

PROJECT AYUDA

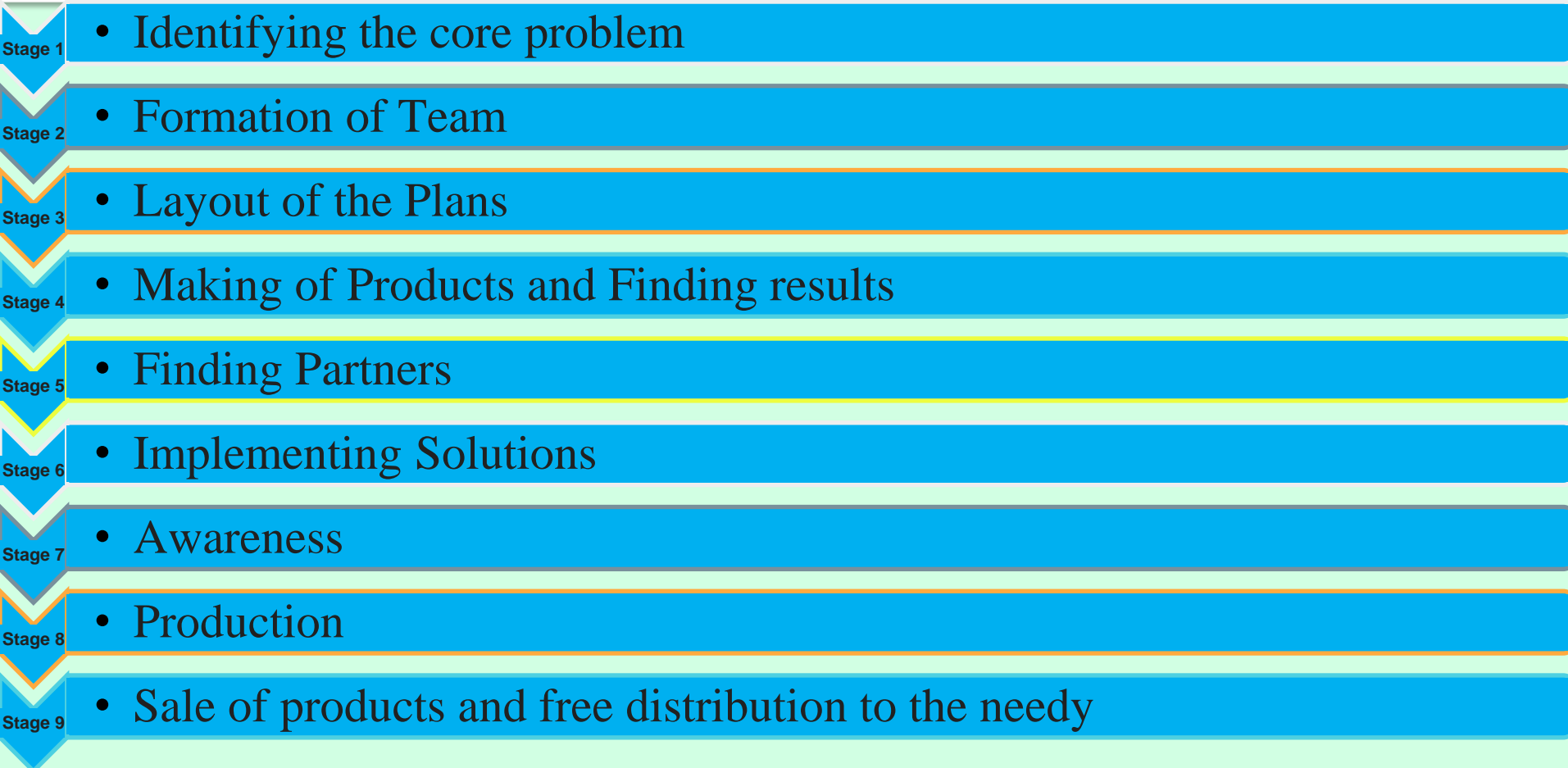


3 GOOD HEALTH
AND WELL-BEING



AARUSH AGARWAL (XI)
SOUMIL GARG (IX)
TAGORE INTERNATIONAL SCHOOL,
EAST OF KAILASH

Progression of Stages



Stage 1: Identifying the Problem

Our Project is to focus on 3 major issues which the world is constantly facing

Lack of Clean Air

Lack of Clean Water

Low Immunity



LOW IMMUNITY



Lack of Clean Air

Lack of clean air is a grave risk to human health that affects nearly everyone in the world and nearly every organ in the body. Fortunately, it is largely a preventable risk. Reducing pollution at its source can have a rapid and substantial impact on health. We need affordable means to improve the air quality at least in our surroundings. There is an urgency of improving global air quality and the importance of increasing efforts to reduce pollution at local levels.

