creating an app that works without mobile network such that in case of domestic violence or any sort of safety concerns, a woman can use the app to alert the police officials for receiving immediate help. The second part consists of setting up letter boxes on streets where young girls going to school can post letters highlighting their concerns with respect to safety and wellbeing. The letter boxes stay on the streets till there are no letters in the box, meaning the complete safety of young women. Eds: Many girls suffer the taunts of miscreant boys while going or coming from school. Such a system might ensure that these letters not requiring any postage step will be delivered to senior police officers for urgent action.

Safe gas stove – Ensure safety of hands while cooking.

KARTIK BASAVARAJ MALGONDA
Class: 8th
Haribhai Devkaran Prashala,
Solapur, Maharashtra

Problem

When placing heavy utensils on the burner, many times, if the gas is turned off for any reason, then on re-igniting it with a lighter, the lighter cannot be used because of the large vessel, and if done, the hand gets burned, or the fire in the gas does not ignite.

Solution

A Lighter needs adjustment for igniting gas when heavy vessels are kept on the burner. Many times, when a big utensil is kept on this gas grill, if the gas is turned off for any reason, then on re-lighting it with a lighter, the lighter cannot reach the gas burner because of the large utensil. One can get hurt by the hot utensil. Hence this safe gas stove has a hole punched in the grate. At the top of the grate where one can slide the lighter through the bottom of the utensil will allow the lighter to go through and not burn hands.

A cobweb and debris cleaning tool to prevent waste falling over the user.

CHAVDA SHIVANIBA JAYENDRASINH
12th Class
Uchttar Utar Buniyadi Kanya Vidhyalaya,
Gandhinagar, Gujarat

Problem

Wall corners and roof have cobwebs, fan blades have debris that is often very difficult to remove and the debris/cobwebs can fall on the cleaner too while cleaning.

Solution

A long plastic rod with a rod at the end is fitted with a broom/brush and a small upside-down umbrella at its bottom to save the user from debris falling over him.

A Smart Charger to indicate full charging thus saving electric energy

ANAMIKA SAHU
7th Class
S.A.G.E.S. (Swami Atmanand Government English medium School), Masturi, Chhattisgarh

Problem

Often we forget that when the mobile is kept charged, it remains charged even after a full charge, electric energy is wasted and the condition of the battery of the phone also deteriorates.

Solution

In order to save electricity in cases where charging still continues even after full charge, a smart charger can display varying colours representing the different percentages of the charge in the phone. In case of 20%, the charger will display a yellow light, when it's 40%, it will display an orange light, when it's 80%, a green light will be indicated and finally at 100%, the charger will display a red light and an alarm will alert the user.

Pen that can massage fingers tired of writing for long

NEHA ARORA
12th Class
Gaytri Vidya Mandir School,
Chhattisgarh

Problem

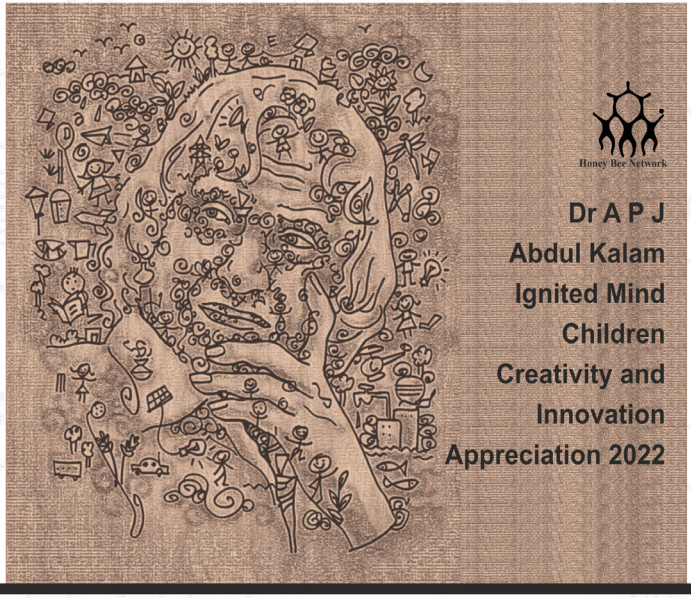
While students are writing in a note book, after writing mostly, pain starts in the fingers of the hand, and we are not able to write much and cannot write much in less time, and it takes a lot of time.

Solution

Owing to the pain that students experience while writing for long, a pen having vibrators installed in it which can act as a massager to the hand.

An innovator is one who does not know it cannot be done.

-Dr. R A Mashelkar(FRS)



Honey Bee Network

Appreciation

A wiper tool designed for assisting housemakers to clean windows

PUSHPA SAHU
Class: 11th
Shaskiy Uchchatar Madhyamik Shala Tifra (Government Higher secondary School Tifra)
New Delhi, Chhattisgarh

Problem

While cleaning the house, the housewives keep getting troubled every time with removing the dust from the glass of the windows or while cleaning the window; therefore, a tool has been developed which will come in handy to keep the windows of the house clean.

Solution

With the help of this tool, just as the car glass can be cleaned with the help of a wiper, the glass of the windows of the house can be cleaned saving a lot of time and physical effort of the housemakers.

Mechanized paddy transplantation using vehicle to reduce drudgery in farm

DOLLY RAJAK
Class: 10th
Gaytri Vidhya Mandir, Lalkhadan,
Chhattisgarh

Problem

In rural areas paddy harvesting machine is used, but a paddy seedling-planting machine is not very common in the village, though seed planting machines are well known.

Solution

A machine is suggested by which motorized or manual paddy seeding planter is attached to a traction device or pulled personally.

Eds: a few innovators have tried to develop such planters but no design is yet widely available for normal nursery though devices exist for mat nurseries.

