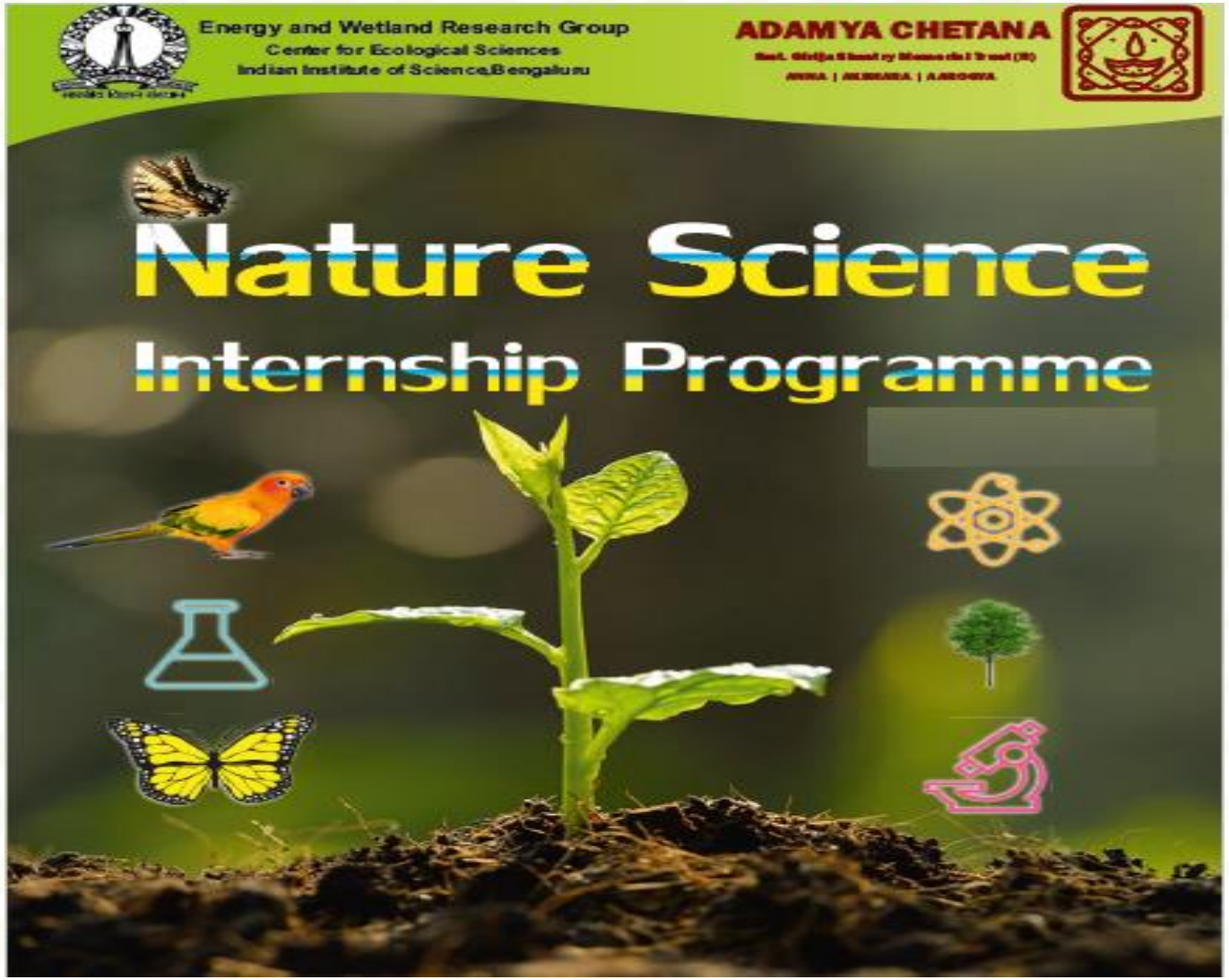

Energy and Wetland Research Group
Center for Ecological Sciences
Indian Institute of Science,Bengaluru
ADAMYA CHETANA
Nature Science
Internship Programme

VAGDEVI VILAS INSTITUTIONS

VAGDEVI VILAS SCHOOL, MARTHAHALLI

Guide teachers name: Shalini .S & Sarita

Students name:

varija

Nidhi Gupta,

Abhishek kalgudi(varija)

