AUDEN SCHOOL

'Igniting Young minds'

BANGALORE - 85

PRESENTING.....

NATURE SCIENCE INTERNSHIP PROGRAMME (NSIP)

Members - Ninth Grade

- Suhas P Shroff
- Neha N
- K S Meghana Upadhyaya
- Tejashree V

LET US PONDER .....

Contents:

STUDY AREA	BUGLE ROCK PARK HOSAKEREHALLI LAKE HOSAKEREHALLI BBMP PARK
DATE OF VISIT	BUGLE ROCK PARK 18/08/2017 HOSAKEREHALLI LAKE 15/09/2017 HOSAKEREHALLI BBMP PARK 23/10/2017

MAPPING OF BUGLE ROCK PARK

DATE : 18 - 08 - 2017

TIME : 4:00 PM

HOSAKEREHALLI LAKE

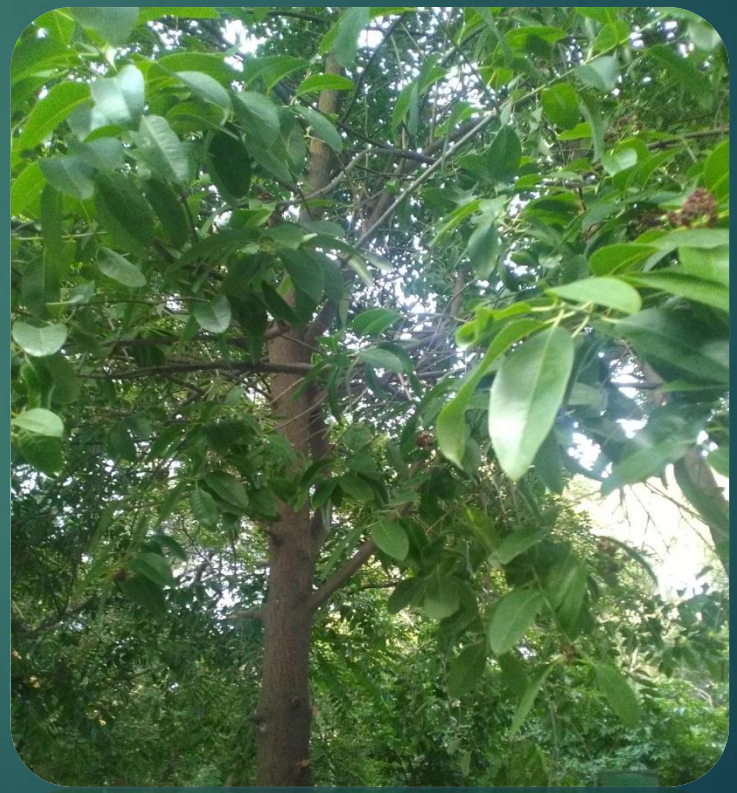
15 – 09 - 2017

HOSAKEREHALLI BBMP PARK

23/10/2017

TREE STUDY

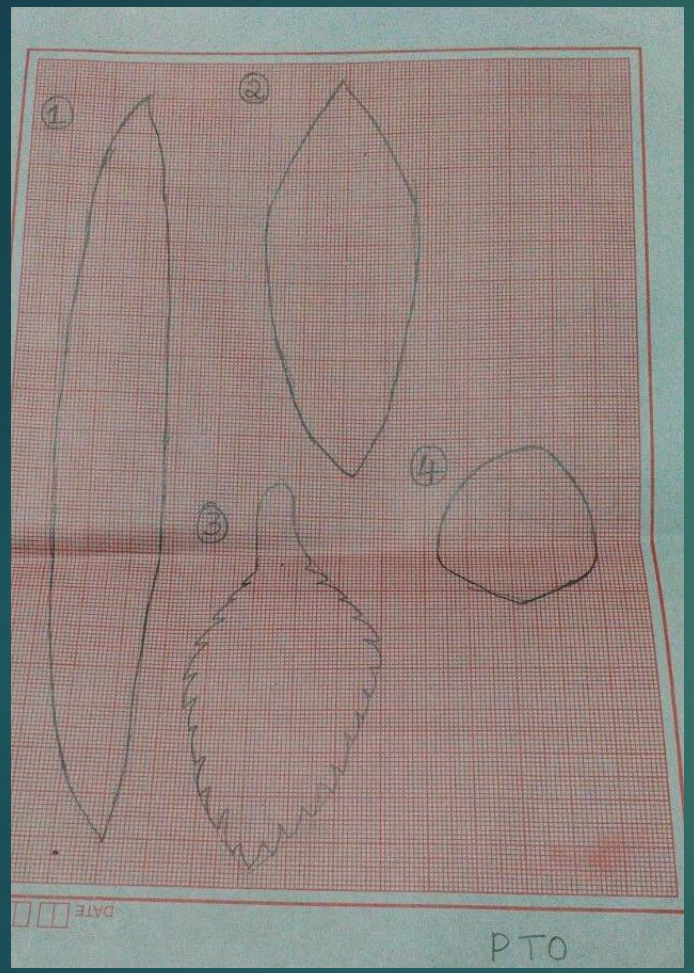
We found the girth, height, shape of the trunk, amount of oxygen produced by the leaf of it and about the tree