AIR POLLUTION – THE SILENT KILLER

Considering the adverse effect of air pollution, it is necessary to take some steps to reduce its effects:

- Air Pollution World's Largest Killer**
responsible for thousands of deaths worldwide every year.
- Stroke**
- Heart disease**
- Lung Cancer and Both chronic & acute Respiratory diseases Including asthma**

<http://air-pollution.in>

The infographic features a pink header with the title 'AIR POLLUTION – THE SILENT KILLER'. Below the header, a light blue background contains text and icons. On the left, a grey circle contains the text 'Air Pollution World's Largest Killer responsible for thousands of deaths worldwide every year.' To the right of this circle are three circular icons: a brain for 'Stroke', a heart for 'Heart disease', and lungs for 'Lung Cancer and Both chronic & acute Respiratory diseases Including asthma'. At the bottom right, the URL 'http://air-pollution.in' is displayed. On the far left, there is a graphic of two blue smokestacks with black smoke rising from them.

Lack of Clean Water

In rural parts of low-income countries, most water sources are untreated, meaning that water is not safe to drink directly from the source.

As per World Health Organization:

785 million people lack even a basic drinking-water service, including 144 million people who are dependent on surface water.

Globally, at least 2 billion people use a drinking water source contaminated with faeces.

Contaminated water can transmit diseases such as diarrhoea, cholera, dysentery, typhoid, and polio. Contaminated drinking water is estimated to cause 485 000 diarrhoeal deaths each year.



Low Immunity

- While the global population is growing rapidly, and people are living longer, our living environment has changed substantially. There is therefore a greater need to support our health and wellbeing, primarily our immune system, at different stages throughout our life.
- These concerns regarding immunity have become more important, given the periodic outbreaks of infectious diseases such as SARS (Severe acute respiratory syndrome), MERS (Middle East respiratory syndrome), and now the coronavirus pandemic, that within a few months, has led to more than Twenty Eight million cases across the world.



Stage 2: Formation of Team

- Interested students of classes IX-XI came together to work as a team for the project.
- 5 core members from the team selected
- Youth Leaders were selected from the core members
- Naming of our project as 'Project Ayuda'.
- Project to focus on SDG Goal 03- Good Health and Well Being

Stage 3- Layout of plans

Team decided to work on 3 main areas: Clean Air, Clean Water and Better Immune System

To fulfill the mission 3 products were innovated and designed by students. They are:

AIRPURO

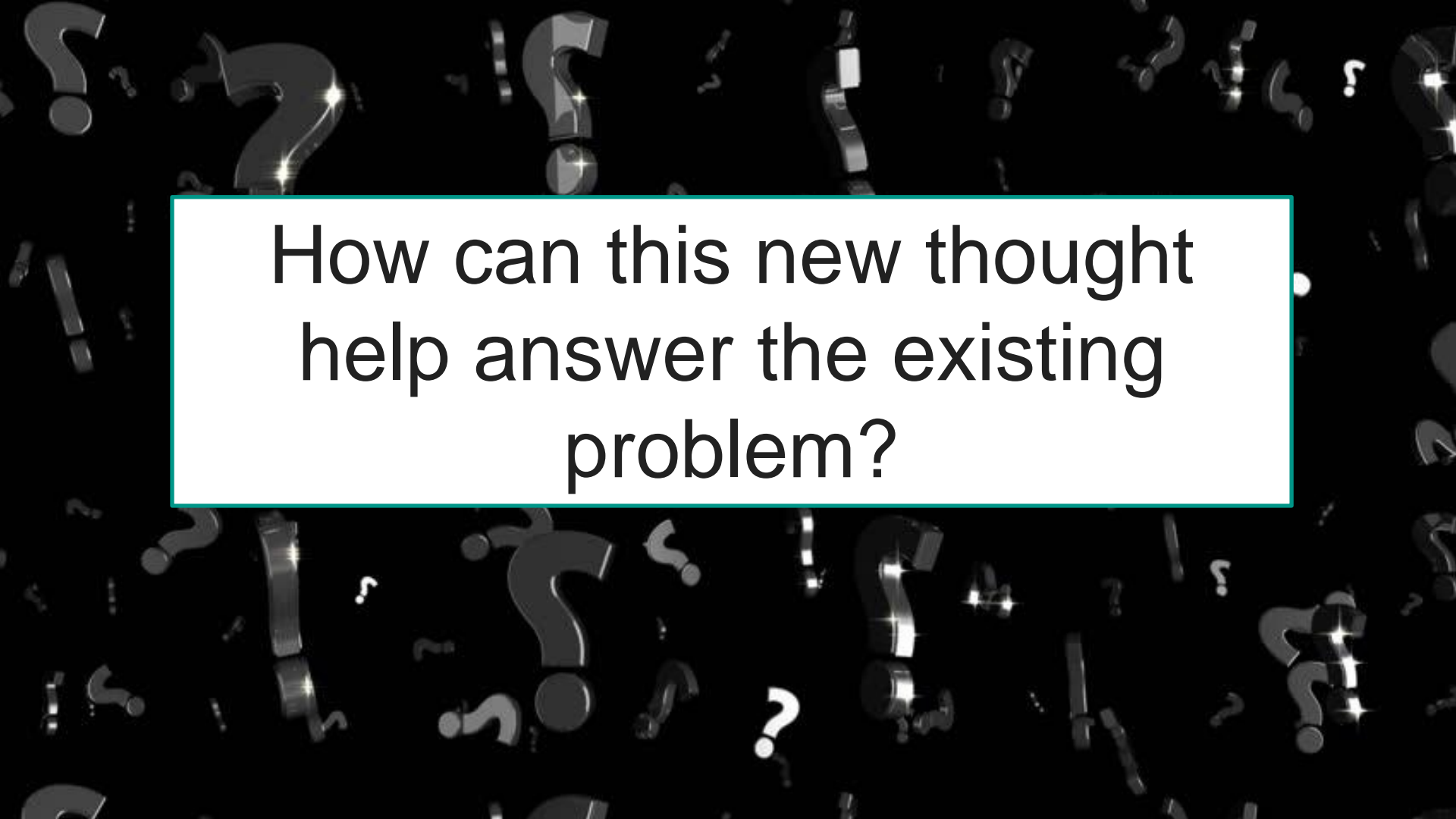
The "Air Puro" is a device capable of reducing AQI levels rapidly, and is available to be purchased for a fraction of the cost of a normal air purifier.

