

ABSTRACT BOOK

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

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Title: effects of different types of music on concentration

Subject Category: Behavioural Science

Name: viradiya vikas bharatbhai & parekh shrey dipakbhai Std: 9

Guide: bhavik borisagar

School: late shree s.g. dholakiya memo. highschool;rajkot, Rajkot

ABSTRACT:

To check the effect of different types of music on human mental concentration first of all we identify three groups of 15 student of same achievement. then after we have selected silent place then we had selected three music 1, Bollywood,2- instrumental and 3- classical songs. Then we divide each group into three part each parts has five students. In first experiment we gave six minutes to read two Sanskrit sloke to each part of first group under the effect of different music. Same experiment should be done with all the groups of students.and then we observe that instrumental music is more effective to concentrate the mind to read and Bollywood music is less effective then any other music to concentrate mind to read.

Title: EFFECT OF COLOR ON MIND OF AGE GROUP 5-12

Subject Category: Behavioural Science

Name: SETA DISH & patel princy Std: 9

Guide: apeksha joshi

School: shri gk dholakiya school uni.road; rajkot, Rajkot

ABSTRACT:

It is observed that if a child is taught systematically he understands it better. Colours have a strong effect on the mind of a child. It is found that if the colour of the textbook is changed the child is able to more easily understand different sentences in various colours of rainbow to children in the age group of 5 to 12 years. Then we showed them craft paper and gave them a paragraph and drew conclusions on the basis of colours which the child remembers.

OBJECTIVE OF PROJECT: A child can easily see if the colour of the textbook is purple.

The main object is to find out that which colour the child is able to see first.

EXPERIMENT NO.1

First of all we meet children in the age-group of 5 to 12 years for discussion and we showed them different sentences through a chart.

The colour used in the chart were taken from the colours of rainbow.

The sentences in the chart were written with different colours of rainbow.

The children were asked to close their eyes for two minutes after giving them necessary instruction. After two minutes they were asked to look at the chart.

The children were asked to write down the sentence with its colour. Which they see first after that they were again asked to close their eyes for two minutes.

After two minutes they were asked to open their eyes and look at the chart and write down the name of the colour which they see first in the chart given to children. A group was made.

EXPERIMENT NO.2

As purple colour was more prominent in the answers we arranged that colour in different orders in the chart.

Letter experiment were made on children giving them craft paper.

EXPERIMENT NO.3

We gave a paragraph to children and asked them to read it.

We asked the children to write the name of the colour which they remember on a chart.

On the basis of that a graph was made.

EXPERIMENT NO.4

The white chart which had different colour of the rainbow was shown to the children of the age group 5 to 8 years. We asked the children, showing them the chart, to write down the colour that they remember on the given chart and prepare the chart on the basis of that.

Similarly this the above mentioned process was repeated on a black chart. On the basis of this a graph was made.

CONCLUSIONS: From experiment number 1,2, and 3 it is clear that purple colour has the most effect on the minds of children. From the experiment number 4 from the colour on the black chart yellow colour has the most effect on the minds of the children and purple colour has the minimum effect. Similarly by experiment number 4 it is clear that the red colour has maximum effect on minds of children and green and orange colours have minimum effect on them as shown in write chart.

**Title: NATURAL HOUSEFLY REPELLENT FROM BASIL LEAVES ;
LEAVES OF VICKS BASIL**

Subject Category: Biology

Name: DUDANI ABHISHEK MUKESHBHAI & MENDAPARA

ROANAK DINESHBHAI Std: 9

Guide: VIRENDRA SANGHVI

**School: MATUSHREE L.G. DHOALIKYA SCHOOL (KRUSHAN
NAGAR RAJ, Rajkot**

ABSTRACT:

As we all know at present human kind is fighting against many threatening disease and health problem. there are many contagious disease which caused by food and water such as cholera, typhoid and many more. houseflies are acting as key spreading agents of such infective disease. So to prevent such disease we have prepared a natural housefly repellent with the help of mixture of basil leaves, leaves of vicks basil and then mixed it with a eucalyptus oil. We have extract juices from basil leaves, vicks basil leaves and mixed it with mixture than add eucalyptus oil. Then filtered it with cotton filter. We had use it in vaporizer and spray to remove insects and found that it can repel the flies easily and effectively.

**Title: TO PREPARE HAND WASH SOLUTION FROM
BASIL;NEEM;TURMERIC AND LEMON**

Subject Category: Biology

Name: PURVA SADARIYA & CHANDRALA TRUSHA Std: 9

Guide: apeksha joshi

School: shri gk dholakiya school uni.road; rajkot, Rajkot

ABSTRACT:

To prepare herbal hand wash first of all we have made the solution of basil, neem, turmeric and lemon in proper proportion and check its antibacterial liquid material. It's contain are basil, neem, turmeric and forming agent (SLES). Its compound is used for antibacterial the neem is used for skin type diseases like remove pimples the hand wash importance is made by ayurvedic and natural contains so no side effect of it. In market many hand wash are selling but it is very harmful to us. Soap is early made by hand wash so bacterial is killed by it and we are protecting diseases, the hand wash is very antibacterial proof by scientific laboratory & research institute. This hand wash is very effective and very easy to make from another liquid. This hand wash is 100% free from bacterial so its side effect is no more. It's very very good for our health. Our experiment and laboratory report tells that our liquid soap is totally antibacterial take 30% forming agent and 50% our hand wash is more good for our health.

**Title: TO CHECK THE EFFECT OF ONION CRUSH ON
MICRORGANIS LIKE MOLD AND E-COIL.**

Subject Category: Biology

Name: VALA RAJVI & saradva aayushi Std: 8

Guide: apeksha joshi

School: shri gk dholakiya school uni.road; rajkot, Rajkot

ABSTRACT:

To prepare fungicide is a first of all we taken red onion. The scientific name of onion is allium sepa we often use onion for treating digestive problems, including loss of appetites upset stomach and gallbladder disorders for coughing, asthma & diabetes onion contain quartet in flavonoid antioxidant damage to cells and tissue of the body. That quercetin helps to eliminate free radicals in the body onion is apply to the ringworm, wound, light bums boiled, warts insecticides and bruises etc. Skin diseases are cursed by fungus. So we can say that onion is antifungal. In medical we can use medicine to cure diseases but if we can use onion juice to cure skin diseases so cannot have infection. We have crush the red onion in mixture and check it's antifungal and antibacterial activities against microorganism like mold and e-coli and check it's inhibition zone in laboratory.

**Title: DESTROY HARMFUL INSECT OF SOIL THROUGH LIQUID OF
CUSTURED APPLE LEAVES**

Subject Category: Biology

**Name: KANSAGARA MANSI RAMESHBHAI & VISAVADIYA
SHIVANGI RASIKBHAI Std: 9**

Guide: SONDAGAR YOGITABEN

**School: MATUSHREE L.G. DHOALIKYA SCHOOL (KRUSHAN
NAGAR RAJ, Rajkot**

ABSTRACT:

To Destroy harmful insect of Soil. We have Prepared Liquid of Custured Apple Leaves. For that We had take 25gm Leaves of Custured Apple Pured in 1 Lt. water For overnight after then We have Crushed in mixture. Then after We have use it in spray pump as on Insecticide. We also gave the sample of this Liquid at Agricultural Research Centre Targhadiya near Rajkot.