FINDING THE GIRTH AND HEIGHT OF CASUARINA EQUISETIFOLIA (SHE OAK) TREE

GIRTH = 4.1 m

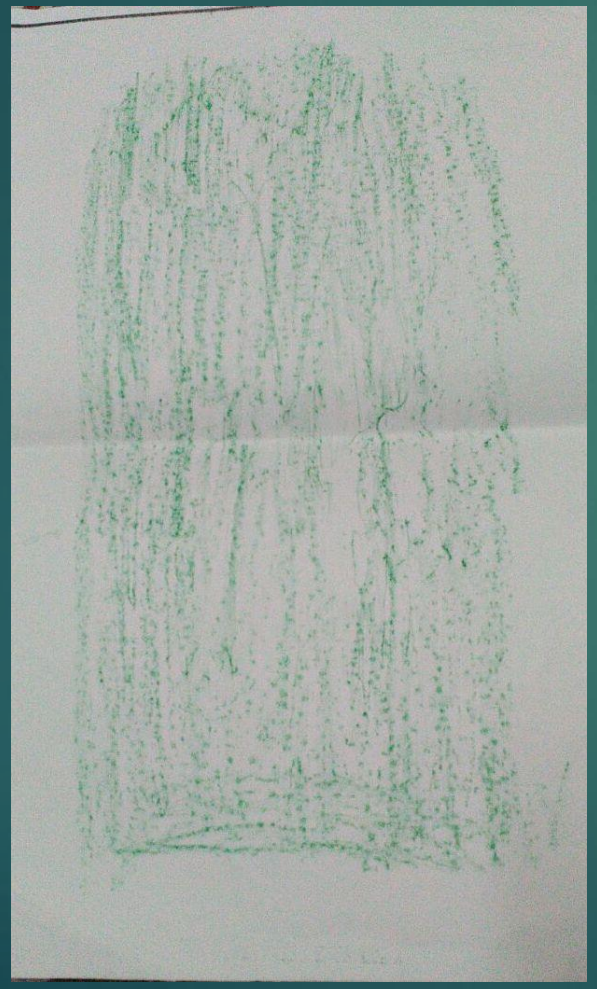
HEIGHT = 17.5 m



Amount of oxygen produced per day by

1. Mango leaf = 979.2 mL
2. Guava Leaf = 662.4 mL
3. Hibiscus Leaf = 547.2 mL
4. Indian Borge = 288 mL

SHADES OF THE BARK

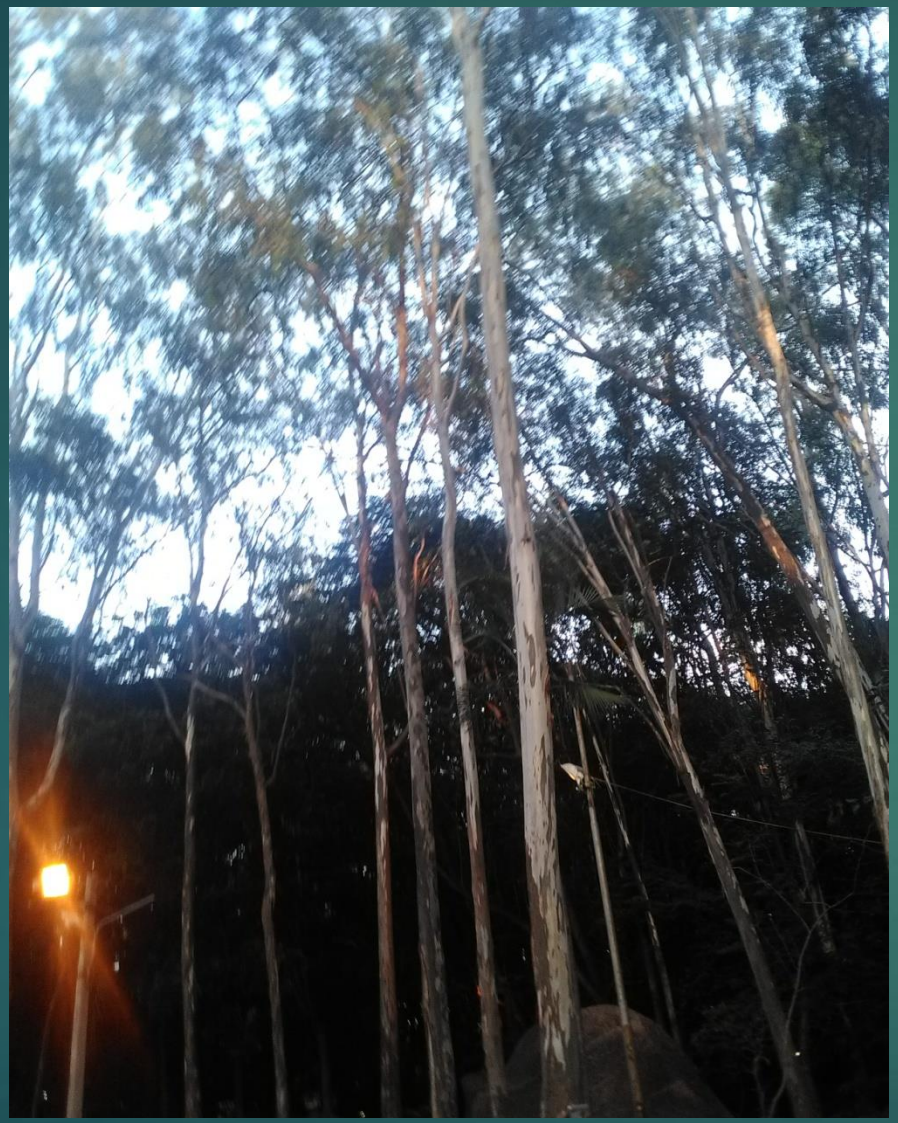


DIFFERENT TREES OBSERVED

Sl . no	TREES NAME	LOCAL NAME	SCIENTIFIC NAME	DESCRIPTION	LOCATION	ORIGIN
01	LEMON	NIMBE MARA	CITRUS LIMON	EUDICOT, KINGDOM PLANTAE, ANGIOSPERMS,	HANUMANTH NAGAR	ASIA
02	MANGO	MAVINA MARA	MANGIFERA INDICA	DICOT, ANGIOSPERMS, SWEET SMELL, RICH IN NUTRITIONAL VALUE	BUGLE ROCK PARK	SOUTH ASIA
03	NILGIRI	NILGIRI MARA	EUCALYPTUS OBLIQUA	GUM TREE, MYRTLE FAMILY, DICOT	HOSAKEREHALLI	AUSTRALIA
04	BAMBOO PLANT	BIDURINA GIDA/ BAMBU	BAMBUSOIDEAE	USED TO MAKE PAPER, MONOCOT	BUGLE ROCK PARK	SOUTHEAST ASIA
05	CHAMPA	SAMPIGE MARA	MAGNOLIA CHAMPACA	IT GROWS UPTO TO 50 m, UMBELLIFORM CROWN, USED FOR TIMBER	HOSAKEREHALLI	SOUTH ASIA
06	NEEM	BEVINA MARA	AZADIRACHTA INDICA	DICOT, HERBAL PLANT	BUGLE ROCK PARK	INDIAN SUB-CONTINENT
07	CHIKOO	SAPOTA MARA	MANILKARA ZAPOTA	DICOT, GROWS 30 METRES TALL	HOSAKEREHALLI	CENTRAL AMERICA

