# NATURE SCIENCE INTERNSHIP PROGRAMME

VIDYANIKETAN PUBLIC SCHOOL
(Terrestrial Group members )
Shamanth, Adithya, Srinivas, Chinmay

# STUDY AREA

- VIDYANIKETAN PUBLIC SCHOOL GARDEN.

# MAPPING

# SOIL TESTING

# Physical Properties

1) Colour :- Blackish Brown

2)Texture :- 65% Clay
25% Silt
10% Sand

which implies Soil is fine and clayey with particle size below 0.002mm.

3)Field Density :-

1.12 gram/cubic centimeter

4)Bulk Density :-

0.97 gram/ cubic centimeter

5)Water Content :-

150 grams of the soil contains 17.5grams of water as
per the experiment carried out in the lab.
This implies that the water content in the soil sample is equal to **11.66 %**

(All of these tests were carried out in our very own school lab.)

# Chemical Properties

1)pH :- Proper pH is very essential to ensure proper growth of plants.

pH of the school soil was found to be slightly less than 7.

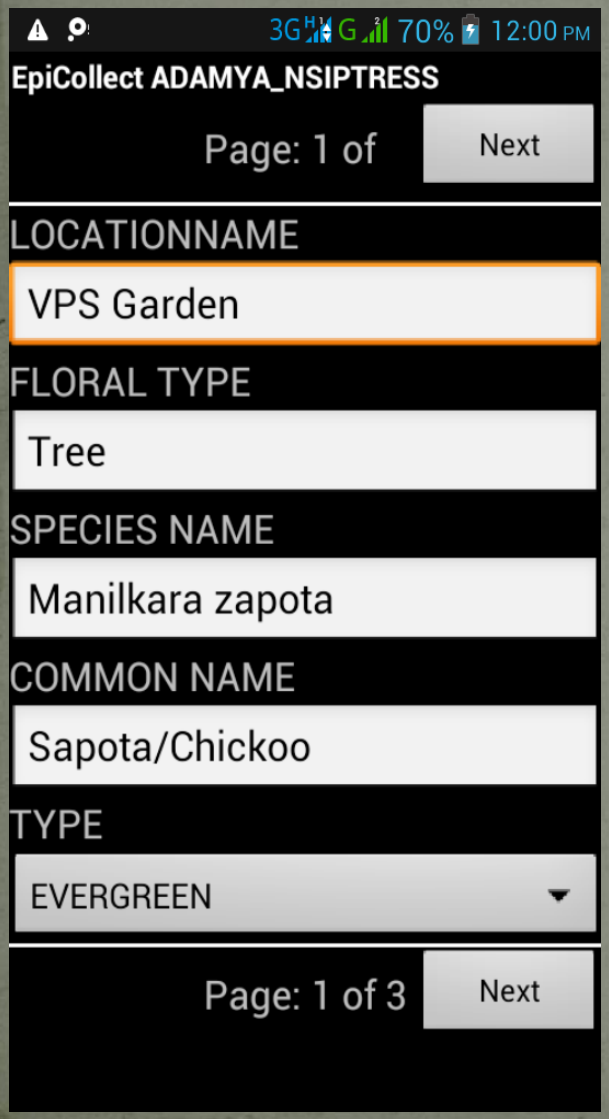
# TREE STUDY

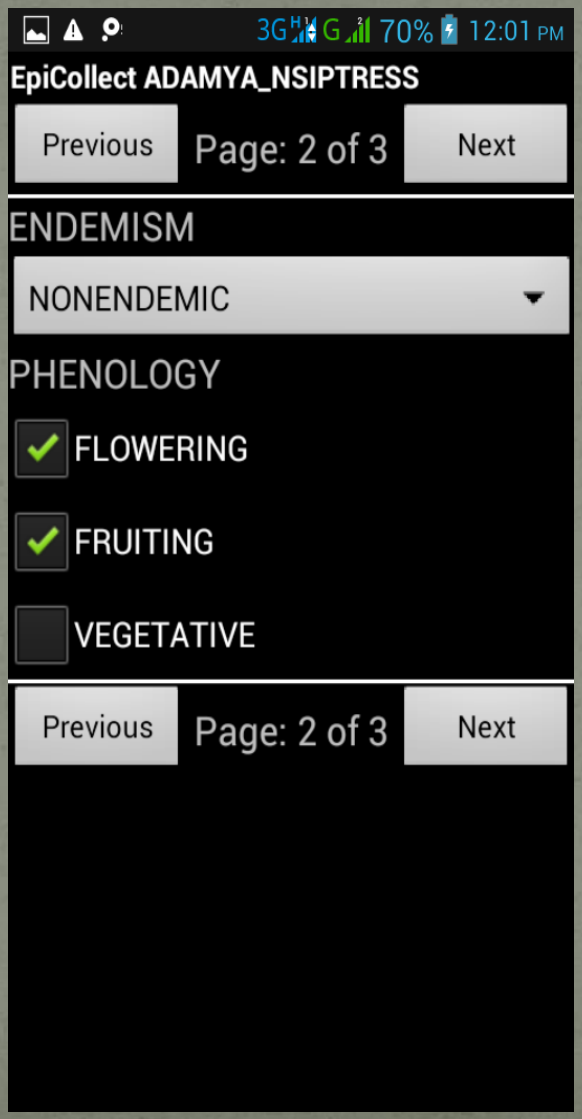
- Trees chosen :-

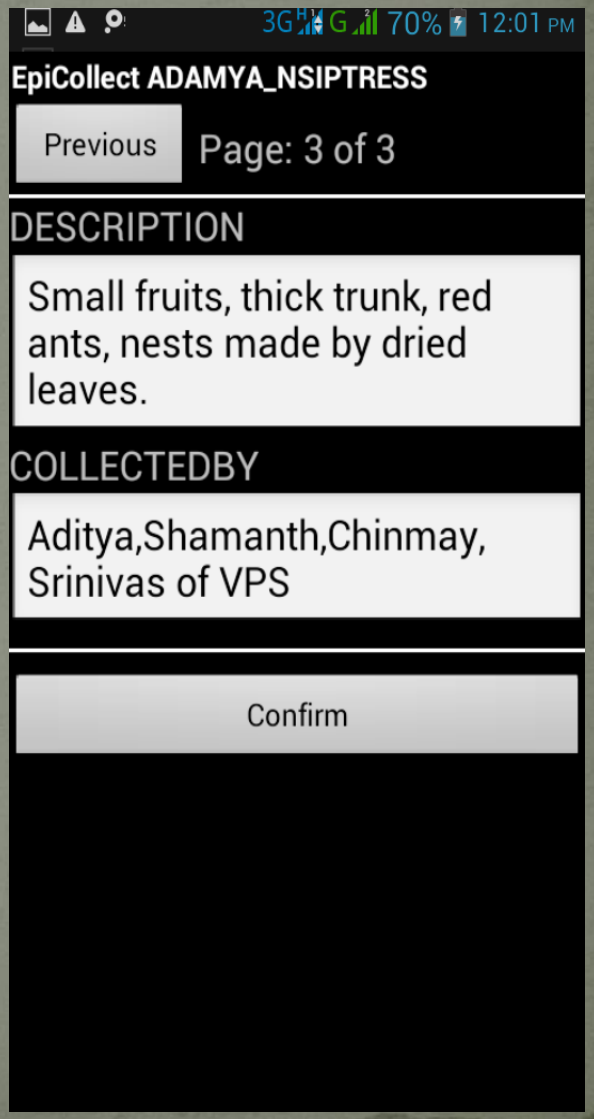
1)Chickoo/sapota

a)Girth- 1.05 m(at the base, then branches off)
b)Height- 8.4 m
c)No. of leaves- 36,700 approx.
d)Oxygen released- 789.22L/hour (21.5 mL/hour/1 leaf)

