Glimpses of Outstanding Science Projects by Young Researchers in 2013

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Young Researchers in NCSC-2013

Research Reports Presented at the

21st National Children's Science Congress 2013

BHOPAL

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GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY,
DEPARTMENT OF SCIENCE AND TECHNOLOGY,
TECHNOLOGY BHAVAN, NEW MEHRAULI ROAD,
NEW DELHI-110016

Dated .....

MESSAGE

The current era belongs to science & technology. It is imperative that each one must be aware of minimum of science and appropriate technology to lead a happy life. Science & technology has become integral to the living today. It is important to know science, but equally important is to be aware of method of science which comprise of hypothesis formation, designing experiments, keen and correct observation regarding data, organization of data in a meaningful manner, analyze it and deduce the logical conclusions based on the evidence of data so generated. An enquiring mind is necessary.

Children Science Congress is a step in this direction wherein students in the age range of 10-17 years practice method of science on a focal theme, carefully selected from their immediate environment. The focal theme is important to emphasize that science & technology is not esoteric subject but a body of knowledge, capable of solving problems of day-do-day living.

I congratulate the 20 selected projects from the National Children Science Congress at Bhopal. There is no good science without ample rigors and dispassionate analysis. To impart these traits in the persona of students, merit based selection of the projects, are introduced. This goes without saying that these 20 projects have successfully completed all the stages of screening. I hope, a bright future in science, is awaiting these child scientists.

With best wishes in all your future endeavors in the realm of science.

(Bhanu Pratap Singh)
Scientist 'G' & Head (NCSTC)

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Bhopal, Dated : 01.09.2014

Message

The 21st National Children's Science Congress (NCSTC) held at Bhopal was a unique mega event in which child scientists from all the states of our country as well as ASEAN and UAE countries participated in several scientific activities with enthusiasm and zeal. The Congress provided them a platform for interaction amongst themselves as well as with famous scientist of the country and presenting their innovative ideas as project on energy issue. They are scientists of future going to shape the destiny of our country for making strong and developed nation.

I am delighted to know that best 20 projects out of more than 600 projects presented in 21st NCSTC are being published by NCSTC as a report. This report will inspire and serve as a guide to our future child scientists in their endeavour and improve scientific temperament.

I wish all the success for the publication of report.

Pramod K. Verma

(Prof. Pramod K. Verma)

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MESSAGE

Several leading and very active scientists in laboratories and industries today recall their early exposure to science research at the forum provided by the Children's Science Congress year after year. The positive experience of participation from problem selection to presenting the findings and every stage in between is reflected in definite career choices for many.

The compilation of twenty projects from the National Children's Science Congress held at Bhopal reflects the wide spectrum of enquiry by young researchers during the past few months. This will prove useful for academics and policy makers in their mission to make learning and teaching of science and mathematics more interesting and topical.

The twenty teams of researchers and their mentors will be offered a three week internship at a leading multi-disciplinary teaching cum research institute.

I look forward to the Network continuing to contribute to such pioneering efforts.

Anuj Sinha

भारत सरकार
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TECHNOLOGY BHAVAN, NEW MEHRAULI ROAD,
NEW DELHI-110016

D.O. No.

Dated .....

Message

The National Children's Science Congress (NCSC) is a flagship programme of National Council for Science & Technology Communication (NCSTC), Department of Science & Technology, Govt. of India and being executed since 1993. I have the conviction that our mission to empower our younger generation with competence and focusing on adopting the "Method of Science" for solving their day-to-day challenges. NCSC leads towards the development of scholastic attitude and spirit of scientific inquiry amongst the children. Our mission is to achieve excellence in science education with meaningful and productive linkages with academic and research institutions. With such kind of programme we try to equip children from 10-17 years of age with lifelong trajectory to foster innovation ecosystem and promoting research outlook. The programme inculcates moral values and work ethics among children and other stakeholders.

With these objectives in mind the initiatives that NCSTC, DST, Govt. of India has taken for the improvisation more particularly the culture of building innovation ecosystem in the country will not only help our budding scientists and teachers to do something new which will create an ambience in order to come out from the closed environment to open platform to showcase their curiosity in the form of activity. The efforts made by the Experts from Academic Core Committee of NCSC, NCSTC-Network, and Jahangirabad Institute of Technology, Barabanki, Uttar Pradesh as host institutions for coordination and compilation of "Ripples of Hope" is highly appreciable.

With best compliments,

(Dr. D.K.Pandey)
Scientist 'F'/Director
(National Programme Coordinator, NCSC)
NCSTC, Deptt. of Science & Technology
Government of India

New Delhi
Dated : 26.08.2014

Editorial note……

The 21st National Children's Science Congress (NCSC 2013) was organized during 27th to 31st December, 2013 at Bhopal (Madhya Pradesh). The focal theme of the NCSC 2013 was "Energy: Explore, Harness and Conserve."

Altogether 633 projects were presented. These were shortlisted from the about 60,000 projects presented at district level congresses across the country and over 6000 projects that were screened at the state congresses. Each paper was a report of an open-ended project conducted by a team of young scientists (average size being four) under the mentorship of a parent or teacher.

Projects presented by male and female project leaders were 341 (53.8%) and 293 (46.2%) respectively. Representation from rural schools was more than 44%, which indicates a good outreach of the programme. A break up of projects by researchers in the age group of 10 to 14 years and 15to 18 years from different states is also presented at Annex I.

A feature of the NCSC from the past 22 years has been in encouraging participation of brilliant scientists and presentation of reports in any modern Indian language. This has encouraged participants from remote and rural regions. A break up is given at Annex II.

Annexe III presents details of projects from different states. The titles in most cases give a fair indication of the work done by the teams. The students of Navodaya Vidyalaya and Kendriya Vidyalaya are listed as separate states since these major chains organise the activity annually as per the NCSC guidelines for all their schools.

At Bhopal the jury had the difficult task of identifying outstanding projects. This was obviously very difficult since the evaluation of the presentations, the project reports and the posters had been done in different halls by a set of about 50 experts. Despite the subjectivity involved, the jury under Dr Jayant Sarma did a remarkable job of preparing a list of twenty projects. Synopsis of these twenty outstanding Research Projects have been compiled and documented in this publication.

The synopses are arranged in the alphabetical order of the names of the group leaders that appears in bold letter. This is followed by name and address of the institution and/or organization. At the bottom of the each synopsis name of the Guide Teacher as well as the language used by the researchers also has been recorded.

Besides the children of our country, 8 from ASEAN countries and 13 children from UAE also took part and presented their projects (Annex IV). These were not considered for this evaluation and hence, the synopsis compiled excludes their projects.

We are hopeful that the synopsis compiled and presented in this book will help the readers to get a comprehensive idea about our children and their ability to identify a problem related to energy and their ability to come out with suitable solutions following systematic research methodologies. The book does not have scope to record the projects as a whole, hence only synopses of the projects have been taken into consideration.

We also hope that this book will help one to get an overall picture of the science movement that NCSC has come to represent.

-Editors

Acknowledgements:

The publication could not have been compiled without the zeal and interest of Er Anuj Sinha, Chairman, NCSTC Network and Dr D.K. Pandey, Scientist-F, NCSTC, DST. They were instrumental in getting the work done and we are thankful to them.

Our thanks are also due to Prof. Jayanta Sarma, Chairman, National Academic Committee, NCSC-2013 for helping us in providing detail information for incorporation here.

Our sincere gratitude to the management of Jahangirabad Institute of Technology, Barabanki, Uttar Pradesh, for providing us all necessary help, assistance and hospitality during the period of stay for this work.

It is our proud privilege to put on record the contributions made by Prof K M Rafi, Director JIT and the following faculty members and students in giving the final shape to this compilation.

Ahsanur Rahman, Nefaur Rahman, Aladdin Maulla, Arwab, Saima, Kishwari Tarannum, Guasiya, Syed Faizan Ahmad, Afzal Ayub, Hamid, Saba, Sana Fatima, Afnas, Azharuddin, Mounuddin, Zeenat Siddiqui, Swama Mahruf, and Abdur Rehman,

We are sincerely indebted to one and all who directly or indirectly helped the editorial team.

Finally, we express our heartfelt gratitude towards NCSTC Network for giving us this opportunity

Editors

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MAKING SOLID BIOFUELS FROM BANANA PEELS AND ITS STUDY

Andhale Rushikesh Baban, Kakad Dashrath Popat, Gwai Jivan Pradip, Bairagi Pankaj Kailas, Kakad Sourabh Ashok

P. R. Bhor Vidyalaya, Thangaon, Sinnar, Nashik, Maharashtra

Banana is a fruit, which is used all over the world, either green or ripen, and its peel is thrown away. Our team decided to turn this discarded part of banana into a solid biofuel and study its effect. We collected thrown away banana peels from the local village market and sun dried for a period of ten days. We, thereafter, made briquettes from the dried banana peels, each weighing roughly 10 gm. and we compared its efficacy with traditional used fuel viz. coal.

To assess the efficacy, we heated 200 gm. of water and noted down temperatures at different intervals of time. Through our experimentation, we observed that banana peel briquettes burnt for a longer period, raising higher temperature in less time in comparison to coal. In addition, smoke and smell produced by banana peel briquettes were much less than coal. Similarly, ash production was also much less after burning of banana peel briquettes.

We also observed that a combination of banana peel briquettes and coal produced higher calories in comparison to when burnt individually.

Guide Teacher: Rupawate Yogesh Manohar
Language used:*Marathi*

USING SOLAR ENERGY BY MAKING SOLAR COOKER

Apoora Singh,Bipasha Mrug, Ramit Das, Rinita Paul, Baishali Bhabra

St. Mary's School,Railway Colony, Cooch Behar, West Bengal

Today fossil fuel is one of the most endangered entities and is dearth is most hunting to the human's future. The nightmare can be adverted by harvesting even a fraction of the most inexhaustible solar energy falling on earth.

About 80% of the total energy used by humans is in the form of heat.

Keeping in mind some more advantages, we decided to find out an alternative by harvesting sun rays for heating in day-to –day life I simpler way, in convenient and also cheaper way. Water and Wind power are limited u se due to place location, but solar energy is available I everywhere of the world. By using our modified solar cooker, we can decrease the pollution rate and can save our earth.

In this way, we came across the Box Solar Cooker, later o improvised by Steve E Joes of Brigham Young University into a BYU Solar Cooker.

In the present project, our objectives are to improvise it further, which we had done as detailed below –

1) Making the parabolic funnel complete all round.
2) Placing flap of a cellophane paper above the mouth of funnel itself.

This newly made solar cooker was comparatively more efficient in term of heating, at least by 25%, cheaper, convenient and easier to use.

We have tried to communicate the information regarding our modified solar cooker to our class friend and to the local people.

Name of Guide Teacher: Debraj Mukherjee
Language used: *English*

WASTAGE OF ENERGY IN GUTTERS

Aswinraj.K., Nived.K,Athul, P,Arya. C and Anjimaraj
GUPS Thavidisseri,M M Bazar,Purkkunnu,Kerala

Wastage of the energy in gutters is quantitative investigation efficiency on the reduction in mileage and fuel efficiency of transport vehicles due to gutters in roads. We conducted a survey among 101 drivers of two, three and four wheelers and calculated the distance covered with one litre of petrol in the presence and absence of gutters. it was estimated that the average mileage of 34 two wheelers was 42065 km/lit. Presence of gutters reduced it to 13.29 km/lit. Reducing in fuel efficiency to 31.16% the average mileage of 27 three wheelers is 25.03 km/lit. The gutter causes 6.4 km /lit reductions in mileage from 6.07 km/lit reduction in mileage and 23.97% reduction in mileage efficiency. Mileage of 19 heavy vehicles have shown a reduction in mileage from 6.07km/lit to 2.31 km/lit and mileage from 6.07km/lit and 38.06 % reduction in the fuel efficiency due to gutters. Hence, we concluded that fuel efficiency without gutter is greater than the gutters resulting 20-38% of one litre is lost.

From the data collected from the drivers, we calculated that the average durability of tyres of two wheelers decreased from 3.67 tyres to 1.88 tyres. Similarly, durability of tyres of the three wheelers decreases to 36.69%, of light motor vehicles to 65.10% and the heavy motor vehicles to 41.47%.

Moreover came to know that for resoling a tyre, an average of 1000 rupee worth fuel and it needs raw materials worth of Rs. 1500/-. Such a resoled tyre usually lasts for years, which in turn cause about 60% loss in fuel.

49 buses make a loss of 931 litres per day, 27,930 litres per month and 335160 litres per year in gutters. Where, light motor vehicles that consume an excess of four litres, wastes 660 litres in a day. Two wheeler vehicles consume excess of one litre. Wastes 340 litre/day,10200 litres two litres per day, waste 500 litres per day, 1500 litres per month and 1,80,000 litres per day when we consider that financial side, at the latest rate of rupees Rs.55.00 for diesel and Rs. 73.00 for petrol, two wheelers on this road waste fuel worth Rs. 89,35,200.00 in gutters. In other way fuel worth Rs. 5, 35, 77,000/- is wasted on this road.