HYDROBEAT

The balls when submerged in polluted water, adsorb the impurities and sediments deep below the container. These purifiers are extremely cheap with only 3 rupees average purification cost per litre.

DETOXIFIER TEA

The various ingredients of the tea help in enhancing the immunity of a person, protecting them from diseases and also improving heart and liver functioning.



How can this new thought
help answer the existing
problem?

AIRPURO

- The "Air Puro" is a device capable of reducing AQI levels rapidly, and can be made from for a fraction of the cost of a normal air purifier. It is made from completely biodegradable materials and is an eco-friendly device, we wanted our device to be as environmental as we could have. Air Puro's main goal is to provide purification services to not the rich but also the money-deprived people. The product was tested using AQI monitors. The running cost of such a purifier is also very low
- Materials used to make the Air Purifier are as follows: Corrugated Cardboard, CPU fans, Powdered Activated Charcoal, Neem Extract, Tissues, Biodegradable Sponge etc.
- Air Quality is tested using AQI monitor and one Air Puro can give clean air for a normal room size of 10*12 feet.



HYDROBEAT

- The purifier balls will be made up of fine nylon mesh filled with aluminium sulphate and activated charcoal.
- Alum in its powdered form can be added to water to bind with phosphorus particles to aid the water purification process
- The balls when submerged in polluted water, adsorbs the impurities and sediments deep below the container.
- The remaining water can be decanted to obtain pure water.
- These purifiers are extremely cheap
- The product was tested using TDS testers

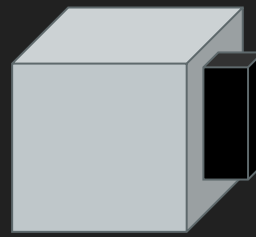


DETOXIFIER TEA

- As the pandemic struck the whole world especially India the importance of ayurvedic and traditional immunity booster was realized. Our tea also works the same way but it would be useful not only in the pandemic but in all stages of life as it helps in boosting immunity.
- The tea contains green tea, black pepper, ginger, tulsi, turmeric, asafoetida, cloves, cardamom, cinnamon, nutmeg, rock salt and natural citric acid.
- The various ingredients of the tea help in enhancing the immunity of a person, protecting them from diseases and also improving heart and liver functioning.
- While people are spending a tons of money for such products for their health our Detox Kahwa is a cheaper and a better alternative as it uses simple and natural ingredients.

Stage 4: Making of products
and finding the result

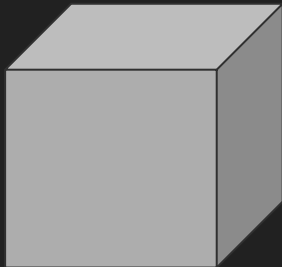
AIRPURO- MAKING



STEP 1

MAKING FRAME

Took a square box and cut a small window on opposite sides



STEP 2

BUILD

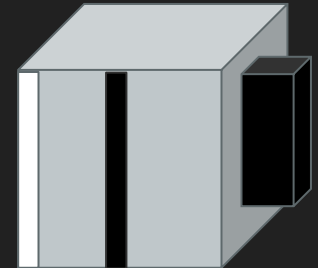
Attached a CPU fan to one end in such a way so that it sucks in air and the neem filter(white in diagram) on the other end.