LEMON TREE

MANGO TREE



NILGIRI TREE

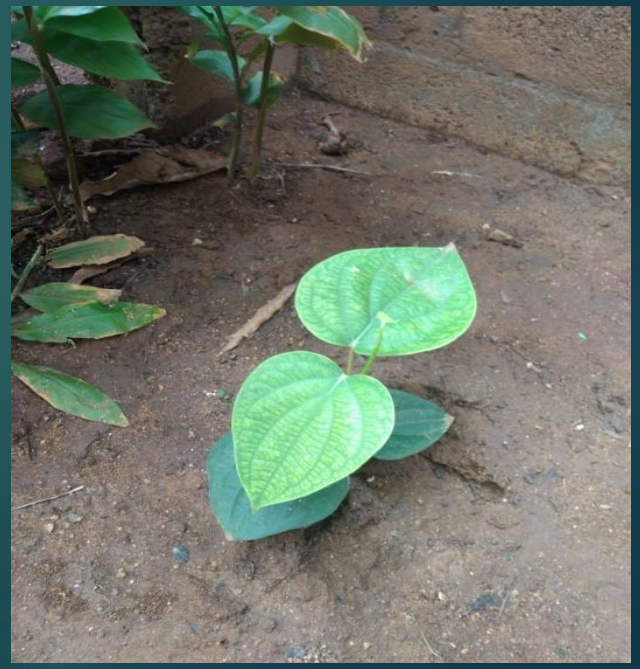
BAMBOO PLANT

NEEM TREE

CHIKOO TREE

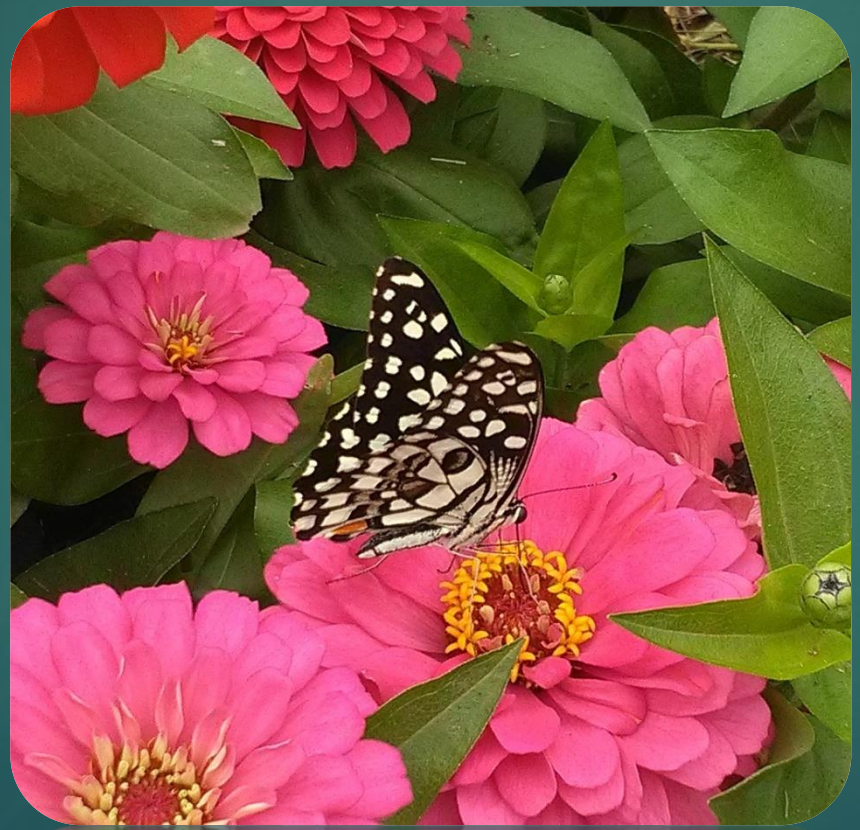
CHAMPA TREE

OUR SCHOOL GARDEN



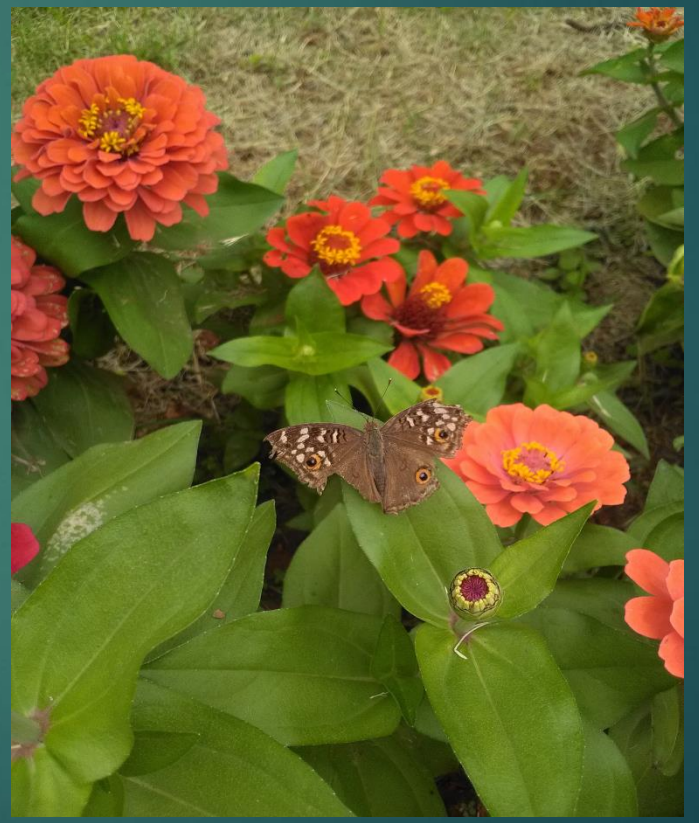
GROWTH OF BANANA PLANT

BUTTERFLY

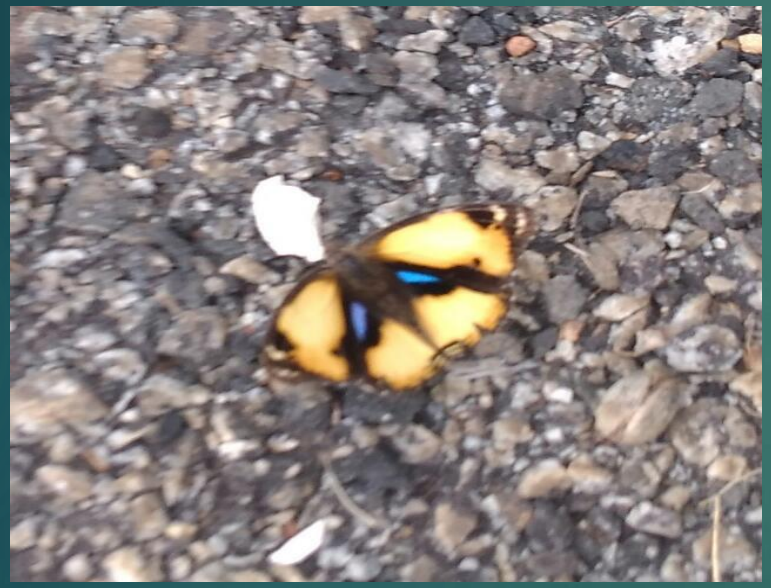


COMMON NAME	NUMBER	ACTIVITY DOING	LOCATION	DESCRIPTION
Lemon Pansy	7-8	Basking in the sun	Bugle Rock Park	Brown in color, medium size, it is having small eye spots
Common Jezebel	1	Fluttering and sucking nectar from flowers.	Bugle Rock Park	White coloured with yellow and red spots.
Yellow pansy	2-6	Basking in the sun	Jinke Park	Yellow color , having blue patch on it
Grass Yellow Butterfly	2	Flying	Hosakerehalli	Yellow in color and has black markings in the upper side of wings
Lime Swallowtail	1	Sitting on a flower and sucking nectar	Bugle Rock Park	Tailless and has a wingspan of 80 to 100 mm.

LEMON PANSY



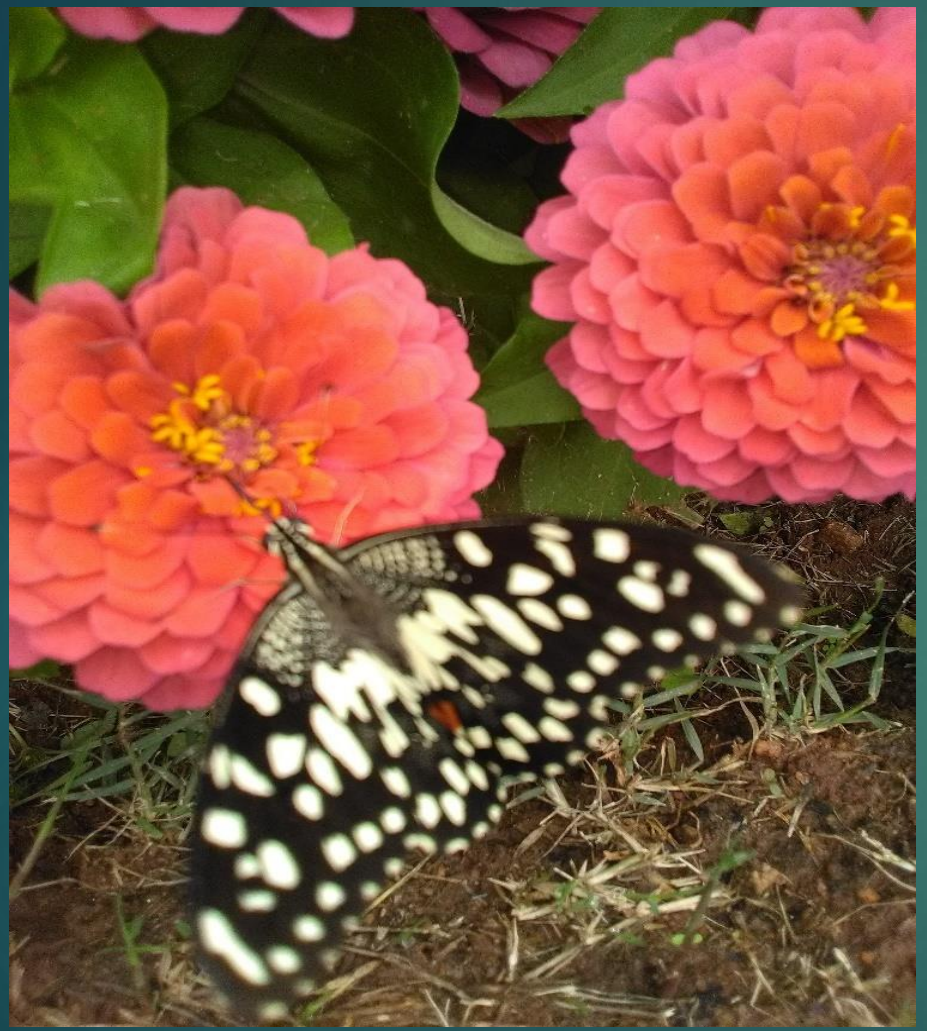
Yellow Pansy



Closed Yellow Pansy

GRASS YELLOW BUTTERFLY

COMMON JEZEBEL



Lime Swallowtail (Papilio demoleus)

DIFFERENT TYPES OF MOTHS

BIRDS

WE OBSERVED THE SIZE OF THE BIRD , BEAK, TAIL , SOUND AND COLOR OF IT

NEST OF A BIRD - BUGLE ROCK PARK

PIGEONS FEEDING ON GRAINS

OTHER SPECIES

WATER BODY WATER TESTING

	BEFORE RAIN	AFTER RAIN
ph	Water was neutral - 7	Water was acidic – 6.5
Hardness	Temporary hardness	Temporary hardness
Conductivity	1 ampere	3 ampere

SOIL TESTING

SOIL NEAR THE LAKE	SOIL INSIDE THE LAKE
ph - 7.5	ph - 8

	AFTER RAIN	BEFORE RAIN
ph	Acidic - 6	Neutral - 7
Conductivity	1.75 ampere	2.3 ampere

FOOD MILE

- Food Mile is a term used to refer to the distance food is transported from the time of production until it reaches the consumer.
- We enquired a vegetable vendor regarding the sale of his vegetables.