A dough kneader designed for women/men pursuing cooking

GAURI NUYIYA
Class: 10th
Shaskiy Kanya Uchchatar Madhyamik Shala Masturi (Government Girls Higher secondary School Masturi), Chhattisgarh

Problem

Women who have trouble kneading dough in the heat of the kitchen and belong to poor families. And because they are from a poor family, they also have to face a lot of trouble; although roti-making machines are available, due to their high cost, they are not able to buy them.

Solution

This device aims to create a device to knead the dough and make lives easier for economically poor women/men who have trouble kneading dough in the heat of the kitchen.

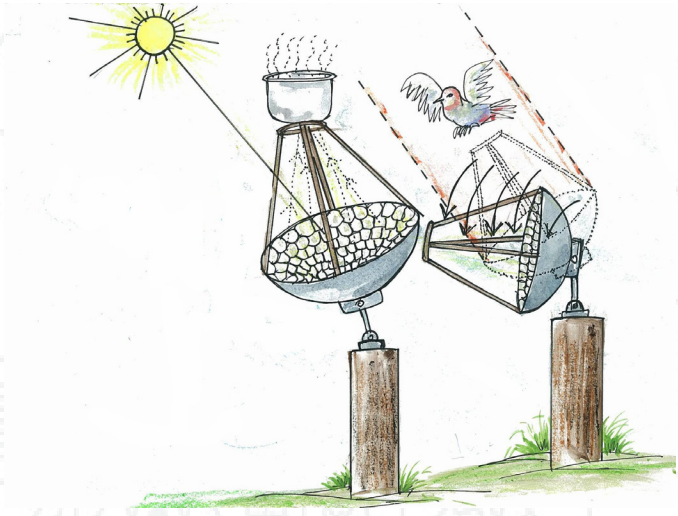
Eds: dough making machines are available but not at a very affordable mechanical one for poor people.

Eco Friendly Solar Dish (EFSD) to prevent accidental deaths/injury of birds

AARAV JUNEJA, AARUSH ARORA, ADITYA RASTOGI
Class: 8th
Amity International School,Sector-46
Haryana

Problem

We install and use the solar dish, and then sometimes the birds keep flying around, and due to excessive hits around the solar dish, the wings of the birds get burned, due to which the birds die, can prevent the accidental deaths of the birds from the high heat produced by the solar dish.

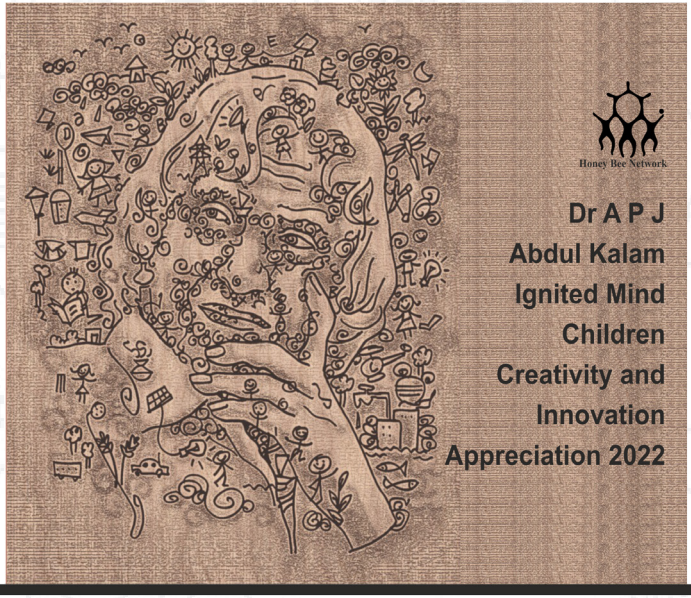


Solution

EFSD aims to produce a cost-effective way to perform solar cooking and at the same time uses PIR motion sensors that might prevent solar dish heat-related bird injury/deaths, When the birds come on the radar of the sensor, our buzzer will produce a sound of less than 20Hz to prevent their accidental deaths.

An innovator is one who does not know it cannot be done.

-Dr. R A Mashelkar(FRS)



Honey Bee Network

Consolation

Glass Dispensing and cleaning Machine- avoiding contamination problems arising out of hands/attached glass

STUTI BANSAL
Class: 10th
Scindia Kanya Vidyalaya, Moti Mahal Road
Gwalior, Madhya Pradesh

Problem

People drink water from the water cooler with their hands or disposable glasses, which can lead to infections and diseases. To avoid infection and diseases while drinking water with a glass from the water cooler in a public place, a glass dispenser machine has been designed that can be attached to the water cooler.

Solution

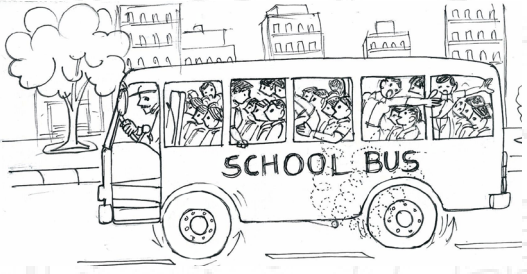
A machine attached to a water cooler will provide washed 'metallic' glasses. When glasses are reinserted into the machine, it will clean them and dispense them.

Eds: paper cup dispensing machines are available which are extremely affordable and clean since no cup is ever touched twice. However, in closed working spaces where there is no water shortage, such an arrangement may have some utility

DISPLAY OF SAFETY SIGNALS IN BUS: A tool to avoid overloading in school bus

RISHABH SETHIA
Class: 8th
D.A.V. PUBLIC SCHOOL BRS NAGAR,
Block - C, Ludhiana, Punjab

Problem



If more children or people are seated in a school bus or state government bus than the capacity, then a situation of overload occurs, due to which the possibility of an accident on the road is definitely high. Although a large number of children are made to sit in the school bus by pressing, the children feel suffocated, and accidents can also happen.