Connected CPU fan to adapter

STEP 3

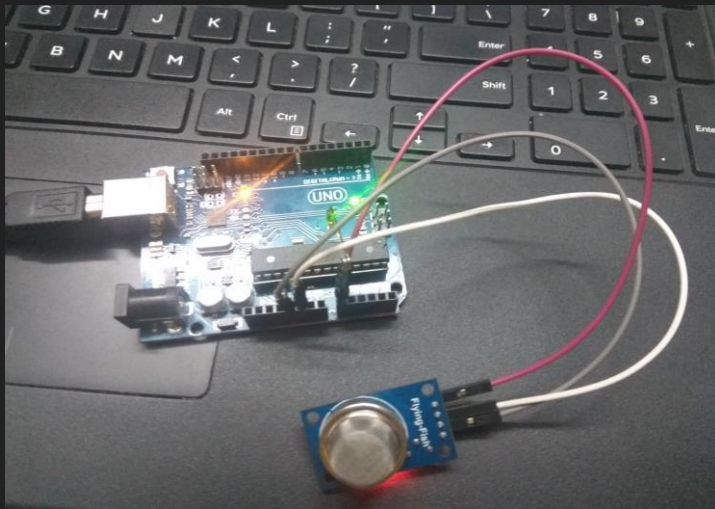
FILTER

Placed the activated charcoal filter (black in diagram) in the centre of the box between the two windows



TECHNOLOGY USED

1. Arduino- The AQI monitor used to test Airpuro was made using Arduino sensors.
2. Electronics- Airpuro consists of basic electronic circuits to help purify air.



Numerical Value	Color	Air Quality Index Levels of Health Concern	Meaning
0 - 50	Green	Good	Air quality is considered satisfactory, and air pollution poses little or no risk.
51 - 100	Yellow	Moderate	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
101 - 150	Orange	Unhealthy for sensitive groups	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
151 - 200	Red	Unhealthy	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
201 - 300	Purple	Very unhealthy	Health alert: everyone may experience more serious health effects.
301 - 500	Maroon	Hazardous	Health warnings of emergency conditions. The entire population is more likely to be affected.

HYDROBEAT- MAKING

STEP 1

MAKING THE FRAME

Used thin spaced nylon mesh (reusable) to make the frame for the balls



STEP 2

FILLING

Filled the nylon mesh with coarsely ground alum and activated charcoal pellets

STEP 3

SEALING

Made the mesh into a ball using a thread and sealed using a candle (flame locking)

DETOX KAHWA

STEP 1

TEA BAGS

Acquired tea bags from recycling and market.

STEP 2

FILLING

Filled the tea bags with green tea, black pepper, ginger, tulsi, turmeric asafoetida, cloves, cardamom, cinnamon, nutmeg, rock salt and natural citric acid.

STEP 3

ALTERNATE

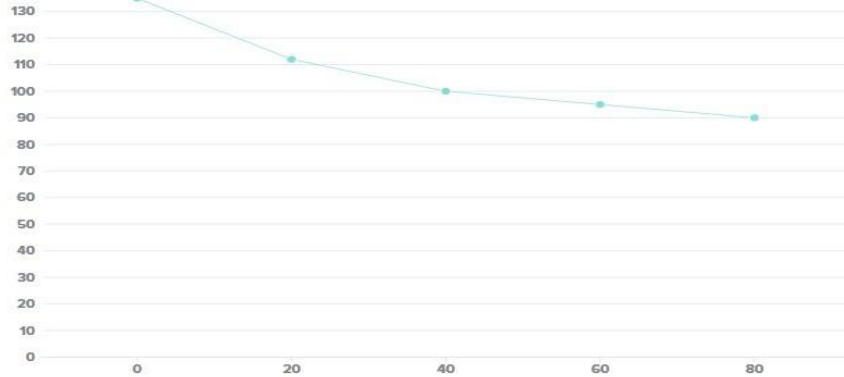
Will also be sold only as a mixture instead of tea bags



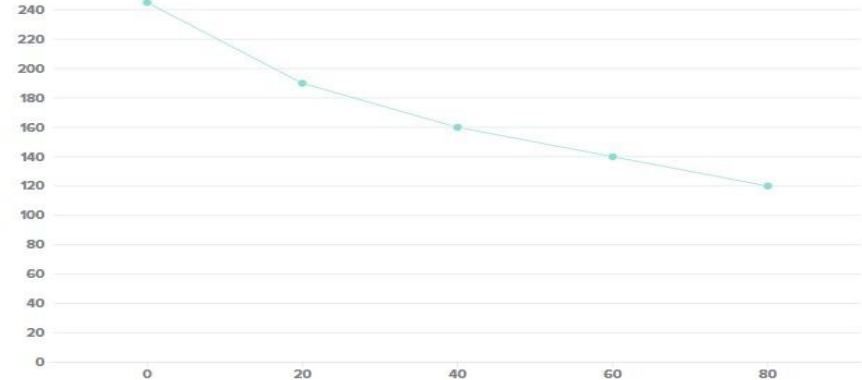
Test results of our products

TEST RESULTS OF AIRPURO

TEST 1- NORMAL ROOM CONDITION (y=ppm, x= minutes)