It is condition of a rural village road, the quantity of fuel lost on other busy roads would be beyond our imagination. Number of vehicles is increasing day by day, beyond the carrying capacity of our roads that are poorly constructed and improperly maintained. Hence it is concluded that gutters cause great reduction in mileage, reduce fuel efficiency and fuel efficiency and increase the wear and tear of spare parts, thus wasting both energy and money. Our suggestion is that roads are tobe built under the supervision of *GramaPanchayath*(village administration).

We are extremely happy that we got our roads repaired as per the special order of Kannur district collector.

Guide Teacher: Bijali, K.V
Language used:*Malayalam*

Tailpiece:

"Sir Isaac Newton's First Law of Thermodynamics states that"energy cannot be created, nor destroyed. It can only be transformed from one form to another". Humans are made of energy; we are biothermal factories. As such, we are subject to the same scientific laws of the universe as any other form of energy….."

INNOVATION OF A DEVICE FOR MAKING CAKES USING STEAM ENERGY WITH EFFICIENT AND ECONOMIC TECHNOLOGY

Bidisha Goroi, Shristi Mahanta, Namasweta Bora, Anuradha Das, Ripli Pegu

Balya Bhavan School, Jorhat, Assam

Energy is a significant component of our daily life and the progress of a country's economic development depends on the energy.Infact, the growth of healthy economy of a region or country depends on the process or way of meeting the demand of the necessary use of energy.

Making a scientific model or device came to our mind through modification of a pressure cooker to a certain extent to minimise the demand of energy in a short time using comparatively less amount offuel. In the beginning, we took a water fill pressure cooker then we removed its whistle cap,so that steam produced inside the cooker can pass freely.A mixture of rice powder, atablespoon of sugar and crushed coconut is prepared and put inside four normal paper glasses having small holes of 2mm at the bottom of each glass. We then kept each of the glasses upon the top of the pipes in the suitable way. On boiling water inside the cooker produced steam,which we passed through the content of each glass. It was observed that 12 cakes was baked in one minute only.

Before this process was done, a cake was made using single pipe and faced the difficulty of preparing four cakes and to offer four people at one serving. It took naturally much time, more consumption of fuel and consequently much use of energy. However, when four pipes are used 12 persons could take cakes at one serve. We observed that more cakes could be made at a short time. Thus, primarily we ascertained the amount of fuel needed, and we found thatthe amount of consumption of fuel was quite less, which confirmed our observation as reported in the result of the experiment.

It is necessary to keep the glasses filled with cakes dry. Thus, the bottom surface of an aluminium saucer of reasonable thickness was cut and placed surrounding the plate and will remain at necessary temperature during the making of cakes. Afterremoving, those cakes can bepreservedfor a month or so and may be served as fresh cakes after keeping at low temperature, if necessary.

The commercial reliability of such an innovative process of making suck traditional cakes will be quite satisfactory according to our assumptions.

We willfurther pursue this innovation in the second phase so that this process of making cakes would be quite beneficial for the common people, particularly rural poor.

Guide Teacher: Mrs. Mousumi Dutta Saikia
Language used: *Assamese*

Tailpiece:

Everything is energy and that's all there is to it. Match the frequency of the reality you want and you cannot help but get that reality. It can be no other way. This is not philosophy. This is physics.

-Albert Einstain

STUDY OF QUALITY OF PADDY GRAINS DRYING ON DIFFERENT SURFACES

Daoha Basumatary, Parmeshwar Brahma, Bwthwr Brahma, Ayrakhi Brahma,
Tipkai H.S. School Kokrajhar, Assam

The main objective of this project is to identify the best surface of drying paddy grains using solar energy to retain quality of rice. For the purpose of the project, we selected Tipkai area and surveyed 80 families to collect necessary data regarding drying paddy grains. We observed that most of the cultivators of that area donot have proper knowledge to select the best surface area for drying paddy grains, whichdeteriorates quality of ricegets and duringprocessing it suffers great wastage; moreover, it affects quality of rice, which becomes measurably poor. So, in order to give some solutions to those problems we carried out an experiment by processing rice from the paddy grains drying on plain tin, triple, bamboo mat plank and ground floor in sunlight (30°C)

For four hours we observed that quality of rice processed from the paddy grains dried on Tarpaulin (commonly known as *Tripaal*) and Plain surfaced tin sheet were very poor due to fast drying of grains as a result of absorbing extreme heat within short period of time. Similarly, we found quality of rice very poor by drying paddy on ground floor for high amount of water vapourfrom the ground surfaces.

Since medium rate of drying is necessary for producing good quality of rice after processing, bamboo-mat, the mat prepared with bamboo slits and as because such mat has pores for air circulation, it helps in drying. Through experimentation, we found that the bamboo-mat proved as the best surface for drying paddy grains through our experiment in comparison to other drying surfaces.

Therefore, we encouraged the cultivators of our study area to use this traditional method of drying paddy grains on this low cost bamboo-mat using sunlight as renewable source of energy.

Guide Teacher: Mrs. Mainao Basumatary
Language used:*Bodo*

PREPARATION OF OIL ECONOMIC WICK FROM BETEL NUT FIBRE

Dimpi Deuri and Deepshikha Boruah
Namdeuri Higher Secondary School, Jorhat, Assam

In our society, the prevailing age-old practice of lighting is with earthen lamp. These lamps are lighted with the help of cotton wick emerging in either mustard or kerosene oil. We noticed that because of using cotton wick, the rate of consumption of oil is very high and therefore uneconomic. This provoked us to find out some alternative materials in and around our locality to use as wick for increasing oil-use-efficiency not at the cost of required amount of illumination. The aim of or project was, therefore, to prepare wicks from fibre out of sheath of Betel nut (*Arecacatechu*) leaf, which is considered as waste.

By using the waste betel nut fibre we prepared wicks of three different cross-sectional areas (1 cm, 1.5 cm,, and 2 cm) and three different lengths (5 cm, 6 cm, and 7cm). Then tested their three properties namely oil economy, length of flame and time of complete burning, and compared these with those of of cotton wicks. Finally, we found that (i) betel nut wicks consumed 0.9 ml less oil than that of cotton wicks within 20 minutes; (ii) The length of flame of betel nut wick is more than of that of cotton wicks; and (iii) betel nut wick burned for longer time than the cotton wick.

Thus, through our project, we have discovered a better material than cotton to prepare wicks. We can contribute in energy saving and decrease the rate of pollution .The betel nut wick was also found to be economically profitable material for lightning the earthen lamp.

Guide Teacher: Udayjyoti Borah
Language used: *Assamese*

Tailpiece:

Because we are now running out of gas and oil, we must prepare quickly for a third change, to strict conservation and to the use of ... permanent renewable energysources, like solar power.
~ Jimmy Carter

A STUDY ON FIREWOOD AS FUEL AND ITS IMPACT ON INDOOR POLLUTION AND AN ATTEMT FOR IMPROVISATION OF TRADITIONAL CHULHA FOR MULTIPLE USES TO RUDUCE THE INDOOR POLLUTION.

Habung Asun, Siddharth Pradhan, L. Poireiton meetei, Lakpa Tsering
Vivekananda Kendra Vidyalaya, Shergaon, Arunachal Pradesh.

Through this project we attempt for improvisation of traditional *chulhas* for multiple uses with the aim (i) to improve efficiency of energy, (ii) to reduce the indoor pollution and (iii) to reduce deforestation. The village Shergaon is located in a cold place. Because of this reason, this village need hot water during October to March every year for their daily activities. To fulfil their needs the women are exposed to smoky environment inside the kitchen due to their age-old modelled *chulha* and this exposure leads to their illness. Therefore, we improvised the older one and developed a new challah. Our proposed new *chulha*can beused efficiently to cook food, can be used as room heater, and can be used as oven to keep the food hot and heat water simultaneously. The fuel used in this *chulha* is of smokeless type, which has been made using locally available resource, which can also help to reduce deforestation to large extent. Due to its very nature of being smokeless, it also helps in reducing pollution of the kitchen and thereby helps in maintain normal health of women.

Guide Teacher: Not available
Language used: *English*

AN ASSESSMENT OF KINETIC ENERGY OF JAIL STREAM IN BAIHMO VILLAGE, ZUNHEBOTO

Holonto S. Zhimo, Limeka K. Ayemi, Kaghalo S. Shikhu
Cornerstonen Old Townn Zunheboto, Nagaland

Physical processes help in transferring or transforming energy from one form to the other.It is also a crucial parameter for development of a state of a nation. Energy can be generated from various sources such as fossil fuel,wood,sun, wind,flow of water, ocean tides and waves, biomass, etc.

As our energy needs to increase at a tremendous pace, an energy crisis in near future is a distinct possibility. We need to increase use of renewable sources of energy, such as wind flowing water and ocean tides and wavesto generate electricity,although considerable success has achieved. Eighty per cent (80%)of the energy consumed today still comes from fossil fuel and about 19% comes from wood, biomass, and only 1% from renewable source of energy. Falling water possesskinetic energy which can be used for generating electricity. About 25% of energy comes through hydel power plant.

We carried an experiment to calculate the kinetic energy to jail stream in Baihmo village under Zunheboto district of Ngaland. We took several readings at different sources of the stream. The kineticenergy possessed by the stream was 764 watt. If micro-hydel power system is setup, which has apotential to generate energy sufficient to provide electricity in many of the houses in the village to supplement the conventional electric supply by the electricity department. We concluded, if such project is set up in five different section of the stream, the total energy generated would be sufficient to light all the households of the village.

Guide Teacher: Bijoy K. Tamang and Suraj Sivakoti
Language used:*English*

ORGANIC FARMING FOR ENERGY SAVING

(GOBBARA BEDADA KRUSHI, KHADER KADU KRUSHI, SHAKTHI ULISUVA KRUSHI, PARISARA RAKSHAKA KRUSHI)

Kallesh S.R, Rashmi. M, Naveen. S, Hemanth R, Vani B.R
G.P.U. College (High School) , Huliyar-Kenker, Tumkur-Dt.

We participated in a lecture delivered by Dr. Khader of Mysore, on the topic, "Food for health and agriculture for food" in our school. In his lecture, he told that god farming can be done only using small amount of forest soil. There is no necessary of using chemical fertilizers. After listening to his lecture following questions arose in our mind- how is it possible to do farming without using chemical fertilizers and if it is possible will it give good yield? Will this method be boon to the farmers? By this method, how much amount of fertilizers can be saved? How much amount of energy can be saved? How much amount of money can be saved?He also mentioned that 11% farmers follow monocarps method 28% farmers follow crop rotation 61% farmers follow mixed crop method but all the 100% of farmers follow improper mixed crop method.

35% of farmers use manure only once 55% of farmers use manure for 2 times 10% of farmers use manure for 3 times. In order to minimize the energy, whichis consumed in manufacturing the fertilizer, its transportation and management, we made up our mind to do scientific study of forest agriculture method of farming. The main objective of our project is to make the farmers understand the positive aspects of this farming. In this view we looked forward to visit field.

In our first experiment we selected 2m X 1m plot named "A" and did mulching for 10 days. We added forest microbial solution to this pot once in three days. Then we selected another plot of the same measurement and spread the soil in certain inclination. We sow same number of monocot and dicot seeds in alternate lines in both the plots. We recorded the heights of these plants after 10,20, and 30days. We found that the height of plants of plot "A" is more than that of the plants of plot "B".

We prepared two plots of measuring 1m X 1m andlabelled as "C" and "D". To the plot C, we added chemical fertilizer and to "D" we added forest microbial solution. We sow 50 seeds in both these plots. After 4 days 40 seeds germinated in the plot c and 48 seeds germinated in the plot "D". We recorded the height of the plants in both these plants after

15 and 25 days. The heights of plants in plot “C” was more in number than that in plot “D”. However, the numbers of earthworm were considerably more in plot “D” than in plot “C”.

In this experiment we took 100 gm. of soil each from plot “C” and plot “D” (of above experiment) and kept in an oven for 1 hour. After 1 hour, we weighed both the samples and it measured 87 gm. and 85 cm respectively. That meant that soil of plot “D” hold more water.

This difference in the water holding capacity is due to the microbes present in the plot “D”. That was the reason for more number of earthworms in plot “D”.

According to our first survey, farmers use 220kg of chemical fertilizer per hectare, which, as we calculate for 100 hectares, is about 2200kg or 22 tonne. From internet information, we came to know that energy required for the production of 1 tonne of fertilizer is 41 GJ (Giga Joules). Therefore, to produce22 tonnes of fertilizer 900 GJ of energy will be required. Thus, by avoiding 22 tonne of fertilizer per 100 hectare, we can save 900 GJ of energy. In India, there is total 140,000,000 hectare of agriculture land. By practicing organic farmingIt is possible to save a huge amount of energy as mentioned below:

(900/100)x140000000=1,260,000,000GJ =126 Crore GJ

Saving of 126 crore GJ implies saving of 126 crore tonne of fuel oil.