# EpiCollect Forms

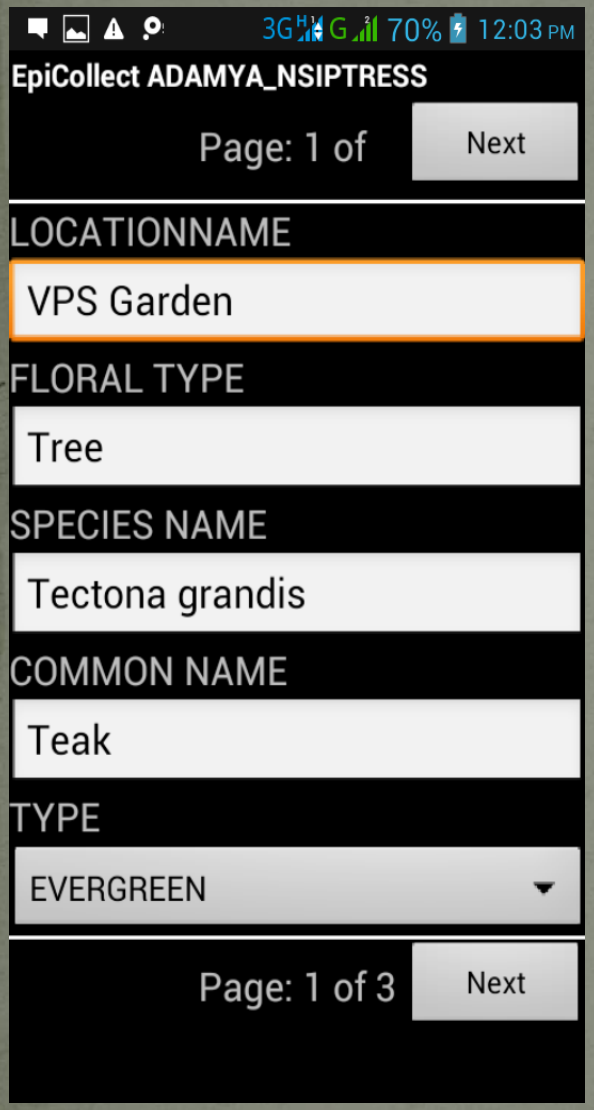


2)Teak

a)Girth- 1.8 m
b)Height- 17 m
c)No. of leaves- 100 approx at height.
d)Oxygen released- 2808.0 L/hour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EpiCollect ADAMYA_NSIPTRESS
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LOCATIONNAME
VPS Garden
FLORAL TYPE
Tree
SPECIES NAME
Tectona grandis
COMMON NAME
Teak
TYPE
EVERGREEN
Page: 1 of 3
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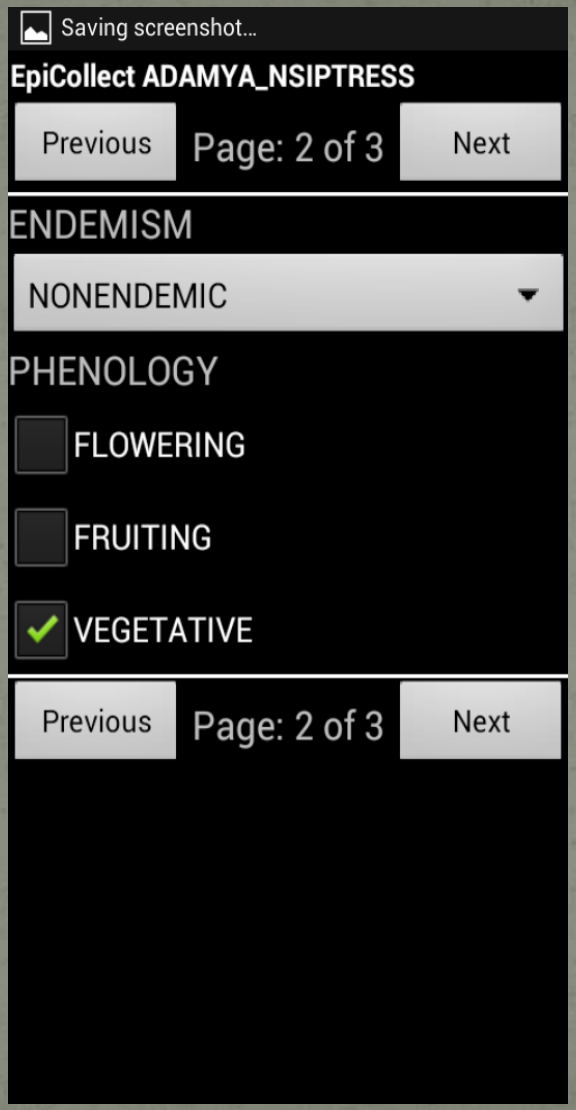