TEST 2- ROOM WITH SMOKE (y=ppm, x= minutes)



Test 1 Shows the Normal Room Condition PPM was around 135 and after using AIRPURO reduced to around 90

Test 1 Shows the Room with smoke PPM was around 245 and after using AIRPURO reduced to around 120

*PPM- Parts per million

TESTING OF HYDROBEAT

Before and after: From 350 PPM to 100 PPM in one hour. Suitable drinking water is around 50-70 PPM, further boiling the water purified from Hydrobeat will get you 'healthy' water





श्रीमत् प्रकाश जी
1403 फेरा नं. 1
गौतमपुरी नं. 5 फेरा

Deepak Man
no-1377/12. Badli
Tughlakabad

Herads
Zamrudpur

**TESTED SAMPLES OF WATER
FROM VARIOUS PLACES IN
DELHI**

Stage 5- Finding Partners

NGO Collaboration

To gather attention and support of people regarding the project, the team of Tagore International School has collaborated with Spectra NGO in order to get in touch with the people who during this tough times have lost their work or are struggling everyday to get basic necessities. According to us this is the best way to get in touch with such people as the NGO itself helps us to contact them by the facilities provided by them



SUPPORT FROM SHARP

Sharp, a leading air purifier company, showed interest in AirPuro and wants to help us to improve it under their CSR activity. This will start after patent process.

SHARP

Be Original.

Stage 6: Implementation

Teachers, Students, Parents, Communities and Staff

1. Creating awareness among students, parents and communities on the problems we are facing due to lack of clean air, water and why our immunity system is getting weaker due to the above factors
2. Explain the benefits of AirPuro, HydroBeat and Detox Kahwa
3. Train people to make AirPuro, HydroBeat and Detox Kahwa
4. Take orders from them through our website
5. Supply them with ordered products on time
6. Supply products for free for needy and poor

Unemployed/Migrant workers

1. Creating awareness among Unemployed/Migrant workers on the problems we are facing due to lack of clean air, water and why our immunity system is getting weaker due to the above factors
2. Explain the benefits of AirPuro, HydroBeat and Detox Kahwa
3. Train people to make AirPuro, HydroBeat and Detox Kahwa
4. Arrange for Raw Materials
5. Encourage them to make finished products
6. We sell their products and share profit

Stage 7
CREATING
AWARENESS



AIRPURO AT SHANGHAI YOUTH SCITECH EXPO

Airpuro represented India at the Shanghai Youth Scitech Expo 2020 in August. It was appreciated about the fact that it was so economical yet effective. The Chinese official encouraged how we made an air purifier during the time Delhi AQI was very bad and all purifiers at that time were above \$200.

This made us to use the product for our project and make it available to as many people as possible at a low and affordable cost.

空气净化器
AIR PURO



主创者姓名：
Name of Creator:
AARUSH AGARWAL

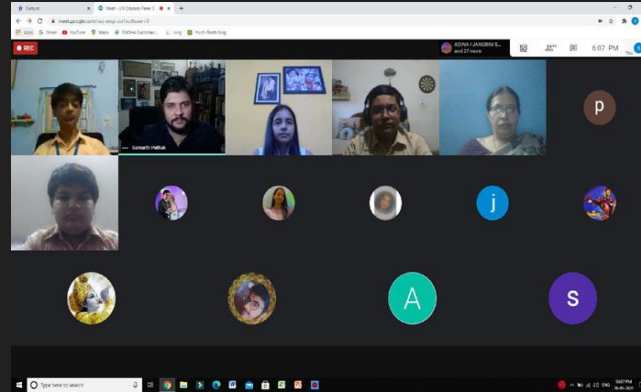
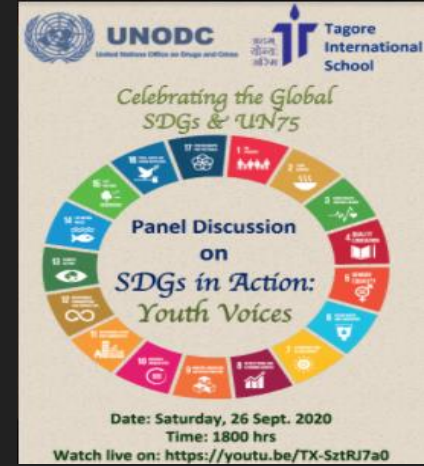
学校：
School：
Tagore International
School, East of Kailash