Title: cultivation without soil

Subject Category: Biology

Name: bhargavi radadiya & jainisha bhagiya Std: 9

Guide: hiral dangi

School: shree g.k.dholakiya highschool rajkot, Rajkot

ABSTRACT:

Materials - coconut coir , micro nutrients , pot and water

How coconut coir is collected?

Coir is waste material of coconut long fibers which are used in making mat,rope,etc.

first coir is soaked into water for 24 hours to remove waxy layers at the fibers surface.

then the fibers are rinsed with water to remove all the waxy layers.and it is dried by

giving some amount of temperature.

Procedure - 1.take a pot fill it 3/4th of coco coir then spread 4-5 seeds of any type of plant.

2. then fill full of coco coir . 3. take some micro nutrients dilute it in water and add to

in appropriate quantity and set it for the plantation . 4. give water to plant regularly.

Result - after comparing sample-a(coconut coir plant) with sample-b(soil plant) we can say that

sample-a plants are more fresh and healthy than sample-b.

Future plans - we want more comparative data between coconut coir and soil plantation in varieties of plants.

Conclusion - coconut coir plantation is cheap and healthy than soil plantation . coir plantation's vegetables and fruits are healthy,

Title: BIODEGRADATION OF OIL CONTAMINATED SITE.

Subject Category: Biology

Name: kuldeepsinh talatia & Std: 7th std

Guide: Dr.KRISHNA JOSHI

School: , Rajkot

ABSTRACT:

The oil industries that are present only in the limited area of the world are responsible for the high generation of contamination of soil, river and seas. They produce highly potent organic residues that causes the server damage to the environment at large aspect. The process of bio-remediation defined as the use of microorganisms to detoxify or remove pollutants owing to that deserve metabolic capabilities is an evolving method for the removal and degradation of many environmental pollutants including the products of petroleum industry. The bio degradation of oil pollutants is not a new concept as it has been intensively studied it controlled conditions and in open filed. Experiments, but it has acquired a new significance as an increasingly effective and potentially inexpensive cleanup technology. Here we have isolated a bacteria from the garage soil. Which is showing a potential to degrade oil wastes. Thus we got the result that the degradation of oil done by microbes colonies were obtained which is can be visualized by density of the culture.

Project Code: BIO-07 (Jr) Online ID:314

Title: To check the effect of extract of prickly pear on different bacteria (E-coil;Pseudomonas aeruginosa; Bacillus subtilis)

Subject Category: Biology

Name: Oza Naisargi Rajivbhai & Std: 6th std

Guide: Ajagiya Smitaben

School: , Rajkot

ABSTRACT:

First of all I had take stem of prickly pear and crushed it into mixture grinder and add water in different amount and make different proportion like ,25:75(50gr pulp:150ml water)50:50(50gr pulp:50ml water)75:25(50gr pulp:16.6ml water)62.5:37.5.(50 pulp:30ml water) than we check an antibacterial activity against E-coli We found that the mixture having 62.5%(50gr) pulp of prickly pear and 37.5%(30ml) water is shown the best antibacterial activity against E-coli. Then we check it's antibacterial activity against E-coil,Pseudomonas aeruginosa, Bacillus subtilis.

Title: to prepare lacto meter

Subject Category: Chemistry

Name: Dandaiya Dhairy Kiritbhai & Gajera Dhruvin Sureshbhai Std: 6

Guide: javiya reena

School: k.g.dholakiya;rajkot, Rajkot

ABSTRACT:

Apparatus: Test-tube, Iron (Fe powder), Biker

Materials: Milk, Water

Procedure: First to take a five test-tube. First test-tube fill up by 10 gm iron powder. Second test-tube fill up by 20 gm iron powder. Third test-tube fill up by 30 gm iron powder. Fourth test-tube fill up by 40 gm iron powder. Fifth test-tube fill up by 50 gm iron powder. This test-tube are closed into a rubber. Then this test-tube are put into a one by one glass of milk and water. Then this reading are observe this are note. In this reading more difference are observe this is pure lacto meter. Then take a one test-tube into add a 50 ml milk and 50 ml water. After take a this type of different reading.

Observation: This reading are observe it shows density of solution.

Use: This lacto meter are work as a rules of center of gravity. To measure a different type density of a solution by lacto meter.

**Title: to prepare a ph value measuring liquid-indicator made from rose
pattel abstract**

Subject Category: Chemistry

Name: balasara akshar savjibhai & raichura utsav dipakbhai Std: 8

Guide: jeminiben santoki

School: late shree s.g. dholakiya primary school;rajkot, Rajkot

ABSTRACT:

To prepare an indicator liquid from natural material first of all we had take different colorful flower ant than we make crush of all the flower and put a dorpe one acid and base in it and observe the color change. We found that red cabbage and rose flower patellas color will gave different color in acid and base solution than after we take 25g of rose pastels and 100ml distele water and make extract by heat it with stove for 10 minutes. Then after we have take different solution with different pH value which was measured by pH meter and add 2ml of indicator in all the solution. We found that it gives different colour with different solution. It gives pink colour with acid of less then one pH and orange colour with acid of 4 to 6 pH and green colour with solution of more then we had use this liquid as an indicator. this way we may use it as natural indicator liquid. we can also make pH indicator paper with the use of blotting paper and this liquid.

Project Code: CHEM-03 (Team) Online ID:239

Title: To Study the effect of calotropis gigantea leaf extract on termites

Subject Category: Chemistry

Name: Makawana Ruchi Ashokbhai & Jogasva Shweta Gobarbhai Std: 9

Guide: uday ukani

School: K.G.Dholakiya School, Rajkot

ABSTRACT:

In present study we have done the experiment to investigate the termicidal properties of Calotropis Gigantea. For the study we have prepared the leaf extract by crushing the leaf with D/W in a mixture. The concentration of solution is 40%. Through lab experiment it is found to be that Calitropa giganta plants contain terpenoids, steroids, flavanoids compounds which shows termicidal activity. it aslo found the plant have a antimicrobial activity..

Title: TO PREPARE ECO FRIENDLY TEXTILE DYE FROM VARIOUS PLANTS AND PLANTS LEAVES/FLOWERS

Subject Category: Chemistry

Name: MAYURSINH VIKRAMSINH VADHER & Std: 9th std

Guide: Madhuri Jimuliya

School: , Rajkot

ABSTRACT:

I have made an Eco friendly textile most of dye which is available in market contain harmful chemicals.i have made Eco friendly textile dye to make this dye kitchen natural ingredients like plants leaves and flowers.

This dye is made up of various type of plant and leaves/flower. For making 100 ml of dye 250 gms of leaves and 100 ml of water is used. This mixture is boiled at 120° C. Seperate the liquid and waste with the help of drainer. Here salt is added at last for permanant colour .To make 100ml of dye approx cost is 3-4 Rs,so its cheaper than existing dye. This dye is not harmful to the nature. It also can be used as fertilizer.