Solution

The word “overloaded” will be shown on a display on the front of the bus. For instance, the bus owner will indicate in the front mirror how many seats are available in the bus and how many it can accommodate. If the vehicle becomes overloaded, the bus’s alarm will ring to avoid chances of accidents due to overloading.

Eds: one can check overloading merely by looking at the bus; such a device may not be needed in school buses though ordinary buses might need such a device. School buses are not allowed to carry more than the seats available in the bus.

A speaking calculator to aid junior students in learning mathematical operations efficiently

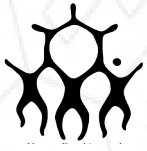
HIRENDRA DAS VAISHNAV
Class: 12th
Shaskiy Uchchatar Madhyamik Shala Tifra
(Government Higher secondary School Tifra),
Chhattisgarh

Problem

Most of the junior school children lack interest in subjects like mathematics; they do not feel much interest in understanding mathematical operations and doing mathematical calculations, and those children lag behind in learning to count mathematical figures, and even the general calculations they don't understand.

Solution

The innovative calculator will be able to speak numbers and the operations it is doing while solving such that junior students can understand the mathematical operations better and thus learn better.



Honey Bee Network

Honey Bee Network

The Honey Bee Network (HBN) is a social movement supported by a large number of volunteers. The network which had pioneered the open innovation culture much before the term became popular. For the past 33 years, it has been the vanguard of protecting knowledge, resources and rights of the knowledge rich, economically poor people. It aims at i) cross-pollination of ideas, promoting lateral learning among creative individuals and communities, ii) overcoming anonymity of the grassroots innovators and other knowledge holders iii) ensuring that whatever is done with their knowledge is shared with them in local language, and iv) if any profit or income is generated using their knowledge, a fair and just share should go back to the people. It has been promoting creativity and green grassroots genius in several countries. It has facilitated documentation of over 45000 ideas, innovations and traditional practices besides student projects through volunteers. Honey Bee Network has incubated a series of institutions to support green grassroots innovators and others. It has given birth to Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI), Grassroots Innovation Augmentation Network (GIAN), National Innovation Foundation (NIF) and inspired many national and international innovation policies. It is a global platform where like-minded individuals, innovators, farmers, academicians, policymakers, entrepreneurs and non-governmental organizations (NGOs) come together to respect, recognize and reward grassroots innovations. Various volunteers associated with the network help in scouting innovators, supporting them, mentoring them and provide help in disseminating the innovations as well.

The key areas of engagement:

- Scouting, spawning, and supporting innovations and outstanding traditional knowledge at grassroots. It links formal and informal science, tries to validate and add value in sustainable innovative technologies, promotes creativity among children and also pursues learning from grandparents, particularly centenarians, about viable and green traditional knowledge.
- Promoting innovations and creativity among grassroots farm and non-farm workers, communities and women's groups engaged with culture, folk art, school and college technical education, institutions (particularly common properties or community managed) for conservation of biodiversity and natural resources.
- Mentoring individual innovators in various sectors and linking them with each other and informal sector innovators. Lobbying for policy and institutional changes in support of grassroots creativity and innovations at regional, national and international levels.
- Supporting knowledge and intellectual property rights (IPR) of economically poor people, young inventors and encouraging them to share their knowledge with other self-¬employed people, as a part of Technology Commons. The transfer of people's knowledge to firms is facilitated on fair and just licensing terms with benefit-sharing.
- Linking innovators with formal research and development (R&D) institutions, market and communication institutions & networks, media etc., so that more and more people are inspired to find solutions to problems of our society. SRISTI (www.sristi.org) and GIAN (www.gian.org) provide institutional support to the Network, along with other volunteers.

Linking technology students with small industry, entrepreneurs and informal sector through techpedia.in and facilitating Gandhian Young Technological Innovation [GYTI] Awards by SRISTI. Creating world's largest open-source pool of sustainable solutions developed by people without outside help, accessible to communities worldwide. Bringing out Honey Bee quarterly newsletter, a unique voice of creative and innovative people at grassroots in different languages. Motivating commercial organizations and public systems to become more empathetic in providing extremely affordable services and products to common people.

SRISTI (www.sristi.org)

INTRODUCTION:

SRISTI, which means creation in Sanskrit, was born in 1993, to support the activities of the Honey Bee Network (1987-88) to recognize, respect and reward creativity at the grassroots level.

SRISTI, as a developmental voluntary organization strengthens the spirit of creativity and innovations by knowledge-rich, economically poor individuals and communities. It builds bridges between informal and formal science, protects intellectual property rights of grassroots innovators and helps in conserving and augmenting biodiversity and associated knowledge systems.
It supports eco-friendly solutions to local problems being scouted, spawned and spread by the Honey Bee Network volunteers for the last 27 years. It also nurtures ecopreneurs engaged in conserving biodiversity, common property resources, cultural diversity and educational innovations. There are five pillars of Honey Bee Network which SRISTI is committed to backstop:

[1] Educational innovations by school and college students, teachers, and other stakeholders; [2] Institutional innovations at community and other levels in managing natural and other resources, [3] Cultural creativity so that curiosity, collaboration, and compassion grow through art, literature and crafts; [4] Technological innovations and traditional knowledge dealing with human, animal, plant and ecosystem health, and [5] Policy reforms to generate frugal innovations for sustainable development at all levels, with specific reference to youth, children, women and elderly.

Essentially, it aims at improving access of knowledge-rich, economically poor people to various informal and formal institutional resources to trigger self-reliant development process as per the Gandhian ethics and principles.

OBJECTIVES:

Systematic documentation and dissemination of and value addition in green grassroots innovations and supporting biotechnological innovations by communities, technology students and others for a sustainable future.