Hemanth S.V

Vinayak Chola

Prithvi

Jeyaditya Babu

Aditya Rajesh

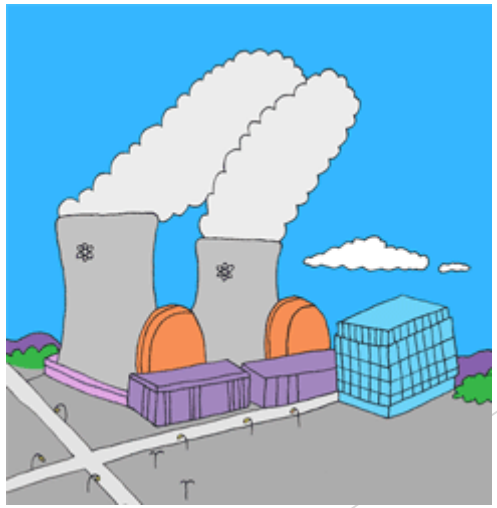
Sohani Bakkannanvar

Sahana Rajesh

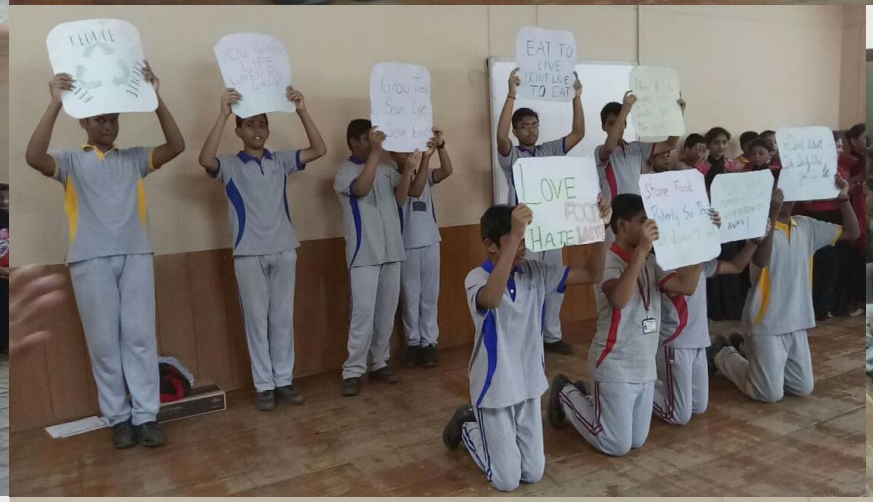
Swapnil Datta

CARBON FOOT PRINT

Date: 13/10/17
Place:Vagdevi Vilas school







EAT TO LIVE DONT LIVE TO EAT
LOVE FOOD HATE WASTE

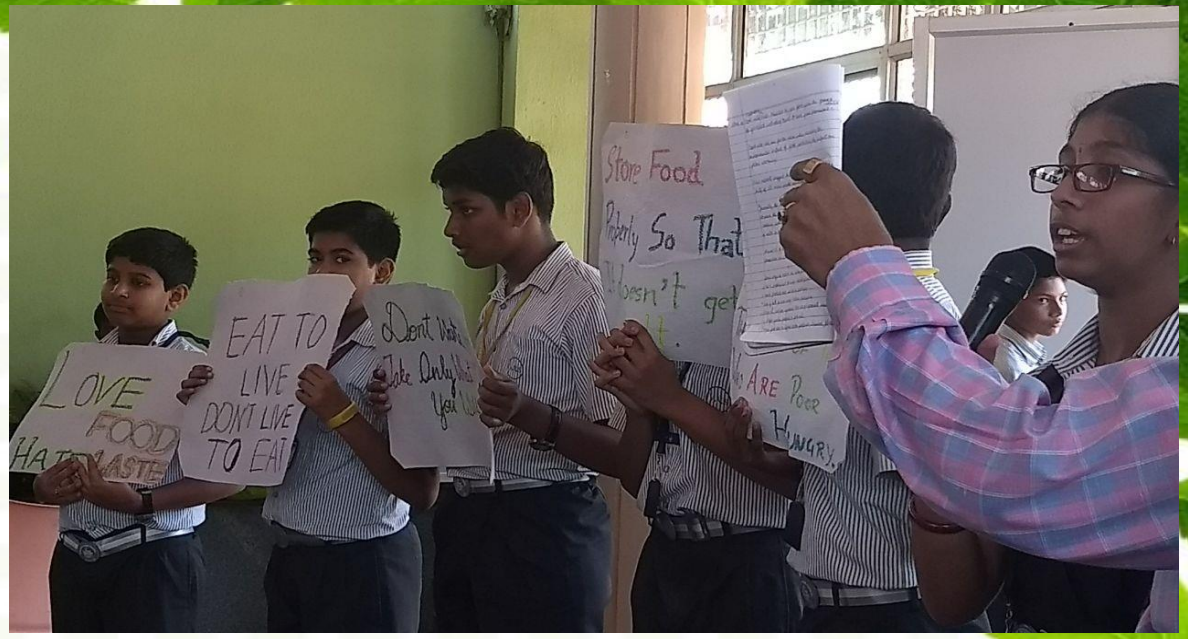


EAT TO LIVE DONT LIVE TO EAT
When it is bright, Switch off the light
YOU PAID MONEY FOR THAT WHY THROW IT AWAY?
Dont Waste Take Only What You Will Eat
LOVE FOOD HATE WASTE
Store Food Properly So That It doesn't get
REDUCE