Project Code: CHEM-05 (Team) Online ID:256

Title: Fenil Hindocha

Subject Category: Chemistry

**Name: Fenil Rakesh bhaiHindocha & Tarang Kanti Bhai Aghera Std: 9th
std**

Guide: Hiral Thakar

School: Shree G K Dholakiya schools, Rajkot

ABSTRACT:

We have prepared home made crayon from flowers and leaves. These prepared crayons are non toxic, cheaper. Here its also possible to insert different shade to one crayon, as well as its also possible to impart different colour. These cryon are prepared from simle candle, colourful candle and leaves. For impart the shape ,as a mould syringe is used. 3cm of simple and colourful candle and leaves extract is used.After melting candle pour the melted material and extract in syringe for giving the shape and freeze it for 10 min. The cost of prepared crayon is 3-4 Rs. The height and radius of crayon is 4.6cm and 0.7 cm respectively.The crayon become soft at 105 °F. Melting point of crayon is 125-130°F. Breaking point 2.75 lbs.The advantage of this crayon is they are not harmful .so child can use it easily.

Project Code: CHEM-06 (Team) Online ID:275

Title: prepare a mosquito repellent stick from basil seeds

Subject Category: Chemistry

Name: ANIYALA VANRAJ & SOLANKI BHAVIK Std: 9

Guide: uday ukani

School: K.G.Dholakiya School, Rajkot

ABSTRACT:

In this study we have prepared the stick from the basil seed powder, wooden ware and cow dung. The stick has a capacity to repel the mosquito easily. It also found that basil seed contains pyrethrum and citronella compounds which show anti-mosquito activity.

Title: HYBRID BICYCLE

Subject Category: Energy

Name: NIKUL GARAIYA & MAHEK MAKADIYA Std: 9

Guide: dhaval madani

School: K G dholakiya school; Nr: balaji hall; rajkot, Rajkot

ABSTRACT:

Join the horizontal rode near about 1.5 ft at the former part of the cycle's seat. Join one more rode near about 3 ft perpendicular down side. Now take the third rode of 2 ft and join it with the cycle's rode then join the other side of the rode with the half circle's zigzagged part like it can stay horizontal. Now join the horizontal rode with the touching point of the perpendicular rode. Put two or four spring of 12 cm between the semi circle and the perpendicular rode to the down side. Fix the down points of the spring like a particular position as showing in the model. Join the half circle rode with the flywheel in a way that the zigzag part of it fixes with it. Now join the fly wheel with the peddle. When the circle goes on the rough road, the rider will often try to peddle with this we can save the energy. When the cycle pass on from very rough at ruler or mountain areas, because of riders weight, the seat goes down from the back side and the rode which was joined ahead will be pulled and with that the rode also pulled with it. At that time the spring will also pull and after that when the springs take its real position the fly wheel which is joining with the semi circle will turn. With that situation the rider will get the help to hit the peddle.

Title: To produce electricity by Slipping slides

Subject Category: Energy

Name: YASH KALARIYA & JAINAM DOSHI Std: 8

Guide: madhuri gadhiya

School: K G dholakiya school; Nr: balaji hall; rajkot, Rajkot

ABSTRACT:

While slipping on the slipping slide we found that pipes are moving circular so that with this motion we can generate electricity for that we had prepare a small model of slipping slide in this model we use 10 small pipes with diameter about half centimeter and length about 3 cm. Arrange these parts in sequence as slipping slider model as rotating conditions as shown in photograph. we also have arrange small generator with all the pipes. So that when anybody is slipped from the slides then all the pipes can be rotated, and they will rotate the generator, this way we can generate electricity (or we can convert potential energy of a person in to electricity).

Then we put a weight of 50g,60g,70g,80g,90g and 100g and measure the voltage difference and current of each generator, and then calculate power with it.

Title: natural cold storage arrangement in house without electricity.

Subject Category: Energy

Name: joshi noopur & mehta zeel Std: 8

Guide: apeksha joshi

School: shri gk dholakiya school uni.road; rajkot, Rajkot

ABSTRACT:

We designed new model for cold storage. This is worked without using electricity. This work based on the evaporation principle. We have constructed the model by using wooden material and steel sheet. In this model we use insulated material as water falling drop wise on saw dust. After evaporation of water can enter to small holes into store house in model house selling is made up at passing through it and also prevent from heat. Procedure is the dry airs enter from the base of store container which containing small holes packed with saw dust and mixture environment created by dry air and help in maintain temperature. This project is useful for farmers to store their agriculture product for long time.

Title: harnessing mechanical energy through apparatus available at children play area

Subject Category: Energy

Name: Rojmala Janki vijaybhai & SAGPARIYA VRUTIKA

YOGESHBHAI Std: 7th std

Guide: KABIR KRISHNA

School: SHREE G.K. DHOLAKIYA SCHOOL ; UNI. ROAD ; RAJKOT, Rajkot

ABSTRACT:

My project is based on see-saw that generates electricity while children play on it. Principle I have used is converting the kinetic energy. Which is generated from see-saw into electrical energy.

Now for this thing to work. I have built a prototype model in which I have used a DVD driver and on motor of DVD drive. I have mounted a led. Then I connected DVD driver with see-saw Via conveyer belt. Now as the child moves up and down the led will start to glow for 1 to 2 sec.

My observation is as the weight is 120 gm. (1.2 N) the power generated is 3 watt. So taking overage of children playing on it 25 kg (250 N) generates 625 watt power in just one sit up & push up.

We can repair the see-saw when needed.

Title: conversion of mechanical energy into electrical energy by rotor gate

Subject Category: Engineering

Name: sojitra jaydeep jayantibhai & kotecha shyam rajeshbhai Std: 9

Guide: vaishaleeba jadeja

School: late shree s.g. dholakiya memo. highschool;rajkot, Rajkot

ABSTRACT:

We have prepared prototype model of rotor gate which is available at public place. We had arranged generator with the axis of rotor gate and then we applied the force on the rotor gate and measured the electrical power generated by it. Then we applied force on original rotor gate available at public place. Energy crisis is one of the biggest problems which have to be solved. As conventional energy sources are depleting day by day we have to increase our dependence on renewable energy sources. These non-conventional sources are the excellent sources of energy if we can use them more efficiently. That's why we have made the system which uses the rotor gate placed at public places. The gear system is connected to the base of a turbine which is placed at the bottom of the rotor gate. The arrangement is shown in figure. The rotating gate will cause the rotation of turbine. When turbine completes a single turn the small wheels connected to it will complete many rotations which in turn is connected to the generator. It will produce electricity. This electricity can be utilized to fulfill the energy need of a garden.

Title: MULTI PURPOSE STOVE

Subject Category: Engineering

**Name: DABHI BALKRISHNA PRAVINBHAI & PANSURIYA HARSHIT
SAILESHBHAI Std: 9**

Guide: VIRENDRA SANGHVI

**School: MATUSHREE L.G. DHOALIKYA SCHOOL (KRUSHAN
NAGAR RAJ, Rajkot**

ABSTRACT:

We had done an experiment to use the heat energy wastage by the wall of stove for that we had prepared multipurpose stove from iron plate in which we have arrange double wall and double bottom so we can roast papad and boil the water while cooking. To check the efficiency of multipurpose stove we had fill water in between the double wall of the stove and put the papad under the bottom of stove than take two liter water of 25 C and divide it into two part than heat it with normal stove and multipurpose stove with same amount of fule(pieces of wood). We had measure the timing to boil the water in both the stove.