灵感来自于自己的生活
Inspired by your own life

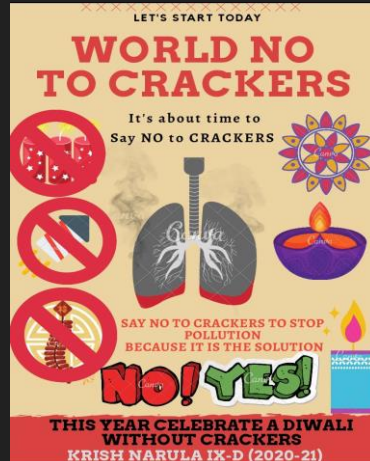
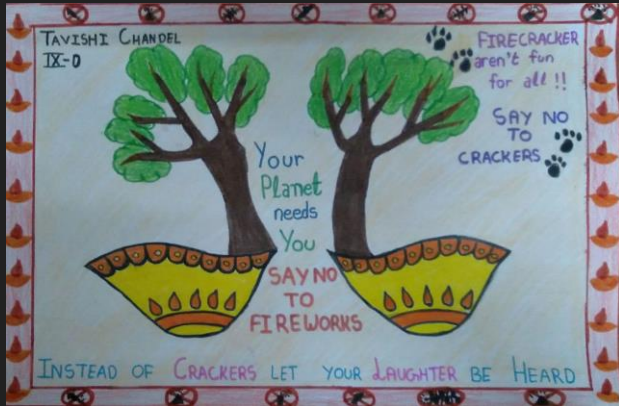
UNODC PANEL DISCUSSION

In order to create awareness on the effects of Air, Water and low immunity to all students and communities, we collaborated with UNODC to have a group discussion on the above topic. This was conducted as a part of celebrating Global SDG Week and the discussion was held on Saturday, 26th September 2020. The discussion shed light on the current situation due to COVID-19 with respect to its impact on the 17 Goals. The discussion also threw light upon the current environmental situation and how good health is necessary for a better society. The event was live streamed on YouTube for Students, Parents and Public to watch. Our Efforts were greatly appreciated by UNODC



ANTI CRACKER CAMPAIGN

An anti-cracker campaign was launched on the occasion of Diwali to urge people in the community to not burst crackers in an environment already vulnerable because of the ongoing COVID- 19 pandemic. This strengthened our campaign to help reduce air pollution and spread awareness on how bursting crackers can harm air and as a result affects our immune system. The campaign consists of films, posters, eco-friendly activities for the whole school, interviews within the community and so on.



UN DAY CELEBRATIONS

The students of our school commemorated 75 years of United Nations. The celebration spanned a complete week of activities for the students of classes VI – XII. The activities were planned to help the students appreciate and celebrate the working of the United Nations. The students indulged in various activities which made them more aware about SDGs and our project. This event was also live streams on YouTube

**TAGORE INTERNATIONAL SCHOOL,
EAST OF KAILASH**

CELEBRATES

75TH UNITED NATIONS DAY

SATURDAY, 24 OCTOBER 2020
10AM ONWARDS

Link: <https://youtu.be/sShXvuqn1fQ>



YouTube IN Search

Member Countries of the United Nations

United Nations Day Celebrations

Unlisted

1,079 views • Streamed live on Oct 23, 2020

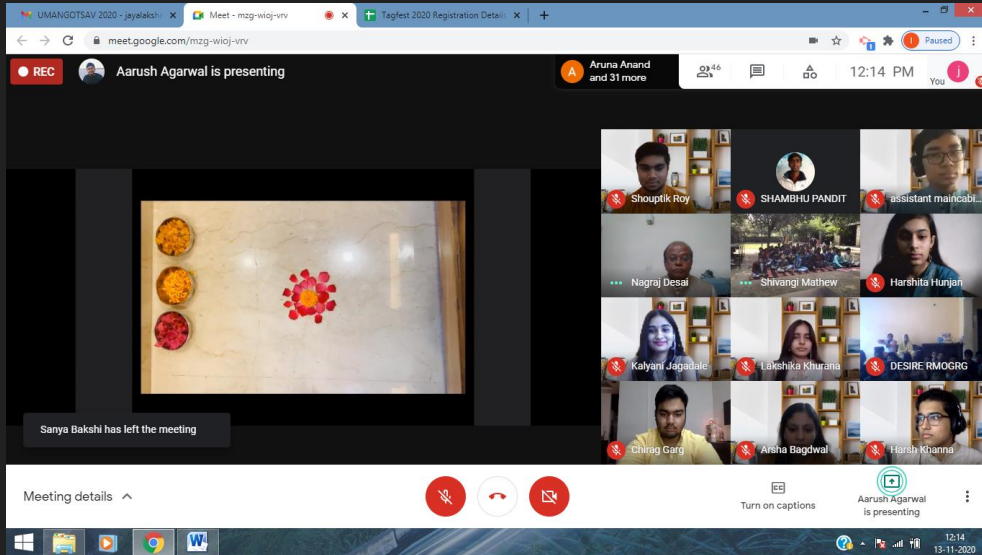
115 3 SHARE SAVE

OCEAN HEROES VIRTUAL BOOTCAMP 2020

Participation in the Ocean Heroes Virtual Bootcamp of 2020 has helped Project Ayuda in a lot of ways, particularly in the case of Hydrobeat. Knowing the key sources of pollution, as well as the various kinds of pollutants in today's water bodies helped us develop a product which not only purifies water, but accumulates all pollutants into one place, thereby making it easier to dispose of them. Through this, we were able to spread the message to reduce water pollution more efficiently



