ABSTRACT BOOK

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(The abstract text provided is exactly as submitted by the participants)

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Project Code:Bio-01 (Team) Online ID:1599

Title: Mosquito Repellent using Cyclea peltata
Name: Hruday S Naik & HRISHIKESH N Std: 9
Guide: SADHANA HEBBAR
School: SUDANA HIGH SCHOOL; NEHRU NAGAR ;PUTTUR

ABSTRACT:
Mosquitoes are one of the major vectors that carry disease affecting human. There are various chemical applications available in the market; to prevent the infestation that may cause allergies in some people.We have tried to use the mosquito repellant property of Cyclea peltata in this project.We have done some experiments involving varying quantities [10gm; 50gm etc]. We have done some experiments involving varying quality of roots; as in powdered; or crushed; wet and dry roots and different oils [coconut; gingelly and olive]. We have noticed a marked affect in the repellant property when we used 10gm crushed dry roots and 50ml and coconut oil.We are doing the above experiments using the preparation before and after boiling. We have further given this concoction to the lab for testing of the active ingredients and results are awaited.Though initially there is a greasy effect on application; it dries up after some time. This preparation is completely natural cost effective and can be made at home; there is a reduction of the risk factors that are involved in using the commercial cream and lotions. We have used it on ourselves and other family and friends and got the feedback. Using these observations and comparing with the commericial product we can conclude that this preparation is harmless and can be used even on small children effectively

Project Code:Bio-02 (Team) (Jr) Online ID:1685

Title: development of black cumin based mosquito repellent formulation
Name: Rhakia & Ayesha al Jazeera Std: 8th std
Guide: Shreevidya.D
School: Indraprastha Vidyalaya ; Uppinangady.

ABSTRACT:
Our project is for mosquito repellent. This project is made with the help of black cumin seed. Our 1st experiment was with larvae by adding the extract of black cumin. But the larvae don't die. Before adding the extract it was dancing and after adding it did not move. . Our 2nd experiment was to see whether the mosquitoes go for the smell of black cumin. We understood that the mosquitoes cannot bear the smell of black cumin seed. Our 3rd experiment was to prepare the ointment from this seed by powdering it. We made an advertisement of cream that is "BE GLAD AND NO CRANKY". And gave this cream for friends and asked them to sign the letter if they have not bitten by the mosquito. But some did not apply the

cream because of its dark color (black). So we are trying to change the color. Our guide told to add more petroleum jelly. By adding more petroleum jelly we got the grey color. So we are trying to change it as white. We also done incense stick of this product by adding water for the powder of black cumin and checked whether it burns. We are working behind this project. We are finding new ideas and making experiments.

Project Code:Bio-03 (Team) (Jr) **Online ID:1801**

Title: NATURAL PRESERVATIVE
Name: ANIRUDDHA M & SHREEHARI BALLAKKURAYA Std: 8
Guide: ANAND M
School: KUMARSWAMY VIDYALAYA SUBRAHMANYA

ABSTRACT:
Enjir leaves(Calycopteris floribunda) can be used as preservative for termeric ;ginger and pepper.Fully grown leaves are collected and mixed with termeric and boiled with water.Then ginger along with the leaves is dried under sun.After drying ;it is collected in bags or tins along with the enjir leaves.The termeric so collected can be preserved for longer periods.

Project Code:Bio-04 (Team) **Online ID:1816**

Title: A Potent Herbal Drug From Mecaranga peltata For Inflammation And Acne
Name: Ananya P K & Maulya R Shetty Std: 9th std
Guide: Nishitha K K
School: Indraprastha Vidyalaya

ABSTRACT:
Mecaranga Peltata is a small resinous tree from Euphorbiaceae family with multiple uses. It's gum is used as a drug around the sores and pimples to subside pain and inflammation in folklore medicines. To find it's anti-microbial properties we conducted experiments on cooked food items and vegetables and got positive results where Mecaranga Peltata gum is used. Laboratory reports revealed that concentrated Mecaranga Peltata leaf extract showed 17 mm zone of inhibition with Pseudomonas aeruginosa; Staphylococcus aureus. Anti- inflammatory and anti- Baterial properties of the ointment prepared from M. peltata helps in controlling the infections due to sores and as a remedy for all type of acne and swelling due to arthritis because of the phyto chemicals like flavonoids; tannins; coumarins present in the plant which are having anti- inflammatory property. drugs which are being used now are with lot of side effects. Concentrated spray prepared from the M.peltata found to be an active agent in controlling ripening and wilting rate in fruits and vegetables respectively. MethodologyPreparation of spray from M.peltata gum : 10ml of gum extract taken from the plant is mixed with 100ml of boiled and cooled water and added with sodium benzoate.Experiment done:•Rice

cake is cooked by wrapping with Artocarpus heterophyllus; Ficus benghalensis; Mecaranga Peltata Tectona grandis; Musa paradisiaca to compare anti- microbial property where Mecaranga Peltata shown good result. •Raw banana; bitter gourd; little gourd; beetroot; papaya are dipped in 10% diluted Mecaranga Peltata gum and kept for observation. •pH; viscocity; electric conductivity of the gum; leaf extract; spray are measured in Vivekananda degree college and Yenopoya research centre. The creams; gels; tincture and spray available in the market are all with side effects and costly. Herbal drug prepared from M.peltata are safe; cheaper and eco-friendly.

Project Code:**Bio-05 (Team)** **Online ID:1865**

Title: synthesis of silver nano particles using the weed plant Hyptis suaveolens leaf extract.

Name: Sushmitha P.I & Pooja B Std: 9
Guide: Jayalaxmi A
School: Sri Ramakrishna Higschool; Puttur

ABSTRACT:
Green route synthesized silver nano particles are extremely toxic to multidrug resistant bacteria and have widespread applications in biomedical science. If the silver reducing weed extract possesses antimicrobial properties then it can additionally contribute to the medicinal activity. The aim of this project is the synthesis of silver nano particles using the weed plant Hyptis suaveolens leaf extractFresh and healthy leaves were collected locally and rinsed thoroughly first with tap water followed by distilled water to remove all the dust and unwanted visible particles; cut into small pieces and dried at room temperature. About 10 g of these finely incised leaves of each plant type was weighed and transferred into 250 mL beaker containing 100 mL distilled water and boiled for about 20 min. The extractwas then filtered to get clear solutionAqueous solution (1 mM) of silver nitrate (AgNO3) was prepared in 250 mL flask and leaf extract was added for reduction into Ag+ ions . The composite mixture was then heated for 3minutes for complete bioreduction the colour change of the mixture was monitored periodically Complete reduction of AgNO3 to Ag+ ions was confirmed by the change in colour. Silver nanoparticles (AgNPs) appear yellowish brown in colour in aqueous medium .The dilute colloidal solution was cooled to room temperature and kept aside for 24 h for complete bioreductionResult/ObservationSilver nanoparticles (AgNPs) were successfully obtained from bioreduction of silver nitrate solutions using Hyptis suaveolensleaf extract.

Project Code:Bio-06 (Team) Online ID:1868

Title: Biosynthesis of stable copper nanoparticles using Breynia vitis-idaea leaf extract.

Name: Sharanya K & Neha N Std: 10
Guide: Jayalaxmi A
School: Sri Ramakrishna Higschool; Puttur

ABSTRACT:
Development of green nanotechnology is generating interest of researchers toward ecofriendly biosynthesis of nanoparticles. In this study; biosynthesis of stable copper nanoparticles were done using Breynia vitis-idaea leaf extract. First we prepared 100ml of leaf extract of Breynia vitis-idaea by boiling250 gms of it in 500ml of deionised water for 30 minutes. This extract added to 1mMol of copper sulfate solution and we observed the change in color of the solution indicates that there is a formation of Cu nanoparticles.