We found that both stove take same time(five minutes) to boil one liter water.

In this experiment we also get hot water and roasted papad from multipurpose stove.

This way we had use the heat energy of stove wastage by wall.

Title: air cooler

Subject Category: Engineering

Name: vaishnav yasha & sangani krusha Std: 6

Guide: hadvani vibha

School: K.G.Dholakiya school;mavdi chowkdi;rajkot, Rajkot

ABSTRACT:

First of all we have made model of an air-cooler form wooden box, than put a table fan inside the box. Than after we had arranged one basket of iron net in front side and water tank on the top of the cooler. So that water can fall on the material which can absorb by the material and with it's evaporation we can get cooling effect. Than we have fill up this basket with above shown material and measure temperature and humidity. Then we have change the surface area of this material and take again same observation.

Title: TO PREPARE WATER RESISTANCE AND HEAT RESISTENCE BRICKS FROM WASTEGE PLASTIC;BANTONITE AND SAND AND COMPARE ITS QUANTITATIVE DATA WITH NORMAL BRICKS

Subject Category: Engineering

Name: Mansi Nilesh Bhai Dalsania & Kairavi Dipak Bhai Rachhadiya

Std: 9th std Guide: Hiral Thakar

School: Shree G K Dholakiya schools, Rajkot

ABSTRACT:

In our construction media many types of bricks available, having some disadvantages and so prevent that thought of making bricks without that problems. This brick is made up of plastic , sand and bentonite. As a plastic polypropylene used here. The proportion in which plastic:sand:bentonite is use is 50:40:10. As per this proportion 250gm plastic, 200gm sand,and 50 gm of bentonite is used for making one brick of 500 gm. This manufactured brick has has 29.55N/nm² compressive strength while the existing one has 5 to 30 N/nm² .The heat resistency at 83°C,there is negligible change.As its water resistency is higher than normal brick so the possibility of being moisturize is very less.these bricks can be used as widely in construction of dam,beamcoloumn and bases of buildings.

Title: TO INCREASE THE STRENGTH OF CEMENT BRICKS BY ADDING AS A FILLAR MATIRIAL ARE IRON POWDER AND POLYTHIN.

Subject Category: Engineering

**Name: THANKI LEKHA HARISHBHAI & MEVADA DHRUTI
DILIPBHAI Std: 8**

Guide: RIDDHIBEN KUBAVAT

**School: MATUSHREE L.G. DHOALIKYA SCHOOL (KRUSHAN
NAGAR RAJ, Rajkot**

ABSTRACT:

To reuse of plastic we prepare holo brick of regular size (9"*6"*3")had add pulp of plastic and iron powder in cement holo brick different proporeation and make five dfferent sample and measure it's strength with through it from different height and we also check it's water absorption with dry weight and wetttable weight than we select third sample from it and then after we give this sample and regular cement brick which is available in market to laborator to check it's physical property like hardness,compressive strength,water absorption and fire resistive test. We don't get yet result. After getting result we can say that pulp of wastage plastic may be use to prepare cement brick.

**Title: TO MAKE A FORDABLE VESSLE BY USING COCONUT HUSK
& WAST PAPER**

Subject Category: Engineering

Name: SARADVA KINJAL & kanani jahnvi Std: 9

Guide: apeksha joshi

School: shri gk dholakiya school uni.road; rajkot, Rajkot

ABSTRACT:

We generally tend to throw away waste papers. But if that paper is reused to make something else which can be useful to all. Keeping this in mind, we decided to do something in this direction. We have therefore chosen to make cardboard out of paper waste and coconut husk. Both these items are easily available in all abundance. The process of making cardboard also not complicated. So, even a lay man can also make it. It would take about three days for the product to be ready. In order to bind the material a little fevicol is used. The main factor to require to dry the material is sunshine, which is freely available. We also experimented making cardboard by different quantities of raw materials to find out if it had any effect on the quality of the product, especially strength. But we found that it did not make much difference. Regarding this project we had various discussions with our friends, teachers, well-wishers etc and received quite a few valuable suggestions. Besides we also had references from books as well as internet.

Title: To generate electricity from the sea waves

Subject Category: Engineering

Name: sorthiya meet lalitbhai & Std: 6

Guide: khushbu p.delvadiya

School: , Rajkot

ABSTRACT:

To produce electricity from the sea waves first of all make a stand from wood. then on the upper side put a bicycle plate in the middle. put the flywheel of bicycle at both side. later on connect all these three things with chain stretch the chain to the bottom of the stand and join the steel fan with it. now what happens? we can see that the wave of sea with the steel fan and the electricity generates from the cycle plate

Project Code: ENGG-08 (Team) (Jr) Online ID:270

Title: To use of wastage plastic as a filler in railway sleeper and compare its properties with original railway sleeper

Subject Category: Engineering

Name: marthak samarth anilbhai & joshi keval jigneshbhai Std: 7

Guide: pratik a kadivar

School: matu shree l g dholakiya school , Rajkot

ABSTRACT:

To prepare novel sleeper first of all we had survey about cement railway sleeper which we can see at railway track than got its management and physical property than after we had prepare railway sleeper of same size by adding pulp of wastage plastic in different proportion and than we had measure its hardness and water absorption and fire resistive capacity at home with crude method.

Title: A Low Cost and handy instrument which can measure displacements and speed

Subject Category: Engineering

Name: ARJAV MANKODI & Std: 7th std

Guide: keyurbhai

School: , Rajkot

ABSTRACT:

In first stage I had make a simple step counter which is made with the help of Counter, battery, switch and a thin wire. These all connected with each other and then fitted at the base part of the shoe. If person walks with this shoes the counter starts working and gives no of steps, walked by a person. At the second stage I have done some modification. I have made One excel sheet and attached a stop watch with the counter. This is what I want to say that I have conclude by walking with my 3330 steps = 1 KM. Then I applied a formula to find the speed i.e. $Speed = Distance / Time$. My try is to make walking speedometer which is useful for every one's life or the Patients who are specially prescribed to walk with the specific distance and a time. In this we can prepare date wise data and preserve it for time sec. The main benefit is that this instrument is handy one can keep this in to pocket.

Title: Hardboard made up of groundnut cortex and wheat fiber.

Subject Category: Engineering

Name: harshit bharatbhai bagthariya & priyam hiteshbhai joshi Std: 09

Guide: dicosta k. ghetia

School: divine school; university road; road;rajkot, Rajkot

ABSTRACT:

Hardboard is a building material consisting of thin wood layers or plies bonded with an adhesive.

Our project is about hardboard which is made up of (wheat fiber) grampulses and groundnut cortex. We added etable gum, alovera and powder of asafoetita as adhesive. For more proper binding we add plastic in this hardboard. by this method we are able to made strong, high nail holding capacity having hardboard.

Characteristics:

- Strong.
- High nail holding capacity.
- Smooth surface which does not required further finishing.
- Best paint base.