FUN EVENING WITH UNDERPRIVILEGED CHILDREN



On 13th November 2020, we had a Children's day and Diwali party with children from various NGOs of India. The event included cultural activities like dancing, singing and screening of short videos. The children were also taught about air and water pollution and the need for good health. They were also encouraged to celebrate a cracker free diwali. The students were also taught to make DIY diyas, lanterns and rangolis

HOW CAN WE HELP THE CHILDREN OF THE NGO?

We plan to help the children in the following way

1. One of the NGO(Desire) is a school for children who live on the streets, so because they don't have electricity, giving them the airpuro won't be beneficial so we will be donating them our tea for better immunity and to help them in the cold weather. Also we will be giving them hydrobeat balls for pure water.
2. Another NGO(NIV) is an orphanage for HIV positive children so we will be donating them all the three products for their welfare.

Stage 8: Production

8.1- Arranging workshop with unemployed migrant workers in collaboration with Spectra NGO

Workshops are a great way to engage people to spread our missions. Our aim to conduct as many workshops as we can not only with the collaborating NGOs but also with the school students and parents who will ultimately help us increase our reach and knowledge. One such session was hosted by TIS EOK students on 7 November 2020 where the idea and technique about AirPuro was shared with some ladies of Alwar, Rajasthan so that they can make and send us some samples of AirPuro that will help us in mass production as a major share of the sale will be given to them.

We will be having more workshops with them as and when required.



Migrant workers who will help us in manufacturing our products

The following migrant workers will be helping us in manufacturing our products

1. Bhagwati
2. Pooja
3. Suman Lata
4. Seema
5. Minakshi
6. Usha
7. Poonam

They have lost their jobs during lockdown and shifted back to their village. Our product will help them to run their household during this tough time and help us to ease the manufacturing process, creating a win win situation



Production by the women

Raw material has been sent and production
Has started



8.2 Certifications

To be recognized nationwide team Ayuda we have applied for both FSSAI certification for the detox tea and patent for Airpuro.

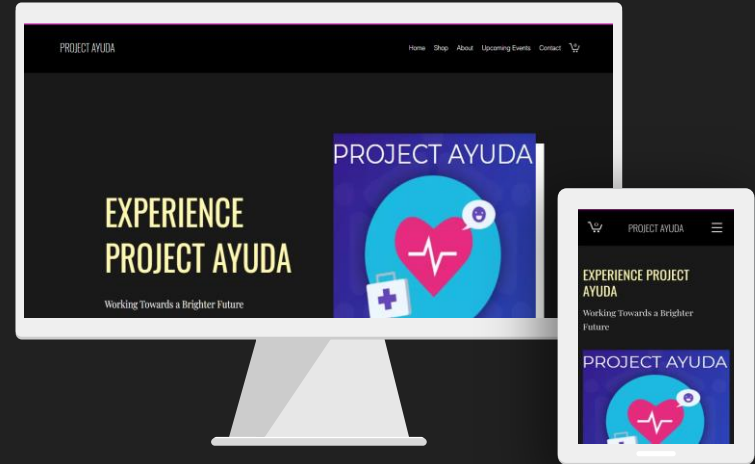


Stage 9: Sale of Products and Free Distribution

Sale through WEBSITE

<https://projectayudatiseok.wixsite.com/website>

Our website is a medium through which we sell our products as well as a source through which we are collecting volunteers for our mission. The website consists of an informative page telling about our missions and goals, a store where a person can buy the products listed above, a page where donations can be made and finally a form through which we are getting many volunteers contributing with their heart and soul for making the world a better place to live for everyone.



PACKAGING

Our team always emphasises on protecting the environment so we do our best not to include any type of material that will harm the environment. Our airpuro is wrapped in recycled/newspaper, Hydrobeat on the other hand comes inside a papers bag and the tea is packed inside butter paper bags. This way we are trying to reduce plastic use and also stressing on not using cello tapes which is made from plastic

Problems Faced

During our journey till now there are quite a few problems we faced.