FOOD MILE CAMPAIGN

Date:11/10/17
Place:Vagdevi Vilas School

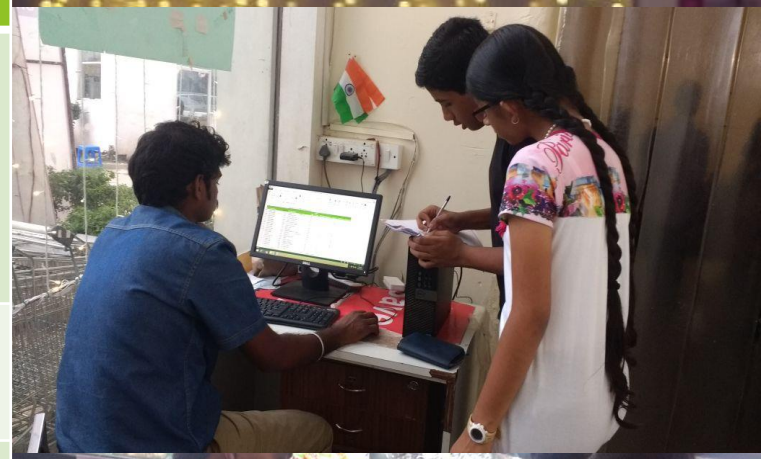

EAT TO
LIVE
DON'T LIVE
TO EAT
LOVE
FOOD


Store Food
EAT TO
LIVE
DON'T LIVE
TO EAT
LOVE
FOOD


VIDEO 1
food mile

FOOD MILE

GPS ID	LATITUDE	LONGITUDE	ACCURACY	DESCRIPTION	PHOTO ID	DATE OF PHOTOGRAPH	DESCRIPTION OF PHOTOGRAPH
17	12⁰56.638ˡ N	77⁰42.585ˡE	13.6m	Foodmile survey	12:55:41	16/10/17	Venkateshwara departmental store.
18	12⁰56.638ˡ N	77⁰42.585ˡE	21.2m	Foodmile survey	15:29:30	16/10/17	Fresh mart
19	12⁰56.638ˡ N	77⁰42.585ˡE	4.6m	Foodmile survey	12:49:44	16/10/17	Hyper city



NAME OF THE VEGETABLES	CURRENT PRICE PER KG	COME FROM	MODE OF TRANSPORT USED	KG OF CARBON DIOXIDE
Red cabbage	80	Hoskote farm house	Truck	0.003135
Red radish	55	Hoskote farm house	Truck	0.003135
Broccoli	135	Hoskote farm house	Truck	0.03344
Sweet corn	8.50/ piece	Hosekotae farm house	Truck	0.0035
Colour capsicum	100	Hoskotae farm house	Truck	0.5643
Onion	40	K.R Market	Truck	0.035
Potato	20	K.R market	Truck	0.27
Tomato	40	Kolar	Truck	0.035
Carrot	80	Ooty	Truck	0.0057
Beans	80	Ooty	Truck	0.0057

Ladies finger	60	Ooty	Truck	0.0042
Spinach	5 per bunch	Varthur local market	Truck	0.190
Coriander	5Rs per bunch	H.A.L Market	Truck	0.321
Pudina	5Rs per bunch	K.R.Market	Truck	0.0675
Coconut	28	Local from B.E.M.L layout	Truck	1.06
Kappa banana	48	Kerala/Wayanadu(303 .1km)	Truck	3.9
Nendra banana	80	Kerala/Wayanadu	Truck	6.6

Brinjal(zero pesticide)	64	Mallvalli(mandya) 124.9	Truck	2.16
Chilli orange (zero pesticide)	500	Mallvalli(mandya) 124.9	Truck	16.86

Onion (desiccated)	500	Bhavnagar,Gujrath(1,605 km)	train	16.05
Chopped fruits	142	Whitefield(5.8km)	truck	0.22
Processed cabbage	156	Mallavalli(121km)	truck	5.09
Lotus stem	390	Mallavalli(121 km)	truck	12.74

Washington apple	225	Washington(13,671km)	Aeroplane(8491mi)	3,383.5
Apple fuji china	320	China(3,671km)	aeroplane	1,292.2
Apple coral pacific	259	Jamica(15,595 km)	ship	0.525
Green apple	240	Thailand(5,125 km)	ship	159.9
Apple red	225	USA	Ship	525.08
Paneer fruit	226	Himachal Pradesh(2,510 km)	train	11.34
Andes fruit	3250	Colmbia(14,320)	Ship	6050.2

Wheat	60	yashwanthpura market	truck	0.03264
Rice	60	yashwanthpura market	truck	0.03264
Ragi	40	yashwanthpura market	truck	0.021
Urad dal	150	yashwanthpura market	truck	0.0816
Toor dal	100	yashwanthpura market	truck	0.0544
Gram dal	140	yashwanthpura market	truck	0.076
Rajma	140	yashwanthpura market	truck	0.076
Ground nut	170	yashwanthpura market	truck	0.092
Pigeon pea	140	yashwanthpura market	truck	0.0761
Moong dal	120	yashwanthpura market	truck	0.0652