Title: vertical wind mill

Subject Category: Engineering

Name: chhatrala jenil hareshbhai & Std: 7

Guide: nehaben maru

School: , Rajkot

ABSTRACT:

To prepare a model of vertical wind mill first of all i had arrange a vertical stand the use of iron rod than after i arrange a cylinder having 16 inch diameter and 11 inch height. i arrange six wings of 5 inch height and 11 inch width vertical as shown in photograph. than after i arrange 1 external wing with 2 divide wind gust into 2 part saw that a rotor of wind mill can be move one side and we can convert the kinetic energy of wind in to mechanical energy and than electricity. even if we can decrease the mechanical loss of normal wind mill rotor.

Title: Feather like light weight concrete brick.

Subject Category: Engineering

Name: shrey prashantbhai kanani & shrey pravinbhai boda Std: 08

Guide: dicosta k. ghetia

School: divine school; university road; road;rajkot, Rajkot

ABSTRACT:

Our project is about make light weight concrete. Normally brick is available in 2.4 kg weight which is quite heavier weight. We have make a brick which have the weight about 1.0 kg weight.

We made brick by using sandy, cement, lime, water and wood ashes with foam of detergent. This mixture is put in mold. Make dry it for 2-3 day.

Characteristics:

- Strong.
- Feather like Light weight
- High nail holding capacity.

Project Code: ENGG-13 (Team) (Jr) Online ID:281

Title: to control traffic and avoid mishaps on a bridge based on the increase in the water level of the water body

Subject Category: Engineering

Name: mungara deep maganbhai & vaghela bhavin ghanshyambhai Std:

6

Guide: daxaben sankhavara

School: l g dholakiya school; rajkot, Rajkot

ABSTRACT:

To control traffic and avoid mishaps on a bridge based on the increase in the water level of the water body we have prepare a prototype model of river and make arrangement of floating body which can floating on the surface of water surface, so that it can shows the level of water. This floating body will moves up and down as per water level and if water level will increase than this floating body comes up and a particular level it moves the wooden road which can stop people to pass through the bridge. this way we can avoid mishaps and control traffic on the river bridge.

Title: solid bio-fule from banana peels (briquettes)

Subject Category: Engineering

Name: VYAS CHINTAN JITENBHAI & JADEJA

HARSHVARDHANSINH SAHDEVSINH Std: 6th std

Guide: ranjita ben

School: SREE G.K.DHOLAKIYA SCHOOL RAJKOT, Rajkot

ABSTRACT:

To prepare solid fuels at first we have to take 5 banana peels and 5 dry banana peels grind it with mixture grinder and make briquettes from it. Then put it in sunlight for 4 days. Then after farm it into normal temperature and we can get heat energy from it. Then alter I had given samples to laboratory to check its. Calorific value which shown in attachment. Then after we comparcel it with normal coal. We have found a new solid Bio-Fuel. If has have banana peel bio-fuel to the test in comparision to coal. We have prowen that this solid fuel initially produced more energy than coal.

Hopefully, people like Experiment and start to use. This idea of making solid feel with Banana peels.

Title: TO MAKE A PLASTIC STRIPS BY RECYCLING OF POLYTHENE PLASTIC.

Subject Category: Engineering

Name: LIMBANI MONALI & namrata sorathiya Std: 9

Guide: dicosta k. ghetia

School: shri gk dholakiya school uni.road; rajkot, Rajkot

ABSTRACT:

In today's world the need of plastic is being increased day by day. Along with the usage of other daily needs. Plastic is polluting the environment in abandon. So we are thought to to recycling , recycle the plastic fforded from the roads or from garbage. Recently from the waste plastics by preparing seeds we prepared box strap. We took that box strap for the quality test & grad. Test during those testing we found that to (p.p)polypropylene we look that plastic waste to the place where the precess of plastic waste to the place where the process of plastic seed box strap was going on. We grinned that waste of p.p washed that grinned that waste of p.p washed that grinned powder and made then get dry in the heat of he sun light with the help of extrude machine we fileted that po coder we prepared lamps but of it lats from that lump we canted then into 15mm pieces 4 heated those at 100c later we again did the powder of those lump. Later we pat that powder again to the extrude machine & powder cooled water in,it the output we got was the strangest strip of the plstic lates again with the help of hot water at first takeup we passed that strape of plastic again we look at 2nd tape up machine and make strep of machine test and design to nursling roll then with the help of 3rd take up it winder machine then take out us roll and then make box strep by the side seeds of box strap.

**Title: TO PREVENT SLIPING OF PLASTIC CHAIR BY USING
VACCUME PAD**

Subject Category: Engineering

Name: MEHTA DRASHTY & Std: 8

Guide: apeksha joshi

School: , Rajkot

ABSTRACT:

The idea about project came from my home itself because when I noticed that my mother has much weight and due to heavy weight. She is afraid of falling down from chair due to breakage of the chair. Then I thought what should be done to avoid this incident and make people free of tension. Then I came to a conclusion that if a vaccume pad is attached at the bottom of chair. Then whole matter is solved because of a vaccume pad enter pressure on the floor as well as on the tiles due to this vaccume pad. The chair will stick on the floor a fully air-tight way. After wards I just told her to sit on a simple chair. Then it started to slip then after attached the vaccume pad in front two legs of chair and comper & observed that back two legs. Than in cross legs of chair I applied vaccume pad so that there is no risk of bricking but in one front legs and its cross legs has that risk. At last I thought if the vaccume pad is attached in all four legs and then result is positive. Because of vaccume pad much pressure over the floor for this purpose:

- 1) I have measured the distance of four leg of the chair.
- 2) I wrote the measurements of four chair.
- 3) Then we told to sit on that chair whose

Title: Keep thing secure from stealing

Subject Category: Engineering

Name: Parth H Kothari & Std: 9

Guide: Gaurang V Kothari

School: , Rajkot

ABSTRACT:

This project is based on security. Using this device we can protect valuable things from others i.e. other than owner.

In this device, it automatically generate shock , siren and also highlight through LED light.

Owner can easily dismiss this security but not other than owner.

It's cost is also affordable to use.

Title: Micro weather forecast with the help of GSM based AUTOMATIC WEATHER STATIONS

Subject Category: Engineering

Name: AYUSH PANARA & Std: 10

Guide: milanbhai panara

School: , Rajkot

ABSTRACT:

Today Weather forecasting is important to save people & reduce causality from upcoming natural weather phenomena. Weather forecasting is based on weather data, satellite picture, geographical condition and much more. At present weather data is manually collected from weather stations due to cost effect factor. Hence limited weather data are available for analysis which results into a large scale forecast. Due to manual system more time is used to convey messages and thus weather data cannot be sent in a real time. These consecutive differences require to established new weather communication system which is based in real time to meet the needs of the people and to achieve the use of people.

So, to reduce the cost and to get weather data in real time, I have created a system which will measure weather data and will transmit / receive data through GSM communication and also will be updating weather data into web site. By the analysis of more weather data, accurate weather forecast can be issued which will be helpful for different emergency/rescue teams (i.e. Disaster management) before time and hence, vulnerability reduces with respect to all types of hazards and natural distress.