- Some problems we among the team where the time management and work division was getting difficult but luckily the problem was realised and resolved at a very early stage.
- The other problems included not being able to make contacts with NGO due to the influence of COVID-19.
- Another problem that we faced was that the NGO we collaborated is a Rajasthan based NGO but due to conflict within the Gurjar community Rajasthan Government had stopped jio internet connection which caused us delay in conducting the planned workshops
- Getting difficult to arrange for Raw materials as Parents and teachers don't want to take the risk of the pandemic
- Getting certification is taking a lot of time

COMMUNITIES BENEFITING

The communities that will be benefited through our project are-



1. Tribal Women of Alwar- Will help in manufacturing and will be paid a part of the profit
2. Underprivileged people of areas with bad water quality- Donation of hydrobeat
3. Workers who lost their jobs during lockdown- Will be helping in various stages of making of products and will be paid from profits
4. Everyone in the society- Using our products will help in ensuring better health and will benefit everyone in the society
5. Hydrobeat balls will be given free of cost to the needy people. It will be donated to different villages where water quality is very bad.
6. We also want to donate AirPuro to old Age homes and for really needy old people who suffer from breathing problems

Stake Holders

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graph TD; A[Stake Holders] --> B[Students]; A --> C[Parents / Teachers]; A --> D[Staff]; A --> E[Community]; A --> F[Migrants/ Unemployed];
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Students

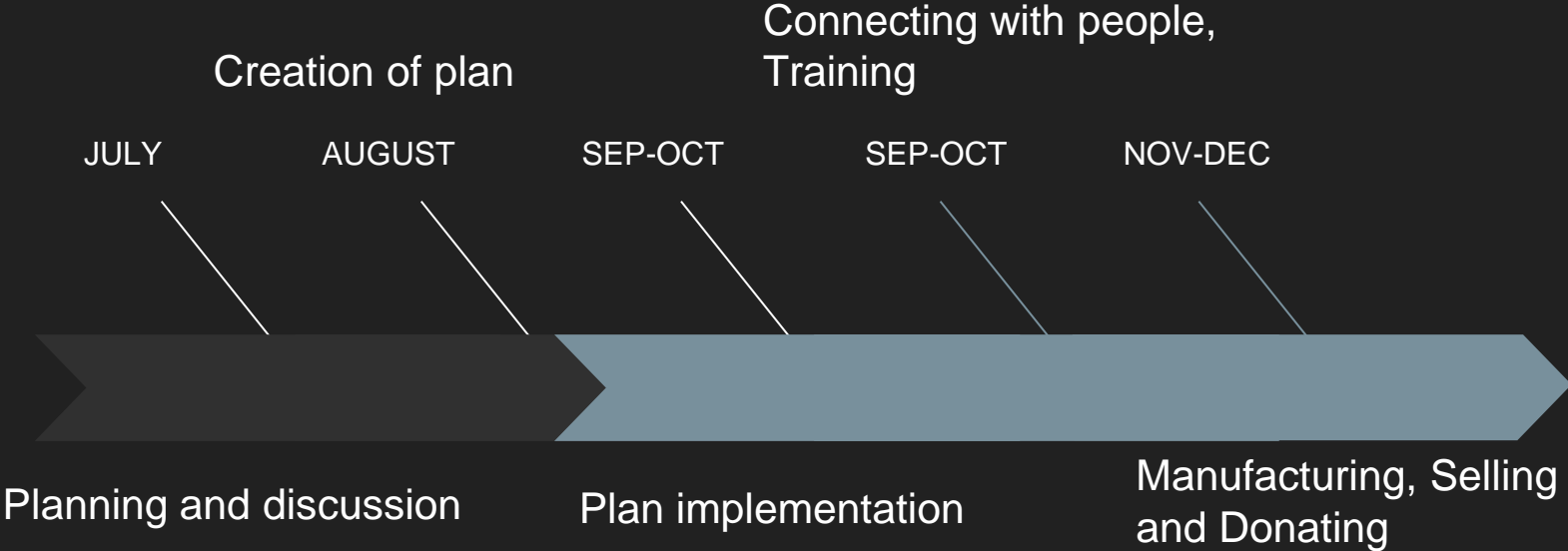
Parents /
Teachers

Staff

Community

Migrants/
Unemployed

Project timeline



Funding

- Funding was initially required for procuring raw materials. The school management to funding the initial amount.
- We will then collect funds through the sale Finished products to Parents, Students and other communities.
- Some amount of profit will be shared to the migrant or unemployed people who helps us with the finished product.
- The remaining profit will be used to make Hydrobeat and then those will be distributed to the needy.
- We will be requesting donations from teachers and parents so that we can donate AirPuro to Old age homes and old needy people. This will be implemented in the month of January

Impacts of Innovations

- Clear Air, Water and immunity boosters will be provided at a reasonable and affordable rates for all
- People living in slums and villages will be given water purifier balls and detox tea for free of cost thus improving in their health
- Needy and old people in old age homes will be given free Air Puro so that they can breathe fresh air.

The above impacts will take time as we are able to get in touch with people only through online. This project is not only for Youth Leader but will continue for many years as a Social Service Project so that more and more people are benefited with our products.

Future Plans

- To connect with more people
- Give our products to more needy people free of cost
- Help more people to start manufacturing our products thus improving their livelihood

Thank
you!