He answered :

- He had been selling vegetables since 7 years
- His wife helps him in the shop.
- He sells seasonal vegetables.
- He buys the vegetables from the market.
- The vegetables are transported to him through a Maruthi Omni.
- He has experienced a lot of hike in the price of the vegetables.

CARBON FOOTPRINT

We calculated the carbon emission of newspaper in our school

CARBON EMISSION OF PAPER

PER MONTH

FOR 3 MONTHS

CARBON FOOTPRINT OF SCHOOL

Carbon emission of paper
3.5 kg per month

3.5 X 2.9 = 10.15

Therefore, 10.15 kg of carbon is produced in our school per month.

Similarly, 30.45 kg of carbon is produced in our school for three months.

ENERGY CONSUMPTION

ELECTRICAL ENERGY CONSUMPTION

We calculated the electricity consumed

ELECTRICITY EMISSION FACTOR

For Kg CO_2 e/kWH

Total Bill amount per year ÷ rate of electricity

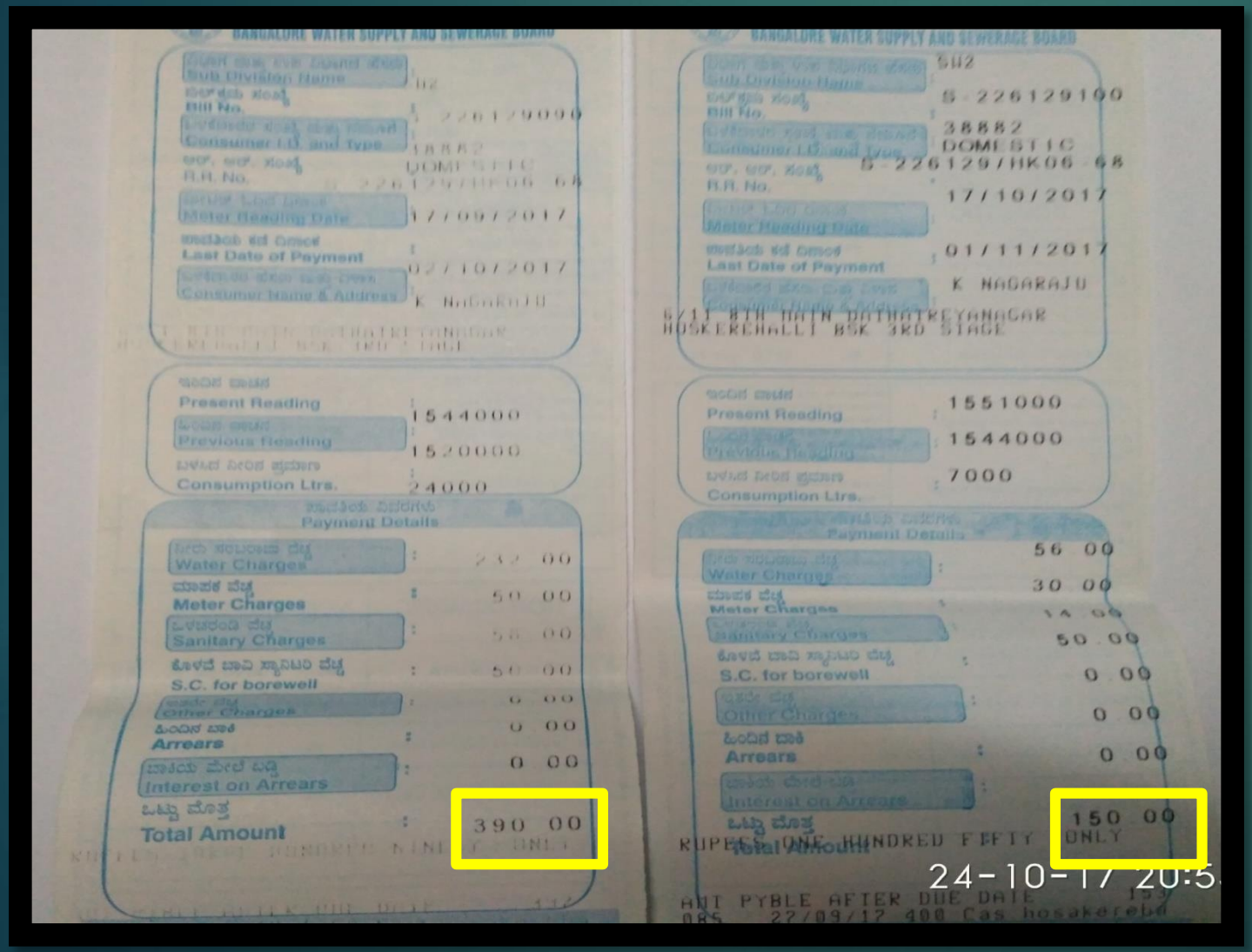
TOTAL ELECTRICAL BILL AMOUNT IS Rs.531 PER MONTH

