

CHILDREN'S WORKSHOP

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Children's Creativity and Innovation Workshop 2017

BY: SRISTI Ahmedabad

DATE: 6th - 7th March 2017

VENUE: Rashtrapati Bhawan, New Delhi

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INTRODUCTION

The First Festival of Innovation organized by the Honey Bee Network consisted of several events at the Rashtrapati Bhavan, New Delhi: the 9th biennial awards to National Grassroots Innovators and exhibition, SRISTI Samman awards to outstanding Traditional Knowledge holders, the 6th Gandhian Young Technological Innovators awards and exhibition, the Global Roundtable Discussions on Inclusive Innovation, and more. The President of India, the Honorable Shri Pranab Mukherjee attended the award ceremonies and the Global Roundtable Discussions.

The Children's Creativity Workshop sought solutions to societal problems in slums around Delhi through the creative ideas of some privileged children from around the country and some underprivileged children (see The workshop was held in the exhibition tent of the Festival of Innovation, thus exposing the children to innovations by children, technology students and people at the grassroots' level like farmers, mechanics, etc.

The children were given an exposure to different solutions to real life problems tried by innovators at the exhibition, and they were encouraged to imbibe the same empathetic values in developing innovative ideas to solve basic problems faced by people living in under privileged areas like slums.

OBJECTIVE

The overall objective of the programme is to develop an operational framework for empowering children to not only articulate their problems but also to find solutions both individually and collectively. This programme will help us understand how young children can be a significant part of the national innovation value chain. The Inverted Model of Innovation implies that children ideate/innovate; fabricators design and companies/agencies diffuse commercially or socially. Involvement of children in solving their challenges will help us understand micro and macro strategies, which can mobilize the creative potential of children around

the world. This may help in overcoming persistent social inertia in developing countries. Thus, children will address: a) The challenges that they face, b) Challenges that the society around them faces and c) Other problems that inhibit the unfolding of their potential. The workshops aim at tapping the dormant creative potential of underprivileged children who probably did not have the courage to articulate their ideas. Likewise, those children and youth who have innovated in some areas may come out with creative ideas in other domains as well.

Students came from different states which includes Nagaland, Haryana, Madhya Pradesh, Arunachal Pradesh, Gujarat, Rajasthan, Maharashtra, Orissa and Delhi. Teachers were also called with students in order to make them understand the objective and procedure of Children's Workshop. The main concept was to spread the word that how young child mind can be channelized to think about innovations and how even a small kid can notice problem with his/ her innocent minds of society which we don't see with more developed mind. They not only feel their problems but also analyze and try to find out the solutions which are sometimes better than a fully developed mind solution for the same problem. This talent of these small children should be taken out through these activities and workshops to impart creative thinking among them.

METHODOLOGY

SELECTION PROCEDURE

The students were selected from all over India. Some of these children belonged to slums of Delhi, while others were the winners of different idea competition carried out during last ten Shodh Yatras.

WORKSHOP PLAN

The workshop was held over two days. The first day involved brainstorming, visiting the displays in the Festival of Innovation exhibition and meeting grassroots innovators, a briefing on field work and then visits to the slums where people still work with hands in this machine-world to earn living. On the second day, the children worked in groups in the exhibition tent, sketching the problems and presenting their ideas to solve them.

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BRAINSTORMING | 6TH MARCH 2017 | VISHWA YUVA KENDRA

BY: PROFESSOR ANIL K GUPTA



FIGURE 1: PROFESSOR - CHILDREN INTERACTION

The preparation prior to the visits to the slums focused on developing creative ideas and gaining confidence in generating solutions. During an 'on the spot idea competition' the children came up with brilliant ideas.

Professor Anil K Gupta addressed the students and said, "We need to sow the seeds of curiosity to develop our country". He mentioned that there is no person in this country who has never experienced a difficulty in his/ her lifetime. But we always learn to live with it and resolve it in our own ways. No one is small or big. Everyone is capable of solving a problem in one way or the other.

Professor told a beautiful real story about how a small village girl came up with an innovative solution of a problem we all must have experienced during our childhood but failed to notice it. The girl named Chhaya resolved the problem of drinking water from taps which used to be at the same heights earlier by providing a solution that they should be installed at different heights. This way the smaller height children can drink water from the lower most tap while the adults can drink water from the taps placed at heights. Thus, every person of every height will be able to access water taps for drinking water.

Professor then said that the first step to identify a problem is to Observe, Draw/ Write, Interact with the concerned person to get more clear understanding of the problem and finally ask questions to oneself to identify the problems. Once the problems are identified, one again needs to ask questions in order to find out the solution for that problem.

Professor said that somethings can only be written, somethings can only be seen and somethings can only be thought.

He ended his session by suggesting that children should work in a group and there should be a variation in ideas like we have variation in our clothes.

BY: CHETAN PATEL

He talked about IGNITE inventions and explained children how they have approached to a particular problem and what was their methodology to resolve that problem. He said that most of the problems taken by these IGNITE students were genuine and very important. Only those who felt such problem thought over it and tried to find out a solution.

He gave instructions for the field visit to children and said that children should first observe the area and try to understand their problems by empathizing with them before jumping to find out the solutions. Further, he asked students to jot down all the problems they think exist in their mind in order to clear their mind spaces for identifying new problems.

Following is the list of few problems written by students:

- The problem is to solve LKG and UKG bench and desk. These children they face problem while sitting in the class, is it possible to solve their problem by having one desk and bench for every student.
- Proper roads, electricity and water problem.
- Disposing Plastic bottle bags is a big problem which is causing environmental problems. This is due to lack of techniques for proper disposal of plastic bottle.
- Some people are not able to guess the fruit if it is fully grown and ripe or not and thus they buy bad fruits
- When something falls behind the cupboard, how can we get it back

- When we are rubbing some written statements on the blackboard, it does not rub properly. Due to this, any user has to rub 2-3 times and it places the shadow black spots on the board so what can be done to solve this problem?
- In train at the night time, the luggage and cell phones get stolen so what can be done for that?
- Stairs of Buses are at a good height for aged people to step in the bus to get in.
- State and central governments implement a lot of schemes for people who are living in rural areas to benefit in every sector of their life but they just remain schemes in papers and never become live. People from rural background never get benefited by them because they are never apprised of such schemes. And because of lack of information they remain unknown to the schemes.
- Projectors work in a dark room. The images displayed in a projector are usually not clearly visible if the room is filled with light so there should be a projector which works in lighted room as well.
- If we forget to switch off the Mic after giving a lecture in conference or some other place and then carry forward a secret discussion with another person in the same room with mic on by mistake. This might become a big problem for speaker. What can be done to solve such a problem?
- Problem of electricity even in this technologically advanced era, there are still some places where people are living in dark and do not have the facility of electricity.
- Many people die because of electrical shock as they don't wear proper safety gears. So there should be an awareness programme to encourage such people to take proper safety measures before dealing with electricity as it can be life threatening.
- Train travelers are usually get bothered by some metal people, something should be done to avoid such people to board the train.
- Problem because of plastic: Plastics are non-degradable materials so there is an urgent need to take proper measures to deal with plastic issue.
- Problem of sound pollution in different events.
- Unemployment problems faced by handicapped people.
- Water pollution: Industries pour all their polluted water into the fresh water rivers and pollute them.
- Forget to switch off their lights and fans when they leave the room.
- People usually use plastic cups for tea and coffee and throw it in the dustbin but instead this cups can be recycled and we plastic table can be made out of it. We need to melt all this plastic cups into container and then spread this melted plastic onto a wooden cardboard after applying oil or oil like substance which acts as a sticking agent between melted plastic and cardboard and let it dry for some time. The final product will be a plastic table.

- There should be some solution to avoid soil pollution caused by thrown away used pens and slippers.
- When we walk, sleepers can create electricity. The Frictional force which gets developed between our footwear and floor/earth surface.
- There should be solution of the problem were phone batteries get swollen up and burst which can injure some people.
- The students who study in school but are poor performers so there should be provision so that they can improve.

BY: BHAVESH PANDYA

He is a person who believes in activity based learning. That's why, he organized some playful activities for students.

- KNOW YOUR STRENGTH:

Activity: Firstly, guess how many words can you speak in a minute and then speak as many words as you can in a minute. Finally, compare your guess with your speaking result. With this activity, it was found that we always underestimate ourselves and don't even try to achieve what we are capable of achieving and settle for less.

Lesson: Don't underestimate yourself and Aim for high goals to achieve high goals in life

- TIME MANAGEMENT:



FIGURE 2: CHILDREN IN TIME MANGEMENT ACTIVITY

Activity: Few children were asked to close their eyes, start counting seconds according to them and stop when they think they have completed 1 min. Then open their eyes and say 1 minute done. The purpose was to know how close their time calculation was to the actual time

Lesson: Only one student calculated the exact time and was near to the actual time of one minute.

At the end of this session, Mr Bhavesh sung songs with students, interacted with them and taught them some tricks which children can implement during field visit.

DAY 1 | 6TH MARCH 2017 | SLUM VISIT & ITS REVIEW

GROUP ONE: TRILOKPURI, NEW DELHI

We met Suleman Bhai at his Shop (35, Haspa, House No: 41, Trilokpuri, New Delhi M: 9811193986). During observation of Field visit at Trilokpuri Children Empathized with Labors who were manufacturing chairs and giving it finishing.

List of Problems observed by children:

- Bending of wood
- Bamboo Cleaning
- Waste of gas in Flaming during bending of wood.
- Fear of hurting their fingers when labours sharpen the strips of Wood (Bamboo Strip).
- The process of sharpening was time consuming.

Then children met decorators over there who were working on dust cleaning, washing and drying of carpet manually which were used in several events.