Project Code:Chem-01 Online ID:1639

Title: Hydrogen production from novel graphene based composite electrode

Name: D K GOUTHAM & x Std: 9
Guide: Prof. D Krishna Bhat
School: NITK ENGLISH MEDIUM SCHOOL(SURATHKAL)

ABSTRACT:
The global demand for energy is increasing rapidly and continuously during the last few decades. The need for an eco-friendly; renewable and efficient energy source with the potential to replace the commonly used nuclear and fossil fuels is growing each day. Hydrogen; a renewable and clean fuel; is considered as a potential energy carrier for future energy infrastructure. The easiest and safest way to obtain high purity H2 gas from water is by electrolysis. The pre-requisites for a material to qualify as electrode material for water electrolysis are high surface area; maximum electrical conductance; corrosion resistance in operating medium and good electrocatalytic property with minimum overvoltage. The first row transition metals like Fe; Co and Ni are cheaper; abundant and have the potential to be better electrocatalysts. Graphene; also known as wonder carbon has extremely large surface area; high conductivity and mechanical strength. The aim of the present project is to combine the properties of graphene and Co-Ni alloy to obtain novel hybrid porous electrode for hydrogen production purpose. The Co-Ni-Graphene composite electrode is prepared by a single step electrodeposition process in an electrolytic bath. The hydrogen evolution experiment is performed in a simple bath using the prepared composite electrodes in an alkaline medium and four 1.5 V cells as power source. The amount of hydrogen gas released in a typical experiment was 20 ml in 5 minutes which is quite good.

Project Code:Chem-02 **Online ID:1652**

Title: ANALYSIS AND DEVELOPMENT OF PARAPHEROMONE TRAP FROM PIPER LONGUM EXTRACTS

Name: Shamanth Rai K & x Std: 10
Guide: sharada shetty
School: vivekananda english medium school; thenkila; puttu

ABSTRACT:
Fruit flies are a problem worldwide. I started investigating about how to tacklethis problem. Pheromone trap available in the market at present is very costly.This parapheromone trap is cost efficient. I observed many times that the fruitflies were very much attracted towards the leaves of the plant piper longum.I extracted the juice of piper longum leaves and was successful in makinga medium to attract the fruit flies. Pheromone is the chemical produced byanimals or insects in order to attract its opposite sex. Some plants imitatethis quality of animals by producing chemicals known as parapheromone. This is exactly the case here. I have made the medium consistent like jellyso as to make it more dense and easy to use. I have made some tests andexperiment which I have mentioned in the results and observations column.This is an innovative way of using piper longum leaves as a source of parapheromone.This parapheromone trap is highly cost effective. It costs about 50% lessthan the traps available in the markets. This trap can be afforded even by poor farmers.

Project Code:Chem-03 (Team) **Online ID:1783**

Title: AN NATURAL ANTI BACTERIA COAGULATING AGENT FROM AVAHERRO BILIMBI FOR RUBBER LATEX

Name: A U Nachiketh Kumar & Aman K A Std: 9
Guide: Akshatha .B
School: Indraprastha Vidyalaya; Uppinangady

ABSTRACT:
A common fruit seen on villages agricultural lands and towns which is known as bilimbi [Averrhoa bilimbi] is not just a weed fruit. It has got many medicinal importance. To check its potential we have tried an extract from this fruit ;this extract acts as an natural coagulater for rubber latex. To prepare this extract take 300g of bilimbi fruit prepare a extract of it by grinding in mixer after making the extract filter it. This extract should be added to rubber latex to coagulate .We observed that rubber latex coagulated quickly compared to rubber latex mixed with formic acid. Bilimbi Extract will coagulate the rubber latex very quickly than the formic Acid. While Bilimbi extract is Added to the Rubber Latex a physical reaction takes place for 1ml bilimbi extract produces 2 H+ ion [where formic acid produces only 1 H+ion so it require double quantity acid than the bilimbi extract] and neutralizes the negative colloidal particles in the rubber latex and make them bigger If the rubber latex exceeds 10-6m the particals settles down and the

coagulation takes place. We have Discussed about the coagulation with the chemistry Lecturer Manjunath sir. We have conducted Physiochemical tests like anti bacterial anti fungal and pH and TLC in yenapoya research center at Deralakatte. The pH of the extract is 1.31.we got positive result when it is used to coagulate the natural rubber latex .Once we recognise this fruit we can easily prepare the extract .This extract is cheaper; eco friendly; natural ;non toxic and also plant based.

Project Code:Chem-04 (Team) **Online ID:1796**

Title: A novel way to remove the fowl smell of coconut oil using Sugar
Name: Chaithra U & Sowbhagya P Y Std: 9
Guide: Vasanthi Kedila
School: Sri Ramakrishna High School Puttur D K

ABSTRACT:
Oils are mostly unsaturated and liquids at room temperature. Unsaturated oils are easy to digest because they are chemically reactive. Coconut oil contains a large proportion of lauric acid;a saturated fat that raises total blood cholesterol levels by increasing both the amount of high –density lipoprotein(HDL) cholesterol and low –density lipoprotein(LDL)cholesterol. But storage of coconut oil for a year or more results in bad;fowl smell due to the presence of unsaturated fatty acids present in it;which undergo oxidation .This leads to the less self-life and the oil become rancid. So as to overcome this problem ;we took 2g of Sugar;tied it in a cotton cloth and dipped it inside the coconut bottle. We observed the smell every day .We then dipped 2g of sugar in the mud coconut oil ;got from rancid coconuts.We observed the mud oil for a month . Surprisingly; mud present in the oil is little bit absorbed by the sugar. And the bad smell is also lessened. The pure coconut remained fresh even after many days.

Project Code:CompSc-01 (Team) **Online ID:1618**

Title: An Android Application For Reminding Bills
Name: Shreejith M & Suhas A Std: 9
Guide: Vasanthi Kedila
School: Sri Ramakrishna High School Puttur D K

ABSTRACT:
The aim of this project is to create a multi-reminder android application to help the users to pay bills in time and prevent the user- delay paying of the bills and avoid the unnecessary fines .The app is done using JAVA programming language in android development kit. Everyone has android mobiles nowadays. So this app will satisfy all the needs of the user relating to bill payments. Our app is user friendly. It prevents the delay payment of bills.This app is compared with other already available bill reminder apps .It is different from them as it has more user friendly options like- sound and light (with green and red)to remind the user

before payment and also it sends the notification .Firstly; when one opens the app the list of saved reminder will appear. If one wishes to create a new reminder; it can be done. So this is a multi- reminder for any use or purpose. Nowadays due to the busy life of humans it is very hard to maintain bills and pay it before the due date. So it is likely to have likely to have our user friendly android app.

Project Code:Energy-01 (Team) **Online ID:1619**

Title: Extended applications of waste coconut shell by preparing different ecofriendly products

Name: Omkar Suresh Koshti & Preetham K Std: 9
Guide: Vasanthi Kedila
School: Sri Ramakrishna High School Puttur D K

ABSTRACT:
The aim of our project is to find out the efficient uses of waste coconut shells by producing Charcoal and comparing its calorific value with coconut shell .Then to find out the anti-termite property of the burnt coconut shell. And to find out the toxic absorption property of fresh coconut shells. 2kg of coconut shell is incompletely burnt in the absence of oxygen to get 1280g of Charcoal. Then 640g of it is powdered and mixed tamarind solution in the ratio 2:1 and diluted with 300ml of water and used as anti-termite spray.The Calorific value of two test samples -coconut shell and coconut shell charcoal were estimated using digital bomb calorimeter. The charcoal made of coconut shell was showing significantly high calorific value i.e..6975.67cal/gm(Averaga of two runs)compared to the coconut shell as such i.e 4329.96cal/gm. The combustion of coconut shell charcoal release more energy than coconut shell.Hence ;it can be used as briquettes.