BIODIVERSITY

- Providing intellectual property rights protection and risk capital support.
- Extending necessary support for in-situ and ex-situ conservation of local biodiversity and associated knowledge system.
- Empowering the knowledge-rich, economically poor people by adding value to their innovations, traditional knowledge and associated biological diversity including microbial diversity.
- Linking formal and informal science to enrich both the knowledge systems, build databases of innovations by farmers, artisans, mechanics, technology students, teachers and other social innovators.
- Providing early stage risk capital and mentoring support to grassroots innovators, students and other mavericks to scale up their products and services which are based on grassroots innovations through commercial or non-commercial channels. Embedding the insights learnt from grassroots innovations in the formal educational, policy and institutional systems in order to expand the conceptual, cognitive, institutional and policy space available to these innovations.

INITIATIVES:

BIRAC's BioNEST

Sanctuary of Innovation, Incubation and Entrepreneurship (SIIE), SRISTI-BioNEST is an innovation and grassroots distinctive traditional knowledge based business incubator, an entity funded by BIRAC (Biotechnology Industry Research Assistance Council, Department of Biotechnology, Govt. of India). Innovations based on 'out-of-the-box' thinking, traditional knowledge, grassroots level knowledge systems, ideas of university students and even children are supported for successful product development and commercialization. Innovations from both formal and informal sectors are supported. The incubator caters to sectors like biotechnology, biological sciences, environmental sciences, food technology, medical science and technology, nanotechnology, pharmacy, rural development and other allied areas. Currently there are 28 incubatees incubated at SIIE-SRISTI BioNEST.

CHILDREN'S CREATIVITY:

The Children's Creativity and Co-creation Workshops aims to empower children to not only identify and articulate their own problems but also identify an try to solve problems of socially disadvantaged segments, individually and/or collectively. This workshop aims to involve children in solving the social challenges faced by community and thus help us mobilize the creative potential of children around the world. The aim is to overcome persistent social inertia in emerging and sometimes even in advanced geographical regions. It is hoped that many of these children will grow into empathetic, creative, and compassionate leaders in future and will try to work towards making an inclusive and sustainable society.

INSHODH - "TEACHERS AS TRANSFORMERS"

Teachers as Transformers is the initiative of Educational Innovations Bank (EI Bank), which is partnered with SRISTI and Honey Bee Network and based at the Ravi J. Matthai Centre for Educational Innovation, Indian Institute of Management Ahmedabad (RJMCEI-IIMA). EI Bank is a clearing house for effective educational innovations developed and implemented by elementary school teachers working in the public system. Teachers in the public system continue to play an important role in ensuring education for the marginalized sections of our society. In spite of the increase in the share of private sector enrolment, the precariously placed socio-economic strata will continue to depend on this system in the foreseeable future. However, the quality and other educational outcomes of the public system have often been criticized for their less than desirable levels. The EI Bank assumes that top-down reform is necessary but not sufficient: learning from those who have performed in spite of constraints that are common to many teachers, valorizing and supplementing their work and converting this work into a resource, will expose teachers to a solution-augmenting approach to local educational reform, and motivate them.

SHODHSANKAL

The concept of Shodh Sankal (a chain of experimenting farmers) to generate a lateral learning environment among grassroots innovators was started by SRISTI in 1996. The idea was to bring together experimenting farmers and discuss the results of trials that farmers have taken up on their own to solve various local problems.

The discussion also enhances the esteem for local knowledge systems apart from speeding up the process of technological change in regions where formal technology generation system has not been very successful - such as dry regions, mountainous regions and other disadvantaged areas.

SOCIAL INNOVATION FUND

The main objective of Social Innovation Fund (SIF) is to provide mentoring-, financial-, fabrication-, validation- support, and value addition facilities in labs, fields, and R&D Institutions for nurturing creativity in culture, education, technology, and governance.

SRISTI INNOVATIONS

A sec 8 company was set up with the objective of strengthening the capacity of grassroots inventors, innovators and ecopreneurs in the area of conserving biodiversity and developing eco-friendly solution to local problems and is engaged inter alia in the areas of documentation, experimentation, search, development and diffusion of sustainable technologies and institutions. It now hosts the BioNEST incubator besides publishing HBN newsletters and other books in Hindi, Gujarati and English languages. It also develops commercialization products ensuring a fair share of benefits going back to knowledge providing communities.

Gandhian Young Technological Innovation (GYTI) Awards celebrates the spirit of students' innovation in engineering, biotechnology, agriculture, pharmacy, material science, design and other applied technological domains through extremely affordable/frugal solutions or the ones pushing the technological edge. It is SRISTI initiative to foster youth-driven tech innovations. Gandhian Young Technological Innovation Awards 2019 were given by the Vice President of India, Shri M. Venkaiah Naidu at Rashtrapati Bhavan, New Delhi on July 06, 2019.

Other Activities:

SATTVIK FOOD FESTIVAL

SATTVIK is the festival to celebrate traditional nutritious food and associated knowledge systems. It was started fourteen years ago at IIMA to provide market based incentives for conserving agro-biodiversity and creation of demand for rarely or less cultivated nutritionally rich crops and varieties to stimulate their cultivation. In the regions with low rainfall, minerals inside of the soil don't leach much and hence crops which are grown there- like millets, sorghum, and pulses- are rich in nutritional value. The paradox of development is that the food that rich eat is often poor while food that poor grow (in poorer regions) is rich in nutritional value. This festival aspires to put the lesser known but nutrient-rich food from various states on the plate of urban communities, helping them to adopt healthier food habits and lifestyle. The festival also hopes to encourage farmers to grow more nutrition-rich crops and thus help them in augmenting their incomes. http://sattvik.sristi.org/