List of Problems observed by children:

- They were dust cleaning the dust by using broom. So the problem was that they were not able to clean the dust completely even when they were cleaning it in open ground where most of the time dust came from environment. After washing, they did not have enough space where they can put all cleaned carpets.
- Along with that, children also observed the problems of manual labours who were working with wood
- There were some other common problems of electricity, water etc. which children noticed during the field visit

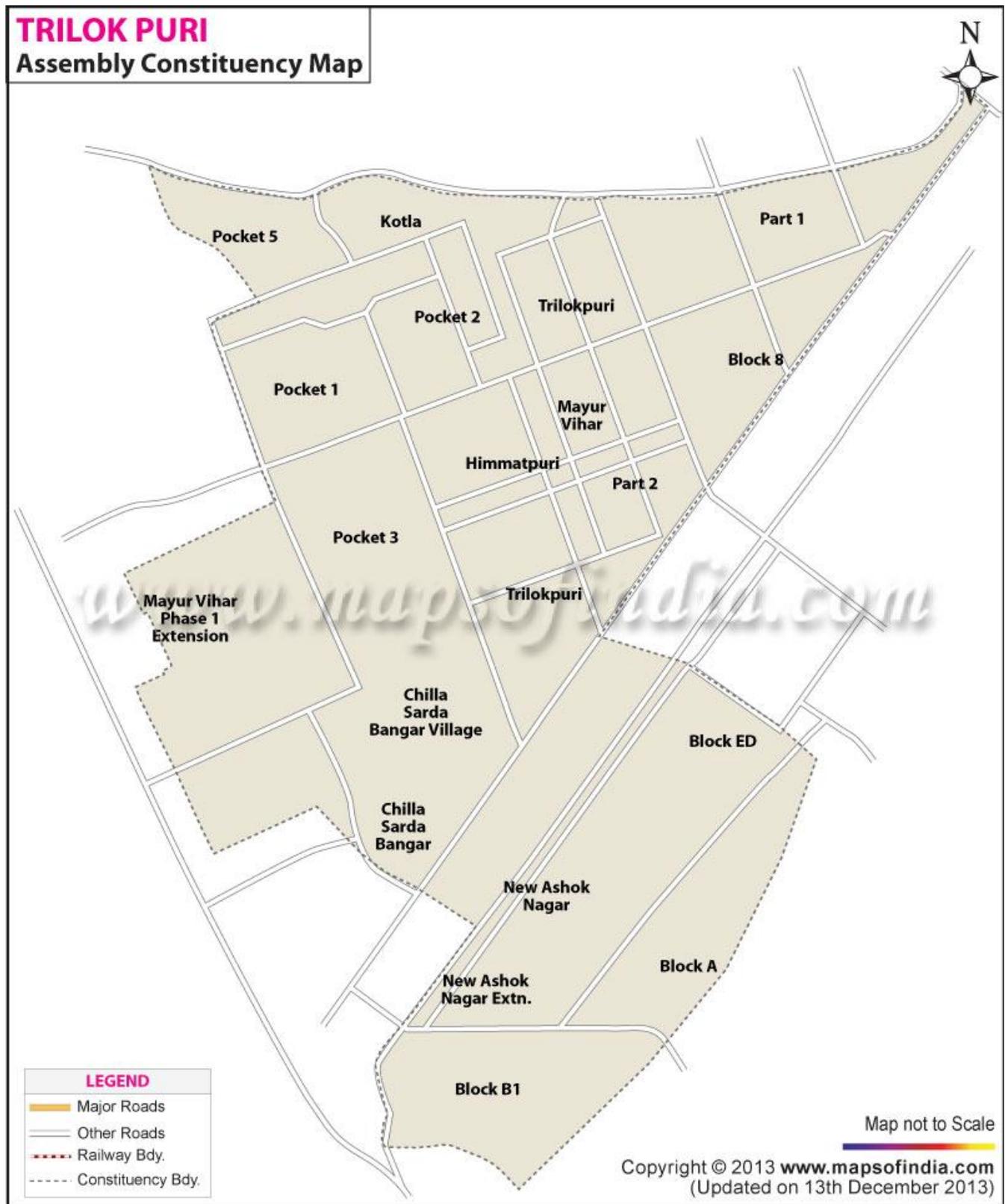


FIGURE 3: MAP OF TRILOK PURI



Manual labour work with wood



Manual labour work with wood



Manual labour work with wood



Manual labour work with wood



Group Photo

FIGURE 4: TRILOK PURI FIELD VISIT PHOTOGRAPHS

GROUP TWO: SEELAMPUR, NEW DELHI

On the first day of the children’s workshop and field trip, 15 children and their 13 mentors on Monday, 6th March, 2017 visited the place which is called Seelampur. It is 14 kms away from Vishwa Yuva Kendra, New Delhi.

Seelampur, formerly spelled as ‘Silampur’, is one of the three main sub districts of Delhi and predominantly known as a residential area dotted with small market places and general stores. Seelampur mainly falls in the rural zone of Delhi and it is divided into two parts named Old Seelampur and New Seelampur, further divided into different blocks. There are around 100 households and 1000 people in the community in which fact finding was done. The primary health center is Jagpravesh Hospital which is approximately two minutes away from the main entry. The local dispensary is the Seva dispensary. The women in the community often lack basic needs, like clean drinking water, sanitary issues, waste disposal etc. They live in a crowded area. None of the women who were interviewed had received benefits under maternal health scheme. Most of the women fear delivering at a health institution, mainly government hospitals, due to the physical and

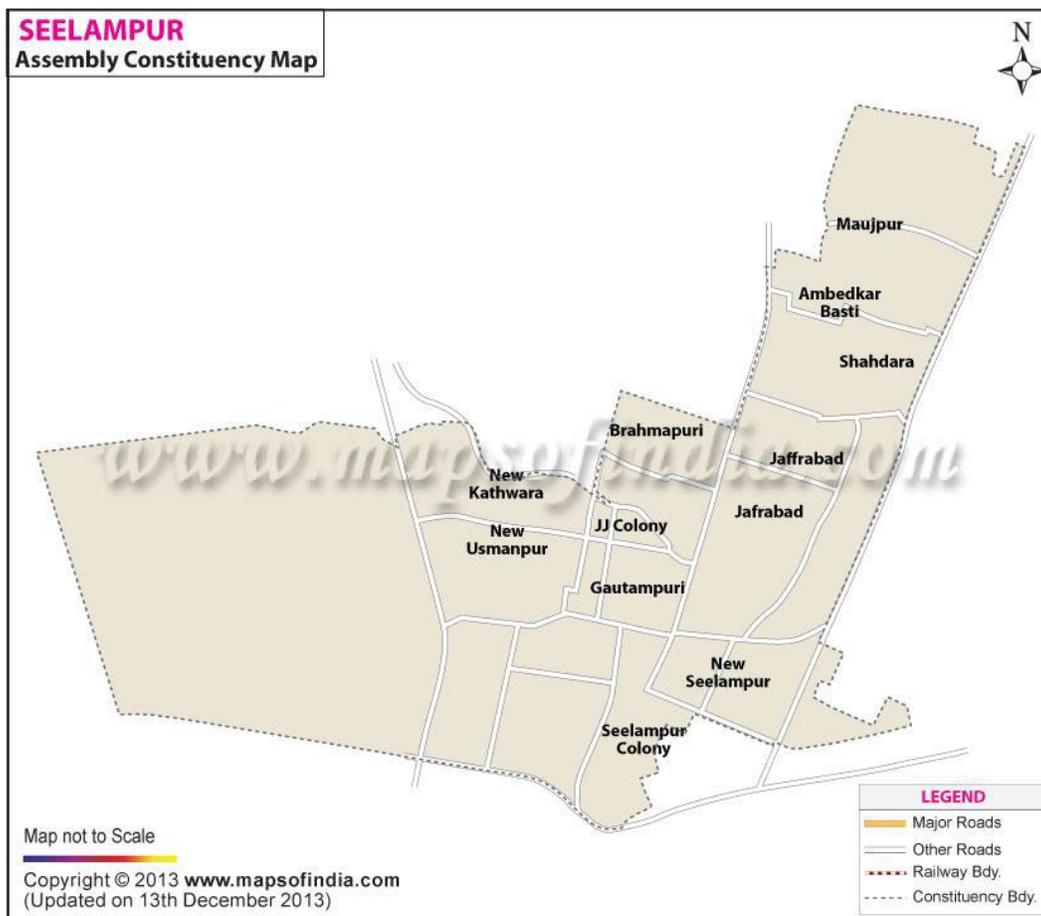


FIGURE 5: MAP OF SEELAMPUR

verbal abuse they receive from the staff. Most of the children haven't been vaccinated, monitored for growth, or had any health check-ups. Most of the women lack access to antenatal check-ups. It was very busy and crowded area, having a lot of shops and people moving here and there. Then we started walking through the crowd about 1.5 km.

POPULATION					
Seelampur	Area	Population	Total	Number of Households	Size
1.	Rural	38,382	9,20,125	6,802	5.6
1.	Urban	8,81,743		1,53,014	5.8

Then children visited a wooden furnishing shop. This shop consisted of a lot of equipment, tools and various other machines for making sets of frameworks or sets of furniture for dining table legs and photo frames. The group along with the coordinators visited the locality of Seelampur. A lot of small scale businesses were observed here like furnishing of wooden objects, making wooden tables, photo frames etc. But along with that, there were a lot of houses on the side of the road having solid and bodily wastes. The children started asking them different questions about their lifestyle, routine-life, work-process and working conditions. At first, some of them were reluctant to answer but eventually they started sharing their experiences about their work, daily routine etc. In one of those shops, one person was making wooden photo frame. There was one worker working on a square and different shaped wall hanging photo frames. Firstly, children asked the worker whether he faces any difficulty in making these photo frames, wooden tables etc. The children noted down the worker reply that he doesn't face any difficulty. Secondly, a child from Nagaland asked about the process of making photo frame and tables of wood. Different workers gave different answers. Children noted down all the answers and observations in their note pad.

The observations made by children from the field visit at Seelampur are listed below:

- The work was distributed according to skill and required specialization. Most of them had a low educational background and they were trained right from their childhood for such hand-labour.
- One of the major problems was that while making bowls or buckets of plastic or other wooden items, a lot of waste gets accumulated in the shops.