Project Code:Energy-02 (Jr) **Online ID:1627**

Title: Turbo cooking Pot

Name: Manaswithshankar & x Std: 7
Guide: Yashwanth
School: Sudana Residential School; Nagara; Puttur

ABSTRACT:
We have the traditional way of cooking process which is similar to switching on air conditioner in an uninsulated building with all the doors and windows open. As we have seen the thermal efficiency of a traditional pot is not efficient in terms of energy but rather cheap. The efficiency and cost are not the same thing. Efficiency is what percentage of a fuel goes towards doing work. The turbo Pot here we are presenting is more efficient than conventional open fire pot; it is not cheaper but efficient.In conventional open fire pot the primary energy is lost during the cooking process. So we could reduce the consumption by implementing this Turbo pot.Cooking food could be achieved in a far more energy efficient way; especially if the cooking pot itself is insulated and this is the principle behind the Turbo pot.

This makes use of a well-insulated box that keeps heat of the cooking pot itself. A Turbo pot doubles the efficiency of any type of cooking device because it shortens the time on the fire and limits heat transfer losses.A turbo pot is a combination of traditional pot fabricated with heat sink kind of structure which is fabricated over the body that works as efficient heat transfer media. The interior thus became hot from the heat which would otherwise escape to open area or to the gas stove itself; ensuring that plenty of retained heat would be available for cooking

Project Code:Energy-03 (Team) **Online ID:1779**

Title: PINDI KAYI (GYMMACRANTHERA CANARICA) CANDLE
Name: ANUSHA K N & AKSHATHA A S Std: 9
Guide: PRAMEELA A
School: KUMARASWAMY VIDYALAYA VIDYANAGARA SUBRAHAMNYA

ABSTRACT:
Pindi kayi gymmacranthera canarica)is a species of plant in the myristic aceae family.Itis endimic to India .Take half kg pindikai and heat in pan until it becomes dry; after heating crush it into powder . roll the powder so formed into candle a shape.The candle what we prepared by using half kg pindikai can be used as a source of light for 10 to 15 minutes .By half kg of pindikai powder we can prepare nearly 10 to 15 candles.

Project Code:Energy-04 **Online ID:1822**

Title: Two in One Energy Saver - Oven and Cooler.
Name: Poorvi K & x Std: 11
Guide: Harish Shastry B
School: Vivekananda P U College; Nehru Nagar; Puttur D.K.

ABSTRACT:
Synopsis:Even today in villages people burn natural wastes like wooden powder; dry leaves; peels of arracunut; coconut etc. to cook food; boil water. They are used even in some small scale industries like bakery. In villages the above raw materials are available in abundance. But the fire ovens used in such cases are not designed properly and most of the heat generated is wasted.Two in One Energy Saver-Oven and Cooler: is a modified oven which on one side heats up a required object to a very high temperature simultaneously developing a low temperature below 20oC in a separate chamber. It consists of an oven with two pipes connected to it. One pipe moves vertically upwards and another along with a chamber is aligned at 45o. The second one is shorter. As the smoke moves out of vertical pipe air rushes through the 45o chamber in to the oven; thereby creating a low temperature at the chamber. Since the chamber is cool some medicines (which should be preserved at low temperatures); vegetables etc. may be preserved here. Since this cold chamber is maintained in the same fire which is used to heat the objects; extra energy is not

required. I have installed this in my house with my father's help and is working from many years.

Project Code:Engg-01 (Jr) **Online ID:1623**

Title: EMERGENCY HAND PUMP FOR WATER EXTRACTION FROM BOREWELL
Name: A.SANOJA & x Std: 6
Guide: A.R.OJASVI SHARMA
School: Vivekananda Ehglish Medium School;Puttur

ABSTRACT:
'EMERGENCY HAND PUMP FOR WATER EXTRACTION FROM BOREWELL'can be used for emergency situations such as electricity failure or motor failure.It works mainly on a bicycle pump.Materials and preparing procedure: *Take the cycle pump and invert its rod's washer.*Install footwall to its bottom.*Insert weight to the rod.*Connect hosecollar to the top of the cycle pump.*Tie the rope to the cycle pump's rod.*Connect flexible pipe to the hose collar.Let the rope move through the flexible pipe.*Extend the flexible pipe as required.*Leave an outlet.*Connect the rope to the pulley.How to use:To use this one should pull the rope and leave it;Continue the action and get the water on the outlet.Working Process:-When a person pull the rope;as the connections the cycle pump washer move upwards and also the footwall opens and water gets inside it.Then the washer moves downwards as there is weight behind it.At the same time due to the preassure; the washer sinks{or compresses due to its inverted shape}and allows the water to penetrate through the gap and move upwards. As the action is repeated; we get the water in the outlet.

Project Code:Engg-02 (Jr) **Online ID:1631**

Title: Blackpath follower
Name: Isha Sulochana Muliya & x Std: 6
Guide: Krishna Narayana Muliya
School: Sudana Residential School Nehru Nagar Puttur

ABSTRACT:
My project is about Black path following robot. It is very useful in our daily life in various fields such as industries and agriculture .It helps in reducing the lab-our problem since it can be used to transport goods. The robot is designed in such a way that it follows the black line which can be marked on the floor to indicate the route.just draw a black line from one destination to another and this black path following robot will carry the goods and reach its destination .This(protomodel)robot can carry about 3 kg at a time We can control this machine with blue tooth and light inside the industry.It can be also modified to sense fire and send message to a watch .Why should we do the black path follower?there are some places where humans face trouble when they try to reach

a place; in such situation this robot can be used These are some advantages of black path followerNo need of driver to on/off/drive the truck The usage of petroleum will decreaseLess money is used Carries more goods that other truckWorks in night alsoIf a 24 volt battery is fully charged it goes till 60 km nonstop(for protomodel)Can be used to detect fire Can control in blue tooth Price is less than Rs 1500An array of sensor is used to detect the line. Based on the status of sensors; special circuit or controller decides the position of line and also the required direction of motion required to follow the line. Motor driver circuit is used to ON/OFF the LEFT/RIGHT motors of the robot to provide desired motion.Sensors are required to detect position of the line to be followed with respect to the robot's position. Most widely used sensors for the line follower robot are PHOTOSENSERS. They are based on the basic observation that "the white surface reflects the light and the black surface absorbs it".IR or VISIBLE light is emitted from the emitter (IR light is mostly preferred to avoid interference from the visible light which is generally around the robot. However IR light is also present in atmosphere but its intensity is much less than that of visible light; so IR light can give much reliable output. For better accuracy of the sensors; they must be covered properly for the isolation from the surrounding.) This emitted light strikes the surface and gets reflected back. If the surface is white; more intensity of light gets reflected and for black surface very less intensity of light is reflected. Photo detector is used to detect the intensity of light reflected. The corresponding analog voltage is induced based on the intensity of reflected light. This voltage is compared with the fixed reference voltage in comparator circuit and hence it is converted into logic 0 or logic 1 which can be used by the controller.The comparator circuit may be designed in two ways.

Project Code:**Engg-03 (Jr)** **Online ID:1640**

Title: Weigh bridge cum road damage controller
Name: Hardik R Naik & x Std: 6
Guide: Harshitha Naik
School: Sudana Residential School; Nehrunagar; Puttur

ABSTRACT:
The device is installed on the road on a hump. It detects the weight of the load on the vehicle and if excess will immediately intimate the control unit which encloses a 9v battery for its energy use and closes the gate thus not allowing the vehicle from taking the higher load.The device is designed such that any excess load beyond 30 tonnes is not allowed on the road. This will reduce the spoilage of the roads due to transport vehicles that normally carry a very heavy load. The pressure sensor in the device on the hump detects the load; and if excess is found will immediately send the message to the sensor ensuring the closure of gate. The vehicle cannot move until the load is reduced. And the gate can be opened only by the gate operator using a double throw switch.The purpose of this project is

ensure that a heavy load is not carried by the vehicle and malpractice by the operators. This will make sure that the national waste that is caused in terms of money spent on road repairs is reduced. BLOCK DIAGRAM

Project Code:Engg-04 **Online ID:1654**

Title: PLAMA; ANALYSIS AND DEVELOPMENT OF ECO-FRIENDLY MATERIAL FROM LDPE WASTE PLASTIC AND SAND.