The above figure indicates the amount of energy involved only in the production of fertilizer.

Guide Teacher: Smt. Vidya Kunchnur
Language used:*Malayalam*

Tailpiece:

"The amount of sunshine energy that hits the surface of the Earth every minute is greater than the total amount of energy that the world's human population consumes in a year!"

(Home Power Magazine

Tailpiece:

“If you want to find the secrets of the universe, think in terms of energy, frequency and vibration.”
— Nikola Tesla

ENERGY FROM WASTE

K. Kanimozhi, C Sathya, A. Sathya, A Praveen, S. Sudharsanan, R. Govindraj.
G.H.S.S. Moranahalli, Krishnagiri, Tamil Nadu

Krishnagiri district in Tamil Nadu is the leading district in Mango Production. Mango juice export has increased Indian Economy, thought it has another side effect of polluting environment with its waste. Mango pulp extract forms 60% and the remaining 40% of the mango pulp wastes are deposited in the Mango industries own Land.It causes severe air pollution by spreading its bad persistent smell for several months. Moreover the deposits accumulation is the breeding place for mosquitoes and other pests.

We gathered information, collected pamphlets regarding Biogas. We prepared a mixture of 6% cow dung and 4% mango pulp waste for Biogas Plant. By 15-27 days the methane gas was produced and then collected in the container. Cost of the digester is high difficulty in installing them, difficulty in procuring spare parts for replacement, as those are not locally available.

Therefore, we used 25 lit. Bottle, Rubber tubes as Biogas plant contain. The cost and some technical details found to be beyond the reach of nonprofessional.

Hence, we designed our Biogas plant using Polythene bags, narrow plastic tubes and fish-tank tube connectors, which are in the reach of poor farmers. It is cheap and appealing to rural people because of lowinstallation cost and therefore of the gas, and the improvement in the environment. It can be applied successfully to rural and urban areas, both in low and hilly land situations.

Guide Teacher: K. Kalavathy
Language used: *Tamil*

Tailpiece:

"Climb the mountains and get their good tidings. Nature's peace will flow into you as sunshine flows into trees. The winds will blow their own freshness into you, and the storms their energy, while cares will drop away from you like the leaves of Autumn."

— John Muir, The Mountains of California

HYDEL POWER GENERATION THROUGH RAIN WATER HARVESTING

Mehul Mitra, Pramit Das, Debarshi Ray, Shreya Chatterjee and Sreyashi Paul
Institute of Total Education,Birbhum, West Bengal

Energy is the driving force of life, and its impact is the very basis of the growth of civilization. Ever since, the human's invention of the fire, man has given signification to the various forms of energy. In today's world, energy is the most important requirement of life. Most of source of energy used are non- renewable which cannot be generated, once exhausted. So people all over the world are trying to reduce direct use of energy in our daily lives in the form of electricity.80% of the electricity produced comes from different power plant stations.But the fossil fuels that is used in the thermal power plant is getting extinct day by day. So we are facing energy crisis. On the other hand, typical renewable sources of energy are not available in different quantity.

Therefore, it is essential to generate the electrical power by using mechanical means. Our objective is to harness energy from downstream rainwater. We also tried to store the generated power into storage cells for future use. The reason behind the selection of this topic that many people living in the remote areas of Birbhum are being suffered from lack of electricity connection.

Under this circumstance, the people need to use the sources of the energy available to them up to the fullest capacity. Use of rainwater to generate hydel power will be effective for generation of electricity and we believe it will be pollution free as well.

Guide Teacher: Mr. Tarun Kanti Ghosh
Language used for presentation: *English*

Tailpiece:

"Solar energy is a clean alternative energy source. It's clear, given the current energy crisis, that we need to embrace new sources of renewable energy that are good for our planet. I believe very strongly in using technology to provide affordable options that all consumers can put into practice."

-Yang Yang

UCLA Engineering Professor

THE STUDY OF BIODIESEL PRODUCTION FROM DIFFERENT ALGAE AND CYANOBACTERIA

Ngagam Yoka, Priya Lomdak, Pranjal Borah, Bompa Lomdak

Vivekanand Public School, Daporijo, Arunachal Pradesh

Search for an alternative source of energy is need of the hour for human survival. Continuous use of petroleum-based fuels is now widely recognized as unsustainable because of depleting supplies and the contribution of these fuels to the accumulation of carbon dioxide in the environment. Biodiesel from oil crops, waste cooking oil, and animal fat cannot realistically satisfy even a small fraction of the existing demand for fuels.

We undertook a study to determine the potentiality in different algae and cyanobacteria for the production of biodiesel. Our study included three green algae (*Cladophora* spp, *Spirogyra* spp, *Oedogoium* sp) and cyanobacteria (*Oscillatoria* spp). The oil was extracted from the cultures of these species.

Among the different culture used, biodiesel production was highest under cyanobacteria followed by *Spirogyra, Cladophora* and *Oscillatoria* spp.

Guide Teacher: Rijo, C. J.
Language used: *English*

THE STUDY OF PRESENCE OF SOLAR THERMAL ENERGY IN OUR SURROUNDING AND MAXIMUM STORAGE OF SOLAR ENERGY WITH THE HELP OF SOLAR TIMER

Pratibha Rani, Neha Kumari, Jaya Mitra, Mandrita Gautam, Priya Kumari
Pie Science Centre, Aliganj, Banka, Bihar

We all are aware of the fact that non-renewable energy is exhausting at a faster pace and we need to search for an alternate source. Among renewable sources, solar energy is one such source that is available in abundance, and our country is blessed with maximum sunshine days.

Our experimentation involved setting up of solar timer attached to photovoltaic plate, such that the photovoltaic plate moves according to changes occurring in the solar angle andelevation. This enables solar rays to fall perpendicular on to the plate during the entire daytime. Thereby, maximum solar energy gets absorbed by the plate, which in turn can be converted into electrical energy.

We also found that if the photovoltaic plate is placed at a height of 10 feet, the maximum quantity of energy can be collected, particularly in the study area.

Guide Teacher: Kumari Shambhawi
Language used: *Hindi*

ECO – FRIDGE

R. Ananthakrishnan, Akhil Pratap, AAkarsh. S, Sreeharsh V.B and Rajesh, K
Kendriya Vidyalaya Sangathan Ernakulam Region

Energy crisis is the main problem in our country. After independence we are not able to distribute energy like electricity and food to the country as a whole. Most of the peoplelive in darkness. The major amount of consumption of electricity is due to lack of people's awareness. Refrigerator is a high energy consuming appliance. Current consumption of refrigerator is high. This is beyond possible to meet up because of the present energy situations of our country and world as a whole. To solve this problem we are here with our innovated model and its cost is low. Materials used are either naturally occurring or recycled. Everyone can use it. It is a simple refrigerator and is very efficient in terms of monetary involvement. We conducted many survey and experiment and came to design and develop a final model. The energy consumed by refrigerators is more than energy consumed by a person per year in a country like ours.

Experiment conducted by us was to find out efficiency of eco-fridge,developed from a water-cooling system, which donot uses electricity. Through survey we came to know that the main purpose of refrigerator is to store raw fruits and vegetables; this requires a temp of 22-25'C. The main phenomena involved are evaporation of water and thermal conductivity of metals. Eco-fridge was constructed using cheap and scrap metals. A long copper tube spiralled in cylindrical shape, surrounded by layers of sand. This was then enclosed in a plastic container covered by cotton cloth.

Higher amount of energy consumed by a commercial refrigerator can be minimized by implementing our Eco- fridge which is a revolutionary development for our future.

Guided Teacher:-Chitra, G
Language used:-*English*

TO MAKE CHARCOAL BRIQUETTES FROM *Lantanacamera* – AN ECO-FRIENDLY FUEL

Ranjna Devi, Mala Thakur, Ashish Kumar, Dinesh Kumar, Ankit Kumar

G.S.S.S Jandru, PO- Jandru, Sojanpur, Himachal Pradesh

Our projectis on making charcoal fromcommon shrub*Lantana camera*. Lantana is a common weed not only in our Jandru area, but also all over India. As prices of L.P.G is rising steeply and fuel wood becoming scarce, the use of lantana charcoal briquettes can serve many of our day-to-day purposes. We also did a survey in the locality and found that 96% people wanted to use the charcoal only if others provided it to them. Hence, we recommend making of lantana charcoal briquette by N.S.S units of our schools.

Under*MashilaMandals* and MNREGA, this will not only provide financial benefit, but will also help in saving wood and LPG toward meeting people's need for fuel.

Guide Teacher: - Yajnish
Language used: - *English*

PROPER UTILISATION OF WASTE OF JAGTSINGHPUR FAMOUS 'BARUNI MELA' AND ITS CASE STUDY AT BALITUTHA

Rupali Priyadarsini Das, Prativa Sahoo, Ashish Mohapatra, Sharaddhannjali tripathy, Subhasmita Maharana.

Panchayat High School Balitutha, Odisha

The need of energy for society is as important as a main spring in a watch. The development of a nation depends on the availability of energy. However, due to fast growth in population and industrialization, energy crisis is of a great concern world over today.

We had undertaken this project to make the world pollution free and to solve the energy crisis by an innovative process with help of newly invented machine from Bio-Wastages available during Jagatsinghpur District's famous *Baruni Mela* (Fair).

The gas produced in this chamber from dried bio-wastes in presence of sunlight in the chamber of destructive distillation process. It is anairtight chamber. Its length is 5 feet, width 3 feet and height is 3 feet. It is made upof zinc plate, and it is sealed in a chamber of glass (8 mm thickness).An area of 5 feet x3 feet is necessary for placing it on a wooden stand. Four horizontal convex lenses were fixed withtwo wooden stands in such a way so that sunrays falling on these lensesare concentrated inside the chamber. In thechamber, we hanged a water pot and a stone of same weight with the help of a rope from apulley. The arrangements made in such a way when water falls by drops into another pot below, the destructive chamber moves according to angular movement of the sun. On the other side of the box,there was an exhaust valve. We, then, connected a delivery pipewith the valve andclamped the other end of the pipe inside the filtration chamber. We then put the dry waste materials inside the chamber and kept it under sunlight so that sunrays through convex lenses fall on the dry waste. The bio-waste thus decomposed by destructive distillation process at 1000°C to 1400 °C temperature, produced gas inside. This combustion gas consisted of methane (CH_4), ethane (C_3H_8), butane (C_4H_{10}) and carbon di-oxide (CO_2). This gaspassedinto the filtration chamber through delivery tube. This chamber filters biogas, so it is called filtration chamber. It is a cylindrical pot made up of zinc plate. Its height is 4 feet and diameter is 5 feet. The pipe coming from destructive distillation chamber, which is clamped inside the chamber filled with water. A collecting gas chamber

floats in this pot. When gases pass through water, the carbon di-oxide gas and unburned carbon particlesgets dissolved init. However,we collected this dissolved methane, ethane, propane, butane in floated collecting gas chamber.

As filtered gas was collectedfrom this chamber, so it is called collecting gas chamber. Its lower part is cylindrical and upper part is conical. Its height is 4 feet and diameter is 4 feet and 10 inch. It is also made up of zinc plate. An exhaust valve with delivery tube is connected to a gas stove. When this chamber is filled with gas, it moves upward by pressure controlling the pressure of the gas. We burnt the gas, which gave blue flame and generatedenough heat. During our experiment, we found that organic waste produced blue flame like LPG gas and producedgood amount of heat.

We four members with our guide teacher met and made discussion with the president, secretary, and other members of *Baruuni Mela* Committee. We explained them the advantages of the project and how it will solve water, air, soil pollution, how we will get fuel from biodegradable wastes. All of them appreciated our project and agreed to construct the biogas project.

Guide Teacher: Sri Dilip Kumar Malik
Language used: *Odiya*

TO MAKE SUPPLEMENTARY FUEL LIKE 'ENTHANOL' FOR PETROL FORM CONGRESS GRASS

Samruddhi Vijay Sonar. Rakshanda Sanjiv Wagh, Dhanashree Nandkishor Salave and Komal Dilip Patil
Chhatrapati Sambhaji Vidyalaya, Deopur, Dhule, 5, Maharastra

In earlier time 5 per cent ethanol was used along with petrol, but in 2005, the mixing rateof ethanol has been increased to 10 per cent. The Indian government prepared a scheme of using ethanol up to 17%. By using ethanol, we can reduce 'Global Warming' and thereby can protect ozone layer. Ethanol is better than petrol according to their chemical properties. It helps India in its industrial development. As because we use crude oil from other countries, the cost of becomes high, which is approximately 50 to 70 US $. Therefore, the cost of crude oil is roughly about 1600 million US $. Hence, for our progress, we should use the ethanol and it is very much important to us.

In our class, our teacher taught us the topic, Biodiversity and at that time,he explained the importance of bio-diversity and its relation to environment, andexplained how increasing population depends upon fuel. As fossil fuel is limited, that's why our teacheradvised us to search for an alternative solution on this problem. Therefore, using *Karanga* and *Jatropha,* which are not useful for our environment,we prepared Biodiesel, which we can use as substitute of fossil fuel.