SHODHYATRA

Shodhyatra is a journey in some of the remotest areas of the country to search for knowledge, creativity, and innovations at the grassroots. It is an attempt on the part of SRISTI with a firm belief that the hardships and challenges of natural surroundings are prime motivators of creativity and innovations. It aims at unearthing such traditional knowledge and grassroots innovations. It is also a journey of mutual exchange and sharing of knowledge. Whatever knowledge and practices that are pooled in over various Shodhyatras are also shared back with the villagers during subsequent Shodhyatras, along with sharing of the various databases of the Honey Bee Network. During Shodhyatras also include women and children to display their ecological knowledge through recipe and children competitions respectively. Over the past 21 years, 45 Shodhyatras have been organised covering all the states of the country. https://www.sristi.org/shodhyatra/

SRISTI LAB

SRISTI believes that adding value to indigenous knowledge will help local communities co-exist with biodiversity by reducing primary extraction and generating long term benefits. Such an approach will lead to augmenting sustainable resource use and livelihood support systems. it converts local knowledge and resources into value added products with simultaneous development of processing facilities in rural region where natural resources exist but not enough in situ value addition takes place.more at http://www.sristi.org/sristi-lab/

AASTIIK

Academy for Augmenting Sustainable Technological Inventions, Innovations, and Traditional Knowledge (AASTIIK) began as an independent programme in 2005. It aims at creating a virtual and real knowledge community of professionals and experts in the field of invention, innovation and traditional knowledge

TECHPEDIA (www.techpedia.in)

Techpedia, an initiative of SRISTI, aims at putting the problems of micro, small and medium enterprises (MSMEs), informal sector, grassroots innovators and other social sectors on the agenda of young technology students across the country. For the past sixty years, India has not utilised much of the technological outputs of millions of students. But, this apathy will continue no more. Can a knowledge society really afford to ignore the huge talent, distributed in thousands of polytechnics, diploma and degree colleges of engineering, pharmacy, medical science, agriculture etc.? SRISTI is providing a platform for the industry and academic institutions to collaborate, co create and foster distributed and horizontal frugal innovations.

Goals of Techpedia

Promotion of originality among technology students by making it impossible for them to repeat what has already been done before. This will be possible only when they can find out what has been done before. Techpedia has 204,000 technology projects done by about 600,000 students from more than 600 colleges in India.

- Connecting the technical students with the problems of informal unorganised sectors and grassroots innovators.
- To harness collaborative potential of students across disciplines and colleges to solve persistent problems of our country in formal and informal sectors.
- Explore kho kho model (relay) of product development; the idea is that if one student group has brought the solution of a particular problem to a specific stage, the next group of the same/other department should be able to build upon it and take it forward.
- To pose challenges for students to address unsolved problems of our society. Gandhiji had announced an award of 7,700 pounds (Rs 100,000) to redesign charkha (spinning wheel). Today, the value of this prize will be more than Rs 10 crore. Industry association, government and others can offer attractive prizes for solving those problems which have remained unsolved for so long.
- Developing high-tech capabilities through network platforms so that India

becomes a hub for high-tech outsourcing for the world in future and does not serve only the low-tech needs.

- Promoting both IPR protected and open-source technology and eventually develop techpedia.in into an online virtual sanctuary of innovations and not just an incubator.
- Creating real-time online National Mentoring Network (NMN) to harness skills, insights and experiences of senior tech experts, for mentoring young students. Also, remote reverse mentoring by young start-ups and students.
- Encourage some of the innovations through SRISTI Social Innovation Fund, set up recently to promote frugal and extremely affordable socially useful ideas.
- Leverage policy and institutional changes to make innovation ecosystem more responsive to societal needs and aspirations of young talent.
- Organize summer schools to address specific social challenges so that young students can try to overcome institutional inertia by coming out with new prototypes for removing child labour, enhance women safety or supporting autonomy of physically-challenged people etc.
- Build global linkages so that collaborative open-innovation models, pioneered by the Honey Bee Network, are further diffused among student communities worldwide.

Summer School on Inclusive Innovations

SRISTI has been engaging with children for tapping their creativity to address unmet social needs for over 30 years. World over, children are often treated as a sink of sermons rather as a source of ideas. The children creativity workshops are organized see the societal inertia through the children eyes. They are empowered to do research and identify the unmet social needs, and suggest solution. Later, the engineering and other students take some of these ideas besides others for fabricating solutions for addressing these problems.

Purpose is to generate extremely affordable solutions over next three weeks which improve the quality of life of poor children, women, workers and other disadvantaged social segments. It is possible that solutions developed during summer school may not be fully finished. We will give opportunity to some of the participants or external designer to finish these in coming months in partnership with the potential users.

Even if some of the problems remain unsolved, there will be better appreciation

of the pathways that will not resolve these problems. SRISTI (Society for Research and Initiatives for Sustainable Technologies and Institutions) has organized this Summer School on Inclusive Innovation through open, reciprocal and responsible frame work guided by the Honey Bee Network Philosophy. It is hoped that young students will learn not to be patient with inertia. They may be sharpen their perceptions to learn the transition from samvedana to srijansheelta (empathetic way of creative problem solving).

A palm leaf broom maker has to beat the leaves on a wooden plank mounted with nails to tear a leaf into fine fibres. The drudgery involved in this act drains much of the energy of women who generally do this task.

Similarly, hundreds of thousands of tribals have to crack mahua nut to get the seed out for oil extraction. The construction workers carry brick on their heads straining their necks and spines. Women in Saurashtra and many other regions get hurt while harvesting the fruits from cactus like opuntia growing on the field bunds. Amla harvesting in the forest often involves cutting branches rather than just harvesting the fruits.

These and many other problems have been mobilized by the Honey Bee Network to challenge the young people to design solution to get over the indifference or inertia of formal design and technology institutions.