- Children got interested in knowing the process of making bucket of plastics and spent some time with the workers to understand the process of bucket making. Children noted down the process in order to see the problems faced by the workers during the process.
- Also, at the shop of making wooden photo frames, there was wood-dust everywhere i.e. on the floor, at the ceiling. Along with that, waste wood pieces all over the place.
- Children observed that making of wooden table's leg is a difficult task and its design is very complicated.
- Also, furnishing and cutting of woods to final products lead to injuries (this was told by workers of the shop).
- The ready-made sofas were furnished at one of the sofa making shop.
- There was one shop which was making various card-board boxes and was full of garbage. These boxes were cut into specific shapes from a square box as raw material. Other remaining left part was thrown at one side of the shop. These boxes can be used and recycled (An opinion expressed by a child of this group).
- Also, at the box-shop, cutting machines used a huge blade which was uncovered or unsafe and was manual. So, children had a lot of ideas of making it by using motor or by bicycle or making a shelter for its safety.



FIGURE 6: SEELAMPUR FIELD VISIT PHOTOGRAPHS

GROUP THREE: NIZAMUDDIN, NEW DELHI

The first group went to Seelampur, New Delhi for field trip. 12 students were divided into 2 groups of 6-6 students along with their coordinators. They visited the locality of Nizamuddin where they saw many hand-laborers who worked on Patthar ki kamgiri which are being further utilized in big monuments like the Taj mahal, the Red fort etc. Very unique things were observed by students and their coordinators. There were sewing machines for stitching clothes. The stitched clothes were then embroidered by hands. This work was done on one-side of the home while the other side of the home was utilized by other members for daily household chores. The children asked them different questions about their lifestyle, work-process, working conditions, problems faced on daily basis etc. At first, some of them were reluctant to answer but gradually they started sharing their experiences about their work and the process. The students then went to other part of this area where they found people working on binding books by hands as well as by machines. The students keenly observed people working in different sectors of this area and asked questions, tried to understand their problems and noted it down in their note-pads. Many photographs were taken during the trip which showed the condition of these labors.

They observed all the things in a group of 4-5 Children so that they can watch, analyse and can resolve their doubts with the current opportunities where they can interact with the real-time workers.

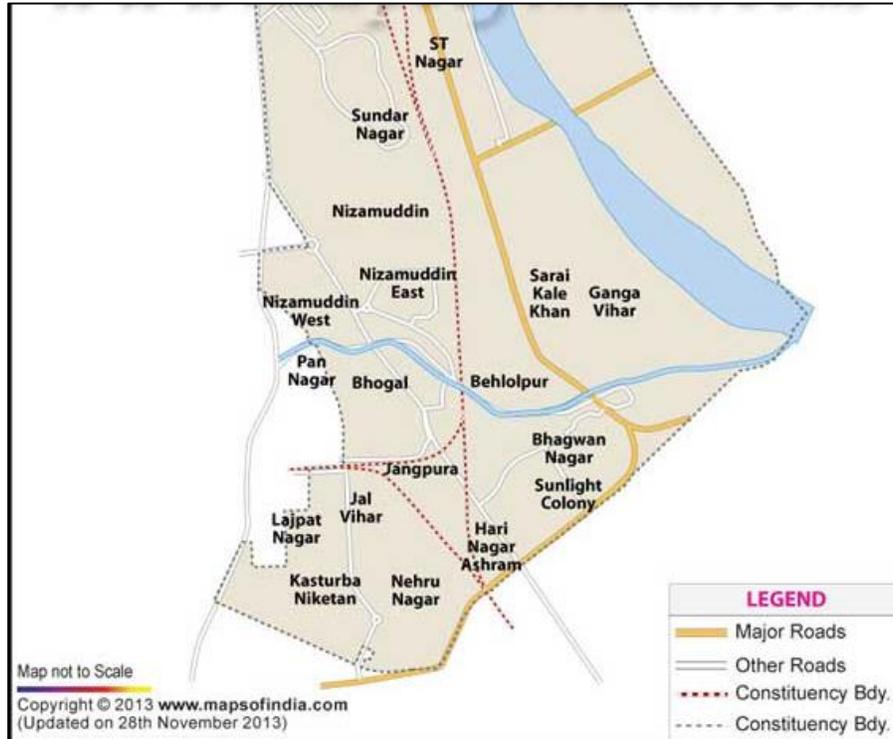


FIGURE 7: MAP OF NIZAMUDDIN

Some of the moments that were captured on that day are shown below.



Group Photo

Children interacting with women tailors

Children observing men working with soil

Man giving shapes to stones

FIGURE 8: NIZAMUDDIN FIELD VISIT PHOTOGRAPHS

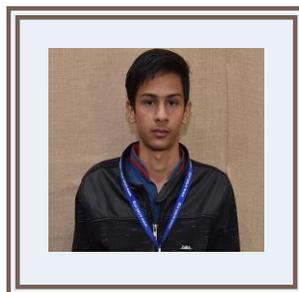
DAY 2 | 7TH MARCH 2017 | PRESENTATION OF SOLUTIONS

GROUP ONE

MEMBERS



NEHA SHARMA



RAHUL VASHISTHA



HARI KISHAN



TEJAS



SAMEER RAMTEKE



VIDHI R.



RAMBABU



ADIL KHAN



MEHAK KAMBOJ



RAMZAN



LI JINGLE SANGTAM



DEHDILLILA

FIGURE 9: PHOTOGRAPHS OF CHILDREN

1. GROUP WORK | NEHA, RAHUL & HARI KISHAN

1. PROBLEM: Wastage of gas while moulding the wood

SOLUTION:

There should be a sensor attached to this burner which senses the wood piece in close proximity and starts flame while stops as soon as the wood piece is being taken away from the burner. This will prevent the loss of gas used in this burner

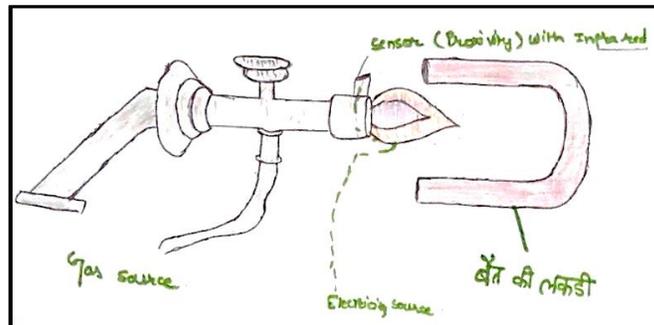


FIGURE 10: BURNER WITH SENSOR

2. PROBLEM: When the tent house worker's wash their carpets in canal, they waste a lot of water and time in doing that task. Not only that but this pollutes the canal water as the soap and detergent used to wash these carpets gets mixed with canal water.

SOLUTION:

There should be a water sprayer through which water can be sprayed on these carpet with a lot of pressure so that the dirt gets removed by it. This will save a lot of water and time of the workers.

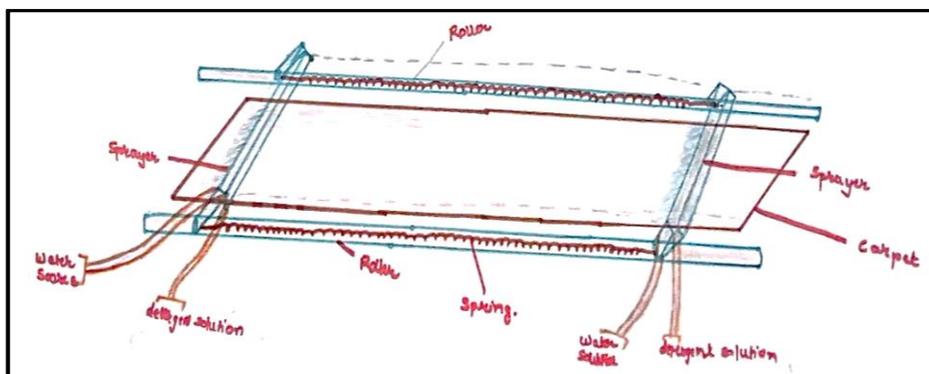


FIGURE 11: CARPET WITH WATER SPRAYER

3. PROBLEM: CO₂ released from the industries and other workshops pollute the environment

SOLUTION:

There should be a CO₂ separator attached to all the exhaust and chimneys as shown below in order to prevent CO₂ release in the environment.

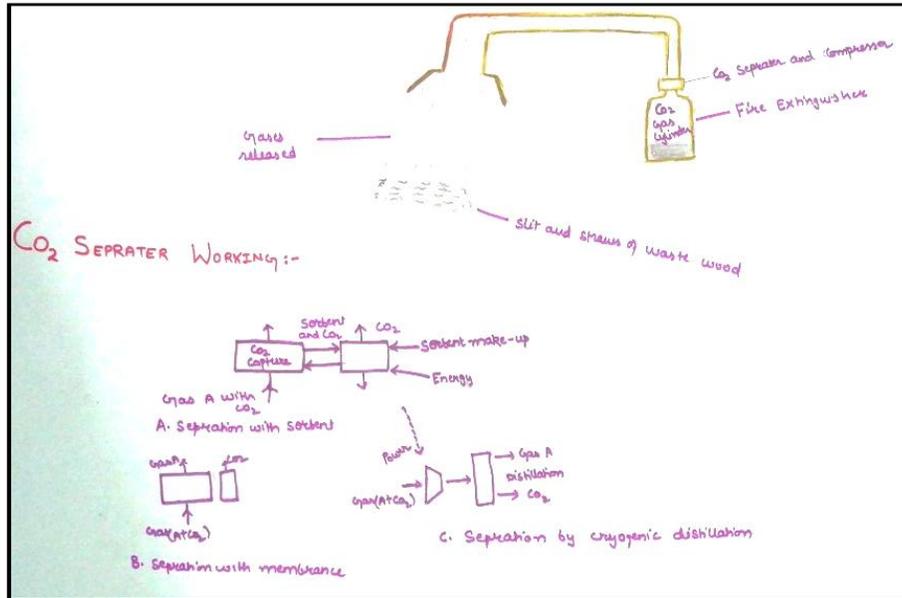


FIGURE 12: CO₂ SEPRATER

2. GROUP WORK | SAMEER & VIDHI R.

PROBLEM: Some hand workers were making wood crafts. While making these wood boxes and other things from wood, they were peeling the wood upper layer in order to provide finishing to the wood using hands. This is dangerous as these workers might get injured and their hands start aching after some time. Along with that, it is a time consuming process.