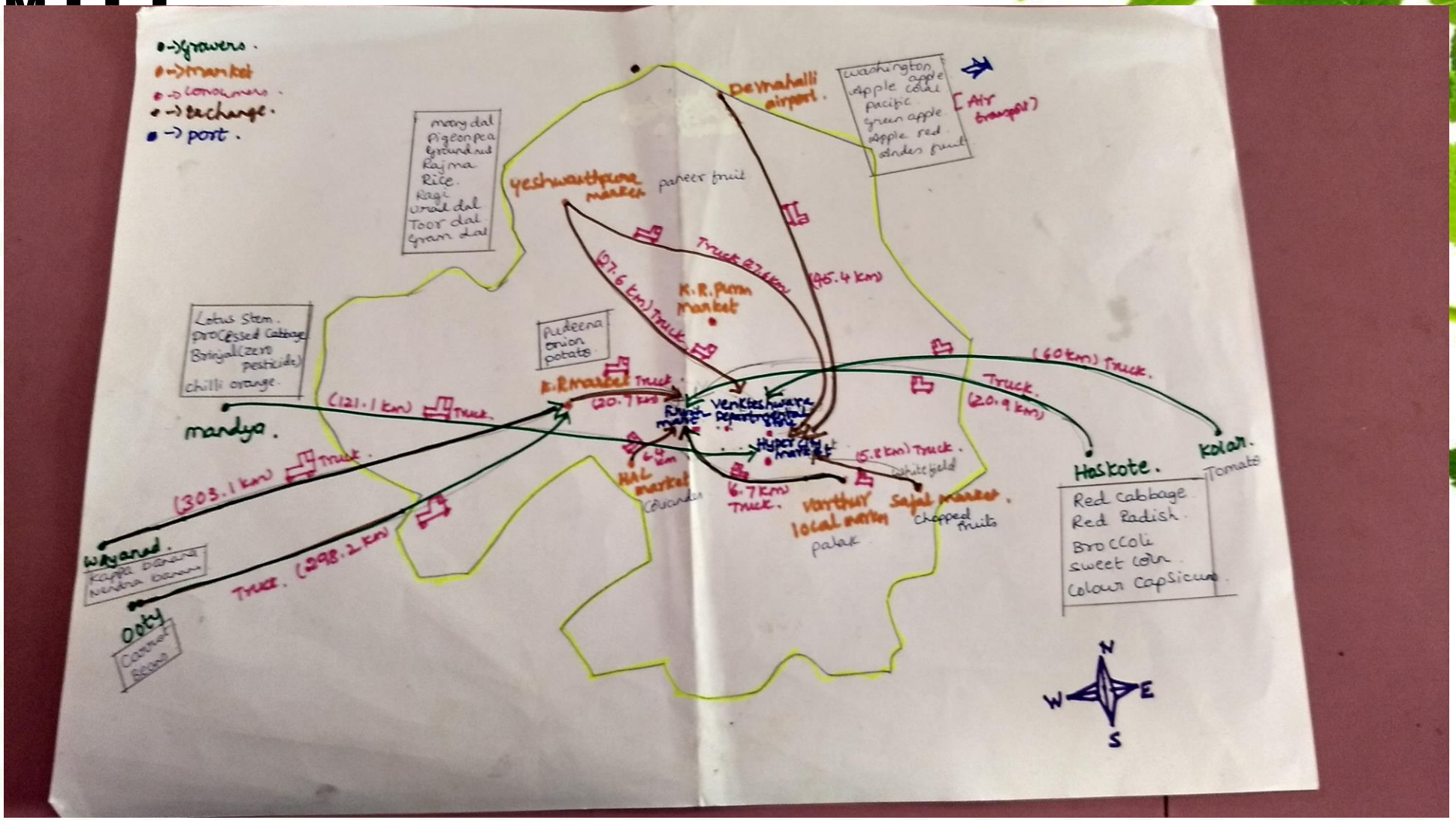

3


BIO GAS PLANT


AGNI SURAKSHA

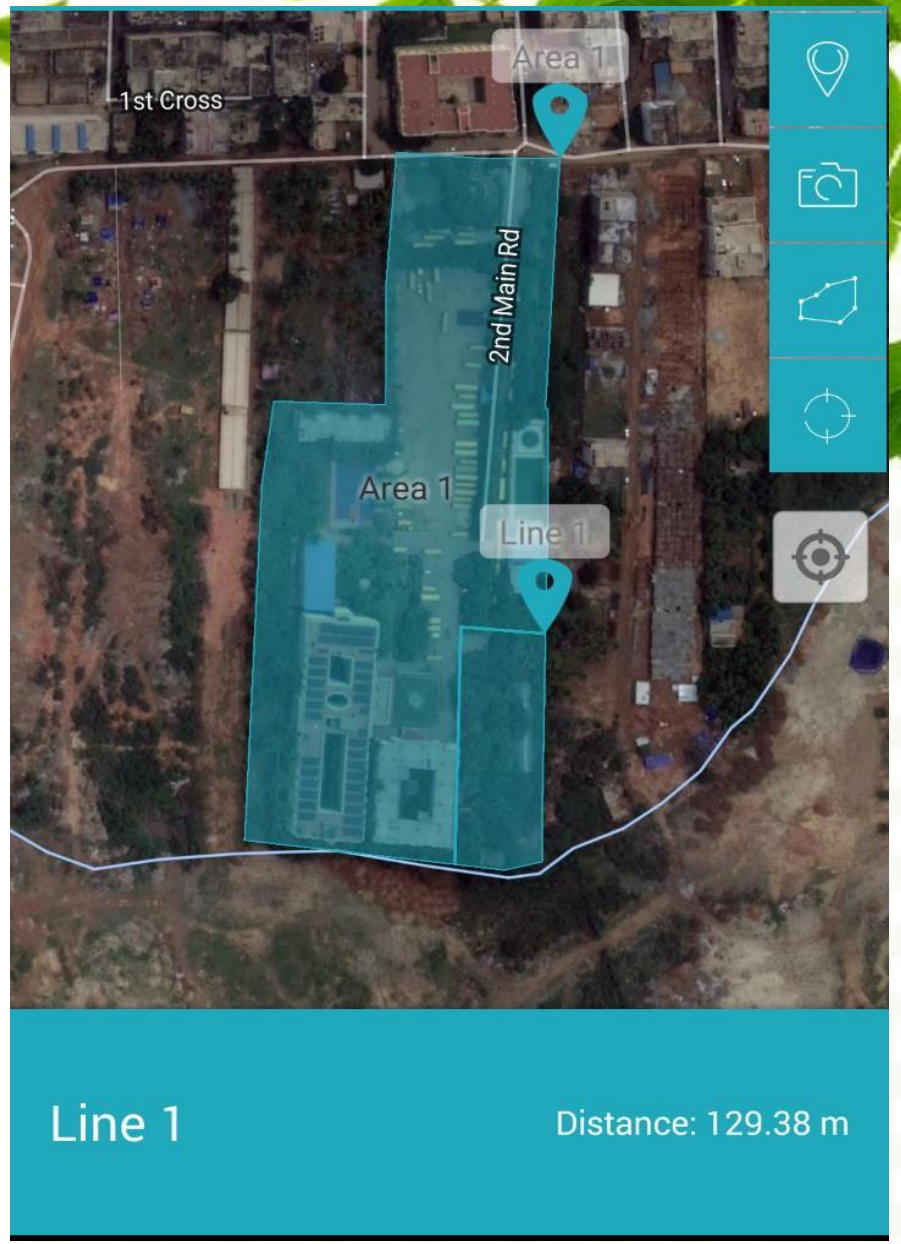


RESOURCE MAPPING OF FOOD MILE



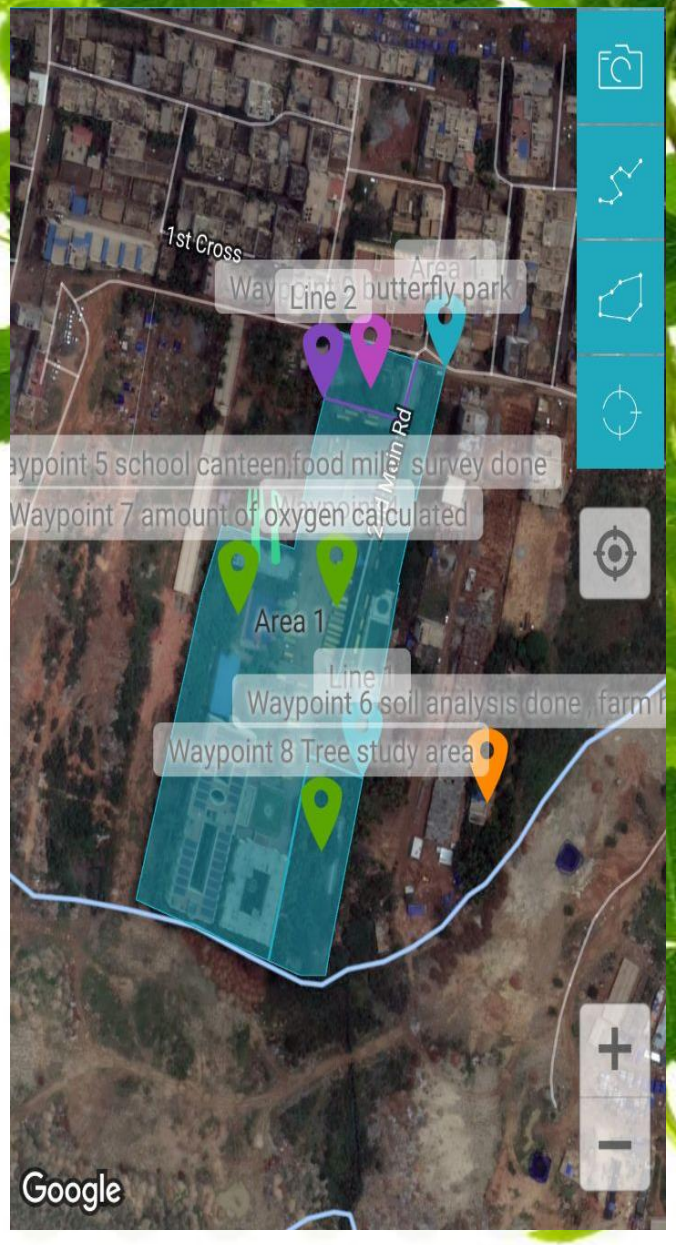
Area 1

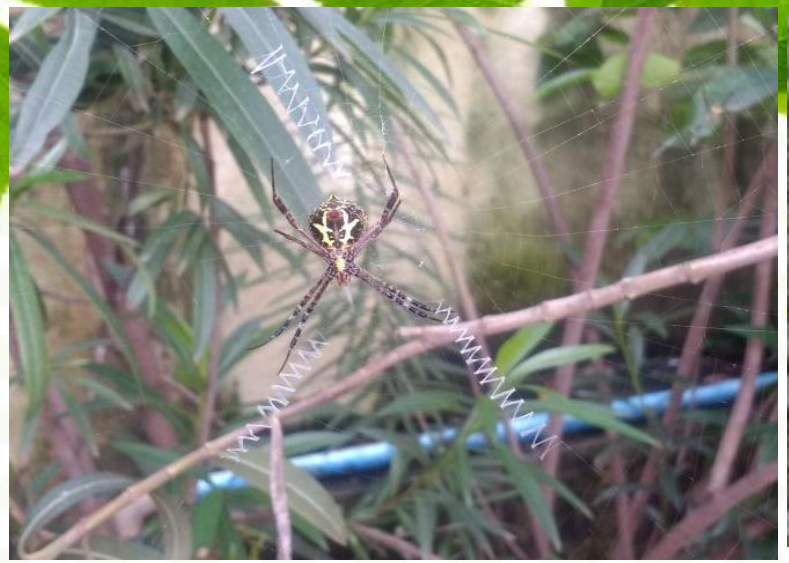
Perimeter: 763.88 m
Area: 2.74 ha



Line 1

Distance: 129.38 m





GPS SET ACCURACY	GPS ID	PHOTO ID	DATE	PHOTO DISCRIPTION
6.07m	6	9:6:19	16/10/17	Badam tree
13.6m	5	9:5:1	16/10/17	Jack fruit
7.6m	7	9:16:54	16/10/2017	Nilgiris
22.75m	8	9:26:31	16/10/2017	Neem tree