Every institution in the country will have to take the responsibility of mapping the unmet social needs in their hinterland and address them through student projects and summer and winter schools. Like every initiative that Honey Bee Network has taken, it may take years before policy and institutional reforms follow. The structure of governance in any society cannot remain indifferent to the persistent problems of the disadvantaged people for too long.
Email: summerschool@sristi.org Web: ss.sristi.org

IGNITED MIND

In the memory of Dr. A.P.J. Abdul Kalam, the Honey Bee Network, SRISTI, and GIAN have jointly organized an annual competition of innovative ideas by students. Dr. A.P.J. Abdul Kalam Children Ignited Mind Creativity and Innovation Award competition accepts entries from students up to class 12 and also from school dropouts. This award aims to develop a culture of the "Samvedna" among children to find solutions to the local problems addressing unmet social needs. The idea is to make children aware of the problems and hardships which are faced by common people in their day-to-day life, problems with which many of us have learned to adjust and adopt. It is believed that if children start becoming impatient with social inertia at an early age, it is likely that they will bring about more creative and compassionate changes in the society as they grow up.

SITARE BIIS: Opportunity for technology students to work on grassroots innovations

SRISTI (Society for Research and Initiatives for Sustainable Technologies and Institutions) in collaboration with BIRAC (Biotechnology Industry Research Assistance Council, Department of Biotechnology, Govt. of India) has been organizing a three-week SITARE BIIS (Students Innovations for Translation & Advancement of Research Explorations-Biotech Innovation Ignition School) for validating, value-adding and product development around grassroots innovations since 2017. The BIIS tries to develop solutions for grassroots applications for humans, animals, and agricultural applications including herbal technologies, medical devices, and microbial applications.

Due to COVID-19 pandemic, we have conducted BIIS (BIIS-5: June 8- June 27, 2020, BIIS-6: September 22- October 12, 2020, BIIS-7: December 1- December 21, 2020 and BIIS-8: January 25 – February 14, 2021) course as a webinar, where the prime focus has been to build the capacity of primarily undergraduate students to develop skills in the field of phytochemistry, pharmacognosy, extraction, separation of compounds, microbial diversity screening, pest control, development of extremely affordable solutions for farmers, livestock keepers, pastoralists, human applications, besides patent, biostatistics and ethical guidelines for work on grassroots knowledge and innovations.

The topics for the online course BIIS are designed based on the following fields and as a part of webinar we will assign some projects to the students primarily in five action-research areas drawing upon the Honey Bee Network Database:

1. Pharmacognosy/Phytochemistry - SRISTI's Grassroots database contains many traditional knowledge practices as well as contemporary innovations from across the country. These projects would involve validation/ value addition to these practices. A few of these practices are presented here- http://www.sristi.org/hbnew/honeybee_database.php
2. Soil Microbiology-SRISTI has a Microbial diversity bank containing 8000+ organisms (bacteria, fungi, and actinomycetes) isolated from the soil samples collected during ShodhYatras (learning walks for scouting and sharing innovations and local practices) in different parts of the country (http://www.sristi.org/cms/shodhyatra). An extensive study of screening these isolated microbes for novel human, animal, and agricultural applications would be conducted.
3. Veterinary Medicine- Validation of traditional practices for the improvement of livestock health, nutrition, and productivity.
4. Agriculture- Validation of grassroots practices by conducting trials in the lab, on the station, and in the field for product development/improvement.
5. Medical devices- Value addition/product development of any of the open-source projects listed on our summer school website (http://summerschool.sristi.org/) or medical devices for human and animal health care or meeting any other unmet social needs.

Eligibility to apply:

Students pursuing bachelors programs in life sciences can apply. The student should have a valid ID issued by the Institution/University. A few seats are reserved for post graduates too. In exceptional cases, even school children with interesting ideas may be considered.

The reading material for each subject will be shared with the selected students in advance. The participants would be expected to do literature review before joining the School. These students will be having expert lecture of various life science fields like, microbiology, agriculture, medical devices, biostatistics, phytochemical extraction procedures, live experiments and demonstration of various lab equipment (AAS, HPTLC, HPLC, ELISA, PCR, BSL-I & II etc.) during the webinar.

They are likely to develop a project proposal as well as work plan. These students would receive an expert feedback on their proposals from the reviewers.

The assignment, quiz and work done by students during the BIIS webinar will be assessed on the last day of the school. The outstanding studies (up to 10 per BIIS) may be identified for further support of INR 1 lakh each as SITARE-Appreciation Award Grant. The grantees are expected to conduct further research on the topic given either at home institution or at SRISTI lab.
Above all, students would get an invaluable opportunity to interact with both national and international experts as well as grassroots practitioners/innovators in their respective fields. It is hoped that each participant becomes a volunteer of the Honey Bee Network which has helped in scouting and disseminating rural creativity and innovation over the last three decades.

All the output will be credited to the grassroots knowledge providers and can be published thereafter with prior written concurrence of the BIIS team and knowledge providers.

Highest ethical code of biotech research is expected to be followed. Team spirit and willingness to develop open source solutions will be highly encouraged. Peer learning will be strongly encouraged. The findings will be shared with knowledge providers in local language with the help of SRISTI and Honey Bee Network team. Undergraduate student from life sciences can apply through the link https://birac.nic.in/ gyti_registration.php?scheme_type=23

www.gian.org

Grassroots Innovation Augmentation Network [GIAN]

One of the major reasons why grassroots innovations are not able to scale up in many regions and sectors is lack of handholding support for reducing their transaction cost in leveraging linkages with investors and entrepreneurs. The grassroots innovators cannot often make or present a business plan, nor can they construct scenarios under different assumptions of demand subject to availability of varying capacity for fabrication, manufacturing or development of other products and services. GIAN was set up in 1997 as a follow up of ICCIG (International Conference on Creativity and Innovations at Grassroots) held at IIMA in collaboration with Society for Research and Initiatives for Sustainable Technologies and Institutions [SRISTI] and Honey Bee Network.