SOLUTION:

Take a table and make two holes on its 2 shorter sides which are opposite to each other. Attach blades in both these holes and fix a motor with a belt which will help in forwarding the wooden piece from one side to the other side. One side blade will peel the upper layer of wood and after it reaches to the other side of the table where second blade is present, this blade will provide finishing to the wood. This will save a lot of time of these workers and will prevent the hand injuries.

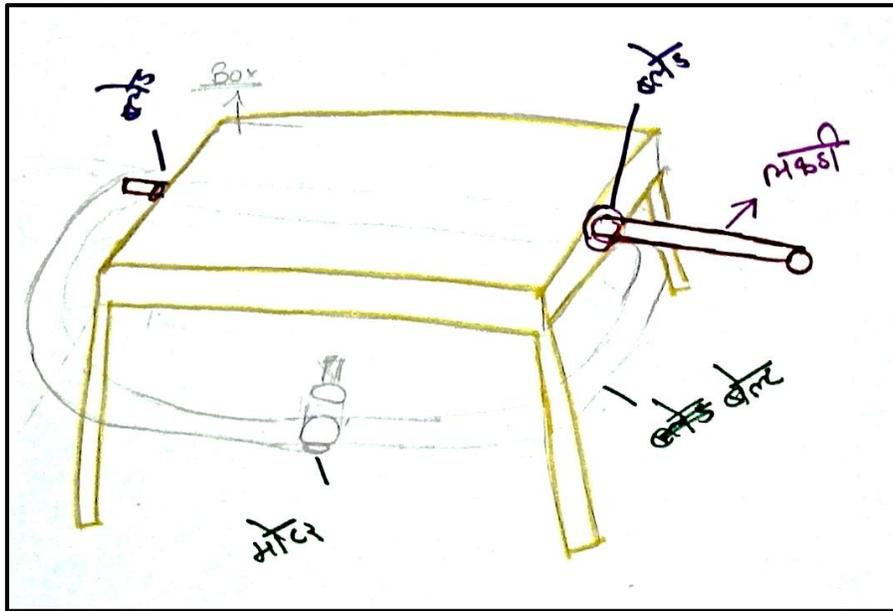


FIGURE 13: WOOD PEELING & FINISHING TABLE

3. GROUP WORK | LI JINGLE, DEHDILLILA, ADIL, ANANG & RAMBABU

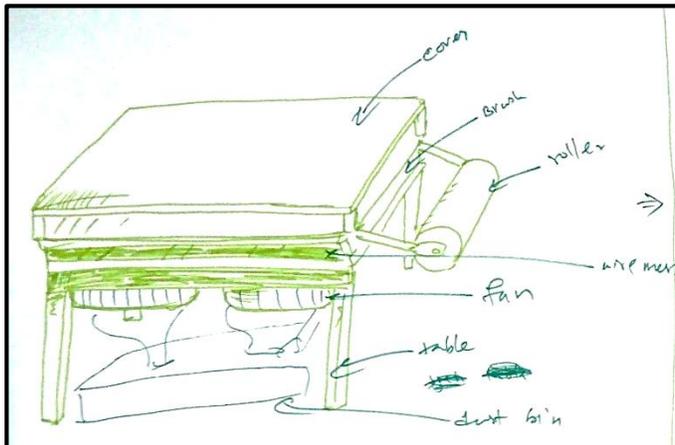
PROBLEM: A lot of dust is being inhaled by the workers while cleaning the carpet which can cause lung diseases

SOLUTION:

The table shown below minimizes the number of dust particles coming from carpet into the air which further are inhaled by the workers causing them lung diseases. Along with that, it will also increase the cleaning efficiency of the carpet. It consists of five layers:

- It is for covering
- It consists of the brushes which will scrape off the dust
- It is the wire mess, the dust will pass through it
- It consists of suction fans which will suck the dust particles coming from the wire mess
- This end layer will consist of a dust bin where the dust sucked by the fan will be collected

This will act as home-made vacuum cleaner



Compact View

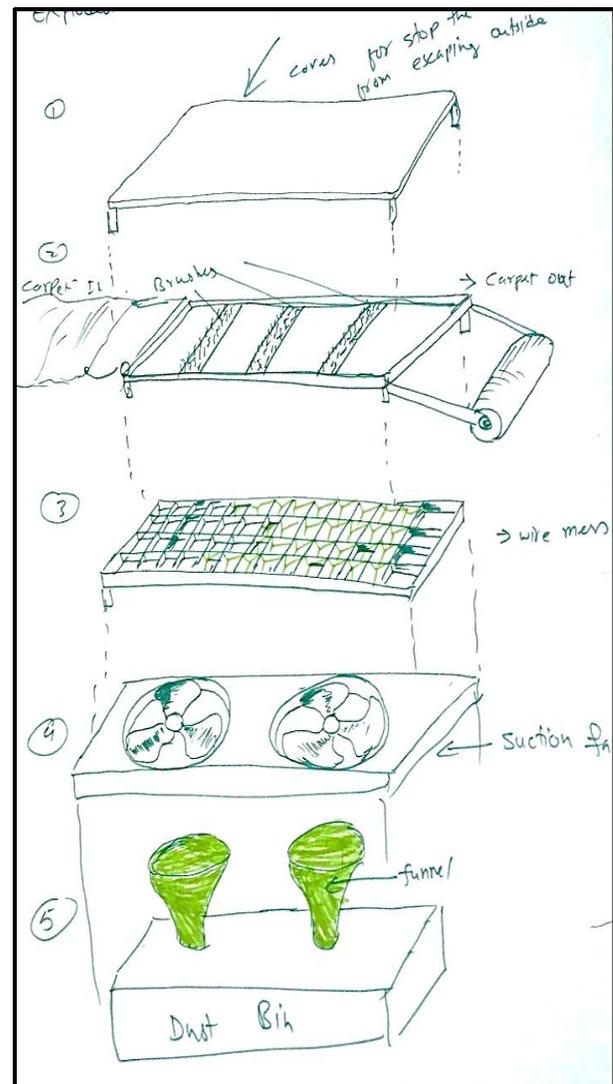


FIGURE 14: HOME-MADE VACUUM CLEANER

1. INDIVIDUAL WORK | TEJAS

- 1. PROBLEM:** Workers make mat with bamboo sticks. These bamboo sticks are again hand-made with a small blade. While making these small sticks from bigger pieces, there is a chance of finger injury.

SOLUTION:

In order to avoid this, the hand-punch which people use should be equipped with blades on top of it which will help in making these sticks. This will increase the speed of these workers as instead of using one blade, now they will be using four blades and thereby making four sticks at a time.

SOLUTION:

There should be an arrangement as shown in the figure where people are standing in the vertical direction on different floors and the load can be passed like relay but in vertical direction.

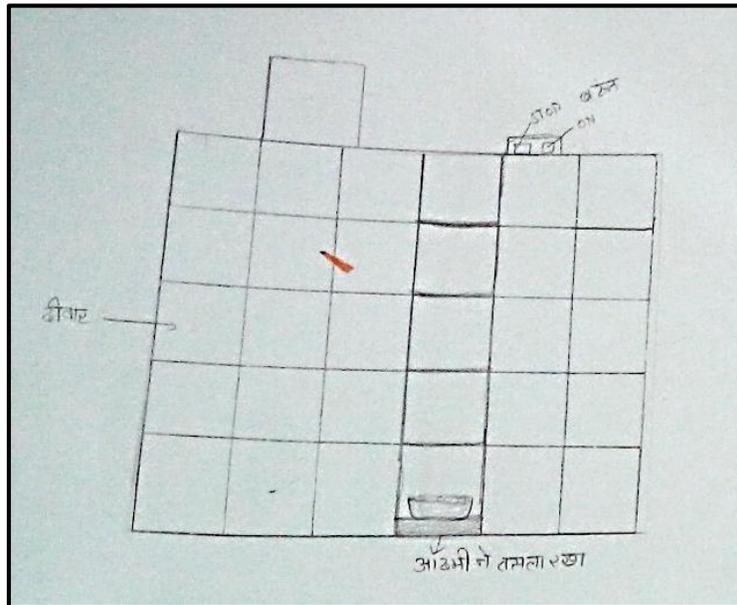


FIGURE 17: PROTOTYPE

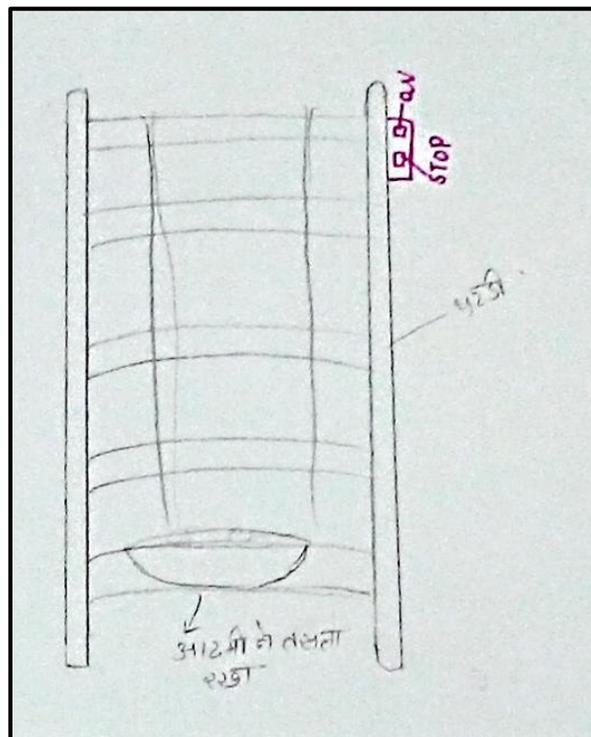


FIGURE 18: PROTOTYPE

3. INDIVIDUAL WORK | AFFAN

PROBLEM:

1. Apples of different varieties are not being identified. People are fooled by fruit vendors and lose a lot of money without getting quality
2. Problem in bending the wood
3. No tool to make different sizes of wood pieces

SOLUTION:

1. All the fruits must contain different stickers which should represent the quality of that fruit and the price should be decided accordingly. This way customers will not be fooled by fruit vendors and these vendors cannot ask for high price for a low quality product
2. This is a tool to solve the be
3. This tool will help in cutting different pieces of wood with the same machine with accuracy of different sizes and shapes. Thus, the worker doesn't have to measure the wood pieces again and again. Thereby saving a lot of time and energy.