While doing the project we used various types of grasses. First, we fermented common grass (Dub grass) and then distilled this product to get the final output, but we failed. After that, we took*Parthenium*, commonly known as Congress grass.

We fermented SwissGrass adding Yeast, which resulted into the traditional energy-source. Therefore, production of ethanol from Swiss Grass became the main aim of our project. After fermentation, it smells just like ethanol. By checking this product we added $FeCI_3$ (Ferric Chloride) powder. We observed that the liquid, which we produced,looked like ethanol and it was Bio ethanol from *Congress Grass*. During the experimentation, we also observed that (i) biomass of *Swiss Grass* is easily available in nature surrounding our dwelling places, (ii) *Swiss Grass*can be used for making ethanol easily byfermentation with yeast and pollution from this grass can be minimised, (iii) The ignition point of ethanol is 3

times greater than petrol. Therefore, use of this bio-ethanol in motorcar is much safer; and (iv) *Congress grass* is rich in hemi-cellulose, which has 35% oxygen resulting less harmful ignition of gases after combustion.

We performed experiments in the laboratory with 1 kg chopped grass mixed with 1 litre of water and then added 100 gm. Yeast. We collectedthe grasses in two stages of its growth – pre-flowering and flowering. We keptthe experimental set-ups consecutively for 3 and 8 days for completefermentationand digestion. Finally, we found that maximum amount of ethanol (200 ml) was produced from 1 kg of grass collected at pre-flowering stage and fermented for 8 days. Production efficiency was more than 26%. We further calculated the production cost, which when compared with petrol; we found that our process is an economical alternative.

Guide Teacher: N.S.Palit
Language used:*Marathi*

SOLAR STILL: AN ALTERNATIVE TO ELECTRICAL WATER PURIFIERS

Shreshth, Navjot**,** Priya, Kartik and Kajal
D.A.V. Multipurpose Public School, Sonepat, Haryana

Water in Sonepat area is brackish and needs purification; but many people do not have any access to treated water. The prevailing electric water purifiers need lot of energy for whichhuge amount of fossil fuels are being consumed in such boiling method of purification.

The main objective of the project was to construct a low-cost, energy efficient Inverted-Absorber (IA) type solar still, which has successfully achieved. After measuring the Total Dissolved Solid (TDS) level of different water samples of Sonepat, we found that up to 1000ppm there is need to treat the water before drinking. Before construction of inverted-absorber-type solar still, we studied several parameters other than TDS,such as energy consumed, water wastage, efficiency, temperature range in solar still particularly from April to November when water becomes scarce.

Analysis shows that the total water purified is upto 5 litres out of 15 litres of brackish water with still area $1m^2$; our Inverted Absorber type solar still costs approximately Rs 1670 which is in the reach of a common person and has minimum technology complexity and maintenance. The TDS of water was reduced to 80ppm.The efficiency of our Inverted Absorber type Soar Still is (64%)as compared to that of R.O, which has40%efficiency.

When we measured the temperature difference between simple IA type solar still came out to be a variation between 5°C to 15°C.This increased the rate of purification of water. Calculation of energy consumed shows that it requires 33900KJ of solar energy to get 5 litres pure water per day, which is cost-free. After demonstrations and awareness, 80.4% rural families were prepared to use this IA solar still.

Efficiency of solar still was further increased using minor as a reflector to concentrate the solar energy within the still. Thus, the efficiency was increased by 34%.

The future scope of the project is to make Multi-Basin Solar Still that can be installed on the roofs of, schools, houses,offices,public buildings and to ensure that the maximum people use solar still to purify water and save energy resources.

Guide teacher: Geeta Dahiya
Language used: *English*

A STUDY TO ENHANCE THE EFFICIENCY OF BIO-GAS PLANTS THROUGH ADDITION OF METHANOGENIC BACTERIA

Sneha Gangha P.V, Kavya Manohar, Kavya Ramesh, Vishnu Prasad, Vyshnav
SKMJ H.S School, Kalpetta Wayanad, Kerala.

Biogas plants are the renewable and sustainable source of energy that converts the Bio waste into Biogas. In society is very relevant. However, some crucial problems are being faced by the exiting Biogas Plants. The major problem is the insufficient production of Methane Gas in the Biogas Plants. This problem can be solved by the inoculation with efficient methanogenic bacteria that has been cultured from a better source, Dung of wild Gaur.

Wild Gaur's dung was choosing as the better source for the isolation of methanogenic bacteria. Wild gaur is an animal whose diet is mainly based on high fibres. After the collection of samples,bacteria was isolated and cultured and then we inoculated various experimental setups with that culture medium. The amount of Methane formed due to innoculationwas detected through methane quantification test. Also calorific value of methane gas was determined using appropriatemethod. For thesewe carried out field trials.

Effective bacteria were isolated and through inoculating it into the biogas plants, the production potential of methane gas was enhanced. Moreover,we observed that the calorific value of the biogas, thus produced, was equal to that of the normal calorific value of exiting biogas.

Finally, a product "Bio Methane" was formulated which consist of inoculated bacterium. Thus through the introduction of this "Bio Methane" all organic waste can be effectively converted into energy. It is the beast alternative for the de pleting fossil fuels. Biogas is the renewable and sustainable source of energy harvesting. The plant with the Bio methane potential is a replicable and viable model.

The most attractive aspect of this project is that the technology involved is quite simple. This technology can reduce the carbon footprint and prevent the adverse effects of climate change.

Guide Teacher: Joseph John
Language used:*English*

AN EXPERIMENTAL STUDY TO PREPARE A NEW FUEL BY MIXING SOME COMMON FUELS WITH RICE GRUEL

Subrata Acharjee, Bahar Mia, Rahul Mia, Babli Sarkar, Rima Ghosh
Naitalim High School, Sub-Division -Teliamura, District – Kowali, Tripura

In our area, continuous deforestation is in vogue for the sake of fuel-wood for cooking, resulting imbalance in natural phenomenon and environmental pollution. Therefore, it is essential to find out some alternative means of cooking of food from the resources available around us. We,therefore, took up this project with the objectives –

1) To save the conventional fuel like LPG, Kerosene oil, Electricity, firewood, etc.
2) To stop cutting of trees to make the people of rural area to use onlyleaves,paddy straw, waste papers,cow dung etc. with rice gruel as fuels.

Baishgharia village of Taliamura in Tripura was our working area and we performed our project work for about 75 days. We collected some common fuel like dry leaves, paddy straws, waste paper, cow dung, fibres of coconut etc. We mixed each of these materials with rice gruel, which is considered as waste in our area, to make blended fuel and then used those separately for cooking 100 gm. of rice and recorded cooking time and quality of fuel required to cook. We also cooked same amount of rice using LPG, kerosene, electricity etc. separately and recorded time and fuel consumption.

Through our experiment, we found that the blended fuel made by us out of all the above-mentioned waste/materials mixing with rice gruel is the best for low consumption rate, low pollution rate as well as convenient to use for all. We gave it the name “FUEL CAKE”.

Guide Teacher: Debdas Royebdas Roy
Language :*Bengali*

Tailpiece:

"I have no doubt that we will be successful in harnessing the sun's energy. If sunbeams were weapons of war, we would have had solar energy centuries ago."
-George Porter

Nobel Prize winner in Chemistry, 1967

ANNEXURE – I

Analysis of Participation At NCSC 2013
State/ Project Leader/Age Group/Background

Sl	State	Total number of Projects Registered	Projects Presented	Project Female	Male	Lower Age Group	Upper Age Group	Rural Back ground	Urban Back Ground
1.	Andaman And Nicobar	4	4	2	2	1	3	1	3
2.	Andhra Pradesh	30	30	17	13	22	8	18	12
3.	Arunachal Pradesh	10	10	6	4	5	5	6	4
4.	Assam	25	25	10	15	12	13	12	13
5.	Bihar	30	30	11	19	14	16	13	17
6.	Chandigarh	4	4		4	2	2		4
7.	Chhattisgarh	16	16	6	10	6	10	2	14
8.	Delhi	8	8	7	1	3	5	1	7
9.	Goa	8	8	5	3	4	4	4	4
10.	Gujarat	26	26	14	12	18	8	13	13
11.	Haryana	16	15	8	7	6	9	9	6
12.	Himachal Pradesh	16	16	11	5	10	6	11	5
13.	Jammu Kashmir	16	16	7	9	7	9	10	6
14.	Jharkhand	12	11	5	6	7	4	3	8
15.	Karnataka	30	30	15	15	21	9	14	16
16.	Kerala	17	17	12	5	8	9	16	1
17.	KVS	42	41	15	26	18	23	6	35
18.	Lakshadweep	4	4	4		2	2	4	0
19.	Madhya Pradesh	30	30	10	20	15	15	9	21
20.	Maharashtra	30	30	12	18	18	12	7	23
21.	Manipur	10	10	7	3	7	3	6	4
22.	Meghalaya	7	7	4	3	3	4	4	3
23.	Mizoram	8	8	6	2	6	2	3	5
24.	Nagaland	8	8	5	3	5	3	3	5
25.	Navodaya Vidyalaya	29	27	4	23	13	14	22	5
26.	Orissa	26	26	9	17	20	6	9	17
27.	PuduCherry	6	6	3	3	2	4	2	4
28.	Punjab	16	15	9	6	9	6	8	7
29.	Rajasthan	28	27	14	13	12	15	14	13
30.	Sikkim	4	4	3	1		4	3	1
31.	Tamil Nadu	30	30	15	15	16	14	1	29
32.	Tripura	10	10	4	6	4	6	7	3
33.	Uttar Pradesh	41	40	17	23	21	19	12	28
34.	Uttarakhand	16	15	5	10	11	4	10	5

35.	West Bengal	30	30	11	19	20	10	17	13
	Grand Total	**643**	**634**	**293**	**341**	**348**	**286**	**280**	**354**
Additionally, 21 participants from UAE and ASEAN Countries were registered, 8 and 13 respectively .									

ANNEXURE – II

Language wise Presentations	
Language	**No. of projects**
Assamese	17
Bengali	35
Bodo	1
English	344
Guajarati	19
Hindi	116
Kanada	18
Konkani	1
Maithili	3*
Marathi	12
Malayalam	19
Oriya	15
Punjabi	8
Tamil	13
Telegu	10
Urdu	3
Total	**634**
* Registered as Maithili but presentation done in English -2 and Hindi-1	

ANNEXURE - III

State wise Details of Projects

Sl No	State	Name	Project Title
1	**Andaman And Nikobar**	Ajeesh Prakash	Green Energy Developed From Coconut Shell
2		Ashwini Tirkey	Harnessing Electricity From Leaves By Altering Photosynthesis
3		Siddharth Prasad Ratnam	Harnessing Energy From Human Excreta
4		Vincky Nagar	Sand Driven Power Generation To Desalination Plant
5	**Andhra Pradesh**	A Ikshwak Varma	Solar Pest Control Device
6		A Keerthi Chandana	Save Energy By Following Energy Saving By Using Renewable Resource in the society
7		B Devendra	Energy Audit Of Food Intake
8		B Karthik	Energy Waste In Our Village & conservation
9		B Lakshman Kumar	Production Of Electricity From Garbage
10		B Shivani	Energy Audit In Our School
11		D Navya	Energy Boosting Through Organic Farming
12		D Seenu	Consumption Of Current By Using C F L Bulbs
13		D Sravanthi	Obtaining Hydrogen From Water Through Electrolysis
14		Dornala Revathi	Friend Or Enemy
15		Duvvari Sravani	Energy System Involved In The Road Transport
16		E Achsah Jesse	Water To Watts
17		E Suresh	Model Solar Village
18		G KeerThana	Oilgae The Next Generation Fuel
19		G Mani Koushik	Poor Farmers Lifting Pump (HYDRAM)
20		L Abhishek	Energy Conservation & Management
21		M Aarthi	Save Today For A Bright Future
22		M Anohan	Save Energy Save For Future
23		M Bhavya Sree	Usage Of Energy In Society
24		M Lakshmi Sowmya	Energy From Urban Waste
25		M Lasya Chowdary	Wattage From Sewage
26		M Prashanth	Save Energy Money And The Environment with CFL Bulbs
27		N Yashaswini	Planning For Energy Efficient Building
28		P J S Jayasri	Electricity From Salt Water
29		P Kiranmaye	Energy Planning & Modelling
30		S Y Sandhya Rani	To Study Bio Resource Potential In A Village
31		Shaik Karim Ulla	Usage Of Agricultural Waste
32		T Naveen	To Conserve The Gas From Different Wastages Of Our School
33		T Ram Babu	Continuous Hydro Electricity
34		U Anitha Kumari	Advantages Of Solar Green House
35	**Arunachal Pradesh**	Arunav Dutta	A Comparative Study On Different Sources Of Light Used In It
36		Bengia Yubeh	Generation Of Energy From The Bio-mass Waste In Koloriang