The golden triangle for rewarding creativity thus became the purpose of GIAN. The reduction in ex-ante and ex-post transaction cost of innovators, investors and entrepreneurs was to be achieved by several operating principles: Never to ask innovators to come to office, instead provide them support at their doorstep; and organize financial, intellectual property, product and business development and dissemination support.

With a small team and limited funds, GIAN has achieved an admirable track record. So much so that it shared the best incubator award with IIT Madras at the hands of the then President, Dr. A.P.J.AbdulKalam by Department of Science and Technology, 2003. GIAN worked in close collaboration with SRISTI which scouted various innovations for incubation purposes. In fact, the model of GIAN was scaled up in 2000 in the form of National Innovation Foundation [NIF].

GIAN has an independent board and a small team of professionals trying to experiment with new models of incubation, innovation and inculcation of experimental ethic at different levels in society.

Genesis

Being a pioneer is not easy. One has much higher expectations from pioneers. There is no template to copy from and much of learning takes place by doing.

The GIAN was set up in collaboration with Gujarat Government, IIMA and SRISTI besides volunteers of Honey Bee Network as a follow up of ICCIG (International Conference on Creativity and Innovations at Grassroots) held at IIMA. Its only assets were: the commitment of state government to support grassroots innovations from the state to become entrepreneur, access to SRISTI's Honey Bee Network Database of innovations by common people and guidance and support by faculty and support of students from IIMA.

Having got the best Incubator award in 2002? At the hands of then President, Dr A P J Abdul Kalam, jointly with IIT Madras, it made a point. India's first grassroots innovation incubator was a viable pathway to reduce transaction cost of innovators, investors and entrepreneurs. The golden triangle (see fig one) for rewarding creativity, now well known, summarizes the purpose of GIAN, handholding a grassroots innovator in her journey to become a social and/or economic entrepreneur. With passage of time, GIAN has expanded its scope work. It now works with women's groups, tribal communities, students of ITIs and polytechnics particularly women polytechnics besides farmers.

It works in all sectors of human survival and adds value to people's knowledge ín collaboration with other HBN institutions such as SRISTI and NIF. It has an independent board having three additional chief secretaries of agriculture, Industry and rural development departments, independent industry reprsentatives, faculty, IIMA, Director, EDI and Director, IIMA and NID are permanent invitees.

Mission

GIAN aims at sustaining the spirit of innovation, encouraging experimentation and nurturing creativity at grassroots level of knowledge rich economically poor people, students, mechanics, workers, young start-ups by contributing to the creation of a knowledge network. This Network empowers the innovators, stems the erosion of traditional knowledge systems, recognises and augments contemporary innovations, and facilitates diffusion of grassroots green innovations through commercial as well as non-commercial public, private and voluntary channels

Objectives

- To identify socially, economically and ecologically viable innovations from Honey Bee data base which are amenable for scaling up, prototype development, diffusion with or without further value addition.
- To participate in the process of value addition being done by other research organizations in grassroots innovation so that eventual scaling up can be achieved effectively.
- To mobilize resources from regional, national and international private, public and other organizations and high net-worth individuals to strengthen the ecosystem of grassroots innovations.
- To undertake market research, project development, provide design, IP related and entrepreneurial support and help in protection of their intellectual property protection.
- To influence policy at micro and macro level to make it more responsive to the needs and expectations of green innovators so that society becomes more inventive and accommodative of local knowledge systems, innovations and practices.
- To publicize innovations and products through exhibitions, Shodhyatras, media and workshops.
- To organize entrepreneurial development workshops in collaboration with expert institutions for the innovators
- To trigger a rural development process that provides an alternative model of poverty alleviation in a fair, just and dignified manner through local resources, knowledge or otherwise

What does it do?

GIAN provides product development, business planning, innovation augmentation through design and development, dissemination and entrepreneurship support. It supports farmers and artisans, primarily in the informal sector in Gujarat, Maharashtra and Goa. However, it can mobilize innovation from any other regions for application in these states. Likewise, it can disseminate innovations from this region in other parts. It has recently started work with the students of ITI and polytechnic, besides school children. It has set up community innovation labs in one of the government primary schools in Ahmedabad. It has also experimented with community food and nutrition lab so that poor people [but also others] can

get more nutrition out of available food materials for healthier future. It is well known that despite economic growth, many regions in our country suffer from high anaemia among women and malnutrition among children.

How can you support GIAN?

Besides CSR and other kinds of funding support, GIAN will appreciate professionals on short term sabbatical, internship, apprenticeship with innovators or incubators; remote mentoring support, exposure for its staff, infrastructural support, mobile food and nutrition labs for women, community innovation lab, sponsorship for summer and winter schools for inclusive innovation to address the unmet social needs, shodhyatas, etc. GIAN also wishes to join hands with SRISTI in online courses in different languages on how to invent and innovate. GIAN wishes to organize mobile exhibition, also build a stationary centre for inclusive innovations; public books, collaborate in bringing out Honey Bee newsletter started 28 years ago, in different languages.

Trust, transparency and accountability

GIAN is committed to uphold highest standards of ethical responsibility in managing resources and other non-material contributions. GIAN welcomes opportunities for social audit where the people with whom it works evaluate its working and various contributions.

Honey Bee Network Innovation Club

Search

Unless young students go out into the field, villages, urban workshops, slums and other MSME clusters to find out innovations by common people as well as others, they would not know the creative potential that already exists in our country. They can mobilize ideas from school children, college students, roadside mechanics, farmers, artisans, homemakers and others for solving various problems or improving the quality of life through incremental innovations. Every time a hidden innovation is brought to surface, many more people feel encouraged and may start trying to solve problems through their own genius. If every college and university starts mapping creativity in its hinterland, the whole society will bristle with positive energy and unleash tremendous dynamism in the economy. The innovations in different fields such as technology, education, institutions, public services, private enterprises, cultural creativity, governance at different levels, etc., will be documented first in a synoptic way and then detailed documentation will be taken up of the more significant ideas. In different courses, these ideas and documentation can be incorporated as a part of curriculum. The social, cultural, ecological, industrial and institutional connect are extremely important for overcoming possible alienation of people in certain areas.