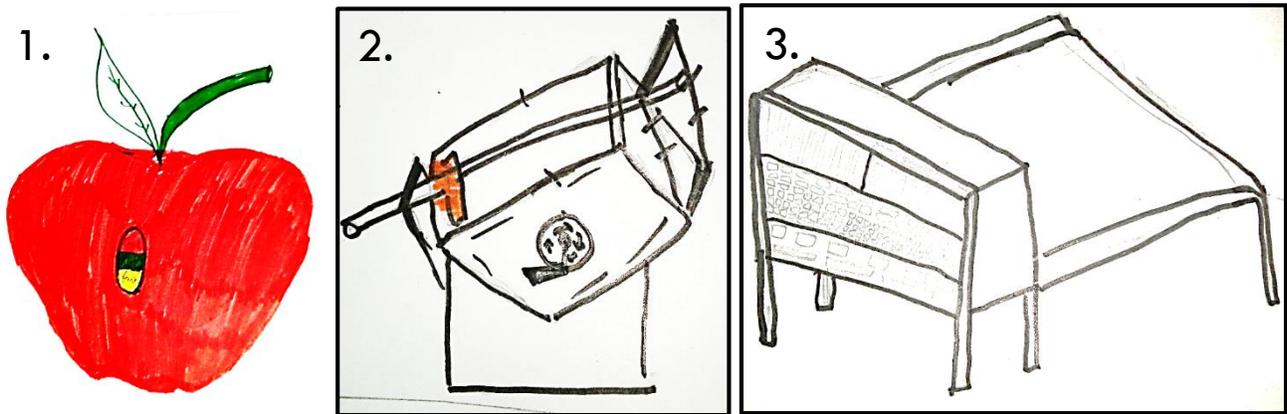


FIGURE 19: PROPOSED PROTOTYPES

4. INDIVIDUAL WORK | MEHAK

PROBLEM: Carpets are very heavy and cleaning them is a tedious and tiring job for these workers

2. PROBLEM: No light while stitching

SOLUTION:

The sewing machine should be equipped with light at the place where the needle is there so that the tailor will not require any external light and there will be less stress on the eyes.

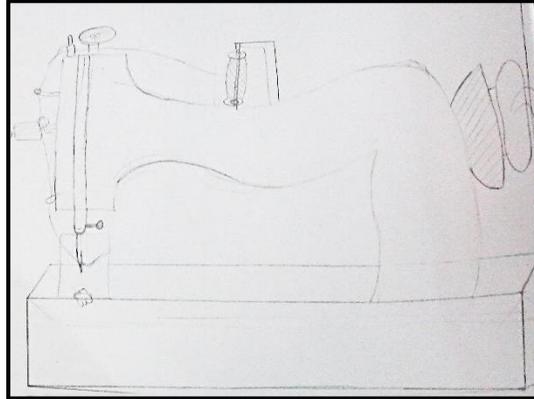


FIGURE 22: ADVANCED STICHING MACHINE

6. INDIVIDUAL WORK | VIDHI

3. PROBLEM: Cool drinking water while travelling in summer

SOLUTION:

A bottle can be made of sand just like earthen pot with a handle which we can carry with ourselves for cool water

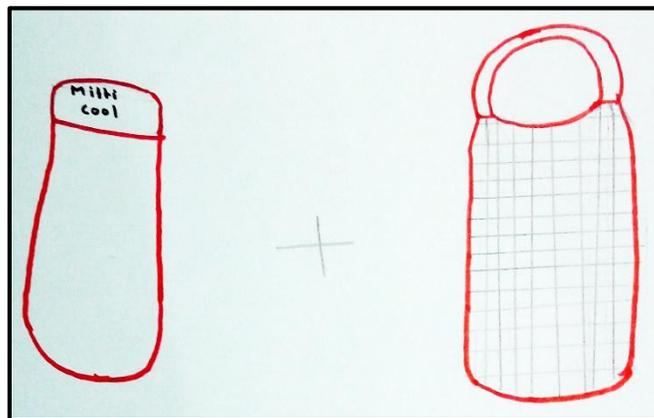


FIGURE 23: MITTI COOL

7. INDIVIDUAL WORK | RAMZAN

4. PROBLEM: Burglary issue in buildings**SOLUTION:**

The wall should be equipped with electric current in order to avoid burglary cases.

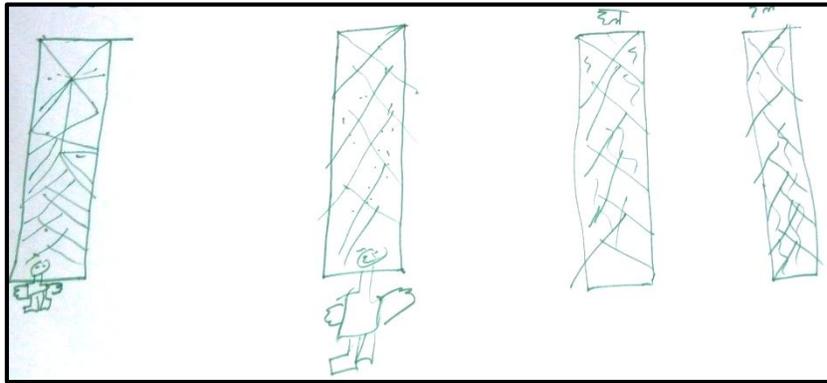


FIGURE 24: WALL WITH ELECTRIC-CURRENT

GROUP TWO

MEMBERS



NIMA TADAR



NIDA



LIDILA SANGTAM



SWALIHA



DURGI MAJNI



THSAJUNGLILA



SALONI MEENA



VAISHALI MEENA



NIJBA SAYYED



DEEPAK



MUSKAN



MOHMMAD



SANDESH



SHUBHAM



ASIF KHAN

FIGURE 25: PHOTOGRAPHS OF CHILDREN

1. GROUP WORK | DEEPAK, NIMA, DURGI, MOHAMMAD, KAMRAN, VAISHALI, SALONI, NIJBA and MUSKAN

PROBLEM: Workers do not have any machine to make shapes from stones, sand or tiles

SOLUTION:

The figure shows the proposed prototype for giving different designer shapes to stones, sand and tile. The raw material will be inserted from one side of the machine. The middle part of the machine will consist of molds with blades of different shapes. The raw material will either get cut or molded into different shapes according to the material and the final product will come out from the other side. This will be collected in baskets.

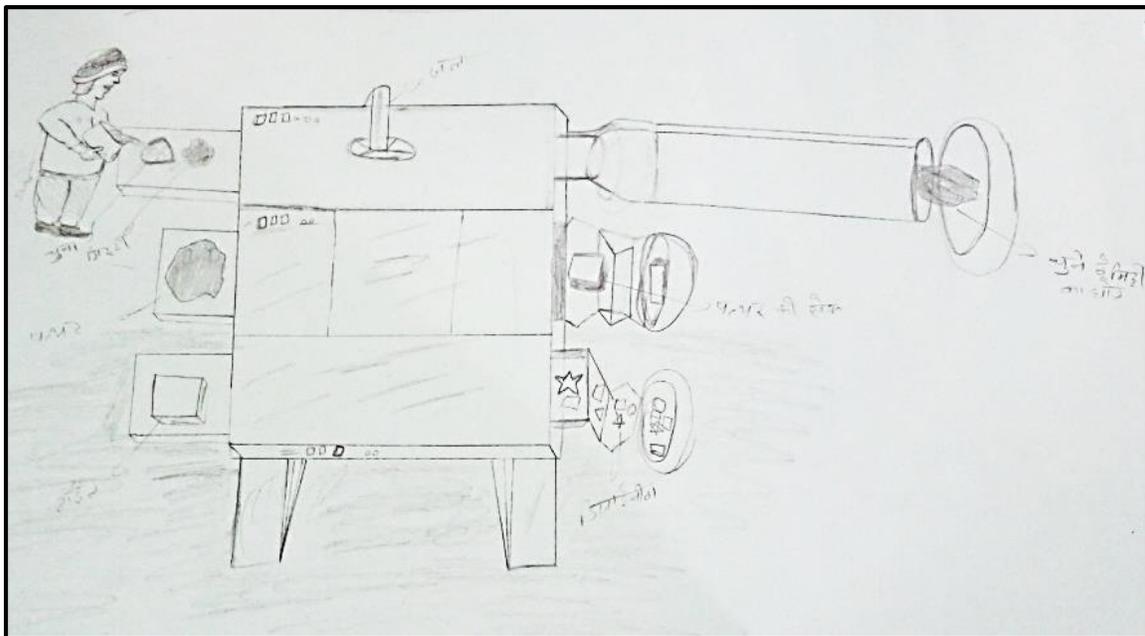


FIGURE 26: SHAPE CUTTER PROTOTYPE FOR SAND, STONE OR TILE

2. GROUP WORK | NIDA, LIDILA and SURBHA

PROBLEM: Workers find it difficult to cut stones at different angles with same accuracy and precision to give same shape

SOLUTION:

A machine was developed to overcome this problem. It consists of blades of different shapes. It will not only make their tedious task easier but also less time consuming. Along with that, it will also provide better accuracy and precision. Thus, workers will be more efficient and thereby more profit can be gained.