Name: Swasthik Padma & x Std: 10
Guide: Padmaswaroop M
School: vivekananda english medium school; thenkila; puttu

ABSTRACT:

I have found an innovative; Eco-friendly; cost-effective material from LDPE waste plastic and I have named it as PLAMA . The main aim of this project is to recycle the LDPE waste plastics into most useful materials. The major problem of plastic is it causes enormous environmental pollution like air pollution; soil pollution etc. Thus leading to cause some dangerous diseases . By using this material prepared by LDPE waste plastics we can produce various waste products like building material; interlock ;construction of barrier; roof tiles; electric poles; doors; construction of dams; vehicle bodies; etc. What is LDPE plastic?The term plastic is used to describe a wide variety of resins or polymers with different characteristics and uses. Polymers are long chain of hydrocarbon; a group of units taking its name from Greek where poly means many and meros means units or parts. Plastic is a synonym of polymers.Plastics can be classified into the following types based on properties PETEà Polyethylene terephthalateHDPEà High Density poly ethyleneLDPEà Low density polyethylenePPà PolypropyleneLDPE means Low Density Poly Ethylene. LDPE has low melting point of 1200C and a density of 0.92 gram/cc. LDPE plastics find a of applications because of its flexibility; relative transparency and also light weight. The applications of these LDPE plastics are grocery bags; garment dry cleaning; etc. But the main drawback of this LDPE plastics is they cannot be recycled. Since it cannot be melted and converted into liquid form I thought of converting it into Semi-liquid form.Method of preparation:- PLAMA material can be produced by following steps1. Segregation:This process involves separation of waste plastics into different types based on 2. Shredding:This process involves making LDPE plastics into small pieces.3. Cleaning:-Removal of mud and other waste materials.4. Mixing:-This is an important step in the production of PLAMA . Here mixing of 60% of LDPE waste plastic is done with 40% of sand.Repeated experiments are carried out on different ratio and the best result got out with the above mentioned ratio.5. Heating:-The mixed proportion is heated to a temperature of 1200 C. At this temperature the mixture of LDPE waste plastic and sand gets converted into Semi-

solid mass.While heating the plastic stases liberating CO and CO2 which are dangerous gases which will cause global warming. So the challenge was to eliminate or to convert these harmful gases into less harmful gases. This is done using green chimney.6. Molding and cooling:-The semi-solid mass is transferred into moulds of required and allowed to cool in water for 2 hours.7. Coating:-The obtained material may catch fire at higher temperature. So to avoid that it is coated with 1mm layer cement grout .Green chimney; The toxic gasses released during melting process like carbon monoxide and carbon dioxide is stored in different chambers. Carbon monoxide is reacted with ferric oxide to give carbon dioxide is reacted with calcium hydroxide to obtain calcium carbonate and water so that pollutants finally get converted into useful by products.Properties of PLAMA1. Hardness -114BHN2. Compressive Strength -140 MPa3. Tensile Strength – 25 MPa4. Impact Strength- 550 J5. Temperature Resistant – from -200 to 4000 C 6. Load Resistant -yess7. Chemical Resistant -yes8. Anti Corrosive –yes 9. Thermal Expansion Co-Efficient -0.00365/0C10. Absorption Rate-0%11. Growth Of Living Organisms- no 12. Cost - 15 rupees/square feet.

Project Code:**Engg-05 (Team) (Jr)** **Online ID:1675**

Title: A model of gear selection to change the gear of a vehicle
Name: CHANDAN SHANKAR & KUMKUMA SHANKAR Std: VIII
Guide: VASANTHI KEDILA
School: RAMAKRISHANA HIGH SCHOOL

ABSTRACT:
Our project is designed in the way it will give trendy feature for two wheelers This is specially designed for physical challenged person. In this system the gear can be changed by operating the switch. The basic model we prepared consists of voice recognition kit; microcontroller and driver circuit; Solenoid; battery. The speech recognition system is the heart of this project which is completely assembled and easy to use programmable speech recognition circuit. It has 8byte data out which can be interfaced with any controller for further development. The microcontroller that we have used here is ATMEL 89C51 in which we have given input to port one and had obtained output through port two. The driver circuit mainly consists of MOSFET's and relays MOSFET's used here IRF630 which has 3 terminals - gate; drain and source. The 5 V output of the microcontroller is given to the gate of the MOSFET. The relay is connected to the drain of MOSFET. When a gate of the MOSFET gets sufficient voltage it energises the relay. Since our application part uses 12V; the driver circuit pulls up the voltage from 5V to 12V. the solenoid actuator used in the system is a starter solenoid with 12V DC supply 32A current; 15mm stock which is usually found in jeeps and pickup trucks. When the current is passed in the system because of electromagnetic induction solenoid moves and comes in contact with the gear and hence gear is operated. The power for the solenoids is supplied by a battery. This project is a small way of solving the

problem faced by leg disabled persons to ride a geared two wheelers. At present most of the custom made handicapped two wheelers are gearless and do not have much power or torque compared to the geared one. This project gives an opportunity to a handicapped person to enjoy the power of a geared two wheelers like others

Project Code:Engg-06 (Team) **Online ID:1776**

Title: WATER PRIVENTSTHE SKIDDING OF VEHICLES
Name: PRANAV H & SAGAR P R Std: 9
Guide: DINAKAR D
School: KUMARASWAMY VIDYALAYA VIDYANAGARA SUBRAHAMNYA

ABSTRACT:
Most of all facing skidding of vehicle during rainy season. So Skidding of vehicle can be avoided by fixing water sprayer to the back wheels of the vehicles.For this one small water tank is required To this water tank two out lets to be connected to the back wheels of the vehicle.during the skidding time we should turned on the outlet valves to spray water to the back wheels.

Project Code:Env-01 (Team) **Online ID:1608**

Title: Herbal cure for tennis elbow using Holoptelea integrifolia (Rahubija) leaves.
Name: P Sathwika & P Swasthik Std: 10
Guide: Krishna moorthy.P
School: St.Philomena High School;Philonagar ;Darbe ;Puttur

ABSTRACT:
Herbal cure for tennis elbow using Holoptelea integrifolia (Rahubija) leaves Tennis elbow is pain in the outer part of the elbow due to inflammation. Many native herbal medicines have been used in the treatment of this disorder. One such plant is Holoptelea integrifolia. It is called Indian Elm tree; Tapassi tree or Rahubija in Kannada. It is a tree that grows in this region. The leaves of this plant have been subjected to phyto-chemical and Pharmacological investigation. Several activities have been reported such as anti inflammatory; analgesic; anti cancer; anti diabetic; anti microbial and anti helmenthic activities. The seed idea for doing this project work has been obtained from a local "Ayurvedic Pandit" who encouraged and suggested to prepare a project having been convinced of the very good analgesic potential of the leaves of this plant to alleviate pain of Tennis Elbow. An aqueous extract is prepared by grinding the leaves with butter milk and applied on the affected elbow; twice or thrice repeatedly after drying. The paste should be washed when a burning sensation is felt in that area. Cow's fresh ghee should be applied to relieve sensation. In 2 to 3 days; skin flaps. In 5 days the skin recovers due to the application of the ghee. The treatment will be

complete only with continuous application of the oil prepared from Carombola fruit in coconut oil. The chemical constituents isolated from Holoptelea include hexacosanol (C25H52OH); fatty acid esters; holoptelin A&B; Beta–amyrin (a triterpenoid); and an anti microbial substance (1;4-naphthalein dione). This compound has been reported to be effective against beta lactone resistant staphylococcus organism. The result of present study showed the presence of alkaloids; carbohydrates; triterpenoids; saponins; steroids and tannins