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37		Dhanasree S. Poduval	A Study Of Energy Efficiency Of Chulhas Used In Seppa And It
38		Habung Asun	A Study On Firewood As A Fuel And Its Impact On Indoor Pollution
39		Lobsang Tsekey	Improved Chulha
40		Misinam Mize	Firewood Collection And Its Probable Impact On Forest And So
41		Ngagam Yoka	The Study Of Biodiesel Production From Different Algae And C
42		Niro Darang	To Find Scope Of Wise And Safe Use Of Biodiversity And To Su
43		Sunita Sharma	Energy Audit Of School Electricity Usage
44		Vishal Dutta	Analysis Of Bio-mass Potential And Usage Of Electricity Source
45	**Assam**	Abhijit Saikia	Cycle Regulated Water Pump: An Experimental Study
46		Agniv Mahanta	Fuel Consumption Of Different Two-Wheelers: A Comparative Study
47		Anima Boruah	Energy Conservation From Different Parts Of Banana Tree
48		Ankita Bhandari	Exploring Utensils As A Means For Energy Conservation
49		Anuska Bora	A Short Study On Production Of Electricity From Cow Urine
50		Arunav Bora	Energy Conservation By Harnessing Of Koroch
51		Bidisha Gogoi	Innovation Of A Device Of Making Rice Cakes Using Steam Energy With Efficient and Economic Technology
52		Daoha Basumatary	Study Of Quality Of Paddy Grains Drying On Different Surfaces
53		Debojit Gogoi	Tea Leaves Can Do It!
54		Devraj Kakoty	A Low Cost And Efficient Solar Water Heater
55		Dimpi Deuri	Preparation Of Novel And Oil Economic Wick From Betel - Nut fibre
56		Francis L. Puruolte	A Simple Evaporative Technique To Store Food
57		Hitesh Bhattarai	Study Of Future Biomass Of 1no. Bordikorai Village
58		Jaytee Paul	Sustainable Use Of Energy By Using Earthen Lamps
59		Jyotirmoy Jishnu	The rate of consumption of fuel in domestic cooking according to the Size, Shape and nature of different utensils a study.
60		Lochan Handique	Candle Flame Regulator
61		Nayana Paul	Improve Indigenous Water Lifter (Nauri) For Irrigation Saving
62		Pragyajyoti Daimary	Water Purification By U.V. Radiation
63		Pranjit Rajgorh	Jiya Gum And Saw-dust Mixture: A Substitute Fuel Of Fire Wood

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64		PuspaPran Dohutia	Mobile Charger : An Essential Device For Train Journey
65		Rashmi Das	Jack Fruit Gum: Use As Substitute Of Chemical Candle
66		SatyaBrat Raj Dowari	A Study On Rotating Energy Of Bhangori
67		Sumit Kalita	Acquiring Electricity Form A Running Sewing Machine: An Attempt.
68		Urbakhi Sonowal	Dhuan Chang- An Effective Utilisation Of Heat Energy
69		Utpal Dutta	Water Hyacinth As A Bio-fuel
70	**Bihar**	Abhishek Kumar	To Charge Mobile In Non Electrified Rural Areas - A Simple Device
71		Awantika Thakur	Generation Of Power Through Wheel For School
72		Chandan Kumar	To Charge Mobile With The Help Of Decomposed Nettle Plant
73		Chinmay Kumar	Impact Of Waste And Conversion Of Waste Into Electricity
74		Divya Jyoti	Study On The Impact Of Suspended Dust Particles On The Photosynthesis
75		Durgesh Kumar	To Save Energy Resources From Harmful Radiation
76		Kajal Kumari	Generating Electricity From Septic Tank Gas
77		Manish Kumar	Changing Habit : Saving Energy
78		Md Zeeshan Alam	Vacuum Generator
79		Minakshi Kumari	Technique Of Energy Saving In Rural Areas
80		Namita Kumari	The Impact Of Deposition Of Suspended Particles On Photosynthesis
81		Nayan Kumar	Study Of Biomass Production And Carbon Content In Different solar radiation.
82		Nikhil Kumar	Automatic Electric Pump Controller Device
83		Paras Nath	Self Looped Energy Generator System
84		Prasant Kumar	A Good Use Of Waste Energy During Exercise
85		Pratibha Rani	Presence Of Solar Thermal Energy And Maximum Storing Of Solar energy with solar timer.
86		Priyaswara Bharati	Generating Electricity With The Help Of Speed Breaker
87		Raghunandan Pradhan	Energy Audit Of School And Conservation By Solar Sensor
88		Rahul Kumar	To Generate Electricity From Urine.
89		Raja Kumar	Food Cooking By Concave Mirror
90		Ritika Raj	Smokeless Modern Oven
91		Saumaya Shiromani	The Technology Of Energy Gain And Conservation
92		Shaloo Trivedi	To Get Light And Cook Food By Methane Gas Using Eichhornia Crassipes

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93		Shree Ganesh Jee	Study On The Impact Of Two Solar Radiation Condition On The Biomass NPP & its carbon content
94		Shrimanti Biswas	Energy Efficient Multi storey Building
95		SM Raashid Akhatar	Fuel Saving Through Cooking Pot
96		Srishti Suman	A Study Of Use Of Sugar Mill Bagasse & Bagasse Ash And Its Effect on Environment.
97		Tanay Raghavendra	Assessment Of Energy Loss Due To Water Leakage And Its Solution
98		Vivek Kumar	Gober Energy Cell -Deenbandhu Model
99		Vivek Kumar Singh	Production Of Electric Energy By Muscular Pressure
100	**Chandigarh**	Akshay Sharma	Automobile Pollution Cause And Solution
101		Ankit Singh	Leaf Litter Management-A Step Towards Energy Conservation
102		Manish Kumar	Assess The Present And Plan For Future
103		Shivam Thakur	Energy Saver Stove
104	**Chhattisgarh**	Abhijeet Chakrabarti	Solar Sunflower
105		Anushka Talukdar	Coal Mines Inventory In Chirimiri
106		Gulab Singh Verma	Energy Explore Harness And Conserve (Energy And Environment
107		Gulnawaz Ali	Impact Of Coal Based Plant On Soil, Agriculture & Society: A Case Study of crop yield decline near NTPC and HTPP.
108		Himanshu Gupta	A Step Towards Utilising Biodegradable Wastes
109		Ku Shraddha Verma	Khana Pakane Hetu Praukta Urja Sroto Ka Adhyayan
110		Manish Kumar Sahu	Energy And Environment
111		Manisha Dev	Micro Level Energy Planning & Modelling
112		Neha Beck	Energy Management And Conservation
113		Nehal Kumar Sahu	Fir Wood Collection And Probable Impact On Forest And Biodiversity
114		Nikhil Mishra	Organic Energy Production
115		Rahul Kumar	Jatropha Documentary In Chirimiri
116		Rohit Ekka	Receiving Of Domestic Fuel From Digestive Wastage
117		Seema Satpathi	Energy Resources - Electric Energy Conserve
118		Shine Varghese Saji	Energy Saving Air Conditioner
119		Sweta Singh	Micro Level Energy Planning & Modelling
120	**Delhi**	Anamika Dubey	Plantoelectric
121		Auroni Deep	Joystick Energy Efficiention
122		Chanchal Gupta	"Energy Conservation In Houses, House Hold Waste Management
123		Himanshu Kumar	Energy And Society Comparative Report
124		Jaskiran Kaur	"Nayi Roshni" Energy Management And Conservation
125		Pooja Joshi	Efficient Energy Use By Planning Sustainable Building Of Future And E Waste Management
126		Raveena Goel	Study Of Fuel Efficiency

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127		Sakshi Kaushik	Approaching Future With Greener Footsteps
128	**Goa**	Ankit Rudrapgol	Energy Resources
129		Bindav N Bakhale	Energy Explore, Harness & Conserve-Energy And Society.
130		Dipesh Tamang	Study Of Different Energy Resources Used In Cavelossim Village.
131		Laxmi R Sutar	Effective Use Of Municipal Solid Waste As An Alternative Energy Resource
132		Mahima A Gaonkar	Energy And Society
133		Nikhat Naushad Sadekar	Use Of Bio-Resources As Fuel In The Kitchen And Impacts On Health of women
134		Saisha U Naik	: Municipal Solid Waste, Its Impact On Health And Environment
135		Sharvari N Chanekar	Better Way Of Using Solar Light For Lighting Traditional Houses
136	**Gujarat**	Vimal Bhai Suthar	Thermal Power Plant In Our City Exploring Its Impact In Near By Area
137		Amitkumar S Kushvah	New Energy Saving Technics By Survey Of Led Lamp And Tube Li
138		Anwesha Kumar	Energy Saving In Schools.
139		Asmita S Prasad	Save Energy In Designing The Building.
140		Azim Anwarul Haque	Energy Audit Of Asia Eng School.
141		Bhargav R Kaila	Today's Wastage Is Tomorrow's Shortage.
142		Chetan P Bakaraniya	The Energy Used In Kitchen And Mathods To Save It.
143		Deep S Patel	Solar Tower.
144		Keyur M Patel	Energy Plantation
145		Khushbu M Maisuriya	Maximum Use Of Solar Energy By Vertical Garden
146		Mansi U Solanki	Energy Used In Agriculture And Its Effects.
147		Maya M Sadhu	Study Of Gobar Gases Uses In Waghpura Village.
148		Meet M Fefar	Electrical Energy Conservation A Key For Bright Future.
149		Mehali B Sidpara	Energy Audit In School
150		Namrata N Kundanani	Research About Wastage Of Petrol & Diesel & Its Causes & Sol
151		Radha R Mehta	To Provide Information and To Give Orientation Of Use of Wat
152		Rajvi V Patel	Use of Bio resources in Kitchen and Its Effect on Women
153		Sahil A Shaikh	To Maximise The Use Of Light & Wind Energies
154		Sanyam Hurkat	Energy Saving In Our Life Style Habbits And Home.
155		Sapan S Patel	Green Building For Green Future.
156		Shuchi Shastri	To Identify And Evaluate The Sources And Means Of Energy Con
157		Siddhi B Pandya	Water Energy Issue And Challenges.

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158		Soham N Dave	Conversion Plastic In To Crude.
159		Trusha S Parikh	Energy Conservation Through Cfl.
160		Urvashi D	Energy Audit In Home Management.
161		Vrunda K Thaker	Life Style And Electricity Energy Use.
162	**Haryana**	Ashwani Kumar	Multipurpose Chullah A Substitute Of Geyser
163		Babita	Survey On Energy Conservation Habit
164		Jyoti	Construction Of Eco Friendly Bricks
165		Kumari Rashmi	Sonepat Villages And Bio-Gas Awareness
166		Kumari Renu	Solar Energy Conservation And Utilisation In Village
167		Manju Rani	Analytical Survey On Alternative Source Of Bio Gas
168		Oshia Garg	Bhatti-Cum-Geyser & Chullah-Cum-Geyser, And Comparative Study
169		Prashant Sharma	Gravity Lamp
170		Pratyush Maini	: Parasitic Energy Harvester
171		Ravina	Formation Of Energy From Unwanted Weed Specialy Parthenium
172		Ritika Kumari	Save Energy By Using Traditional Methods In Modern Lifestyle
173		Rohtas Kumar	Production Of Eco Friendly Bricks For Flood Area
174		Saksham Bansal	Energy Efficient Mattress.
175		Shreshth	Solar Still- An Alternative To The Electrical Water Purifier
176		Uday Bhan	Electricity Generation From Kantali,Amla,Taramira,Kikar,Aa
177	**Himachal Pradesh**	Alia Naz	Study Of Fuel Wood In Innovative Fusion Device
178		Amit Kumar	Explore & Identify Energy Resources In And Around You
179		Animesh Barnyal	To Evaluate The Houses On The Parameter Of Energy Effeciency
180		Arushika Sharma	Impact Of Hydropower Projects
181		Madhu Sudan Sood	Case Study On Feasibility Of Innovative Device
182		Mrinal Goswami	Uses Of The Bio-Resources As Fuel In The Kitchen
183		Muskan	Evaluate The Energy Efficiency Of Different Chulhas
184		Pushpa Kumari	Possibility Of Hydro Power Project In Kais
185		Rahul Chauhan	Energy Conservation In Village Household
186		Ranjna Devi	Lantana Charcoal Briquettes An Eco Friendly Fuel
187		Shivani Kumari	A Detail Study Of Newly Invented Kais Chulha
188		Srishti Bajaj	Energy Conservation
189		Sujya Sharma	Evaluate The Energy Efficiency Of Different Chulhas
190		Vandana Kumari	Harness Of Solar Energy By Using New Technology