ELECTRICITY BILL PER YEAR = Rs.6372

UNIT OF ELECTRICITY CONSUMED
kWH = 6372/5.98 = 1065.551

ELECTRIC EMISSION FACTOR kg OF CO_2e = 1.56
1065.551 X 1.56 = 1662.2608 IN kgs

WATER CONSERVATION

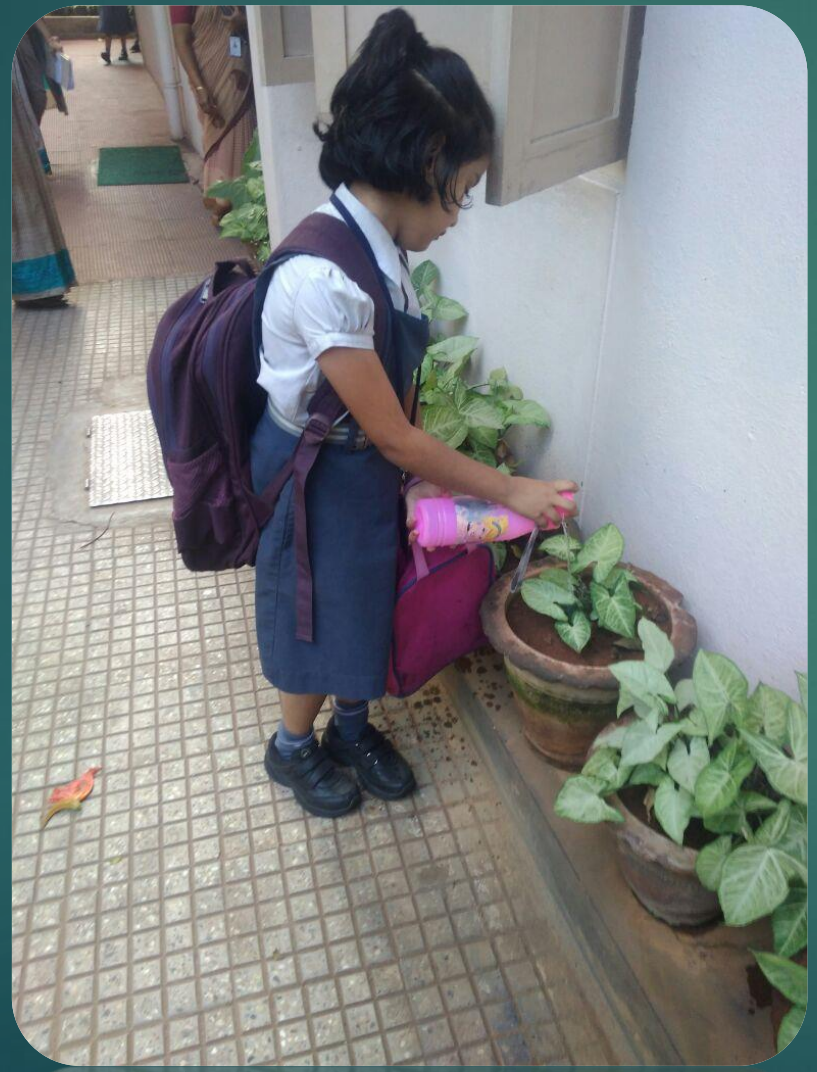


Water bills of August 2017 and September 2017 months

Conservation of Water at Auden School

- We have implemented rain water harvesting in our school.
- The rain water is collected which is later used for the washrooms.
- The students at Auden are insisted to minimize the use of water near the washrooms.

The students are insisted to pour the leftover water from the bottles to the plants.



TEXTILES

We went to the nearest textile shop and surveyed the types of textile they had and enquired which was sold more.

We visited the shop "My Fashion Textiles" on 21 - 10 - 2017 at 6:00 pm.

TEXTILES SOLD (QUANTITY) IN THE SHOP ARE

1. SILK - the most
2. JEANS - less than silk
3. COTTON - less than jeans
4. NYLON - more than jute
5. JUTE - the least

SILK

JEANS

COTTON

NYLON

JUTE

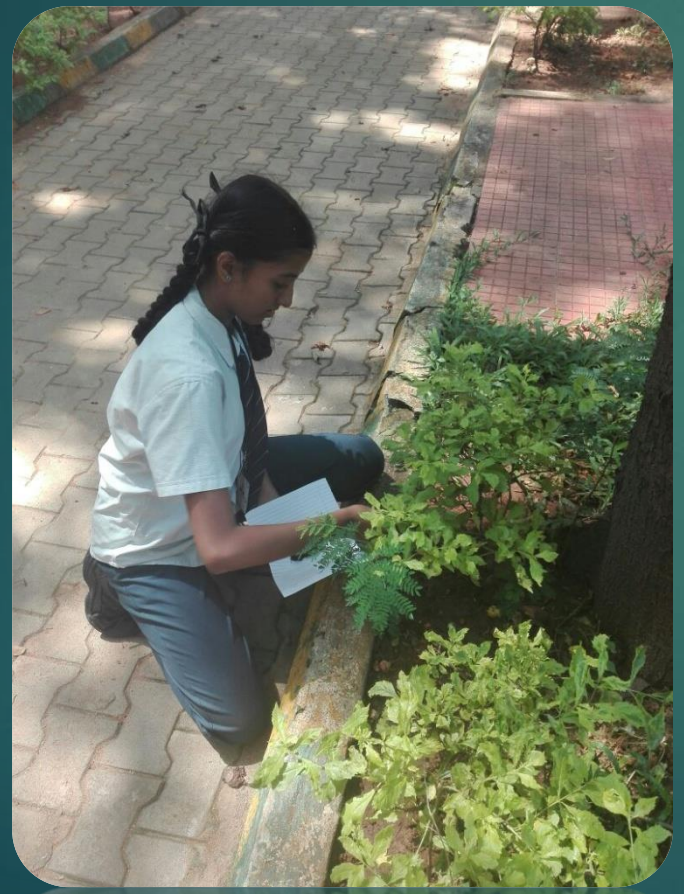
It was observed that

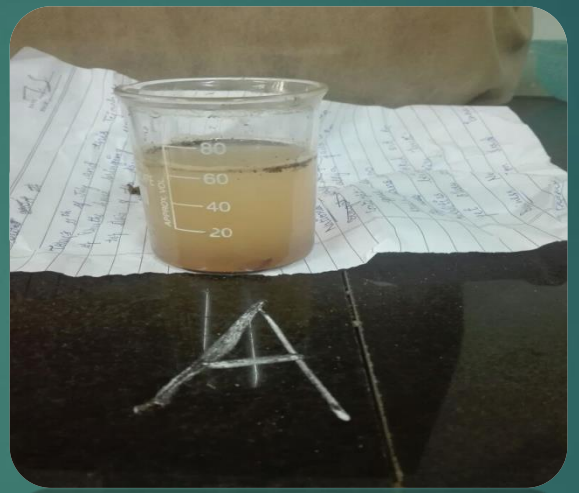
- only Jute bags were sold
- No dress materials of Jute were sold