The analysis showed my system is better in real time data transmission, in accurate forecasting and also is able save government expenditure at greater heights compare to existing weather system. Thus I have created a novel system that can replace the existing expensive weather system with a more accuracy option.

Title: light weight porous brick

Subject Category: Engineering

Name: Jethwa Akhil Dilipkumar & Jadeja Mandisinh Prahladsinh

Std: 6th std

Guide: Pamnani Ranjitaben

School: shree g.k.dholakiya school uni.road rajkot, Rajkot

ABSTRACT:

The prepare light weight bricks first of all we had taken different ingredients like cement; ash; Limestone and sand and mix it in different proportion and add foam of detergent and put it into the mould then dry it into the sunlight for 4 days and we abstained bricks. We have make 7 samples with different proportion of each ingredients and make 7 samples of brick and check its heeless and strength and brick and check its hardness and strength and water assertive capacity. We got the best result of sample 5 which have 85 g cement; 35 g ash; 80 g sandy 80 g limestone and 200 ml foam of detergent. We have already given this bricks into the lab to check its strength; hardness; water absorptive capacity and heat transfer capacity in V.V.P. egg. College, Rajkot.

Title: portable power generator

Subject Category: Engineering

Name: Tarapara Akshay Niteshbhai & Kasundra dhananjay Rajeshbhai

Std: 6th std

Guide: Pamnani Ranjita

School: Shree g.k.dholakiya school uni. road rajkot., Rajkot

ABSTRACT:

First take a wooden stand as shown in figure. Connect the handle with plastic disk. Fix the wooden disk near to plastic disk and connect both using belt. Fix the copper coil on wooden disk connect the bulb cottage with the two end of copper wire. Arrange magnets and aluminum disk on plastic disk near to copper coil. Fix this and assemble in a wooden box as shown in figure and screw the disk on which copper coil is fixed when plastic disk is rotated in one direction, magnet moves round along with the copper coil which generate the magnetic field and it causes the generation of electricity. When we connect the bulb which the two end of copper wire and bulb will glow. There are 500 turns in the each coil. It generate three volts. When rotated approximately at 250 R.P.M. (rotation per minute). The minimum power in volt can be generated is given by $w=v \cdot I$ $w = 3v \cdot 0.51$ $W = 1.5$ WALT The minimum voltage capacity of this generator is 1.5 watt.

Project Code: ENGG-21 (Team) (Jr) Online ID:318

Title: to prepare novel silencer which prevent from rainy water to vehicle.

Subject Category: Engineering

**Name: Rangani Parthiv Shaileshbhai & Tada Jay Nandkishorbhai Std:
6th std**

Guide: Pamnani Ranjitaben

School: Shree g. k. dholakiya school ; uni. road ; rajkot., Rajkot

ABSTRACT:

We took a iron pipe 4.4cm. length and it has diameter 3cm it has one side with cap.cap is join with pipe by ingies. other side pipe has joint nut-bolt.this bolt is connected pipe with silencer. cover cap is prevent water of rainy seasons. when our vehicle in the water and water is over the silencer the cap cover the silencer and the water can't enter in the silencer.

**Title: BIODEGRADABLE PLASTIC MATERIAL USING
GELATIN; CORNFLOUR; VINEGAR; AND POLYPROPYLENE**

Subject Category: Engineering

Name: BHLALA JANVI & udani aarti Std: 9

Guide: apeksha joshi

School: shri gk dholakiya school uni.road; rajkot, Rajkot

ABSTRACT:

In day to day life and in daily usage the use of plastic is increasing gradually. plastic is responsible for pollution in environment & the inference is also wide spread where plastic is burnt then poisonous gas is produced which mix with air & pollute the environment. also the plastic is insoluble in water flow of water is stopped or tags disturbed. plastic does not degrade in land and remove is it is in their original form & pollute the land. due to this reason, to stop pollution or decrease the pollution level we had thought to prepare such plastics which does not pollute & also we search on it.

EXPERIMENT NO :1

in preparation of plastic we had used gelatin, water & vinegar also to spread in plate glycerin is used. heat i 30sec. of 60>c tem. when this plastic is formed we observed that thickness of this plastic is vary loss. so we had made other plastic with same materials & same procedure. but we had added corn starch in the preparation of plastic.

due to this material this plastic be came vary strong & thickness is also maintained.

now we made few pieces of this plastic is on is kept in soil & other pieces is put in water.

OBSERVATION:

after 2-4dys the plastic that was kept in soil got degraded & after 2-3 day the plastic in water get soluble.

due to this reason (IE plastic is soluble in water) we had added polypropylene in preparation of plastic so that it does not soluble in water.

our work on this project is continue & the research is going on.

The plastic made by us is degraded in soil. this plastic is used in art in destining the glass, in making posture for decoration house.

The main aim of making this plastic is to decrease the pollution & up to certain louse we can prevent the environmental substances as ruing things.

Title: Effect of buttermilk spray on the plants damaged by smoke of gasoline

Subject Category: Environment

Name: Ekta patel & Disha sangani Std: 7

Guide: Krishnaben kabir

School: shree g.k.dholakiya school, Rajkot

ABSTRACT:

For this science fair project, the independent variable is the environmental temperature and the length of exposure time. the dependent variable is the color of the leaves and the survivability of the plants. this is determined by observing the plants for 8 days. the constants (control variables) are the size of the bowls containing the gasoline, the type and amount of gasoline used and the size of the aquariums. four potted plants are required for this experiment. they should be kept in a well lit, cool and airy spot in your garden or balcony for several weeks, allowing the plants to adjust and acclimatize. the pots are labeled a to d using the marker pen. gasoline is poured into the 4 ceramic bowls and placed beside the plants. the 4 aquariums are inverted and used to cover the potted plants. covered with the aquarium and placed in hot sun (34°C) for 6 hours everyday. covered with the aquarium and placed in hot sun (34°C) for 6 hours everyday. after procedure is completed the aquariums and gasoline bowls are removed and the plants returned to their original environments until the next day. the condition of the plants is checked everyday and the observations are recorded in the given below. it was observed that the plants that were exposed to gasoline fumes for longer periods of time, and at higher temperatures died more quickly.

Title: silencer which can produce less amount of cOx through chemical process(smart silencer)

Subject Category: Environment

Name: DARSHITA BHANDERI & HITASHA MAKWANA Std: 9

Guide: raksha javiya

School: K G dholakiya school; Nr: balaji hall; rajkot, Rajkot

ABSTRACT:

Reduce the amount of CO and CO₂ released in the smoke of vehicles as much as possible. Potassium hydroxide absorbs CO and CO₂ to some extent. We prepared a paper like material using paste of potassium hydroxide solution with wastage of used paper. Take 100 gms of potassium hydroxide powder and 100 ml of water. Mix both and make solution. Add wastage papers in the solution and stir to mix well, also amount of papers added maintain practically as our requirement. Thick past made up of above procedure convert into paper like material and dry the papers about two days. Take a cylinder closed with one end and also possible to close other side using proper cap. Diameter and length of cylinder varies as per our requirement. Here we can use 4 to 5 cm and 8 to 10 cm. Cut the paper round shape which we made is used as size of cylinder to put in 3 to 4 cuttings of papers at same distance in it. Close the cylinder and attach with a bike silencer. Collect the PUC data of the bike before attach our cylindrical model and after attach it. Difference in released CO and CO₂ amount with smoke of bike is shown in PUC we have.