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ENDEMISM
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PHENOLOGY
FLOWERING
FRUITING
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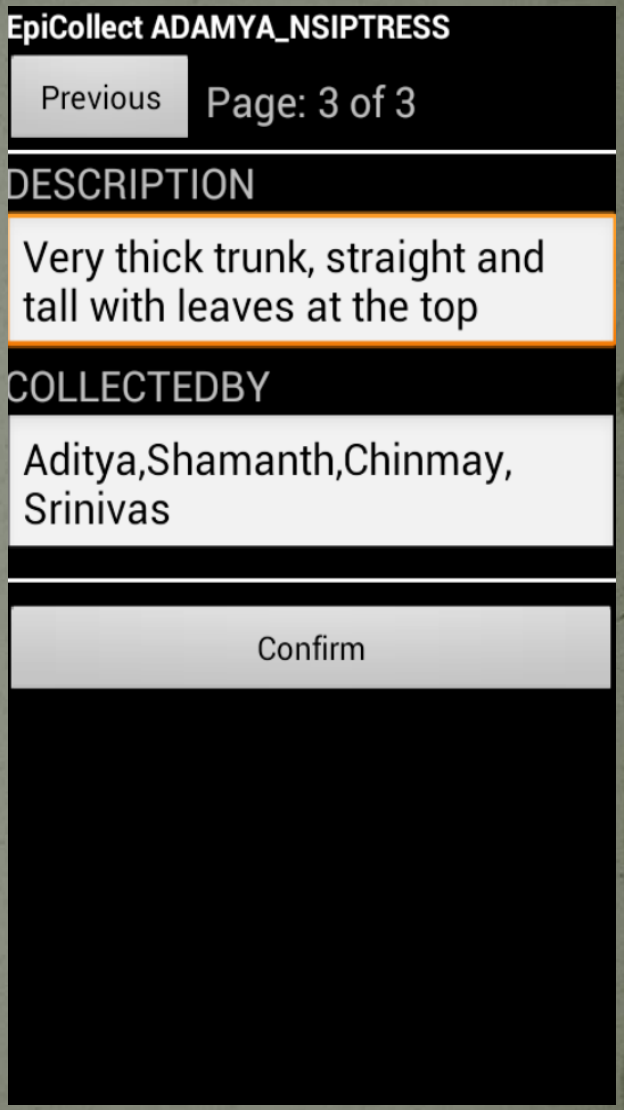
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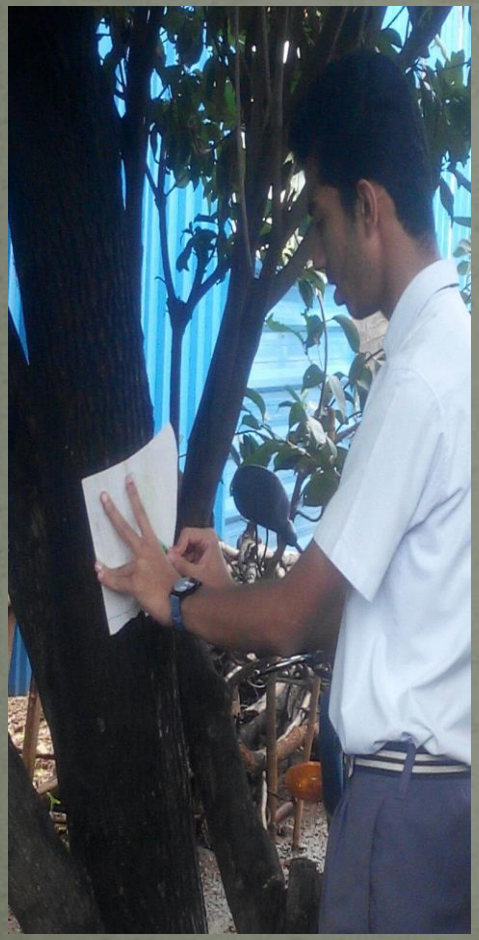
Page: 3 of 3
DESCRIPTION
Very thick trunk, straight and tall with leaves at the top
COLLECTEDBY
Aditya,Shamanth,Chinmay, Srinivas
Confirm