Project Code:Env-02 (Team) (Jr) **Online ID:1617**

Title: Carbon fixing for quality Life
Name: Shivapriya.H & Subitsha.Maliga Std: 8th std
Guide: Prathima N.G
School: Sudana High School(Nehru Nagar Puttur)

ABSTRACT:
Man and animals need oxygen for survival; while contrary plants need carbon dioxide. Thus; the ratio of carbon di oxide and oxygen was maintained. But due to heavy vehicular density; industries; factories etc the carbon di oxide is increasing alarmingly. So planting trees can result in lowering of carbon di oxide. Higher level of emission of these gas are always harmful to human life. To restore the balance the best method is to fix carbon. Plants convert carbon dioxide into hydrocarbon and store it in leaves and plant part. Trees absorb CO2 based on various factors like age; size; leaf size weight; width shape etc. Factories and industries pollute the air and water. So by calculating the amount of CO2 absorbed by the trees; a decision about the number of trees and the variety of tree that has to be planted can be worked out.It has also been known that the maximum amount of CO2 is absorbed by the Banyan trees. Hence by calculating the age; dry weight; size of the leaves etc of the trees amount of CO2 absorbed by the tree can be calculated. If the number of factories and the number of vehicles is known the number of trees that has to be planted can be calculated.

Project Code:Env-03 **Online ID:1635**

Title: Biodegrable Biocide using Andrographis peniculata
Name: Srijan Rai R & x Std: 9
Guide: Vasanthi Kedila
School: Sri Ramakrishna High School Puttur D K

ABSTRACT:
The aim of my project is to prepare a biocide from Andrographis peniculata and to use the natural product to prevent harmful insects/pests; worms . 100g of Andrographis peniculata plant and 100g Strychnos nux-vomica leavesare shade dried and powdered .Then 400ml of ethanol is added and kept for24 hours . It is then filtered to get 250 ml of extract by maceration method. The exract is diluted with water in 1:5 ratio and used as biocide to kill/prevent snails; cockroach .The

individual and mixture of extracts were analysed for preliminary phytochemical screening. The biocide is having 90%mortality rate compared with commercial product. The phytochemical analysis is done in research lab. Andrographis peniculata extract showed the presence of alkaloids; carbohydrates; glycosides and proteins. Strychnos nux-vomica extract showed the presence of alkaloids; carbohydrates; proteins and polyphenolic compounds. The biocide prepared by me using Andrographis peniculata is a novel work.This is cost effective and socially usefull product.

Project Code:Env-04 (Jr) **Online ID:1636**

Title: NATURAL ALTERNATIVE MATERIALS FOR PLASTICS FROM Pandanus unipapillatus

Name: Gagandeep S & x Std: 8
Guide: Vasanthi Kedila
School: Sri Ramakrishna High School Puttur D K

ABSTRACT:
Pandanus unipapillatus of Pandanaceae family; common in coastal belt; Western Ghats along banks of streams; marshy places is investigated for preparing eco-friendly materials used as an alternatives against non-biodegradable plastic materials.The P.unipapillatus leaves are kept in sun shade for its flexibility; dipped in water. Thorns are removed; leaves are flattened; bent; tied one another to prepare mat and basket using broom sticks. The mat and basket prepared is to be dried and used for different purposes. This is used to dry food items like papad; Kokum(Garcinia indica) etc . It is having higher self-life and it won't spoil because of its antibacterial and antifungal property. The observation proved that the food materials dried in the P. unipapillatus leaf is having more shelf-life. Painting brush prepared by the stem of the plant is used for white washing the walls. This brush is flexible and stable. Basket is used for storing vegetables and food items which remains fresh for many days. The vertical section of P.unipapillatus; leaf revealed thick cuticle; gum-resin canals; responsible for aromatic property and preservative quality.ATR;phytochemical;HPTLC; anti-microbial property tests are done .The P.unipapillatus; leaf showed maximum activity against S. aureus; B. Subtilis ; P.aeruginosa and K.pneumoniae while compared to Streptomycin as positive control. . Bio-assays showed presence of multiple specifically active compounds at different Rfvalues in the leaf extract. ATR showed the presence of carbonyl; hydroxyl; and amine groups. Thus; cultivation of P. unipapillatus; plant is to be promoted. In depth investigation is required to isolate; identify and characterize the components which are responsible for the beneficial effects of the P.unipapillatus.KEY WORDS: Pandanus unipapillatus; Pandanus kaida; P.unipapillatus; Chemical constituents; Anti-Bacterial; Anti-fungal.

Project Code:Env-05 (Jr) Online ID:1637

Title: Homemade Natural Kajal (kadige/Kohl)
Name: ANUSHA.N & x Std: 7
Guide: Dr.K.Suryanarayana
School: Little flower Upper primary School; Darbe; Puttur

ABSTRACT:
Eyes have been celebrated as one of the most beautiful organ. Any song you hear be it in kannada; Hindi or English there are at least 20% of those dedicated to eyes. Most of the girls are using kajal to increase the beauty of the eyes. However during the makeup for the drama; dance etc kajal is one of the important cosmetic needed. The commercially and industrially produced kajal is causing harmful effects on the eyes. Some of the impurities found in kajal are charcoal; which is added for getting dark colour; silver nitrate; which gives kajal a glow and if it is used more than 2%; it causes problems like irritation; burning and redness to the eyes and another impurity found is the lead content. During one dance program I used commercially available kajal which irritated my eyes and I suffered for more than 10 days. This made me to think about natural Kajal.We Prepared homemade natural kajal using natural oils like castor oil; coconut oil and Cow ghee. We compared the quantity of the kajal obtained in 3 different cases and analysed. Qunatitative analysis gives the idea of the amount of kajal obtained in different cases. Prepareed the kajal by adding some natural flavours. The method which we used is very simple and a lay man can manufacture the kajal. In every home every day the peoples are having the culture of lighting the lamp during the prayer. From the same lamp it is possible to prepare the kajal which serves two purposes: preparation of kajal without any extra expense Possible to avoid the deposition of the carbon on the wall of prayer roomAs oil is natural the kajal prepared is pure and free of lead and other contamination. Content of natural kajal is only the carbon and the oil content. The use of turmeric or sandalwood increases its medicinal property. The ash test of the sample also carried out and analysed. Which shows the manufactured kajal is harm less to health because of very less carbon content.

Project Code:Env-06 Online ID:1645

Title: VANILLA PLANIFOLIA LEAF-A MULTIPURPOSE HERBAL SPRAY AND PASTE FOR VEGETABLE PLANTS VANI PEST SQUIRT {SPRAY} VANILINIMENT {PASTE}
Name: Gautham Shankar N & x Std: 10
Guide: P Shankara Bhat
School: Sri Sathya Sai Loka Seva High School;Alike

ABSTRACT:
The aim of this project is to prepare a non-polluting;locally and cheaply available;Eco friendly;user friendly;very new;easily preparable pesticide. pests and

It is made to safeguard vegetables;fruits and stem from rusts.As vanilla planifolia leaf has irritational property this research was conducted.this spray and paste has repelling property.The investigation was done by spraying this herbal pesticide to different types of rusts; vegetables and for the leaf eating pests.this was also checked by spraying it on cockroach;mosquito and ants and we got good results.The paste was tested by smearing it on the stem affected by rusts.The rusts was cured within 2-3 days.As the spray is sprayed to pests it started to lose its vitality.When compared to other chemical pesticide it is more effective.phytochemical screening is done and there was alkaloid.carbohydrate and phenolic content in it. FTIR-ATR tests were conducted and got the presence of some best pesticidal compounds.the phenolic content is 459.00mg/g and alkaloid content is 1916.66mg/g. this solution can be made as coil for mosquitoes and cockroaches.it is being used for areca diseases. Researches are going on.