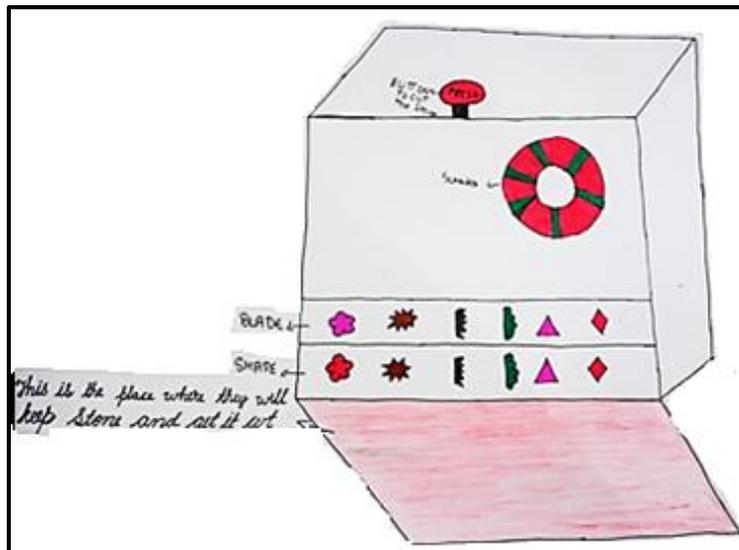


FIGURE 27: STONE CUTTER

3. GROUP WORK | ASIF, SANDESH and SHUBHAM

PROBLEM: Workers were carrying heavy baskets on their head. This was a tiresome job. Workers were also having pain in their heads because of heavy weight.

SOLUTION:

A basket was designed such that it has legs attached to it which consists of loops at one of the end. These loops will rest on shoulders. Thus, all the load will come on shoulders and it will be divided into two parts (left and right shoulder). Thus, because of distribution of weight equally in two parts. The head will bear less weight and the workers will not have any pain in their heads.

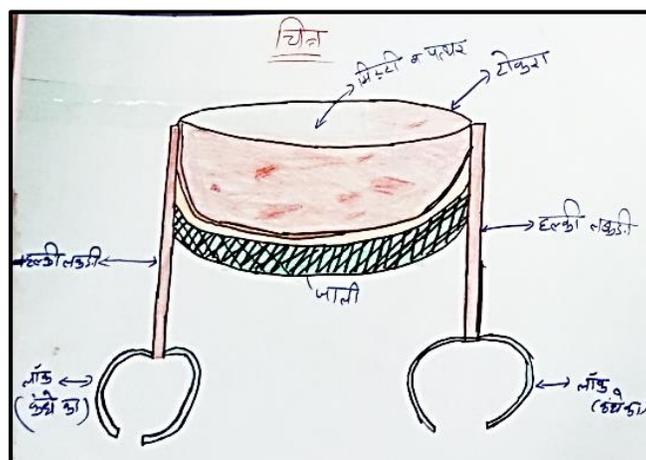


FIGURE 28: LOAD BEARING BASKET

4. GROUP WORK | VAISHALI, SALONI and NIJBA

PROBLEM: Same shapes of stones

SOLUTION:

There should be molds to cut stones in order to obtain same shape and size stones as shown below.

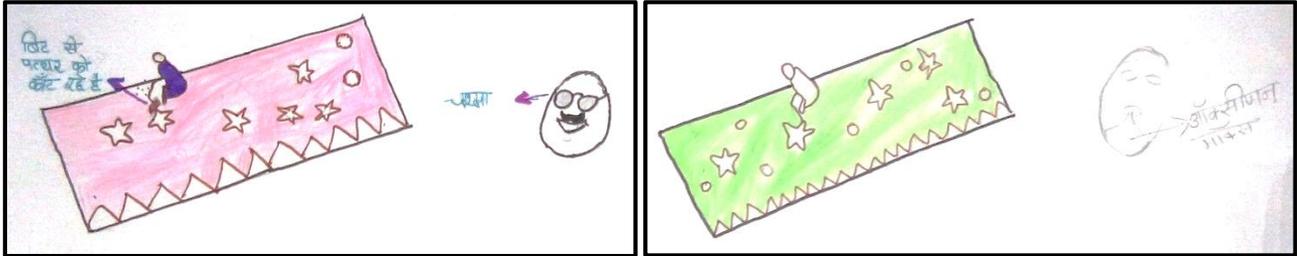


FIGURE 29: STONE SHAPE CUTTER MOLDS

1. INDIVIDUAL WORK | DEEPAK

PROBLEM:

1. Workers take almost a day to make different designs with stones

SOLUTION:

The below figure shows the machine which operates on solar energy, thereby having low cost operation. It consists of a rotator and different shapes' mold with blades attached to it at one end. When this machine will operate, these molds will act like stamps which will imprint the shape on stones or tiles and blades will cut that stone or tile into the imprinted shape.

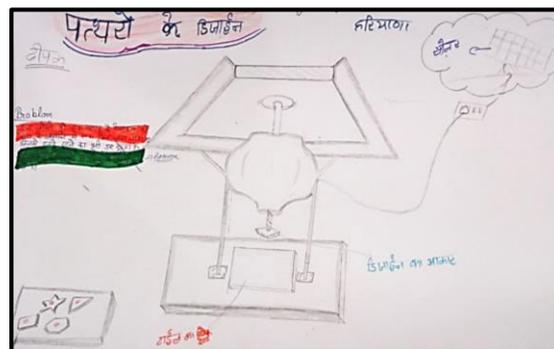


FIGURE 30: STONE SHAPING MACHINE

2. There was problem in cutting the stones in small size with precision

SOLUTION:

The machine will cut the stones in small pieces of same size which will be collected at the end side of the machine. The stone powder will have a separate outlet to facilitate smooth running of the machine.

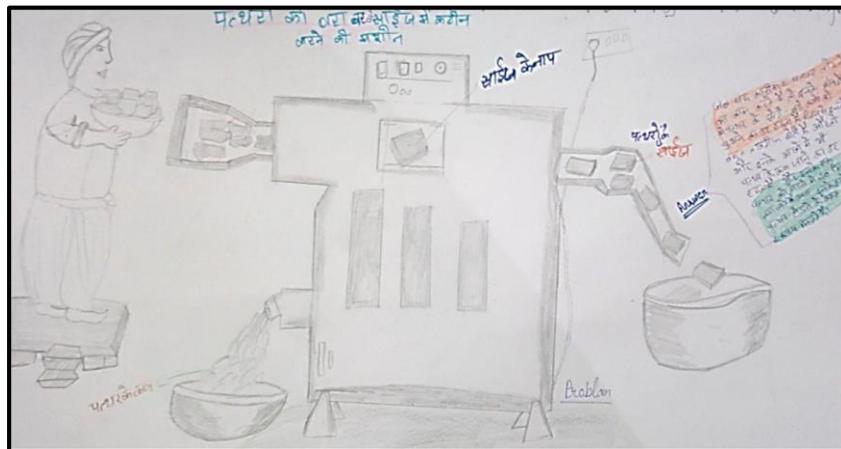


FIGURE 31: STONE CUTTING MACHINE

2. INDIVIDUAL WORK | KAMRAN

PROBLEM: Garbage all around the dustbin

SOLUTION:

The dustbin should contain sensors which can sense if there any of the waste falls down from the dustbin and starts buzzing. This buzzing should not stop until someone again puts the waste that fell outside the dustbin in the dustbin.

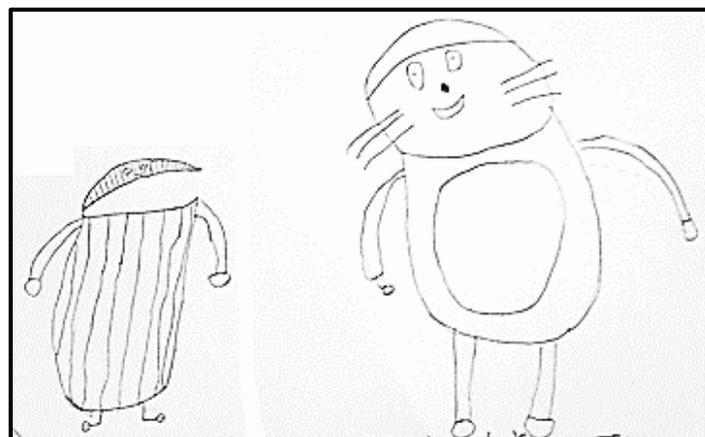


FIGURE 32: SMART DUSTBIN

3. INDIVIDUAL WORK | MUSKAN

PROBLEM: A lot of stone dust goes into workers' eyes while cutting the stones. Along with that, they also have to put a lot of energy in doing this task. Sometimes, the whole tiled design breaks, thereby destroying their efforts.

SOLUTION:

This is an electronic machine. It consists of 2 motors with 2 big blades. This will help in cutting the stones, protecting the eyes of workers and making this complex task easier in less time.

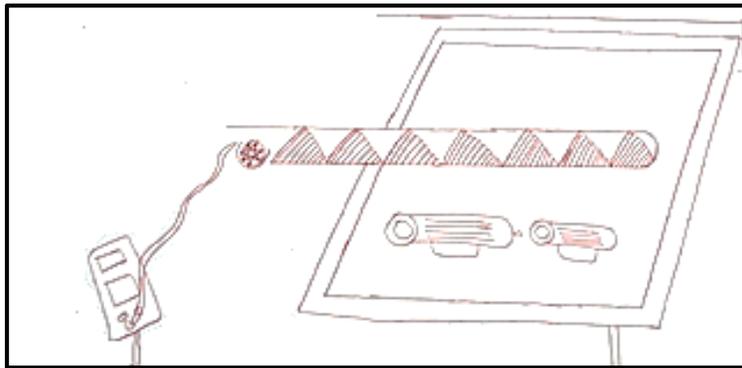


FIGURE 33: ELECTRONIC STONE CUTTER

4. INDIVIDUAL WORK | KAMRAN

PROBLEM: Body-ache issue while cutting stones

SOLUTION:

The stones should be cut with the pulley based stone cutter as shown below in order to reduce manual labour. This is also a cost effective model.