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191		Vanshika Thakur	Uses Of The Bio-resources As Fuel In The Kitchen
192		Vishal Thakur	Evaluation Of Energy Efficiency Of Different Chullahs In Jandru
193	**Jammu and Kashmir**	Arif Hamid Bhat	Harness Of Solar Energy For Dehydration Of Vegetables And Fr
194		Arushima Pankaj	Feasibility Study Of Hybrid Solar Optic Fibre Lighting Syste
195		Erwin Andromeda	NoHeWa - No Heat Waste In LPG Stove
196		Harshdeep Singh	Waste Management-A Solution To Energy Crisis
197		Issam Sheikh	Hybrid Chullah
198		M00min Jahan	How To Use Spring Water In Energy Management & Conservation
199		Mehreen Jan	Energy From Plastic - An Innovative Way
200		Mohd Adrees Sheikh	Shoe Electricity
201		Omar Wahid Sheikh	Warming Mattress
202		Perdeep Singh Sodhi	Solar Harnesser
203		Prateek Koul	Conservation Of Energy Through Mobile Phone
204		Roopsi Roopsi	Eco Village
205		Sehaj Pal Singh Bakshi	Go Green With Leaf Furnace
206		Shreya Sharma	Converting Non-Biodegradable Waste Into Useful Form
207		Souban Bin Mushtaq	Organic Energy A Sweet Fruit For Pahalgam
208		Ubaid Shafi Bhat	Biodiesel-Fuel For A Cleaner Tomorrow
209	**Jharkhand**	Abha Kumari	Partho Ethanol As A Bio Fuel To Save Fossil Fuels
210		Ajay Kumar Layak	A Comparative Study Between Solar Energy & Electricity In Du
211		Ayushi Ojashwi	Harnessing Energy From Artificial Wind And Its Management
212		Deep Shikha	A Ray Of Hope (Energy System)
213		Kumar Harsh	Metal Oxides As An Alternative To Use Solar Energy
214		Mehul Mayank	Lightning Future With Piezoelectric Crystal
215		Mohini Kumari	Energy Resources
216		Prakash Kumar Ghar	Producing Hydroelectricity With The Help Of Water Minar
217		Pratyush Choubey	Portable Bio Gas Plant
218		Prithvi Raj	Energy System
219		Shivangi Satnaliwala	Waste Of Energy By Scaled Water Harness In Deoghar
220	**Karnataka**	Aishwarya S Gowdar	Vividha Prakarada Jaivika Beranigalu, Parisara Snehi Mattu Halligara Atthitutama Gelaya
221		Akshar K R	Methene Assist Hydrogen Production For Running Ic Engine
222		Akshaya Sabarama Missala	LED Balase Vidyuth Ulish
223		Anghi B Jain	Rationalisation Of Fossil Fuels.

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224		Chetan R Macha	Burning Of Tropical Sugar Gross Losing The Natural Resources
225		Gururaj P Byadagi	Today's Wastage Is Tomorrow's Shortage
226		Hemavathi Basappa C	Baaleyinda Baalu Bangara
227		Jeevan K G	Kiru Jala Vidyuth
228		K C Bhoomika	Bio-Gas From Coffee Husks And Pulp
229		Kallesh S R	Gobra Bedada Krushi, Khada Kadu,Krushi Shakthi Ulisuva Krushi Parisara Rakshaka Krushi
230		Kumar Manjunath Bhat	Tampu Paradeya Balake Shakthiya Ulike
231		Kumari Shravana Daptardar	Harnessing Biological Energy For Enhanced Rooting Of Stem
232		Kumari Veeksha Dechamma	Energy From Coffee Husk Boon To The Planters
233		Miss Pooja B	A Study On The Use Of Poly Tunnel In Araca Nut Drying
234		Abhiram Mithur	Manual Water Pump
235		Mohammed Suhail	Lets Generate Electricity By Walking
236		Mr Samyak Jain	
237		Reethu Nandh	Is Flour Mill Be The Substitute Resource Of Energy
238		Niteesh K R	VAWT - Vertical Axis Wind Turbine
239		P U Shantageri	Save Energy By Spinning Wheel
240		Ramya V Sangurmath	Poor People Bhagyajyothi
241		Shashikala B Daded	An Experiment Study On Using Solar Light To Produce The Light By Using Optical Fiber
242		Shreenidhi S Mayya	Chakkadi Balasi Indhana Ulisi
243		Shri Harsha K	Power generation From The Exhaust Gas Of Two wheeler
244		Shri Lakshmi Bhat	Astra- A Weapon For Fuel Economy
245		Soujanya Jagannath Rao	Cooking Gas By Kitchen Wastage
246		Spandana H G	Sudharitha Desaiya Besokallu Shakthi Ulhisuva A Adigallu
247		Swathi P Patil	Impact Of Smoke On Women's Health Of Koli Pete
248		Tara A Minajagi	Jala Ni Eddare Jeeva
249		Tejas M P	Use Solar Bicycle, Save Petrol.
250	**Kerala**	Agna Kurian	A Study Of Electricity Consumption In Malam Area
251		Aleena Elizabath Mathew	Come Back To Bicycle Save Energy
252		Amritha Suresh	Assessing Present Energy Usage And Projection For Future Requirement
253		Anagha Varma	A Technique For A Sustainable Green Environment And The Energy

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254		Anjana A	Cellulose Upcoming Fuel
255		Aparna C P	A Study On The Hardness Of Drinking Water In Cherukunnu Loca
256		Aparna P R	Conservation Of Electrical Energy Waste On Reactive Power
257		Aparna U	Energy Conservation Through Self Sufficiency
258		Aswinraj K	Energy Wastage In Gutters
259		Gayathri A J	A Study On Energy Efficiency Of Rubber Smoke Houses
260		Gopika D A	A Comparative Study On Energy From Food Consumed..Categories
261		Harikrishnan R S	Promotion Of Cow Rearing By The Production Of Electricity Fr
262		Navaneeth M P	A Study About The Impact On High Watt Equipments
263		Parvathiraveendran M A	Electricity By Exercise
264		Sainulabid K A	Wealthy Waste A Study On Energy
265		Sneha Ganga P Sv	A Study To Enhance The Efficiency Of Biogas Plant
266		Tom Gladin Jose	A Study On The Impact Of Battery Disposal On Earthworms
267	**Kendriya Vidyalaya Sangathan**	Abhiroop Das	Energy And The Development Of Infrastructure
268		Abhishek Sharma Sharma	Electricity From Shoes And Ultimate Car
269		Abhranil Roy	Adding Fruits To Diet
270		Akansha Grover Grover	Biostove
271		Akshaykumar Ganesh	Municipal Solid Waste Management And Environmental Protection
272		Aman Ranjan Sahu	Energy System In Commercial And Household Building
273		Anibrata Ghosh	Piezoelectric Change In The World
274		Anjana H Kumar	Solar Energy Trapping
275		Ankit Bhardwaj	Residential Houses And Energy Consumption In Darewadi
276		Chandan Kumar Singh	Planning Of Various Energy Resources
277		Dhritisha Bhagawati	Usage Of Solar Energy In Hospitals
278		Divya KB	Let The Curse Be Blessing
279		Ekant Aryaprakash Mishra	Conservation Of Electricity Through LDR Circuit
280		Gobilla Mothy	Sun Shine-Solar Society-Sunny Future
281		Gopika G. S	Biofuel From Chicken Feather
282		Gunjan Kumari Shaw	Urine (The Future Fuel)
283		Mahamaya Mishra	Exploring Energy Resources For Energy Efficiency & Sufficiency;
284		Mridula Swaminathan	Energy Impact Of Food And Diet

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285		Navdeep Singh	Planting Right Trees At Right Place For Energy Conservation
286		Nishant Tiwari	Vehicular Pollution
287		Pranjal Sharma	Solar Powered Multimodal Chargeable Device/Bag
288		R Anantha Krishnan	Eco Fridge
289		Rahul Shaw	Conservation Of Energy
290		Raja Ratnadeep Mahapatra	Solar Refrigerator, Water Bulb
291		Ramdas Tiwari	Can IIT Kanpur Become Self Reliant In Electricity
292		Rishabh Manish Joshi	Save Energy
293		Rohit Ramesh Gennur	Solar Cabinet Dryer
294		Sadineni Shashank	Utilisation Solar Energy By Making Glass Cleaner, Sprinkler
295		Sandeep Kumar Singh	Biogas Plant In Tezu
296		Saurabh Kumar	Eco Brick
297		Shaaz Raza Khan	Water Resources Energy Its Treatment For Present And Future
298		Shashank Kumar Singh	Fuel Consumption In Different Structured Utensils
299		Shikha Kumari	Effect Of Domestic Fuel On The Health Of Users
300		Smriti Mukherjee	Microwave Oven: Its Impact On Environment
301		Shikhita Gupta	Air With Zero Pollution
		Swati Saxena	Energy Audit Of Domestic Electricity Usage
302		Swati Sharma	Samana Chulha Golden
303		Vaishali Singh	Energy Audit Of A Flour Mill
304		Victor Adharsh	Living Plants - Future Generators Of Electricity
305		Vijayshri B	Impact Of Mobile Radiation On Living Organisms
306		Vivek Singh	Generate Electricity Where Needed
307	**Lakshadweep**	Anju Krishnan V	Impact Of Suspended Particles On Photosynthesis
308		Shameema A K	Possibility Bio Electric Power House In Lakshadweep
309		Aseesa Beegum M K	Conservation Of Electrical Energy Using Solar Energy
310		Galiya Jaleel MP	Bio Diesel-A Blessing For Secure Future
311	**Madhya Pradesh**	Aditya Shukla	Solid Waste Management A New Wax For Better Tomorrow
312		Aditya Soni	Study On Biomass Resource Potential In Your Village Or Local
313		Aman Singh	Efficiency Increase Of Biogas Plant By Using Wheat,Rice Straw Etc
314		Anmol Khemuka	Generating Valuable Electricity From Weed (World's Worst)

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315		Ashi Jain	Tyre To Fuel
316		Ashta Joshi	Hydroelectric Power Plant By Waste Water In A Multi
317		Aviral Tripathi	Artificial Electricity Producer Device
318		Bharti Dangi	The Solar Water Heater For Saving Of Energy
319		Divya Kumar Garg	Assessing The Electricity Potential Of Footsteps & Vehicles
320		Durgesh Kumar Mali	Flour Mill Producing Electricity From Mechanical Energy
321		Isha Agrawal	Algae- The Ultimate Source Of Energy
322		Madhur Gupta	Comparative Study Of Energy Consumption By Malls In Bhopal .
323		Nachiket Jhala	Energy Conservation At School Level
324		Namrata Meena	Energy Conservation And Generation From Vehicles
325		Priyanshi Agrawal	Energy Conservation & Management With The Help Of Cooler
326		Puneet Sahu	Efficient & Revolving Solar Cooker
327		Rituraj Rajput	Electricity Generations From Speed Breakers
328		Riya Singh Rathore	Energy Consumption In The Bricks Industries In Hoshangabad
329		Saral Nigam	An Energy Efficient Village
330		Sarita Choudiya	Modelling Of Energy Efficient Onion Storage Unit
331		Shiv Sachin Prajapati	Husk Can Be Used As An Alternative Source Of Energy In Society
332		Shivansh Sahu	Electricity Production By Muscular Energy
333		Siddharth Dhodapkar	Fuel From Organic Waste : Green Fuel : Charcoal Nuggets
334		Srijan Soni	Anhoni : An Unlimited Source Of Energy
335		Sujal Yadav	Conservtn.Of Resources By Changing Mech To Elec Energy In Park
336		Suraj Pipardey	Energy's Rain Sugarcane
337		Surbhi Kumbhakar	Electricity Generations From Waste Water
338		Vedant Maurya	A Future House (Uses Lesser Energy)
339		Vikrant Singh	Innovative Water Lifting Project By Human Operated Bicycle
340		Vrinda Mishra	Bio Plastics : Energy Conservator
341	**Maharashtra**	Amartya Maheshwari	Battery Efficiency
342		Amruta Raghunath Uikey	Energy System
343		Archit Rajiv Hinge	To Increase The Efficiency Of Solar Cooker
344		Chaitanya J Vavhal	Electric Assessment Of Our School
345		Deepshikha Vilas Relan	Energy Efficient Cooler
346		Gorakh Ramesh Watade	Study Of Natural And Burning Wood Fuel From Rural Area
347		Jitesh P Chavan	Saving Energy- A Burning Need