Project Code:**Env-07** **Online ID:1691**

Title: A NOVEL MULTI PURPOSE LACQUER FOR RUST PREVENTION AND WOOD PRESERVATION FROM TENDER ARECANUT EXTRACT

Name: NIHAL NOOJIBAIL & x Std: 9
Guide: BADANAJE SHANKARA BHAT
School: INDRAPRASTHA VIDYALAYA - UPPINANGADY

ABSTRACT:
In coastal areas due to heavy rain and high humidity it is a great challenge to prevent the steel from corrosion and wood from fungus and termites. I prepared a multipurpose lacquer from the waste extract of tender arecanut to prevent the oxidation of steel and to protect the wood from termites and fungicides. To prepare the extract boil 1 kg of chopped tender arecanuts in 3 litres of water and condense it to 1/3 of its original volume. Then mix 70 ml of condensed tender arecanut extract with 20 ml of mustard oil; 5 ml of Cashew nut shell liquid and 4 ml of turpentine which are dissolved by 3 spoons of sodium silicate.To this add 1 spoon of borax and stir well to get a homogeneous areca lacquer. The investigation showed the presence of 529.63 mg/g of tannin which acts as anti rust agent and 6 mm of anti-fungal inhibition zone in tender arecanut lacquer. The tests also proved the anti-termite actions in mustard oil and Cashew nut shell liquid . This multipurpose lacquer is very effective; economical; eco-friendly; farmer friendly; easily preparable; without any hazardous chemicals and it is successful in indoors and outdoors for various application.

Project Code:**Env-08** **Online ID:1739**

Title: A pollution abatement material from Cocos nucifera L.

Name: Anvith A Hebbar & x Std: 10
Guide: H Ajith Hebbar

School: Sharada Vidyanikethana Public School; Mangalore

ABSTRACT:
Saving the water and protecting our air is the need of the hour. In this context; this project aims at studying the pollution abatement property of activated carbon produced from endocarp of coconut (inner hard shell). In the first phase; the fine grained activated carbon of endocarp was tested as an adsorbent in purifying the wastewater using a column study. The properties like BOD; total solids and oil and grease concentration were determined. The results revealed that the shell endocarp was a potential adsorbent in the purification. In the second phase; an attempt was made to use the activated carbon as a gas adsorbent. The exhaust gas from a vehicle was passed through a column of finely powdered activated endocarp carbon. Using Flue Gas Analyzer; the gas at the exit of this column was tested for concentration of harmful gases like CO2 and CO. The results were very much promising. It can be concluded that the powdered activated carbon of coconut hard shell is a versatile material and play a big role in the pollution control. Using suitable scientific techniques; a device may be designed which can be fitted to the exhaust of the vehicle.

Project Code:Env-09 (Team) (Jr) **Online ID:1787**

Title: NOVEL; ENVIRONMENTAL FRIENDLY; ECONOMICAL CARTRIDGE FOR THE REMOVAL OF DYE; HEAVY METALS AND MICROBES FROM WASTE WATER : A PROPOSAL FOR SMART CITIES

Name: NISHANT ARUN ISLOOR & AMAN P SHETTY Std: 7
Guide: Dr. ARUN MOHAN ISLOOR
School: N.I.T.K English Medium High School; Mangalore

ABSTRACT:
In the proposed ‘Smart Cities’ project; providing clean and hygienic water to the human population is one of the major challenge. We hereby proposing a novel; environmental friendly cartridge for the effective treatment of waste water from residential apartments/ industries. The recycled water may be directly used for our day today activities without any further chemical treatment. Waste water is mainly enriched with detergents; any trace heavy metal; microbes; organic dyes etc. Here; waste water is directly passed through the novel cartridge by the gravitational force. The multilayered components (adsorbents) adsorb the different impurities present in the waste water and thus makes the water pure upto 99.5%. Release of such hazardous compounds in the water may lead to harmful effects on human beings and also on the surrounding environment. Present set up was developed using locally available inexpensive materials based on scientific justifications. Initially; waste water is passed through fine sand particles; which removes suspended particles. Further; water passes through activated charcoal; which removes most of the dye; detergent based impurities; chemicals and smell causing

agents. Layer of acid treated laterite granules can adsorb arsenic; lead; cadmium; chromium and other heavy metals present in the water. Further; water passes through the layer of activated charcoal; which can adsorb any of the remaining traces of the above mentioned compounds. The so obtained water is almost 99.5 % pure in nature.Presently there is no any such low cost commercial water purifier which can remove above components. In order to make the water potable; finally exposed to the UV lamp; which can kill the microbes upto 100% .

Project Code:**Env-10 (Team)** **Online ID:1789**

Title: Natural pesticide for wolly aphids from Lantana camara leaves
Name: Mashal Mohammad & Muhammad Haroon Std: 9
Guide: Jayalaxmi A
School: Sri Ramakrishna Higschool; Puttur

ABSTRACT:
:Agricultural crops are under constant assault by insect pests; making insecticides essential to reduce losses. Synthetic insecticides such as organophosphates are important; effective tools in modern crop management. However; they pose serious threats to the environment and to people. Humans come in contact with dangerous pesticides on food; in water and in the air near farms. Organophosphates designed to affect the brain and nervous system of insects; sometimes damage those of humans and animals. It is possible to create effective; natural insecticides from these substances to protect crops. Natural pesticides have many advantages over synthetic ones and may be more cost-effective as a whole; considering the environmental cost of chemical alternatives. Many plant species produce substances that protect them by killing or repelling the insects that feed on them. One such plant is Lantana camara. So we decided to prepare pesticide form the leaves of Lantana camara .for wolly aphidsMethodologyTo prepare the pesticide; we collected 250g of Lantana camara leaves & chopped them up in a food processor and added 500ml of distilled water. Then we concentrated it by boiling to extract the substances from the leaves and strained out the sediment. We prepared 3 such samples of pesticides by adding 200gms and 100gms of leaves in 500ml of distilled water. After 24 hours we sprayed the insecticide on wooly aphids. Every day we tracked the numbers of dead and live aphids. We graphed the cumulative mortality of the population for each concentration of the insecticide.Conclusion The water extract of Lantana camara leaves started taking effect immediately; which suggests that it was a pesticide. All the three samples of natural pesticides were made from a common plant Lantana camara that grow every where in our place and can be purchased quite cheaply. It was easy for us to produce them in my kitchen.So this experiment could lead to many more pesticides that could improve the farming processes we use today.

Project Code:Env-11 (Jr) Online ID:1790

Title: Novel Water Conservator
Name: Rakeshkrishna.K & x Std: 7
Guide: Rashmiparvathi.K
School: Vivekananda English medium school; Puttur -D.K

ABSTRACT:
Synopsis :Water is our primary requirement and a single drop of water is very precious. Water conservation is current major issue of entire world. We store water in tanks on roofs or hilltops. People; more often; switch off the pump only after water overflows !! This is because we don't know the exact water level in the tank. To check the water level ; we have been using some electrical gadgets which are costly and need electricity. Moreover; they do not show exact level of water in the tank. I have come up with a model of Novel Water Conservator which enables an easy way to confirm the exact water level in any water tank. This method doesn't require electricity and is the cheapest and best method possible to check the water level and save water. We can check water level from a far away distance with help of indicator. It is Eco- friendly; pollution free and farmer friendly .This is purely novel and innovative working model which enables an easier systematic water level confirmation for people. It is so cost feasible that a common man could always afford for. Moreover easy maintenance; one time investment to save water makes it even more useful. Here when the tank is filled with water;the indicator will go to the bottom level and when the tank has very less quantity of water then the indicator will go up to the top. I have applied this method to the water tank at my home and it is successful. With the help of the radium tape and red coloured indicator; it is easier to spot it in the night also because of its reflection.