Local name	Scientific name	Number	Flowering/fruiting/Leafy	Dependents	uses
Jack fruit tree	Artocarpus heterophyllies	2	Fruit is the largest tree borne fruit/flowers	Monkeys	Ayurvedic tree used for the treatment of wounds.Bell's palsy,improve the body strength.
Coconut tree	Cocos nucifera	5	fruit	crow	The oil and milkd erived from it are commonly used in cooking and frying, as well as in soaps and cosmetics.
Nilgiri tree	(eucalyptus tree)	1	Flowers		Medicinal plant,oil
badam	Terminalia catappa	1	Fruit/flowers	Squirrels,bees	Medicinal plant,fruit,oil,seed are eatable.
Neem tree	Azadiracta indica	1	Flowers are white frogrant.	birds	Medicinal insecticidal or pesticidal

Photo id	date	time	Gps accuracy	Oxgen calculation	Description of plant
11	13/10/17	8:32:3	4.5m	8775.6ml	Mango tree

Area of 1 leaf =71cm²

Ml of oxygen produced per hour

71X1.2=85.2ml

Number of lives=103

103X85.2=8775.6ml

Report:

1.Leaf margin wavy.

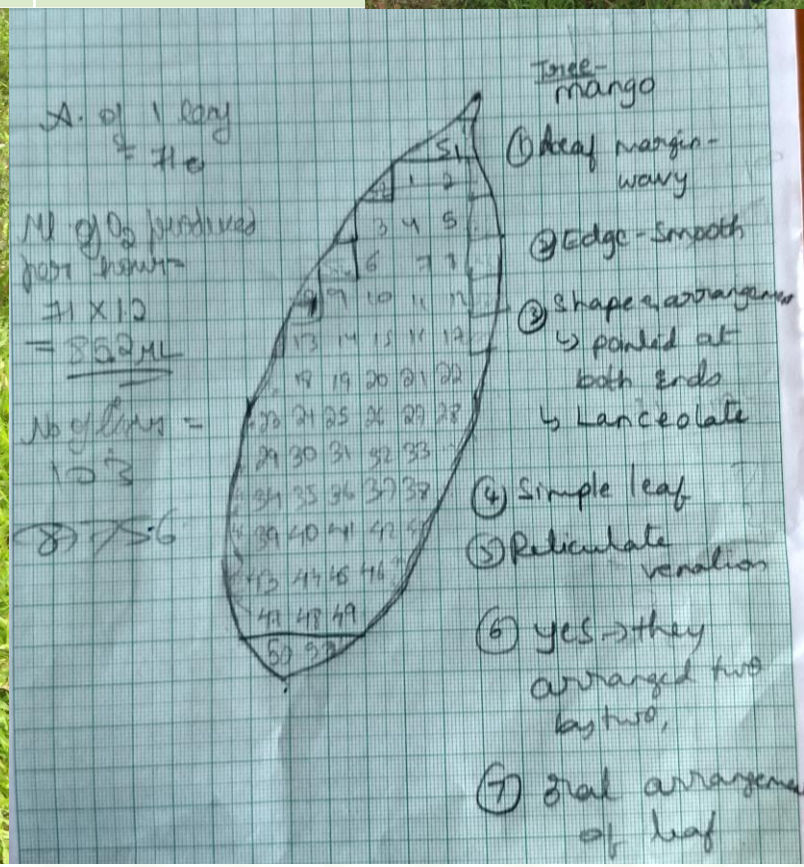
2.Edge-smooth

3.shapes and arrangements: Pointed at the both the ends. Lanceolate

4.Simple leaf

5.they arranged two by two.

6.Oral arrangement of leaf.



ABOUT CHINNAPANAHALLI LAKE

Chinnappanahalli kere – 2002 (Google Earth)