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348		Manisha Sanjay Potbhare	Natural Refrigerator
349		Mayuri Ashok Pawar	Electricity From Piezo
350		MIhir Arvind Patil	To Study The Efficiency Of Drying A Marine Product Using Sol
351		Niyati Premarajan	A Study Of Develop Grass (Cyperusrotunclus) As A Electrolyte
352		Omkar D Sathe	The Red Transformation Human Energy To Reduce Electrical
353		Prathamesh Deelip Jadhav	Energy Conservative 'Vattal' Method Study In Rural Area.
354		Priyanka Laxman Chavan	Multipurpose Sand Stove
355		Priyanka Vitthal Gawade	Solar Dryer
356		Ram Gajanan Ghongde	Multiple Lenses Solar Water Heater
357		Rishabh Srivatsava	Atmo Power , My Dream A Green World.
358		Rushikesh Baban Adhale	Production Of Solid Fuel From Banana Peels.
359		Rutuja Milind Desale	Generation Of Electricity By The Motion Of Stick
360		Samiksha Harishchandra Pawar	To Produce Energy From Waste Oil Seeds
361		Samrudhi Vijay Sonar	To Make Supplementary Fuel Ethanol To Petrol And Diesel From
362		Sarthak Sanwal	To Study Heat Retaining Efficiency Of Various Insulators.
363		Saurabh Rakesh Wagh	Energy From Garbage
364		Saurabh Suryakant Kadam	Motion Detectorchya Sahayane Urja Saving
365		Shrirang Sanjay Bhagat	Proper Use Of Fuels In Hotels And Restaurants
366		Simran S Nawander	Generating Electricity From Cellulose
367		Sudhir Shankar Jagdale	Kachara Urjecha Energy Waste
368		Suraj Dharma Patil	Study Of Efficient Burning Wood (Separate File Attached)
369		Swaraj Virendra Hanmante	Creating Bioplastic From Banana Peel
370		Vijaya Nivrutti Gonugade	Power Bench
371	**Manipur**	Brahmacharimayum Rose Devi	A Survey On Utilisation Of Certain Bio- Waste In The Villages Of Jinibam
372		Debabarta Laishram	Making Use Of Biodegradable Waste In The Form Of Biogas In S

Sl No	State	Name	Project Title
373		Harbir Kaur	A Brief Study On Solar Power Generation, Its Efficiency And Means to Obtain Maximum Yields
374		K. S. VEHLOU	A Study On Biogas as a Sources Of Energy Used For Cooling at Vakho Village Senapati Dist Manipur
375		Kabita Dhimal	Multi-purpose Chulha Plant - To Harness Energy For A Better
376		Miranda Moirangthem	A Study On The Use Of Solar Energy For Preparing Certain Types
377		Rozaria Thounaojam	Sunlight a boom to replace electric energy for lighting propose
378		Sanasam Bidyabasuni Devi	A Comparative Study Of LPG And Biogas
379		Supriya Devi Loitongbam	Study Of Efficiencies Of Grain Size Charcoal And Conglomerat
380		Vincent Letkhohao Baite	Energy Possess By Chakpi River
381	**Meghalaya**	Ardaki K Lamare	Multiple Cooking Way For Reduction Of Fuel Consumption
382		Azharuddin Ansari	Madylight Technique- An Idea That Can Save & Conserve Energy
383		Deekreat Nath	Bio-Energy
384		Lalrawngbawli Ralte	Auditing Of Waste At Shillong Public School
385		Lambok Shaphrang Thabah	Assessment Of Hydel Energy Of Umkaplam Stream In Pariong
386		Lemdashisha Muksor	To Generate Hydel Electricity Using The Flow Of Running Water
387		Saphibanteinam Kharjahrin	Use Of Sawdust As Fuel In The Kitchen.
388	**Mizoram**	George Lalruat Mawia	Study Of Wastage Of Fuel In Mamit And Its Conservation
389		Laetitia Lalrin Ngheti	Automobile Pollution - Impact On Health
390		Lal Rin Diki	A Study On Our School Mid Day Meal
391		Lal Rin Siami	Consumption Of Power Energy Of Leite Village In Mizoram
392		Linda Rochan Hlui	Energy Audit Of Govt. Chaltlang HS
393		Ro Sang Zuali	Save Energy In Household
394		T Lalhlim Puii	Bio-gas Harness In Bawngpu Veng, Kolasib
395		Zo Rem Siama	Energy Audit On Mizoram University
396	**Nagaland**	Bishal Dutta	Management Of Waste Water To Produce Efficient Energy For Sustainable Society
397		Carol Andrea Kevichusa	A Case Study On The Types Of Energy Used By The Households In Lerie Colony Kohima
398		Hinokali K Chishi	Assessing Present Energy Usage And Projection For Future In Khuwaboto Colony Zunheboto
399		Holonto S Zhimo	Assessment Of Kinetic Energy Of Jail Stream In Biahmo Village

Sl No	State	Name	Project Title
400		Janet K Chishi	Use Of Traditional Chulla And Its Impact On The Health Of Women
401		Mayanglila Longkumer	Eco-Friendly Biogas For Better Lifestyle
402		Phoebe Yanlem	Biodiesel Beneficial For The Society
403		Rakovi Pohena	Survey On Waste Disposal In Dimapur & Its Solution
404	**Navodaya Vidyalaya**	Alok Singh	Energy Consumption: Changes In Its Use And Its Effect On Society & Lifestyle
405		Anuj Pratap	Use Of Energy From Bricks Kiln And Consumption Fuel And Their Effect
406		D Sai Kumar	Bio Manure Plant
407		Gopal Saikrishna	Energy Resources And Transmission In Organisms
408		Jineeth N	Trash To Gas Biomass Energy
409		Jitendra Kumar	Measurement Of Energy Consumption In JNV & Malikpur Faizabad and Future Plan
410		K Aakash	Waste Management Resource
411		Koti Joshua Nikhil	Assesing The Impact Of Transition From Incandescent Lamps To
412		Kumar Vishnu Patel	Energy Management From Waste Materials
413		M Ganesh	Potentials And Constraints For Solar Energy In And Around Poducherry
414		Mahua Mondal	Energy Production From Biodegradable Substance
415		Namrata Kumari	Environmental Impact Of Electricity Generation
416		Niranjan Murthy BV	Energy Saved Is Energy Produced
417		Nishchay Dubey	Alternative Energy Resources In Malikpur Village And Their Conservation
418		Poulami Mondal	Automobile Pollution-Impact On Human Health
419		Pradyot Kumar Verma	Study On Energy Resources For Cooking In Malikpur Village
420		Rakesh Kumar	Energy And Environment
421		Sandhya Kumari	Global Warming And Energy Management
422		Shameem Ahmed	Wind Diesel Hybrid Power
423		Shashank Dwivedi	Level At Use Of Energy And Analysing The Need Of Future
424		Shivam Kesarwani	Utilise Of Energy From The Changes Effect On Human Life
425		Shubham Yadav	Generation Of Electricity By Fast Moving Vehicles On N.H. 28
426		Sk Kaja	Power Saving Pump sets
427		T Bharath Kumar	Renewable Energy â€“Path To Energy Security
428		V Chidambaram	Comparative Study Of LPG And Firewood As Domestic Fuels
429		Venkata Harshavardhan Reddy	Solar Kitchen In Jnv Ongole
430		Zunaid Akhtar	Pollution And Energy

Sl No	State	Name	Project Title
431	**Odisa**	Aman Kumar Mahapatra	Sustainable Agriculture- A Case Study In Sarasara Village Of Boudh Dist.
432		Ankush Sahoo	Harnessing Energy From Alternative Sources
433		Anupam Debashis Mishra	Planning For Energy Efficient Ideal House In Dhenkanal Muncipality of Odisha -A scientific analysis
434		Bishnu Saran Sahoo	Mini Bio-gas Plant By Using Kitchen Waste .
435		Biswajit Das	Conservation Of Electricity : A Case Study In Boriguma Gram Panchayat
436		D.Raj Prasad Dora	Solar Power Tree-an Answer To Scarcity of Power
437		Deekshya Das	Walk Charger
438		Eeshanee Tripathy	One Chulla Many Solutions: Energy Efficient Means Of Cooking
439		Lucy Priydarshini Bagar	Zero Energy Cooling Pot
440		Manzil Kumar	Dilgae Technology-As A Greener & Cleaner Legacy
441		Monalisa Panigrahi	Energy Efficient Bhusha Chulla
442		Mrutyunjaya Panigrahi	To Reduce Energy Consumption By Change In Practices And Bio - Gas from water hyacinth - A case study in Haripur Village
443		Nirlipta Pati	Energy Saving House
444		Prasannjit Mohapatra	Sustainable Production of Bio-gas from Palm oil Extracts-Acase study
445		Punya Prabhupad Pradhan	Algae Biotechnology for production of Bioenergy In Talcher
446		Research Parida	Ideal Fuel, Ideal Chullah Meant For Good Health And Energy Conservation : A case study in village Raikama
447		Rupali Priyadarsini Das	Proper Utilisation Of Waste Of Jagatsinghpur Famous Baruni Mela and its case study at Balitutha
448		Sanjib Kumar Nayak	Transport And Fishing By Motor Boat and Launch Inside BhitarKa
449		Sanjukta Kumbhar	Wastage Of Fuel By Public Vehicles In The Twin Towns Khariar Road and Nuapada
450		Satya Narayan Rath	Ideal Wax Candle -A Step Towards Disaster Management Phailin,2013
451		Seema Bhoi	Preparation Of Fuel Tablets From Agricultural Waste
452		Shivam Mahapatra	Techniques Of Conserving Fuel By Efficient Addition Of Bio-diesel
453		Shyam Sarndeep Singh	Save Electric Power, Save Water Resource
454		Soumya Rosalin Dash	Let's Reap Energy - A Mission of Puri Towards Solar City.
455		Sradhanjali Panda	Preparation Of Liquid Fuel From Mahula

Sl No	State	Name	Project Title
456		Srichandan Dash	An Innovation Way To Produce Electricity From Urine
457	**Puducherry**	Deepakshatha Francita	Estimation Of Energy Efficiency Of The Same Biomass In Different Forma
458		Megha Baburaj	Eco-Friendly Bio-Fuel From Chicken Waste
459		Mira Arabinth P	Producing Electricity From Speed Breakers
460		Narendiran N	Comparative Study On Bio Gas Production From Prawn, Fish Waste and Vegetable wastes of Market places in Puducherry Region
461		Nivetha V	Production Of Biodiesel By Trans-Esterification Of Cooked Edible Oil
462		Vishnu Thampan	Know The Calorie And Eat Right Food
463	**Punjab**	Arshdeep Bawa	Water Hyacinth From Bane To Energy Boon
464		Arshpinder Singh	Efficient Use Of Biogas
465		Deepanshi Bhavans S L	A Comparative Study Of Biogas From Kitchen Waste With and Without Polluting litter and cowdung
466		Gurpreet Kaur	Energy & Society
467		Inderjit	Scientific Study Of Comparison Of Different Biomass and efficiency of Chullahs used in Village Mehtan
468		Mohit Sharma	Analysis Of Unproduction of Burning of Muscular Energy to Stay Fit
469		Muskaan Bakshi	Sustainable Methods Of Energy Conservation
470		Prachi	Conserve It To Have It
471		Rajwant Kaur	To Develop Opportunities For Saving Electrical Energy
472		Rajwinder Kaur	Biogas Plant With Multi-purpose Chullahs For Rural Family
473		Samridhi Sood	New Life For Plastic As Fuel
474		Shaurya Gulati	Green Roof, Heat Proof
475		Shivani Sharma	To Develop Improvised Multi -Purpose Chullah
476		Simranjeet Kaur	Use Of Agricultural Waste
477		Vishavjit Parihar	Stop Not Till Destination Is Reached
478	**Rajasthan**	Abhishek Taparia	Farmer's Friend - Iconic Car
479		Akshay Nehra	Energy Efficient Village
480		Anita Teli	Energy Conservation
481		ANKITA Vaishnav	Our Village The Impact Of Water Uses On Energy Consumption
482		Arnav Bansal	Comparative Study Of Uses Of Inc. Bulb
483		Aryan Mukhija	Fashion And Wastage Of Energy
484		Ayushi Purohit	Cooking Fuel Saver
485		Bhagirath Singh	Construct A Zero Energy Refrigeration System
486		Dishita Bhowmik	Solar Energy Usage Is Fuel Savage
487		JasanDeep Kaur	Comparative Study On The Effect Of Roofs Made From Different
488		Kiran Gamar	Festival May Energy Ka Vivek Purn Upypg
489		Krati Maheshwari	Solar Energy Conservation And Energy Audit
490		Krishna Tolia	Steam Food Processor Using Solar Heater