Title: Make ink; lipstick etc using natural dyes;Flavors of FRUIT OF CACTUS

Subject Category: Environment

Name: SAKSHI LADANI & KHYATI GORASIA Std: 8

Guide: raksha javiya

School: K G dholakiya school; Nr: balaji hall; rajkot, Rajkot

ABSTRACT:

* First we had take prickly pears & remove its thrones by heating on stove.then after we Crushed them in to mixture for 5 minuts. * Take Crushed material & add glycerin we had make 7 different sample by mixing both the ingridiants in different proporation which make material suitable ink.

* Take dry crushed material & adds different flavors or test & made stick like shape to use as lipstick. * Here we don't use any synthetic chemical material except glycerin.

**Title: tODEVELOPED THE METHOD TO RECYCLE PROCESS OF
POLYTHENE AND GRANULES**

Subject Category: Environment

Name: HEMANGI CHANGELA & AGHERA NIDHI Std: 9

Guide: apeksha joshi

School: agheranidhi@yahoo.com, Rajkot

ABSTRACT:

To recycle plastic first we collect different plastic film of monolayer, two layers and three layer of HDPE, LDPE. Then this plastic was melted with Killen and we got plastic lumps. Then this lumps passed from different machines like eglo, extruder. That we got cylindrical shape plastic strip. Then we passed it in to water tank for 5minutes for cooling. Than after this plastic passed through the grinder –cutter to cut this strip in small granules. These granules can be used to get plastic film and made. This way can made the plastic bag for milk, oil, water and packaging the shopping items and we also get different plastic mould items which are available in the market.

**Title: MAKE A COLOURFUL NATURAL PLASTIC FROM
DIFFERENT TYPE OF VEGETABLES ; VINEGAR ; JELLETIN**

Subject Category: Environment

Name: VARU RAHUL HARESHBHAI & ABHISHEK MEHULBHAI

DAVE Std: 8

Guide: SONDAGAR YOGITABEN

**School: MATUSHREE L.G. DHOALIKYA SCHOOL (KRUSHAN
NAGAR RAJ, Rajkot**

ABSTRACT:

We have prepared flexible material which is bio-degradable and which can be use as a plastic material which can change its state,stretchable. To prepare this material we have mixed 27% Jilleen powder+14%vinegar+21% sodiumbicarbonet+20% poteto starch + 12% grisline. than after we have heat it at 145 degree centigrade for 15 mints and than spread this liquid in plane surface for 24 hours in daylight. with some crush of colorful vegetable like beetroot,leaves of cabbage, juice of spinach,juice of different colorful flowers, coriander leaves etc. we can prepare different colorful material as per need. we can change it's hardness and flexibility with different proportion of sodium bicarbonate and potato starch. this material have properties like poly thine or rubber and can be degrade in soil within 10 days.

Title: Effect of earth worms on soil properties in tropical eco system

Subject Category: Environment

Name: jadeja vaibhavta & maradiya nandini Std: 8

Guide: neela

School: K.G.Dholakiya High school(eng;med.), Rajkot

ABSTRACT:

Aim:to prove that earthworms are very useful for soil ;fertility can be increases what is going to be made? 1.model 2.reports 3.charts in the model basic information of earth-worms is there 3 pots;soil in one of them plain soil ;in second pot soil with earthworms ;in third one soil with fertilizer plantation in all the 3 pots reports of all pots are taken after one week checking of organic matter and percentage of different nutrient elements

Title: ecofriendly packaging material

Subject Category: Environment

Name: chintan rachh & bhavya rupani Std: 9

Guide: gohil jaynilsinh R

School: K G Dholakiya school, Rajkot

ABSTRACT:

Objectives: to prepare eco-friendly and bio- degradable plastic which could be used as packaging material that can reduce pollution produced by non biodegradable plastic materials: water, corn starch, cooking oil, potato starch, citric acid, food color(optional) procedure: mix all material in appropriate amount and keep in microwave for 4mins and 29 seconds. then it will be slimy material and then mold it properly as per our requirements. allow this mixture to cool for about 18 hours Global use: it would be used as a replacement of every non biodegradable plastic material it is completely eco-friendly.

Title: preserve the color; moist & taste of fruits vegetable and leaves with the help of coating of gelatin on them

Subject Category: Environment

Name: mandaliya shalini rajendrbhai & babariya hirva dineshbhai Std:

6

Guide: pravin mokariya

School: late shree s.g. dholakiya memorial primary school , Rajkot

ABSTRACT:

Preserve the color, moist & taste of fruits & vegetable with the help of coating of edible wax on them for that we have prepare this edible wax at home. to prepare edible wax first of all we have take 200gm. sugar powder, 10ml lemon juice, 10ml water and heat them on gas stove fro 15 minutes then put it for cooling for 10 minutes now this sticky material is used for coating so that we had coat different fruits like apple,Chikoo,banana and tomato and different vegetables like brinjal, potato with this edible wax and than put it for preservation for a week, we also took all above material and put them as it is(without coating) and put them for preservation for a week and than after observation we conclude that this method can be use to preserve the natural item like fruits and vegetables.

Title: Mud house that can be use to to live comfortably in all the seasons

Subject Category: Environment

Name: parekh jay niteshbhai & jariya dhaval prafulbhai Std: 7

Guide: madhavi ramanuj

School: late shree s.g. dholakiya memorial primary school, Rajkot

ABSTRACT:

We had prepare a model of house which require less electricity to live comfortable. and also it's helps save us from radiation of radioactivity for that We had take mud,send and hay in different proportion and make a pest then we had prepare a model of house. as shown in photograph. then we check it's heat transmission capacity and radiation resistivity with the use of thermometer and Mobil tower.than after we have put it in sunlight day light and dark light and measure temperature and humidity and compare it with normal temperature and humidity.

When the temperature variation is about 40 to 45 degree at that time In this house we found the temperature variation is about 6 to 8 degree.

**Title: IMPROVING AGRICULTURE CROPS USING JATROPHA'S
STEAMS AND LEAVES UNDER SOIL POLLUTION BY
LAUNDRY DETERGENTS (new eco-friendly neutralizer)**

Subject Category: Environment

Name: MILAN RAMESHBHAI KALSARIYA & Std: 09

Guide: dicosta k. ghetia

School: , Rajkot

ABSTRACT:

Our project is study about improving agriculture crops using jatropha's steams and leaves under soil pollution by laundry detergents. I have made a boiled waters of jatropha's leaves and steams. We can use it as a neutralizer. The detergent is the main element of sewage water 90% detergent can be remove but 10% is remaining in the water, this will be harmful to plants and make the land allcaline to neutral land farmer uses gypsum as a neutralizer. but is costly so this is a option for gypsum. and it is also useful as fertilizer in land because after addition of it's extract into plant we get increase in amount of carbon, phosphorous, potash.