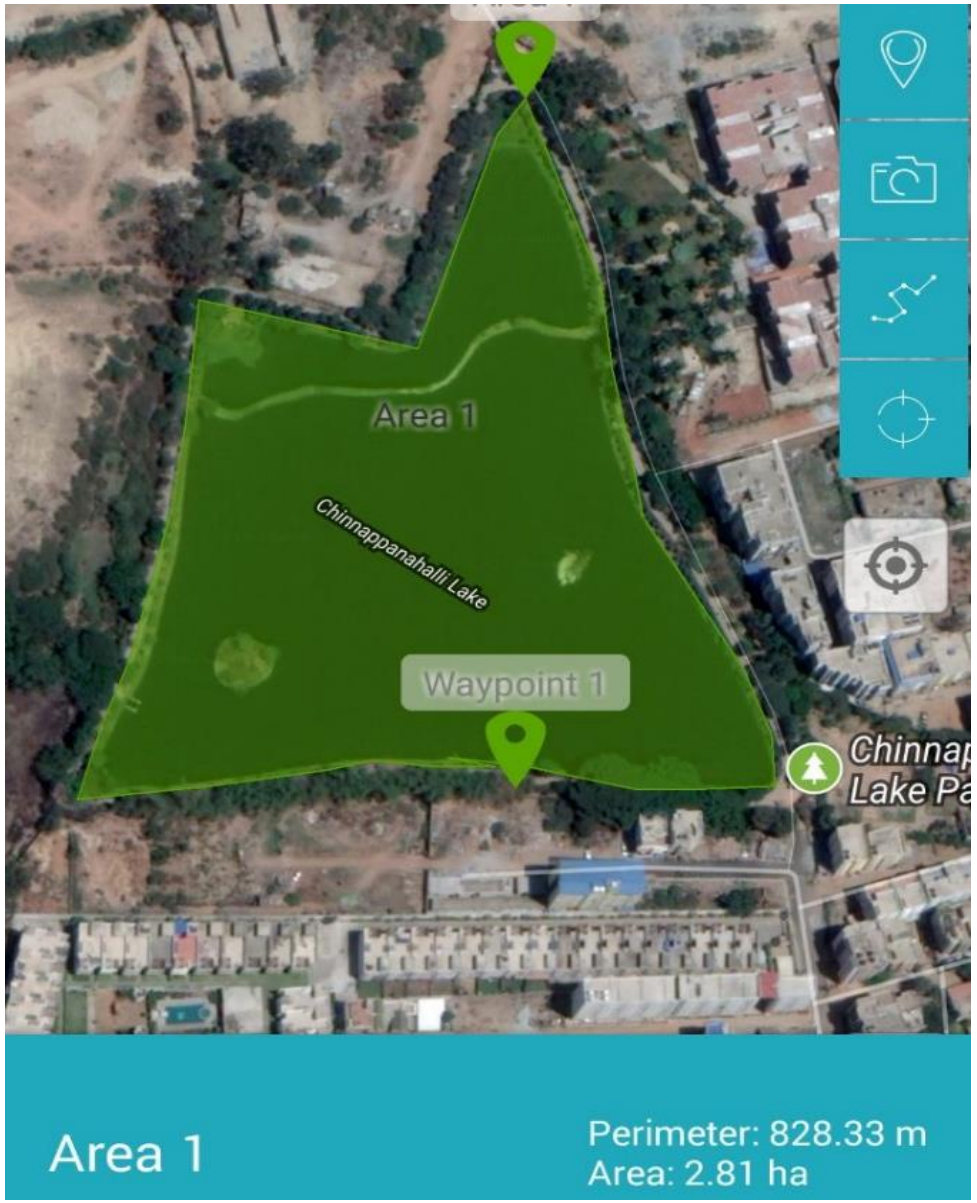
Chinnappanahalli kere – 2009 (Google Earth)

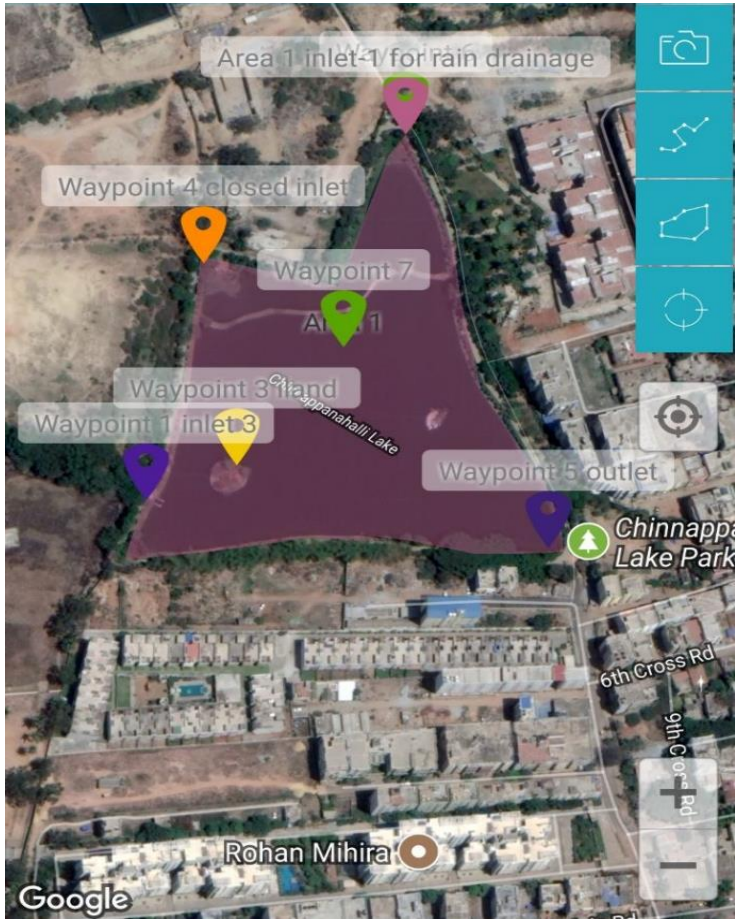
Chinnappanahalli kere – 1973 (SoI toposheet)

Chinnappanahalli kere – field visit

The Chinnapanahalli lake is a treasure trove of both flora and fauna. The lake has a beautiful biodiversity with ducks, storks, herons, eagles that can be spotted. With so many birds, the lake also has a huge population of fishes and reptilian species of snakes including water snakes which the birds prey on. Chinnapanahalli lake of size2.81 hectares, deep water of 0.43 hectare. Large part of the lake appears to have been filled and diverted for a park. Lake appears encroached to north and north west in comparison to survey of India top sheet. Connectivity from surrounding landscape outlet to munnekollalu lake.