Sl No	State	Name	Project Title
491		Manmeet Singh Meena	Energy Audit For Electric Conservation In Hostel At Kekri
492		Mansi Rathore	Common Transport Facilities To Minimise Energy Input & Its Soc
493		Pankaj Kumar Jangid	To Transport Water At The Height By Human Energy
494		Ratan Dan Charan	Impact Of Power Transmission Lines On Avian Diversity
495		Ravi Jain	Energy Garden
496		Ritik Pagaria	To Overcome Energy Crisis Grow Eichhornea Get Fuel
497		Satyanaryan Prajapat	Create Awareness About Solar Energy To Popularize Solar energy
498		Shefali Sethia	Solar Water Heater Cum Room Heater
499		Shreshtha Behra	Conservation Of Energy By Using Compact Fluorescent Lamps
500		Sohum Garg	Investigation For Household Energy Conservation Potential
501		Trishita Konar	Impact Of Coal Based Thermal Power In Chittorgarh
502		Vandana Vishnoi	Zero Energy Cooling System
503		Vasu Sharma	Intelligent Traffic Control System
504		Yashika Goidani	Energy Conservation By Collagen
505	**Sikkim**	Naren Kumar Chettri	Pattern Of Energy Conservation Around Mangan
506		Nayanika Sharma Nepal	Energy Conservation And Management In Ngsss
507		Roshni Sharma	Impact Of Teesta [v] (Hydel Power Project On Our Biodiversity
508		Tshering Ongnu Lepcha	Use Of Bio-resources As Fuel In Kitchen
509	**Tamil Nadu**	Behin Thomas	Energy Zip
510		A Akshya Rathna	Festivals and Changes in energy Consumption Pattern
511		A K Thamizhamutha	Abcd
512		A. Karthiban	Future Homes
513		E Ramyakala	Producing Electricity By Sewing Machine
514		J J ARUN	To produce electricity through foot path presure at Nagar Coil Bus Stand
515		K Konimozhi	Energy From Wastage
516		K Kowsalya	To Avoid The Energy Lass When 3 Phase Motors Are Operating In Two Phase Current
517		Karpaga Muthu Pandiyan	Alternative Fuel For Diesel Engine (Bio Diesel)
518		Kirubba Amalorapava Sherine	To Avoid The Energy Lass When 3 Phase Motors are Operating in two phase current
519		M Abdulrahman	Rice Mill Waste To Produce Energy Production

Sl No	State	Name	Project Title
520		M Akash	Production Of Electrical Energy Form Vegetable & Fruit Waste
521		M Preetha	Structure Of The Houses And Electrical Energy Consumption
522		M S Subiksha	Blue Energy
523		M Tenith Adithyaa	Efficient Energy Generation From Natural Resources By Improved models and Nayz
524		M. Karthik Jothi	Taking Electricity from Tailoring Machine
525		N Dinesh KUMAR	Usage Of Bioenergy In Fodder For Cattle
526		N NAVEENA	Innovative Energy Production
527		N. Lisha	Future Fuel For Kitchen
528		P Kabilan	Evaluation/Estimation Of Energy Supplied By Cattle In the village eco-system
529		R MUGILAN	Petrol Consumption
530		R Mukesh Raj	Salt Water Fuel Cell
531		R Ranjani	Energy From Garbage
532		S Kavin	Child Marriage - Loss of Energy
533		S Mohammed Shiffin	Piezo Electric Road Powering The Future
534		S Nandhini	Geo Thermal Power Plant
535		S Saipriya	Auditing On Electricity Usage In Schools
536		S. Adaikkala Amalan	Awareness on usage and conservation of Electricity in Tamil Nadu Housing Unit
537		S. Swetha	Energy conservation in villages through, recycling Method.
538		T Meena Nachiyar	Bio-Coal
539	**Tripura**	Ankit Karmakar	Mixed Bio Fuel And Heat.
540		Apurba Debnath	To Study The Consumption Of Fuel Replacing Partially the Conventional Fuel
541		Arjun Sil	To Find Out Fuel Saving Chula By Comparing Fuel Consumption of different mud chullahs in villages
542		Rasmi Debnath	A Experimental Study To Estimate The Hydel Energy Of Rivers Under Mohanpur Subdivision
543		Ripon Debbarma	Evaluate The Energy Efficiency Of Different Chullas Used In village
544		Shuvadip Mitra	Method Of Saving Fuel for Cooking MDM (Mid Day Meal) and a low cost mobile oven for reducing time and fuel Consumption
545		Subrata Acherjee	An Experimental Study To Prepare A new Fuel By Mixing some common Fuels With Rice gruel
546		Sudipta Paul	A Study Based On The Conservation Of Wood Energy By Waste
547		Sunita Sinha	Comparative Study Of Fuel Efficiency Of Different type Of Wood Oven
548		Swagata Lodh	An Experimental Study To Maintain Comfortable Room Temperature using earth air Tuned System
549	**Uttar Pradesh**	Aarzoo Jamal	Conservation & Effect Of Fuel Energy Consumed During Cooking

Sl No	State	Name	Project Title
550		Adarsh Sethi	Electricity Generation And Theft In Avas Vikas Colony, Fzd
551		Aditya Tripathi	Energy Efficient House
552		Akash Rajput	Water And Bubbles Energy
553		Anshuman Pandey	Energy Management And Conservation
554		Anuj Kumar	Expansion Of Hydro Electric Production At Ganga Canal
555		Anushka Sharma	Compost Water Heater: Harnessing Heat Released In Composting
556		Anushka Shrivas	Effect of large Coal based thermal power plant
557		Apoorv Dwivedi	Are Energy Consumers Educated Or Not
558		Avdhesh Singh Sidhu	Conservation Of Energy By Proper Management Of Billboards
559		Devanshu Gupta	Fuel Wastage In Traffic At Red Light Or / Jam
560		Dharmendra Bahadur Singh	Eco Friendly Mechanical Energy
561		Himanshu Sharma	Evaluate The Energy Efficiency Of Different Chullahs In A Village
562		Ishaan Garg	Advanced Footwear Design To Conserve Energy
563		Ishan Singh	Solar Concentrator
564		Ishita Paliwal	Production Of Electricity From Lime
565		Mani Shankar Mishra	6 Stroke Engine
566		Miss Swati Sharma	Cfl Is Saving Electricity But Degrading Human Health And Env
567		Mudit Gupta	The Green Microgym
568		Prachi Agarwal	Electricity Conservation
569		Pranjul Mishra	The Electricity (Energy) From Coal Ash And Its Saver
570		Pranshu Agrawal	Abate The Abuse Of Energy- deep Study In Homes And Food Court
571		Ridhima Mishra	Use Of Sunlight Through Optical Fibre
572		Saloni Singh	Use Of Bio Energy In Kitchens
573		Sameer Sharma	Burnable Wastage Convert As Coal Substance
574		SAMRIDDHI PRAKASH	Eco Friendly And Energy Efficient Market In Kaushambi (GZB)
575		Sarthak Sharma	Simple Solar Air Heater From Waste Materials For Domestic An
576		Shashank Tyagi	Production Of Electricity From The Wasted Smoke
577		Shishir Kumar	My Green House
578		Shiti Singh	Changing The Face Of World By Using Thermoplastic
579		Shruti Srivasrava	Conservation Of Human Energy
580		Shubham Gupta O	Impact of Exercise Utilization Of Electricity in our Locality Area
581		Siddhi Mishra	Scientific Revolution In Energy Resources Of Our Area
582		Somya Mishra	Yoga Vs Gym : Trend Setter Vs. Trend Follower For Energy Co

Sl No	State	Name	Project Title
583		Srishti Nawal	The Plunket Soundenator
584		Sumit Kumari	Hydraulic Pressor JBC Machine
585		Vaibhav Ji Srivastava	Sun Sensitive Solar Cooker
586		Vatsal Chaudhary	Harnessing Of Electricity Vie Road In Bijnor
587		Yash Agarwal	Solar Energy Efficient House
588		Zoya Fatima	The Cheaper Greener Cleaner Energy Fuel-Ethanol
589	**Uttarakhand**	Akash Bisht	CFL and LED Use
590		Anjali Rawat	Comparative Study Of Different Types Of Houses
591		Aryan Rautela	Falo Va Sabjiyo Ke Liye Shunya Urja Aadharit Bhandaar Vyavas
592		Ashlesha Thapliyal	Changes Of Energy Use A& Consumption
593		Manjul Joshi	Energy Production Through Gharat
594		Meghana Bisht	Plant Thermogenesis : Future Engineer
595		Mohd Shabab	Energy Sytems
596		Pawan Kumar	Gram Bhat Me Vaikalpik Urja Sanrakshan Vidhiyo Dwara Vano...
597		Rajpreet Singh	Comparative Study Of Electricty Consumption.....
598		Rishabh Jain	More Energy More Less Input
599		Sarthak Dhuliya	Cooking Food By Solar Energy
600		Saurav Rawat	Vyaktigat Vahno Ki Apeksha Sarvajanik Vaahano.....
601		Smita Rawat	Gram Jiwala Danchaura Me Urja Prabandhan Evam Sanrakshan
602		Sonali Rawat	Joshimath Me Navinikaran Urja Sansadhano Ka Prayog
603		Surendra Singh Jaimyal	Gori Ganga Kshetra Ke Garam Pani Stroto Ka Adhyayan
604	**West Bengal**	Ankit Saha	Low Cost No Cost Thermo Flask
605		Anu Das	Coservation Of Energy Utilisation Of Sunlight
606		Apoorva Singh	Solar Funnel Cooker
607		Arpita Das	Smokeless Sawdust Oven An Approach To Save Fuel, Money & Environment In Kitchens
608		Arunava Modak	Recycle Of Waste Water From Mid-Day-Meal For Saving Energy
609		Debasish Sutradhar	Extraction Of Oil From Gelonium Multiflorium Seed And Its Use
610		Devdas Sen	Conservation Of Energy For Future
611		Dhrupad Dutta	Ignite Fun Burner - Save Fuel
612		Dipendra Sunwar	Electrical Energy Auditing In Our School And Conservation
613		Kalyan Roy	Effect Of Cell phone Tower On Human Body An d Environment
614		Kanwa Sengupta	Energy Conservation And Its Management
615		Loknath Chowdhury	Making Of Clay Cups/Vessels Through Less Energy Consumption Technology At Advanced Level

Sl No	State	Name	Project Title
616		Mehul Mitra	Hydel Power Generation Through Rain Water Harvesting
617		Parvez Rasul	Power From Solar Panel At Different Illumination
618		Preet Majumder	Green Building For Local Weavers
619		Ritwika Ghosh	Energy Audit Of School Electricity Usage - A Study
620		Rofika Khatun	Use Of Solar Energy, Through Non Conventional Method At Kalash & Kuldia Village
621		Sahan Saha Najim	Importance Of Dui Mukhi Choola
622		Sahina Khatun	Explor And Identify Fuel Energy, Resource For Cooking In Around And Locality
623		Sanjib Barman	Small Air And Water Is Used As A Source Of Energy
624		Sayani Bose	Impact Of Misuse Of Water 0n Electric Energy: A Case Study Of 24 No. Ward Raniganj N Darjiling
625		Sayantan Kar	Developing Awareness For Using Energy Efficient Chullah In Village Cooking System
626		Shanka Suvra Mondal	Alternative Bio Fuel From Hyacinth
627		Shreyasee Karmakar	Adjustment Of Uses And Waste Of Electricity Used In Everyday Life In Pandapara Area In Innovation Of Alternative
628		Shuvam Dutta	Utilisation Of Light Energy To Increase The Growth Of Plant Yield And To Decrease The Agriculture Expenditure
629		Sourajit Dey	Whether The Trident Lamp Posts Are Essential For Our Urban Life
630		Subhra Bhowmick	Electricity Generation From Parthenium And Water Hyacinth Use
631		Swastika Singha	House Energy Conservation
632		Tanushree Mahato	Improvised Smokeless Oven
633		Tara Dey	Restoring Of Pencil Batteries

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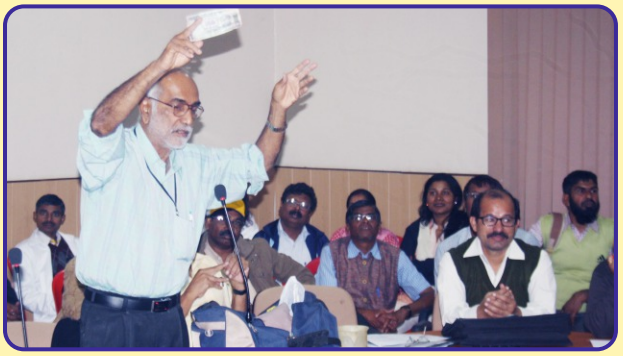
ANNEXURE - IV

Details of Projects and Delegates from ASEAN and United Arab Emirates (UAE)

Project Title	No	Name	Country
Glue Board	1	Wasin Meesuay	ASEAN
		Ratchapak Tantisanghirun	-DO-
		Siddha Kumwongwan	-DO-
Magnetoturbine	2	Su Jin Chandran	-DO-
		Phua Qi Sheng	-DO-
Project	3	Bella Sely	-DO-
		Nadhif Hirba	-DO-
		Muhammad Ilham	-DO-
Flood Water Harvesting	4	Kabir Khanna	UAE
		Shrey Padhi	-DO-
		Austin Thomas Antonytherattil	-DO-
Flood Water Harvesting - A Leap Into The Future	5	Sairam Subbu	-DO-
		Sanjay Vinod Menon	-DO-
Generating Electricity From Road Transport Pressure	6	Nevita Saha	-DO-
		Nimisha Lele	-DO-
		Nimisha Sandeep Lele	-DO-
Highway Wind Beacon	7	Anna Joselin Payyappilly	-DO-
		Chaithanya Divakaran	-DO-
		Oshin Elluvathingal Joseph	-DO-
On A Novel Way To Harness Tidal Energy	8	Aditya Rajesh	-DO-
		Meenakshi Rajesh	-DO-



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ABHIYAN, Jagdalpur, Chattishgarh

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ABHIYAN, Jagdalpur, Chattishgarh

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