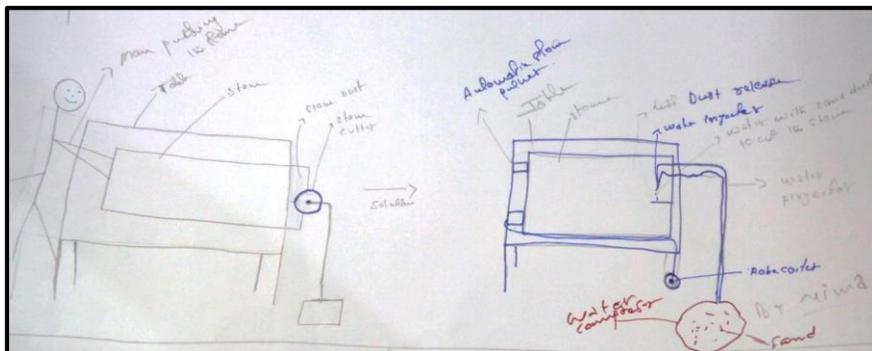


FIGURE 34: PULLEY BASED STONE CUTTER

5. INDIVIDUAL WORK | THSAJUNGLILA

PROBLEM:

1. Workers face problem while putting thread in the needle as there is no less light

SOLUTION:

There should be a led attached at the place where the needle is there so that workers do not face problem of less light and can put thread easily in the needle. Also, it will help in stitching of clothes and making designs on clothes.



FIGURE 35: LIGHT INDUCED SEWING MACHINE

2. Chalk powder dirties the hand and its dust goes into breath which is very harmful

SOLUTION:

Usually the chalks which teachers use makes their hands dirty. Also, it gets in our breath when they write with it on boards. Below shown is the chalk cover with the height adjustment arrangement. Thus, it will prevent the chalk particles to be inhaled by the user and will prevent the hands from getting dirty.

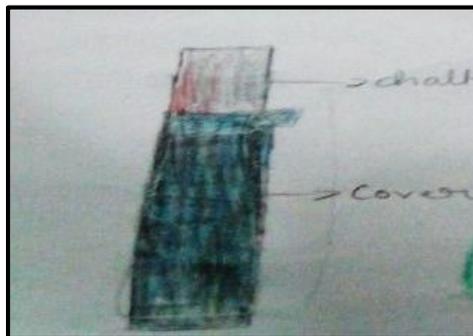


FIGURE 36: CHALK COVER

6. INDIVIDUAL WORK | DURGI

PROBLEM: Workers use nails to design the stones which can lead to hand-injury as well as it is a very time consuming process

SOLUTION:

There should be a machine consisting of different shapes which can be used to design the stones

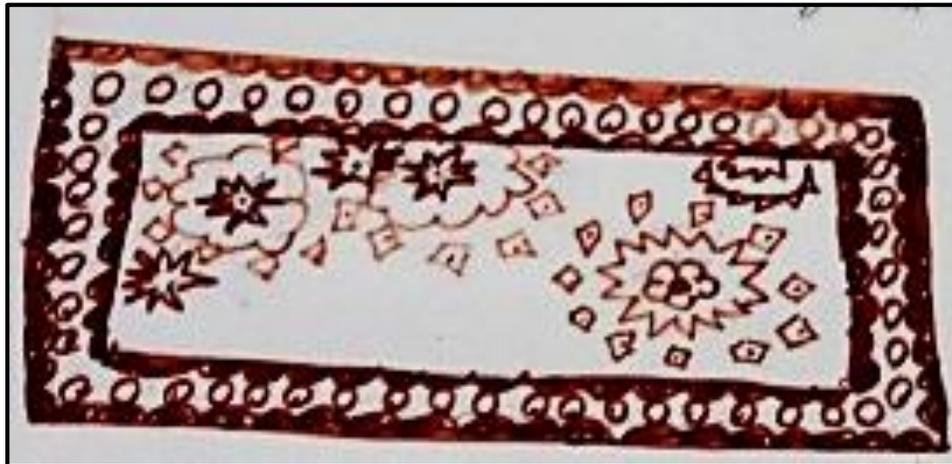


FIGURE 37: STONE CUTTER

GROUP THREE

MEMBERS



SAAMLINA



MEHAK



SABITA



SAKSHI



RUBI



VISHAL



SUNARAM



MANDEEP



ROHIT



LUKMAN



AHMAD



CHAMAN



MINGA



AKHUMLA



SEZI



SWALIHA

FIGURE 38: PHOTOGRAPHS OF CHILDREN

1. GROUP WORK | ROHIT, CHAMAN and MANDEEP

PROBLEM: When people throw garbage in the dustbin, sometimes it doesn't enter the dustbin and falls outside it. But usually, people don't pick that up but leave it there.

SOLUTION:

There should be a dustbin which will sense if the garbage thrown has fallen inside or outside the dustbin. In case if the garbage falls outside, the dustbin should have an alarm which will warn the person throwing garbage that the garbage is not at its right place. The alarm should continue ringing till the garbage remains outside the dustbin.

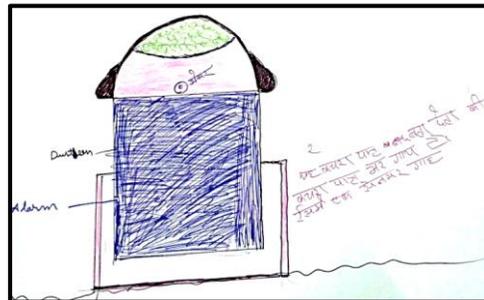


FIGURE 39: SMART DUSTBIN

2. GROUP WORK | VISHAL, RUBY, SAKSHI, MEHAK and SAAKIMA

PROBLEM: It is difficult to join two stones for a complex design

SOLUTION:

The machine consists of a mixture used to paste two stones together. This will not only help in pasting two stones together but also prevents hand injury. There is an iron box which will help in preventing hand injury.

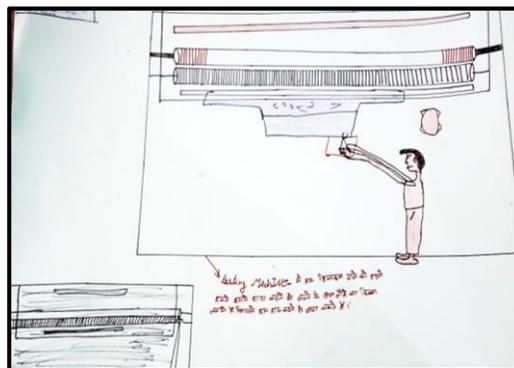


FIGURE 40: PASTING MACHINE

3. GROUP WORK | RUBI, SAKSHI and SABITA

PROBLEM:

1. Carpenters usually need a work table for their work

SOLUTION:

There should be a folding table which can be turned into a suitcase. It will have multiple use. Carpenter can put his tools when the table is folded into a suitcase and carry it anywhere without much difficulty. And convert this into a work table whenever required.

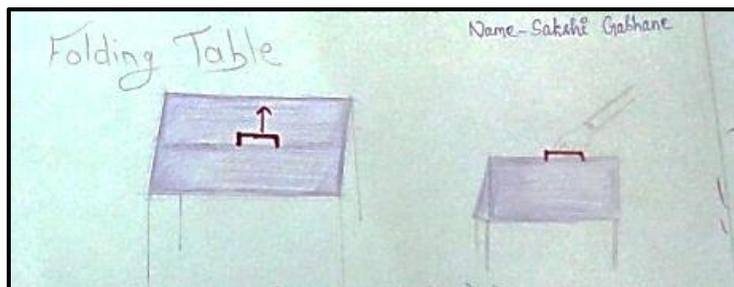


FIGURE 41: MULTIPURPOSE FOLDING TABLE

2. A long queue was observed at the petrol pump

SOLUTION:

There should be an arrangement at the petrol-pumps where people can get petrol in bottles or cans as the CNG comes in cylinders. This will help in reducing the queue and will facilitate the process in less time.

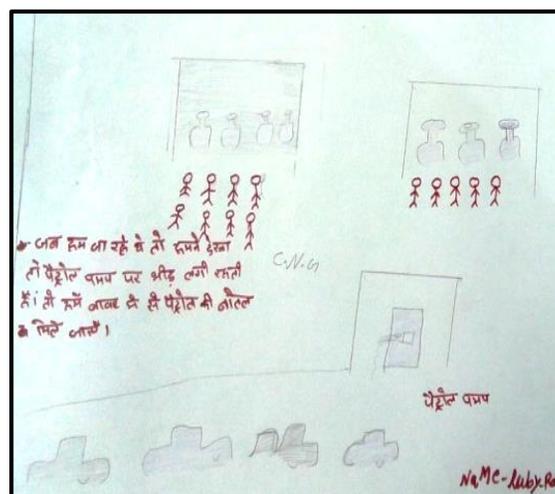


FIGURE 42: PETROL BOTTLE

3. Garbage is thrown out of the dustbin

SOLUTION:

A sensor should be attached to the dustbin which should be linked directly to the main office of Municipal Corporation. As soon as the dustbin gets filled. This sensor should sense it and an automatic message should be received at the Municipal Office which will alert them to empty the dustbin.