Project Code:Env-12 (Team) Online ID:1793

Title: HYDRAULIC MACHINE FOR TREE REPLANTING
Name: Bevan Mathew A. & AYUSH S.B Std: 9
Guide: BRINDA.K.M
School: BETHANY ENG.MED.HIGH SCHOOL;PANGLAI;DARBE;PUTTUR

ABSTRACT:
All of us know that forests are the indicators of a Nations Wealth so it is our bond duty to preserve our forest.But now a days people are cutting the trees for their selfish needs.Tree replantation is a best way to avoid deforestation using Hydraulic Machine for this process is a best way which is already in use in Gujarat and some states of India.This machine can be transported from one place to other and the trees in the commercial area can be uprooted and replanted in a forest area.By this

we can preserve the forest wealth of our nation.This is just a demonstration that how it can work but it can be achieved without much human force especially by the hydraulic pumps which are already in use this method is cost-effective and also easy to manage so by this project if implemented in all the states of India we can preserve our rich forest resourses and prepare the path of development to our country.This is also a eco-friendly method.This works on the principle of Pascal's law of pressure of liquid.By the pressure of liquid in the hydraulic pumps we can replant the the trees.

Project Code:Env-13 (Team) **Online ID:1798**

Title: MOSQUITO BAT USING RUBBER LATEX
Name: Manvitha Rai A & Ankitha K Std: 9
Guide: Vasanthi Kedila
School: Sri Ramakrishna High School Puttur D K

ABSTRACT:
Dengue ;malaria ;chikkangunya are epedimic diseases types of mosquitos [Aedes ;aegyptie;anaphilis etc] . So natural preventue measure to reduce the mosquito in alternative cheaper bat against commercial costly mosquito bat available in market.Methodology One litre of rubber latex is taken to prepare a mosquito bat of circular area of 20 cm of arracanut plate. It is used to catch mosquitos especially in the evening time .As rubber latex had a bad smell we added Eva perfume .Mosquitos stick to the rubber latex .We prepared 10 bats just like hand fans .Thus we are able to minimize mosquitos in our area that spread dengue ;chikkangunya ;malaria etc.

Project Code:Env-14 (Team) **Online ID:1803**

Title: COCONUT RHINOCEROS BEETLE CONTROL USING PETROLIUM TAR
Name: Thrupthi P & Akshatha N Std: 9
Guide: Vasanthi Kedila
School: Sri Ramakrishna High School Puttur D K

ABSTRACT:
Coconut rhinoceros beetle damage trees by boring in to the centre of crone were the injure the young growing tissues and feed on the sap cut the developing leaves. So we thought of preventing this damage by using black petroleum tar. . We are the childrens of farmers. There are 40 coconuts trees in our one acre garden.In this garden 10 coconut trees are attacked by rhinoceros beetle .Among this 2 coconut trees died; because of beetle attack. So as to reduce the beetle attack.We painted this trees using petroleum black tar.And then we observed the trees for 2 months.After our painting work there were no beetle attack and death of coconut tree.Thus we are able to save our coconut garden from the beetle attack.

Project Code:Env-15 (Jr) Online ID:1818

Title: Eco-friendly pesticide from Cassia fistula
Name: Sushanth N G & x Std: 8
Guide: Vidyagovinda N
School: Vivekananda english medium school thenkila puttur

ABSTRACT:
Cassia fistula is a moderate sized tree of 3-7ft height belongs to the family Caesalpiniaceae.This is a golden shower tree is found all over India. The plant is having greenish grey bark which is investigated for pesticidal property in this project.The bark is cut into pieces ; dried and powered.200g of the powder is treated with 2 litres of water and kept aside for 4 days.Then it is filtred and used as pesticide to control worms ;caterpillars and snails that eat the leaves of plants .These worms are usually found during winter and rainy season around houses.The natural product is having Rhein component which is responsible for its pesticide property. The mortality rate is 100%.as it killed all worms immediately. So this is an eco-friendly pest control product which is less expensive ;socially useful and easy to prepare by all.

Project Code:Env-16 (Team) (Jr) Online ID:1820

Title: - Organic bag using Araca catechu sheets
Name: Prakhyath . Y.B & Pranav Y.B Std: 8
Guide: Jayalaxmi A
School: Sri Ramakrishna Higschool; Puttur

ABSTRACT:
- The aim of our project is to prepare biodegradable bags to replace non biodegradable plastic bags using the Araca catechu sheet A sheet of Aracanut is taken and it's outer thin sheet which looks like plastic is carefully removed. It is then fold into a bag of 15 cm×15 cm and stitched.It is used as thin plastic like bag to carry lightweight things.We can also use the thin sheets to grow small pottery plants to avoid the use of non-biodegadable plastics. The Araca sheet bag prepared by us is thin light weight.The sheets used in growing pottery plants are biodegradable. So the pot itself can be put directly to the soil without removing the cover. So reduced plastic waste.

Project Code:Env-17 (Team) Online ID:1862

Title: Degradation of coloured dye using Copper oxide nano particles from Cyperus rotundus leaf extract
Name: Sangeetha Pai G & Sniddha M J Std: 10
Guide: Jayalaxmi A

School: Sri Ramakrishna Higschool; Puttur

ABSTRACT:
The enormous volume of environmental pollutants; nondegradable and carcinogenic natured colored dye effluents is discharged by the industries. Moreover; to unique in their products most of the industry uses color dyes; without any treatment the coloring materials are liquidated in water leads to contamination of resources. The recent findings showed metal nanoparticles were successfully used in the degradation of color dyes. Since plant mediates synthesis of metal nanoparticles can be profitable when compared with chemical and physical method . So we are trying to study the green synthesized copper oxide nanoparticles from Cyperus rotundus leaf extract in the degradation of coloured dye.Cyperus rotundus leaves were washed with deionized water and shadow dried for 14 days. The dried leaves were powdered using a mixer grinder. Formerly; 10 g of powder dispersed in 100 ml of deionized water followed by boiling for 10 min. After bringing back to room temperature; the extract filtered filter paper and the filtrate was stored for further use. 90 ml of 5 mM cupric sulphate solution was mixed with 10 ml of leaves extract and allow to stand at room temperature until further color change occurs. An indicator for synthesis of nanoparticles is the color change of the solution .We have already collected 100 ml of the coloured dye . we added 10 ml of solution to the copper oxide nano particle solution and kept it for 10 hours

Project Code:Env-18 (Team) Online ID:1885

Title: Weed management strategy-conversion of weed into biochar

Name: Swsthik kumar & Akshobhya B Std: 10
Guide: Jayalaxmi A
School: Sri Ramakrishna Higschool; Puttur

ABSTRACT:
A weed is a plant considered undesirable in a particular situation There are a number of weed control methods. Weed control is important in agriculture. Methods include hand cultivation withhoes; powered cultivation with cultivaters; smothering with mulch or burning .conversion of weed into biochar offers us a golden opportunity to remove excess CO2 from the atmosphere and sequester it in a virtually permanent and environmentally beneficial way.Biochar is defined simply as charcoal that is used for agricultural purposes. It it created using a pyrolysis process; heating biomass in a low oxygen environment. Once it is produced; biochar is spread on agricultural fields and incorporated into the top layer of soil. It increases crop yields; sometimes substantially if the soil is in poor condition. It helps to prevent fertilizer runoff and leeching; allowing the use of less fertilizers and diminishing agricultural pollution to the surrounding environment. And it retains moisture; helping plants through periods of drought more easily. Most importantly; it replenishesexhausted or marginal soils with organic carbon

and fosters the growth of soil microbes essential for nutrient absorption; particularly mycorrhizal fungi.Insert a barrel / retort into the fire brick enclosure. Fill it with dry biomass. Place a few sticks of wood under the retort and set them alight.It can take as little as 15 minutes to bring temperatures up above 300 C to initiate pyrolysis. The let the barrel to cool for 2 hours and remove the bio char from the barrel