# Pictures of  the fieldwork done



# Flora

| SL. NO | LOCAL NAME | SCIENTIFIC NAME | NO. | LEAFY/FRUITY/FLOWERING |
|---|---|---|---|---|
| 1 | FORGET ME NOT BUSH | DURANTA ERECTA | 2 | FLOWERING |
| 2 | BURMA TEAK | TECTONA GRANDIS | 35 | WOODY |
| 3 | MANGO TREE | MAGNIFERA INDICA | 5 | FRIUTING |
| 4 | JAMAICA CHERRY | MUTINGIA CALABURA | 2 | FRUITING |
| 5 | ASHOKA TREE | POLVATHIA LONGIFOLIA | 200 | WOODY |
| 6 | CHIKOO | MANIKARA ZAPOTA | 2 | FRUITY |
| 7 | GUAVA | PSIDIUM GUAJAVA | 2 | FRUITING |
| 8 | SILVER OAK | GREVILLEA ROBUSTA | 2 | WOODY |
| 9 | COCONUT TREE | COCOS NUCIFERA | 15 | FRUITING |
| 10 | SAGO PALM | CYLAS REVOLUTA | 15 | FRUITY |

| SL. NO | LOCAL NAME | SCIENTIFIC NAME | NO. | LEAFY/FRUITY/FLOWERING |
|---|---|---|---|---|
| 11 | FLAME OF GARDEN | IXORA COCCINEA | 4 | Flowering |
| 12 | GOLDEN RAIN TREE | CASSIA FISTULA | 8 | Woody |
| 13 | RAIN TREE | SAMANEA SAMAN | 4 | Woody |
| 14 | PEACOCK FLOWER | CAESAPINIA | 6 | Flowering |
| 15 | NEEM TREE | AZADIRACHTA INDICA | 2 | Woody |
| 16 | WHISTLING PINE | CASUARINA EQUISETIFOLIA | 2 | Woody |
| 17 | CURRY TREE | MURRAYA KUENIGII | 3 | Woody |
| 18 | INDIAN ALMOND | TERMINALIA CATAPPA | 4 | Woody |
| 19 | PEEPAL TREE | FICUS RELIGIOSA | 3 | Woody |
| 20 | VINCA ROSEA | CATHARANTHUS RUSEUS | 6 | Flowering |
| 21 | CHINA ROSE | HIBISCUS ROSASINENSIS | 10 | Flowering |
| 22 | BIG LEAF HYDRANGEA | HYDRANGEA MACROPHYLLA | 5 | Flowering |
| 23 | CHAMPACA | MAGNOLIA CHAMPACA | 4 | flowering |
| 24 | BOTTLE BRUSH | CALLISTEMON CITRINUS | 1 | flowering |
| 25 | JAMUN TREE | SYZYGIUM CUMINI | 4 | fruity |