Spread

Diffusion of existing innovations whether sourced from Honey Bee Network and National Innovation foundation [NIF] or other depositories have to be shared with the local communities in a systematic manner through various creative pedagogies and performances. In fact, searching innovations without sharing may neither appear very credible nor even ethical. In the process of sharing, the students and faculty will themselves become aware of how creative our country is and how limited is the support extended to these people/communities by the formal sector including academia. Such a realization will do more to trigger introspection and generate empathetic culture for blending ideas from formal and informal sector. The students can organize exhibitions, have street theatre performances or follow other means of creating awareness about innovations in the nearby villages, schools, communities, clusters of industry, government departments, etc.

Sense

There are a lot of problems in our society which have remained unsolved for long. Unless we benchmark the persistent problems and try to address them within the means available, we may develop an attitude of living with them indefinitely. Such an attitude will never let our society progress in the long term. Idea here is that students from different discipline should benchmark unsolved problems or challenges in different sectors, at various scales affecting numerous social groups. In technology institutions, third year students can go to both MSME clusters and units and informal rural and urban sector and benchmark the problems to be addressed. They can be given credit for identifying the problem and writing a synopsis on it. In the final year, they can take up projects to address these problems in one or two terms. Accordingly, they can get credit for that too. Practical examples of such a process are given at www.techpedia.in. The innovative solution can be given prizes at university level and also at national level through competition like Gandhian Young Technological Innovation Awards. In social sciences, one can identify gender and other cultural problems and address them likewise through action research approach. Language related students can help improve the linguistics skill of school children and develop innovative pedagogies. If every student develop one lesson for any one topic and for any class, a huge repository of open source local language lesson for school children can be developed to overcome the asymmetry in access to basic education. Different challenges can be sensed and responded.

Celebrate

During the interactions with different social and institutional segment, a lot of outstanding achievers. Will be identified in the hinterland. There may be an outstanding doctor who may have contributed in big way for making the communities almost disease free or a teacher who has created a very rich learning environment in a school or an innovator who has solved a problem or a public or private functionary who has created public goods for larger social development. There may also be outstanding artists, writers or other change agents who need to be invited in the universities to inspire students and create and insatiable desire to excel and serve society.

Honey Bee Network Innovation Clubs can be coordinated by the students under the oversight of empathetic faculty members. Students should have as much flexibility and freedom as possible. They should organize interaction with innovators in different fields and try to add value where possible, help in diffusion, create markets, provide linkage with other innovators and stakeholders and forge a knowledge network

around innovations. They should not remain restricted only with local innovations. They should also mobilize ideas from outside for local development and vice versa. If a few session can be organized in different course to rigorously analyze the heuristics, triggers, motivations, outcomes and ecosystem characteristics, more and more student feel encouraged to take risk and try new ideas.

HBN will support the value chain development in the case of innovations from informal sector and by school children. The mandate of HBN is restricted to support ideas, innovations and outstanding traditional knowledge practices from the unorganized sector by individuals or communities who have not received any professional training or support. The educational, cultural, institutional and other governance related innovations will be pooled by Society for Research and Initiatives for Technologies and Institutions [sristi.org] and linked to various other programmes. In due course, support may be mobilized to give traction to these ideas. At present, the major contribution will be to give voice and visibility to the innovative ideas in various sectors. Volunteers from among faculty, staff and students will hopefully join hands with the innovators at different levels and in different sectors to ensure widest application for creative and compassionate ideas. Collaborative culture is likely to emerge when learning across formal and informal boundaries get reinforced. During the visit of the Hon'ble President, such clubs can be inaugurated and the team of volunteers can be blessed by the President so as to motivate them to excel in search, spread, sense and celebrate the creativity and innovation in our country.

NOTE

Honey Bee Network

Creativiy & Inclusive Innovation Awards
HBN CRIIA

Anyone around the world can A P P L Y!

Submit your

- Ideas
- Innovations
- Prototypes

Do you have any creative & Innovative idea or Traditional Knowledge practice which solves day to day problems faced by us, animals or environment, anywhere in the world ?

Selected ideas and social innovations will be conferred HBN CRIIA Award and also given incubation support

Send your entries to

HBNCRIIA@gian.org or post them to GIAN

Bungalow No.1, Satellite Complex,
Nr.Mansi Crossroads, Satellite Complex,
Ahmedabad – 380 015
Call us at +91 8511600455, 079 26769686

Last date to send your entries is 31 August, 2022

Dr A P J Abdul Kalam Ignited Mind Children Creativity and Innovation Awards 2022

.....Celebrating children as source of ideas and not just

- You can send any number of entries with or without a proof of concept (POC) or prototype, those who have converted their idea into a POC will get additional credit. It is earnestly requested to parents/teachers not to send their ideas in children's name, they can submit their own creative ideas at HBNCRIIA@honeybee.org for separate awards.

- The children from families associated with Honey Bee Network institutions will not be eligible to apply for awards, though they can submit creative ideas.

- The Children should be allowed to share their ideas on their own without any outside tutoring or help.

If you are aged under 19 years and have original technological ideas to solve day to day problems.....send your entries at a sink of sermons!

Email: ignitedmind@honeybee.org
Link: https://bit.ly/ignitedmind2022
WhatsApp: 9313246772

Last date to send your entries is 31 August, 2022

www.sristi.org

sristiinnovation.com

www.gian.org

csir.res.in