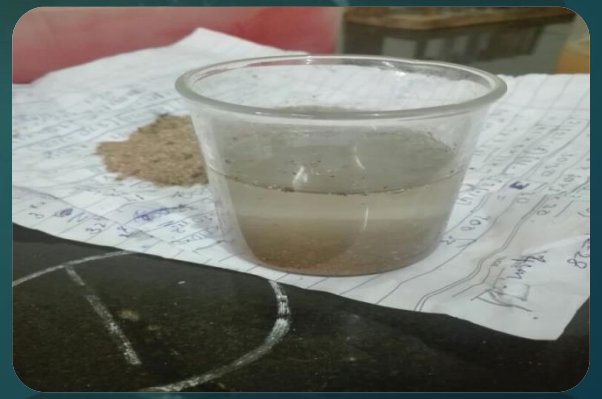
SAND

WE TOOK DIFFERENT SAMPLES OF SOIL, TESTED IT AND FOUND OUT ITS FERTILITY

COLLECTING SAMPLES ON 23 – 10 - 17 AT 1.30 PM



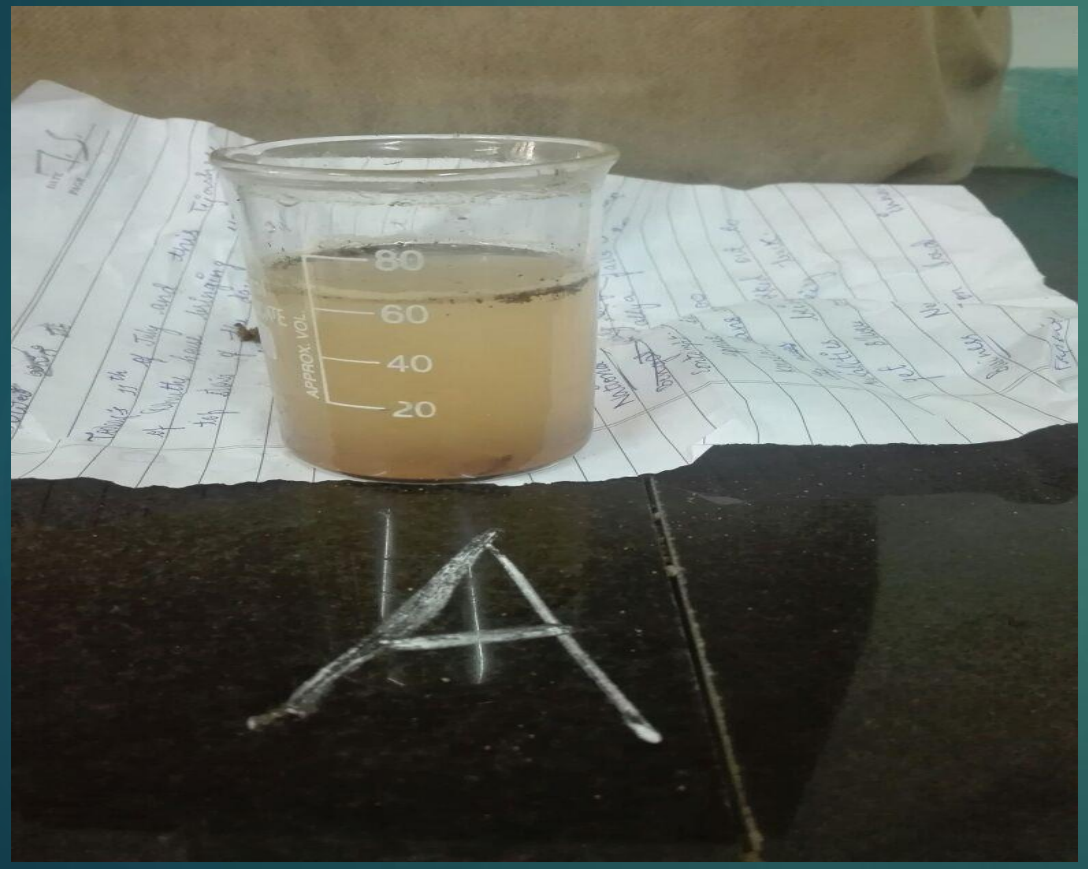




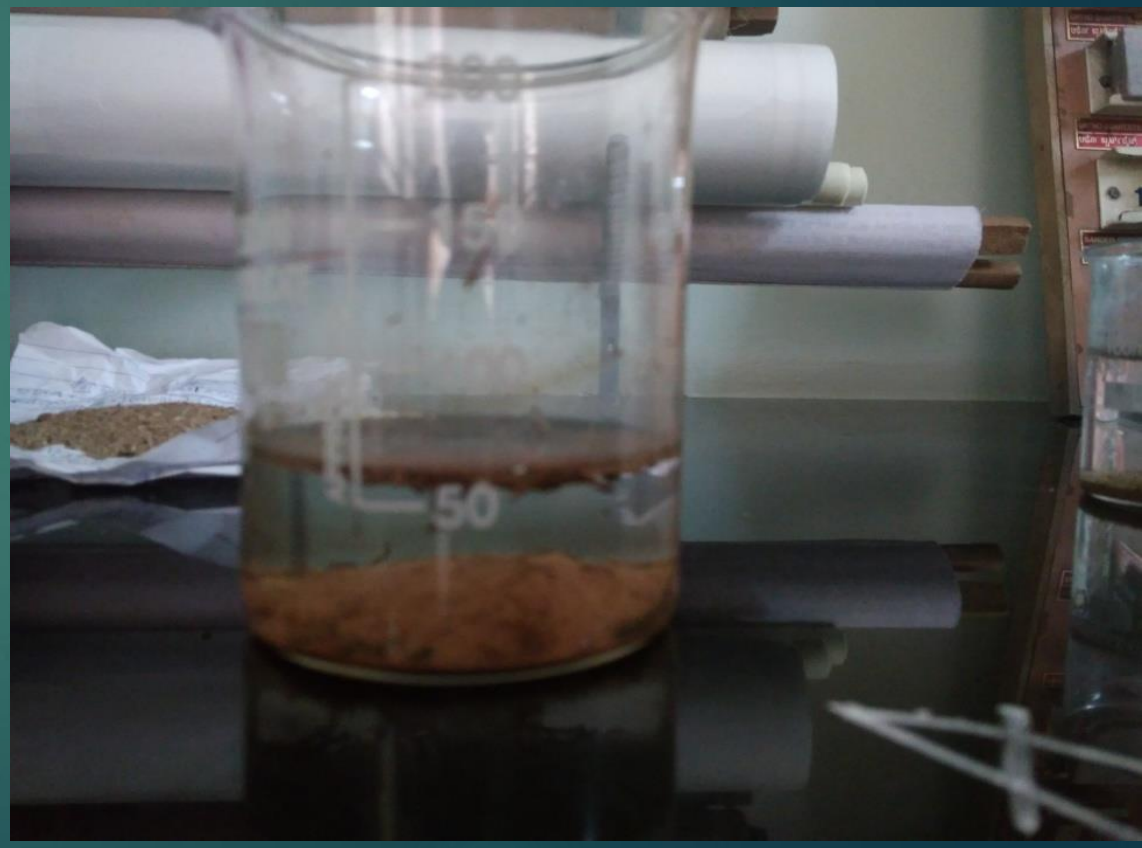
OBSERVATION OF SAMPLE 'A' :

BEFORE : SUSPENDED AND MUDDY IN COLOR
AFTER : SETTLED AND TRANSPARENT

BEFORE



AFTER 1 DAY



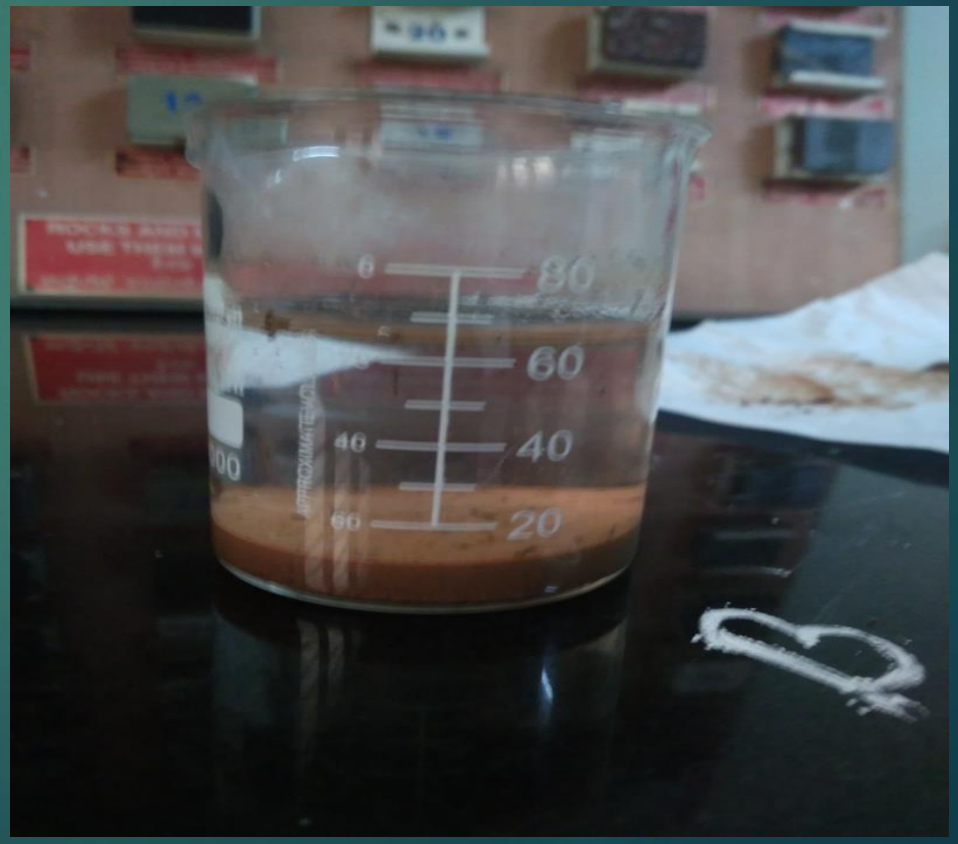
OBSERVATION OF SAMPLE 'B' :