| SL. NO | LOCAL NAME | SCIENTIFIC NAME | NO. | LEAFY/FRUITY/FLOWERING |
|---|---|---|---|---|
| 26 | FOX TALL PALM | WODYETIA BIFURCATA | 6 | woody |
| 27 | BRAMHA KAMAL | SAUSSUREA OBVALLATA | 6 | flowering |
| 28 | QUEEN OF NIGHT | CESTRUM NOCTURNUM | 5 | flowering |
| 29 | BAMBOO PALM | CHAMAEDOREA SEIFRIZII | 35 | woody |
| 30 | CHRISTMAS TREE | ARAUCARIA COLUMNARIA | 2 | woody |
| 31 | TRAVELLER'S PALM | RAVENALA MADAGASCARIENSIS | 6 | woody |
| 32 | PAPAYA TREE | CARICA PAPAYA | 6 | fruity |
| 33 | BANANA | MUSA ACUMINATA | 13 | fruity |
| 34 | POMOGRANATE | PUNICA GRANATUM | 9 | fruity |
| 35 | ARJUNA(THORE MATTI) | TERMINALIA ARJUNA | 4 | woody |
| 36 | SILVER WOOD | LEUCADENDRON ARGENTUM | 4 | woody |
| 37 | HONGE | PONGAMIA PINNATA | 30 | woody |
| 38 | AMLA | PHYLLANTHUS EMBLICA | 3 | fruity |
| 39 | WOOD APPLE(BILVA) | AEGLE MARMELOS | 3 | fruity |
| 40 | JACK FRUIT | ARTOCARPUS HETEROPHYLLUS | 5 | fruity |

| SL. NO | LOCAL NAME | SCIENTIFIC NAME | NO. | LEAFY/FRUITY/FLOWERING |
|---|---|---|---|---|
| 41 | DRUMSTICK | MORINGA OLIFERA | 1 | Fruity |
| 42 | DEODAR | CEDRUS DEODRA | 1 | woody |
| 43 | RUDRAKASH TREE | ELAEOCARPUS GANITRUS | 1 | woody |
| 44 | ARECA NUT | ARECA CATECHU | 40 | fruity |
| 45 | BETEL LEAF | PIPER BETEL | 10 | leafy |
| 46 | YELLOW BELL | TECOMO STANS | 30 | flowering |
| 47 | CRAPE JASMINE | TABERNAEMONTANA OIVARICATA | 40 | flowering |
| 48 | ROSE | ROSA | 15 | flowering |
| 49 | HOLY BASIL | OSCIMUM TENUIFORUM | 20 | flowering |
| 50 | COFFEE | COFFEA ARABICA | 2 | fruity |

# VARIOUS INSECTS AND OTHER LIFE FORMS IN OUR GARDEN

# List of Birds observed in the campus

- Common Myna
- House Sparrow
- Crow
- Pigeon
- Dove
- Barbet
- Parakeet
- Bulbul
- Peahen
- Aquiline

# BRIEFING THE SCHOOL STUDENTS ABOUT NSIP AND FOODMILE

# Food Mile

In our school , we briefed all the grades ranging from the first to the tenth grade.

We also kept some dustbins in every corridor of the classes and told them to put the waste food in the dustbin.

We weighed the food and noted down the measurements and calculated the **Food Mile** and also the **Carbon Dioxide** released.

The Food wasted was being reduced day by day after we created awareness about Food mile in our school.

# Waste Weighed :

| Class | Waste (g) Day 1 | Waste (g) Day 2 | Waste (g) Day 3 | Waste (g) Day 4 |
|---|---|---|---|---|
| I | 3 | 0 | 12.90 | 12.90 |
| II | 70 | 122.04 | 173 | 11.7 |
| III | 268 | 0 | 140.2 | 62 |
| IV | 48.1 | 75.0 | 54.6 | 34.6 |

# Carbon Emission :units $CO_2e$=2.9kg of $CO_2$ for 1kg of paper, here emission factor of paper taken as emission factor of food.

| Class | $CO_2$ (g) Day 1 | $CO_2$ (g) Day 2 | $CO_2$ (g) Day 3 | $CO_2$ (g) Day 4 |
|---|---|---|---|---|
| I | 0.11165 | 0 | 0.03741 | 0.03741 |
| II | 0.203 | 0.3596 | 0.9017 | 0.03393 |
| III | 0.7772 | 0 | 0.40698 | 0.1798 |
| IV | 0.13949 | 0.2175 | 0.19834 | 0.10034 |

# THANK YOU