Project Code:Env-19 Online ID:1892

Title: Use of waste plastics to manufacture tiles
Name: Neelappa S & x Std: 10
Guide: Shobha b
School: Sri Ramakrishna High School Puttur D K

ABSTRACT:
Now –a –days non-biodegradable plastic wastes created a major problem in solving the environmental issues .So ;in this project plastic wastes are used in the preparation of tiles. At first; a plastic sheet is set up inside the tiles mode (trace). Cement; sand should be added. Then gravel is added to it in small proportion and water is added and mixed well. Then waste plastic plastic pieces should be mixed.This mixture is then put into the mode about half of the mode and level it. Then add the mixture of sand and cement and level it. Then the mode is closed by adding weight to it. Then with the help of the pressing machine press the mode. Then the mode is removed and separate the tile from its mode. It has to be kept for curing for 22 days. Then the tiles is ready.Its can used in the grounds in place of interlock. It can be used for various purposes.

Project Code:Env-20 Online ID:1893

Title: Engineering Photosynthesis to combat Global Warming
Name: Athul Shenoy & x Std: 12
Guide: KARTICK TARAFDER
School: Sharada vidyanikethana Talapady Mangalore

ABSTRACT:
The world is getting warmer day by day as we are burning fossil fuels which increase the carbon dioxide concentration in the atmosphere which causes imbalance in Carbon Cycle leading to a phenomenon known as Climate change .Current generation of plants cannot utilise this excess CO2 ; In Order to solve this problem i have come up with a simple solution . Genetically modifying the Photosynthetic ability of the Plants / Cyanobacteria will allow enhanced absorption of CO2 as well as result in useful products . In layman's terms when we boost a plants photosynthetic rate and dynamic respiration ;The growth will be very fast and we can get plant harvest faster than ever. We also find out how many years will it take for at least 5% of plants /cyanobacteria/algae in all of the world to bring down the worlds CO2 concentration from the very recent 400ppm to 300

ppm by using Computer simulations .

Project Code:**Physics-01 (Team)** **Online ID:1607**

Title: Electronic Water Conserving Tap
Name: Deelia Primal Rodrigues & Sahana Std: 9TH STD
Guide: ROSHAN PINTO
School: CARMEL HIGH SCHOOL; MODANKAP

ABSTRACT:
As per the circuit diagram ; when we turn on the tap the positive terminal of the battery comes in contact with the switch 1. Hence the green LED bulb glows which ensure the low flow of water. When we turn on the tap towards switch 2; the battery positive terminal which connects to the orange LED. Hence orange LED bulb glows. Which indicate medium flow of water. When we turn on the tap completely switch 3 is connected to the positive terminal. Hence red LED lamp glows along with buzzer. Which indicates heavy flow of water. Instead of battery we can use mobile charger adopter also(5.5 V DC; 600m.A)

Project Code:**Tech-01 (Team)** **Online ID:1621**

Title: The Eye
Name: Rajath rao kn & Samarth M Std: 10
Guide: Latha
School: Sharada Vidyalaya Mangaluru

ABSTRACT:
There are 35 Crore blind and more than 90% of them are unemployed.They are excluded from the main stream.They are disconnected from the whole world as they cant use the most Powerful tool -the Mobile-.Our project is an attempt to solve their day to day problems.The 'Eye' is an app that will help them to type (faster than QWERTY keyboard) and search that in Google; Youtube ;Facebook and Twitter.It also consists of an calculator which will help the blind in complex arithmetic calculation.For recreation we have also created a Music Player so that he can relax and Get Motivated By Listening to his favourite songs.One of the major problems faced by them is that the cant understand the time so we have created a Calender also.The app is an 6 grid system which can be easily learnt within 10minutes.For typing :he has to click on the 1st and the 1st grind the app tells - AIf he clicks the 1st and 2nd grid the app tells - BIf he clicks the 1st and 3rd grid the app tells - CGOES ON TILL 5TH AND 2ND GRID FOR - ZSame for other tools it is of 6 grid format

Project Code:**Tech-02 (Team)** **Online ID:1633**

Title: EMERGENCY MOBILE CHARGER
Name: SHARANYA & RAKSHA Std: 10th std
Guide: ROSHAN PINTO
School: CARMEL HIGH SCHOOL; MODANKAP

ABSTRACT:
As per the circuit diagram when 9 V battery or solar cell (10V) is connected to the circuit; red LED lamp glows; which indicates availability of the battery supply / voltageWhen 9 V D C is applied to the 7805 voltage regulator IC; the 9V is converted into 5V DC. This supply can be used to charge the mobile.IC 7805 Voltage regulatorVoltage regulator IC's are the IC's that are used to regulate voltage. IC 7805 is a 5v voltage regulator that restricts the voltage output to 5V and draws 5V regulated power supply. The maximum value for input to the voltage regulator is 24V. It can provide a constant steady voltage flow of 5V for higher voltage input till the threshold limit of 24V. The last two digits of 7805 IC i..e '05' indicates the value of output voltage.There are 3 pins in IC 7805;Pin 1 – Input :-In this pin of the IC positive unregulated voltage is given in regulation.Pin 2 – Ground :- In this pin where the ground in given. This pin in neutral for equally the input and output.Pin 3 – Output :-The output of the regulated 5V is taken out at this pin of the IC regulator.

Project Code:**Tech-03 (Team)** **Online ID:1657**

Title: AURDINO BASED AUTOMATIC VEHICAL FOR TRANSPORTING OF GOODS
Name: Dhanush.P.R & Thejas.kumar Std: 10
Guide: Sampath kumar
School: Vivekananda English Medium school Tenkila Puttur

ABSTRACT:
A machine which is built to follow a specific path is defined as a Line follower. It follows the white line. We have build a line follower for transportation.In places where humans face difficult to reach the places due to they're busy shedule. In such situations we can use a machine which has the ability to take decisions as humans. A practical example is guidance system for industrial robots moving on shop floor etc. It is a GPS robot which we can control it from any part of the world. We used IR sensors detect difference between black road in the white background. The resistance of the sensors decreases when IR light falls on it. A good sensor will have zero resistance in presence of light and a very large

resistance in absence of light. Aurdino is the central processing unit of our project. For tracking we have used GPS & GSM modules. GSM module sends the location details & GPS module receives the message and it sends to the aurdino . Aurdino match the message and preinstalled detail .if any match found; it display it through the pc. And it has 4 motion sensors to avoid crashing of vehical when it is in main road. When any vehical come across the contact of the motion sensor it will stop and avoids it. It has a camera to see the traffic lights when it is red it sends message and aurdino says to stop . so we can conclude it is an fully automatic robot.

Project Code:**Tech-04** **Online ID:1750**

Title: multi utility rover

Name: TUSHAR GOPAL D R & x Std: 10
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ABSTRACT:
The feature of this rover are; it follows black path which is very useful to transport goods from one place to another automatically;can be controlled from our android devices using Bluetooth and also through hand signals. If we press the no.s like 2; 4;6 and 8 in our mobile using Bluetooth we can make the rover to move forward; backward; left and right. Using hand signals like if we our fist is closed then it moves forward; if we move our hand towards right or left it too moves right or left side. The main feature of this rover whenever it is moving in the industries if it detects fire then it makes all the doors of the industry to get opened so that the people working there might come out of the building easily and shuts down every single machine of the industry automatically.it also makes the buzzer in the modified watch of the watchman