BEFORE : SOME OF THE PARTICLES WERE SUSPENDED AND MUDDY IN COLOR

AFTER : ALL THE PARTICLES WERE SETTLED AND IT WAS CLEAR

BEFORE

AFTER 1 DAY



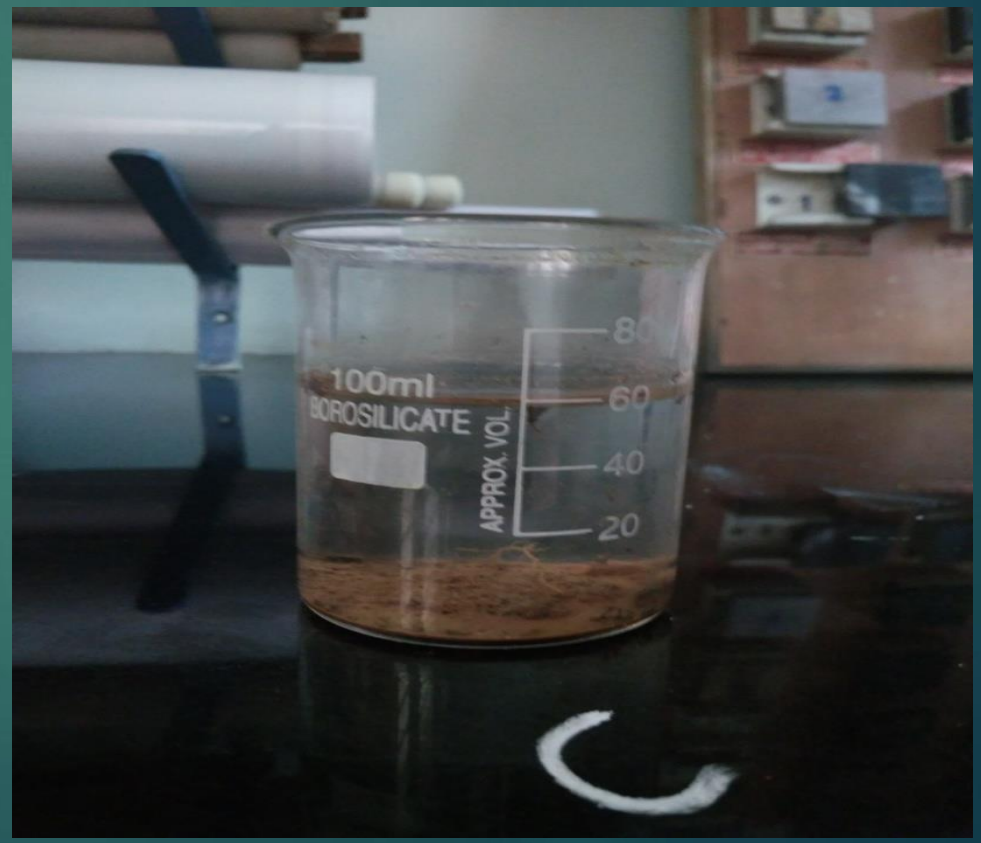
OBSERVATION OF SAMPLE 'C' :

BEFORE : PARTICLES WERE SUSPENDED AND MUDDY IN COLOR

AFTER : IT WAS TRANSPARENT

BEFORE

AFTER 1 DAY

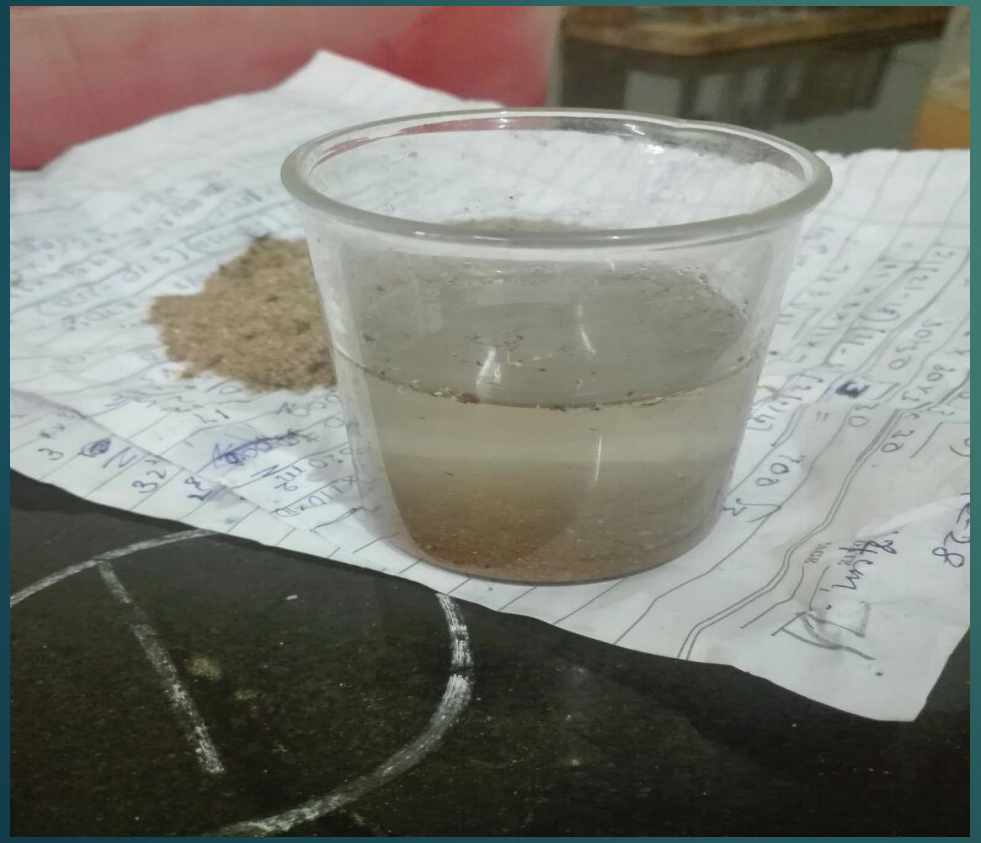


OBSERVATION OF SAMPLE 'D' :