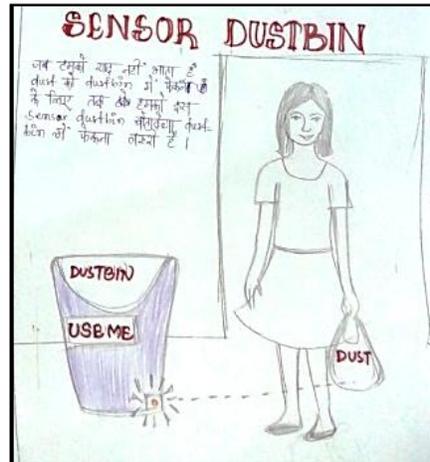


FIGURE 43: SENSOR DUSTBIN

4. GROUP WORK | ROHIT, MANDEEP, AKHUMLA, MINGA, LUKMAN, ARBAZ, CHAMAN and AHMAD

PROBLEM: Women/ Girls teased and harassed by men/ boys

SOLUTION:

The watch wore by the woman should be equipped with GPS system. There should be a camera in this which should capture the image of the man/ boy and send the location and image to police. This way police will be informed at the right time and women will be more safe.

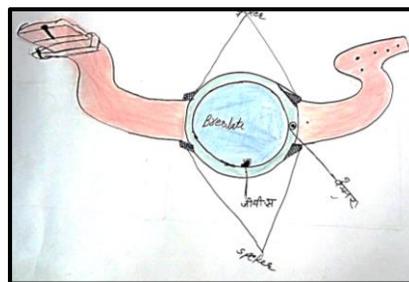


FIGURE 44: SMART WATCH FOR WOMEN SAFETY

5. GROUP WORK | SEZI and MANDEEP

PROBLEM: Less spacious rooms to accommodate more number of people

SOLUTION:

When guests come at home and people who have small rooms, they can have a board attached to the wardrobe which can be drawn out, mattress can be put on it which will serve as bed as well as sofa. Once the guests leave, this board can again be pushed inside the wardrobe

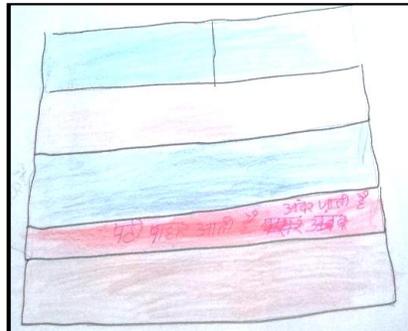


FIGURE 45: SMART ALMIRAH-SOFA PLUS BED

1. INDIVIDUAL WORK | ROHIT

2. PROBLEM: People lose their mobiles as they keep it somewhere and then forget to pick it up while leaving from that place

SOLUTION:

The mobiles should have such an arrangement that if it is lost or stolen, and when we call on that phone from some other number, it should capture the image of the person having it, erasing all the data of the device and sending the location of the place.

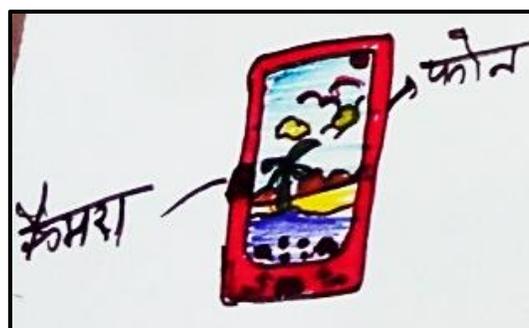


FIGURE 46: SMART MOBILE PHONE

3. PROBLEM: Space is usually less in homes now a days with increasing population because of which space management is a big issue

SOLUTION:

A single table should consists of multiple tables which can be kept inside the bigger one. This will allow to utilize less space.

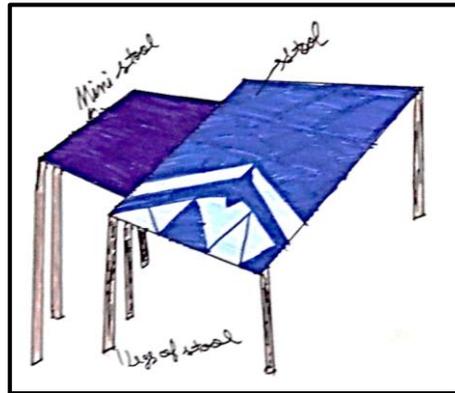


FIGURE 47: MULTIPLE TABLES IN A SINGLE TABLE

2. INDIVIDUAL WORK | SAKSHI

PROBLEM: When the plants are watered, water doesn't reach to the root

SOLUTION:

Take a plastic bottle. Make holes in it from top to bottom with some space in between and put it right beside the plant root system in the soil. The end hole of the bottle should reach the roots and the open end of the bottle should be above the soil. This way instead of putting water on plant, if we put water in this bottle, water will reach every layer of the soil till the root system of the plant.

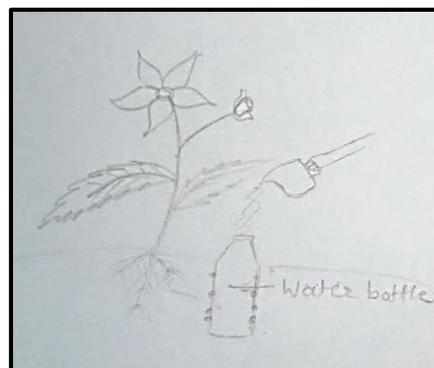


FIGURE 48: WATER BOTTLE FOR THE ROOT SYSTEM OF PLANT

3. INDIVIDUAL WORK | AHMAD

PROBLEM: Person selling water bottles and packets in train gets pain in his hand because of heavy lifting

SOLUTION:

There should be a trolley with wheels where he can keep all the items with water.

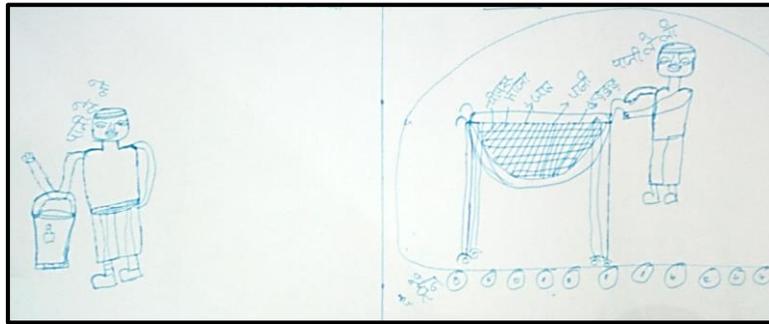


FIGURE 49: TROLLEY FOR HEAVY LIFTING

4. INDIVIDUAL WORK | AKHUMLA

PROBLEM: The sawdust is thrown in dustbin by carpenter

SOLUTION:

Sawdust can be used as manure. It should be collected and dumped under the ground. After some months, it will convert into manure and thus making that soil rich in nutrients. It will act as organic manure.



FIGURE 50: SAWDUST AS MANURE

5. INDIVIDUAL WORK | SABITA

PROBLEM: Problems of pick-pocketing

SOLUTION:

There should be a magnet equipped with attached to the wallet. So whenever a thief will use material detecting device, this magnet will attract the device and the alarm will alert everyone in the surrounding. Thus, pickpocketers can be caught.

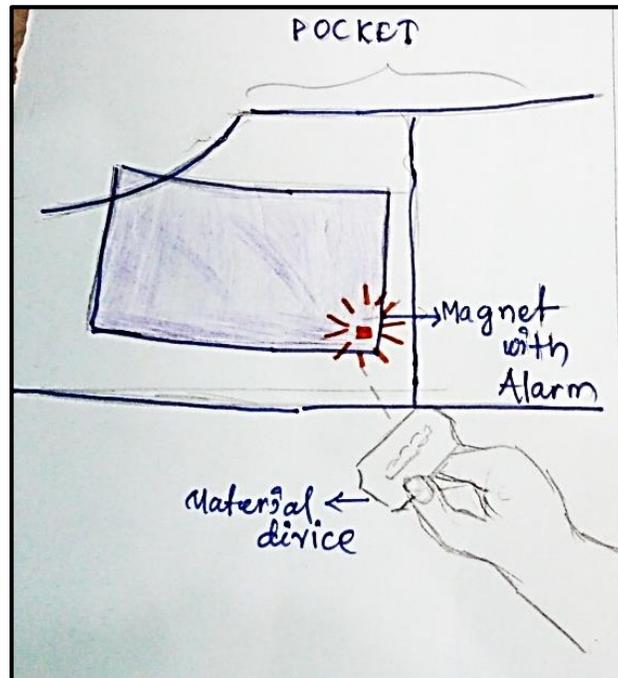


FIGURE 51: SMART WALLET

CONCLUSION

SRISTI thanks UNICEF, NIF, and the Office of the President of India for facilitating the organization of the Children's Creativity Workshop during the Festival of Innovation (FOIN), March 4 to 10, 2017.

The sixth Children's Creativity Workshop has consolidated the experience of the first one held in November 2016 of demonstrating that given a conducive context, children from the ages of 10 to 17 are capable of generating creative solutions in a very short time period to seemingly intractable problems in day to day life. Indeed, if we could mobilize children of the world for solving the persistent problems around us, the world would change at a faster pace.

The close to 50 children were given training on the first day in generating innovative ideas, building on their innate capacity to identify problems and relevant solutions. On both days, they learnt the importance of presenting and critiquing ideas to stimulate production of better quality solutions and to define problems more accurately. They learnt the importance of empathy and imagination for generating innovative solutions, and to have confidence in their ability to challenge the status quo.

It was observed that once exposed to the creativity of other children their expectations from themselves increased. Some children are born ideators, while others come out with creative ideas under the pressure of expectations by others. Graphic presentation of ideas brought precision and also in many cases the totality of the children's ideas. The children tended to describe much less in the narrative form than in the graphic.

Different activities were carried out that demanded creative thinking. The activity involved interaction with grassroots innovators and IGNITE scholars. The next activity was the visit to the slum areas. As we found in the first workshop, some of the children demonstrated keen insights into the social and structural issues faced by slum dwellers. The composition of the groups for the visits included children from low income families in rural families in UP, and from Delhi slums. In this way, the slum dwellers were coopted into solving their own problems. The children showed an impressive degree of empathy with the slum dwellers which enhanced the quality of their solutions by making them affordable and relevant to the objective of improving their livelihoods and quality of life. Thus, proving that initiatives for institutional policy changes can indeed be designed based on children's ideas.