Project Code: ENV-11 (Jr) Online ID:313

Title: Human frendly water percolation plant (portable;flexible and easy washeble)

Subject Category: Environment

Name: BHIMANI KHUSHI RUGNATHBHAI & Std: 6th std

Guide: Ajagiya Smitaben

School: , Rajkot

ABSTRACT:

I had prepare water percolation plant. for this first of all i had take one small table with 6 drawer with same size and fill it with different material pieces of brick,big send, small send particle and charcoal We have drill a small hall in the bottom of drawer so that water can easily through the media which we have arrange. This way water can easily purify without electricity. If we want to clean any part of this percolation plant separately and it can easily maintain. We also have check the total dissolve salt and pH.

Title: simple model to measure the radius of circular/cylindrical object

Subject Category: Maths

Name: dholakiya vidisha amitbhai & kothari jinali manishkumar Std: 9

Guide: parekh priyanka girishbhai

School: late shree s.g. dholakiya memo. highschool;rajkot, Rajkot

ABSTRACT:

Today we use different instruments to measure diameter of a cylindrical and spherical object, like vernier calipers, micrometer screw. But these instruments are not easily available at any places and the method to measure the diameter with this instrument is little bit hard to children. So an idea came in our mind to make an instrument to measure diameter of cylindrical, spherical objects easily. In our project we use ply to measure diameter of a circle. In this instrument we take two equilateral triangles with same side length. On each side of triangle we mention equal measurement like 1cm, 2cm etc. Then we cut in one triangle from vertex and the other triangle from bottom. Then we joint both the triangle perpendicular to each other. The cylindrical object of which we have to find diameter we put it from top of instrument and the point at which it touches equally on both sides that point (measurement) is diameter of that thing. And to measure the internal diameter of a cylindrical and spherical object we make an instrument with help of four same length of ruler. And we make square. With this square we can measure the external diameter of cylindrical and spherical object.

Title: DISTANCE MEASURE OF MATHEMETICAL MODEL.

Subject Category: Maths

Name: SORTHIYA FORAM & himali gajera Std: 8

Guide: apeksha joshi

School: shri gk dholakiya school uni.road; rajkot, Rajkot

ABSTRACT:

Take one wooden board which length is more then 1 meter and draw 1 meter line segment and now fix 1 meter plastic strip passed to 1 side and at the second end fix laser light on protector fix the other end of strip with the help of bolt. Arrange both the laser light such a way that both should meet at one point we can obtained the distance of other place by the onside which is we get from the protector by see the value of angle in tan8 table.

Use principal by trigonometry ratio measurement of angle reaming cont ante side of the angle can be change but ratio remains same.

In astronomy navigation certain distance can not measure directly by this instrument we can measure this distance easily like height of mountain width of river, width of road etc.

Title: To prepare a device to measure the distance of an object without any direct contact and as per the range of laser.

Subject Category: Maths

Name: HALVADIYA AJAY & KALATHIYA MEHUL Std: 10

Guide: hitesh bhundiya

School: shree swaminarayan gurukul vidyalay , Rajkot

ABSTRACT:

To measure the distance of an object without any direct contact and as per the range of laser we had prepare a device which is made up of two laser and wooden plate we had made two types of model In one model we had joined two wooden palate with each other so that we can slide it and joined two protector on the opposite side of the wooden plate as shown in figure and measure the distance with it. with the use of trigonometric formula. ($X = \frac{\tan 30}{\tan 60 - \tan 30}$). this model have some limitation that we can not measure the distance more than half length of this model. So we had designed another Synopsis: model in which we had take one wooden strip of one meter and joined two laser at the end and attached one protector with each laser so that we can measure the angle of laser each beam with horizontal line. Now if we want to measure the distance of an object than we have to attract laser beam on it from both the laser and than we have to overlap both laser beam with each other and at that time we got two angle a and b , $a > b$, now with the use of formula---- $X(\text{distance of an object}) = \frac{\tan b}{\tan a - \tan b}$, we can get the exact distance of an object. with this device we can measure the distance as per the range of laser.

Title: Telepericope

Subject Category: Physics

Name: MAKADIA PALAK & Goti Niva Std: 9

Guide: GADHIYA MADHURI

School: K G dholakiya highschool, Rajkot

ABSTRACT:

"Z" shaped periscope use in submarine to see the one side view when the "L" shaped periscope see all sides by joining. we had arrange eye piece of telescope on the lower side of the tel-periscope. Arranged by convex lens we can get big and clear images at circular path. We had joined barring in the middle portion of the tel-periscope.

Title: effect of resonance cavity on mobile speaker made from bamboo

Subject Category: Physics

Name: madhani vivek & garala mann Std: 8

Guide: neela

School: K.G.Dholakiya high school, Rajkot

ABSTRACT:

First of all we took a bamboo of 5cm diameter and cut it into five piece with different length(10cm,15cm,20cm,25cm and 30cm. Then make a hole to put mobile in side it. then put mobile inside the bamboo and arrange intensity meter at the other end of bamboo and measure the intensity of voice that was playing on mobile speaker. Then we remove the bamboo and measure the intensity of voice that was playing on mobile speaker(to do controlled experiment).

Same experiment should be done with different sized bamboo.

In the other experiment we arrange intensity meter at 35cm away from mobile speaker and measure the intensity of voice that was playing on mobile speaker. Then after same experiment should be done with different sized bamboo.

In this experimentation we found that intensity of speaker will increase as per length of bamboo.

Title: ELECTRONIC SECURITY DEVICE**Subject Category: Physics****Name: SHANKAR PARIYAR & Std: 9****Guide: DR. CHETAN BATAVIA****School: , Rajkot****ABSTRACT:**

The said device is made out of car remote circuit and its remote circuit. This is an electronic security device. This device is wireless device. For wireless device there should be minimum of two circuits. A. data transmission from remote control and B. from the object i.e. data receiver circuit. This device could be put near any valuable object as security guard(the data transmission circuit). The data receiver circuit is put to some distant place from the main object. We could either increase or reduce the signal strength with its antenna. When any one attempts to go near the object to hold, immediately the data receiver circuit gets the signals through the body of the attempt. As soon as the data receiver gets the signals & lit starts giving bell ringing alert sound. This alerts the other people with prompt awareness. We could have one question in our mind how is it possible that the object that the person attempt to touch and yet not touched which is near about 15 to 20 cm. away from his reach and the bell gets alert signals. Yes, this is because the human body works here as the antenna for data transmission circuit and the electronic signals passes through his body reaches up to the receiver circuit. The signal strength of data transmission circuit is increased when this happens and we get alert from data receiver circuit.

Project Code: PHY-04 (Team)

Online ID:326

Title: ARTIFICIAL INTELLIGENCE ROBOT

Subject Category: Physics

Name: TIWARI ANKIT RAMKRISHNA & OMKAR BHINGARKAR M

Std: 12

Guide: HEMANG J. BHATT

School: SUNGRACE HIGH SCHOOL, UDHNA

ABSTRACT:

This is artificially made project for benefit for mankind. It is totally eco friendly project. This is been made for benefit to handicapped person, controlling of pollution, solution for traffic rules, accident controller and etc. We had used a different type of programming languages and with the help of atmega 16 ic we had made this project it is a low cost robot and made by elaborate things and our guide Mr Hemang Bhatt Sir had given their concept regarding physics to complete this project.