BEFORE : ALL THE PARTICLES WERE SUSPENDED AND IT WAS TRANSPARENT

AFTER : IT WAS VERY TRANSPARENT

BEFORE

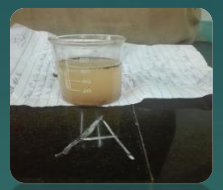


AFTER 1 DAY

OBSERVATION : A+B+C+D=E

BEFORE : MUDDY IN COLOR

AFTER : VERY CLEAR



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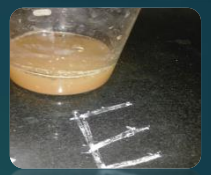
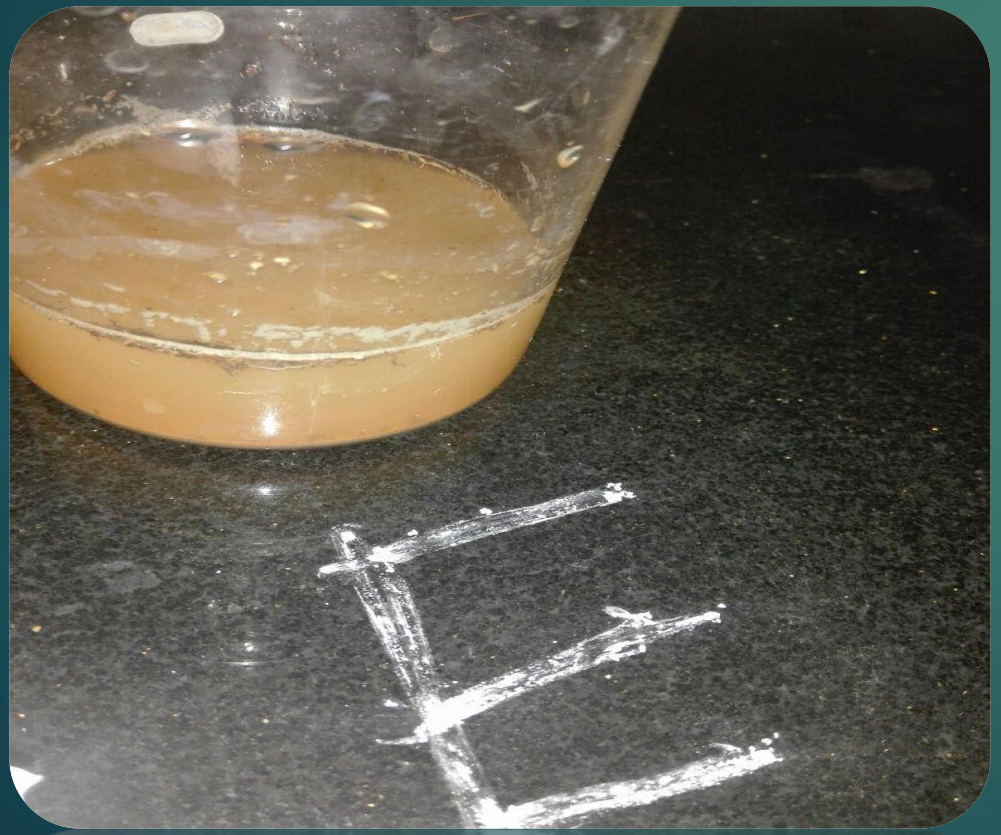
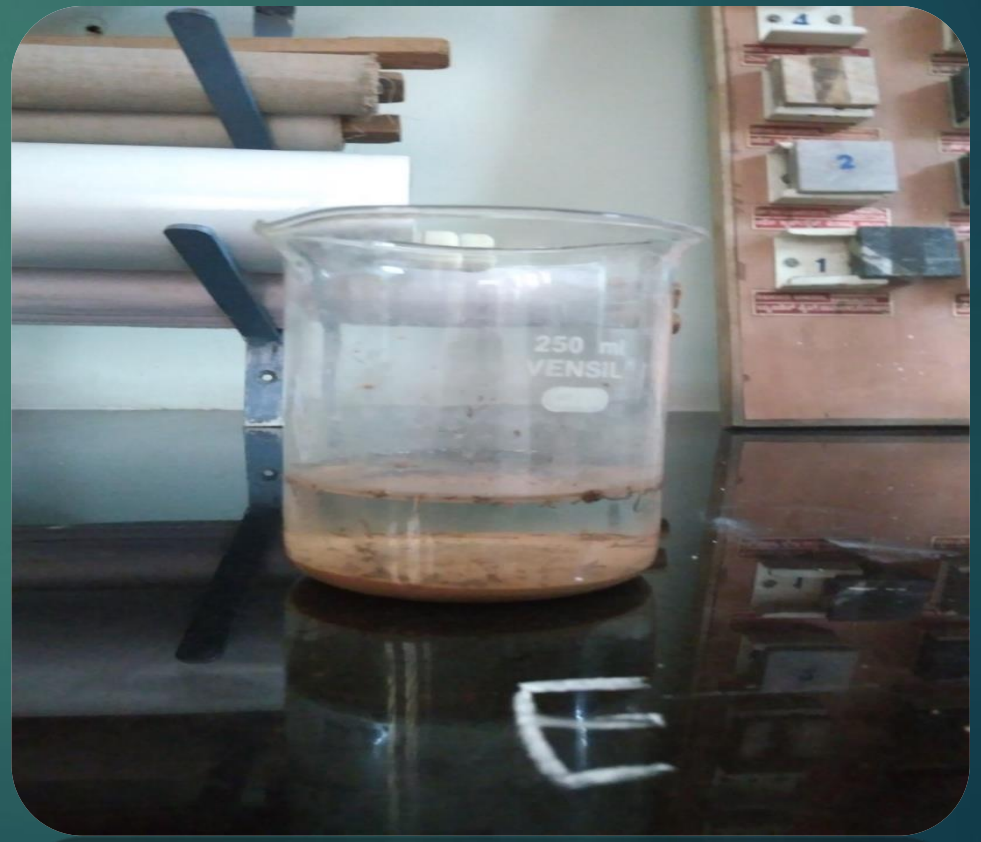


BEFORE



AFTER 1 DAY



Waste Management

- Waste Management is nothing but making the least trash to go into the trash bin and making the maximum use of the waste materials.

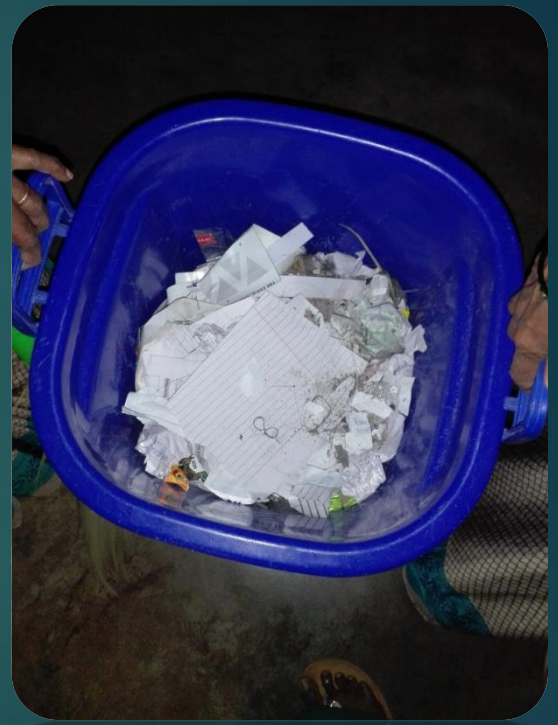
Waste Management includes the

1. REDUCE : This means that we must reduce the wastes produced as much as possible
2. REUSE : This means that we must reuse the used materials instead of throwing them away.
3. RECYCLE : This means that we must recycle the used materials instead of permanently throwing them away.

WASTE MANAGEMENT AT AUDEN SCHOOL

- We collected the wastes from all the classes for 5 days and weighed them. The results were as follows.

DAY	WASTE PRODUCED (Approximately)
DAY 1 (08 - 10 - 2017)	2.5 kg
DAY 2 (09 - 10 - 2017)	2.2 kg
DAY 3 (10 - 10 - 2017)	2.1 kg
DAY 4 (11 - 10 - 2017)	2 kg
DAY 5 (12 - 10 - 2017)	1.8 kg



On Day 5 - 1.8 kg

- We will try more and will surely reduce the waste produced, to zero.

GREEN LIFESTYLE

- Green living is a choice that we make as individuals to change to a green lifestyle in ways that reduce our impact on the environment.
- All of us must try to lead a green life i.e. we must be eco – friendly as much as possible
- To be eco – friendly, we must follow the 3R's – Reduce, Reuse & Recycle

SURVEY (22/10/17) OF THE TYPE OF BOTTLES USED

CLASS	NO. OF PLASTIC BOTTLES	NO. OF STEEL BOTTLES
I 'A'	24	07
I 'B'	20	10
I 'C'	11	20
I 'D'	30	06
II 'A'	23	16
II 'B'	25	10
II 'C'	20	14
III 'A'	21	10
III 'B'	21	12
IV 'A'	20	10
IV 'B'	15	12
Total	230	127

A POEM ON NATURE

MOTHER NATURE

O, Mother Nature, you provide us with trees
That give us a cool breeze
They provide us with flower
You are the one that no one can ever overpower.
We turned a deaf ear to your words of kindness
And polluted you due to our foolishness
Your warning to us was in vain
And now we have caused you a lot of pain.
After we made your patience break
We realized our mistake
Please forgive us Mother Nature
We promise to never pollute you in future.

BY:
Suhas P Shroff
IX

A POEM ON NATURE
MY FRIEND

Oh my lovely nature
You are my best friend
You give shelter to
All creatures

You are the one with
Lot of talents
You bring rain
You give us food
You give birth
To the beautiful things

You are so gorgeous
With lot of green
And a bit of other colors

You bear all
the pollution that we produce
You have a lovely heart

You are the majesty
Oh my lovely friend!!!!

BY:
Tejashree V
IX

OUTCOME OF NSIP

- Awareness created regarding the 3 R's
- Observed the beauty of nature
- Adopted the path of being
  eco – friendly
- The detailed study of nature enhanced our knowledge

THANK YOU

Our Research on nature will go on .....

1. *Suhas P Shroff*
2. *Tejashree V*
3. *K S Meghana Upadhyaya*
4. *Neha N*