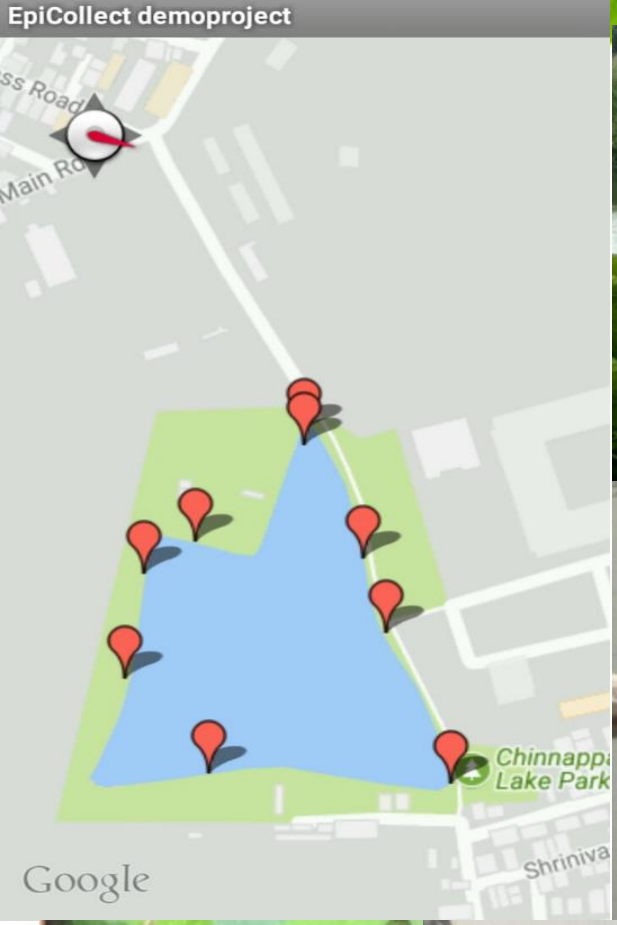
MAPPING USING MAP INR APP AND EPICOLLECT





Lake has three inlets and an outlet,
Inlet-1: Where the rain and the surrounding dump water flow through
Inlet-2: This is the closed inlet, but can see many weeds and aquatic plants growth here
Inlet-3: Where the agricultural and surrounding water flow through it
Outlet: Through this water flow out to munnekolala lake

BIODIVERSITY STUDY AT CHINNAPANAHALLI LAKE


EpiCollect demoproject
Google

AQUATIC PLANT FOUND IN CHINNAPANHALLI LAKE

Alternanthera philxeroides **(Alligator weed)**

Typha (Cattail)

Lemna gibba **(Common duckweed)**

Pistia stratiotes **(Water lettuce)**

POLLUTION REPORT OF CHINNAPANHALLI LAKE

There are around three to four garages around the periphery of the lake which dump their waste nearby. When it rains, the waste seeps into the lake, killing the aquatic life. Another reason for the fish kill, is the encroachment by buildings around the lake. Dumping happens around the lake and also the buildings nearby have been trying to encroach the land for a while now.No sewage water treatment plants in few appartments,Also oxygen depletion in water

Dead fish and snakes were floating in Chinnappanahalli lake near Marathahalli on Thursday. This is been published in ,Saturday 21 October 2017 DECCAN HERALD NEWS PAPER

PHYSICAL AND CHEMICAL ANALYSIS

Location: Varthanahalli Lake
Date: 21/09/2017
Time: 9:00 a.m.
Weather condition: Cloudy

Physical Parameters	Inlet-1	Inlet-2	Inlet-3	Outlet
Colour	Light Brown	Transparent	Slightly turbid	Green
Temperature	27⁰ C	28⁰ C	28⁰ C	28⁰ C
Turbidity	180NTU 10NTU	120NTU 10NTU	120NTU 10NTU	40NTU 10NTU
Odour	Stinky	Odourless	Odourless	Stinky

pH	6.7	7.7	8.2	8.6
Electric conductivity	1560microsimens	954 microsimens	1180microsimens	927 microsimens
Total solids	0.340mg/L			0.280mg/L
Total dissolved solids	0.1mg/L			0.1mg/L
Total suspended solids	0.240mg/L			0.180mg/L
Chloride presence	531.75mg/L	141.8mg/L	354.5mg/L	177.25mg/L
Calcium Hardness	80mg/L	280mg/L	520mg/L	240mg/L
Magnesium	19.39mg/L	68mg/L	126.23mg/L	58.19mg/L

Phosphorous	0.5mg/L	< 0.5mg/L	1.0mg/L	0.5mg/L
Residual Chloride	0.2mg/L	0.2mg/L	0.5mg/L	0.2mg/L
Ammonia	3.0mg/L	1.0mg/L	3.0mg/L	1.0mg/L
Fluorides	0.6mg/L	0.6mg/L	3.0mg/L	1.5mg/L
Dissolved oxygen	4.1mg/L	6.75mg/L	2.8mg/L	5.5mg/L
Iron	<0.3mg	0.3mg/L	1.0mg/L	<0.3mg/L

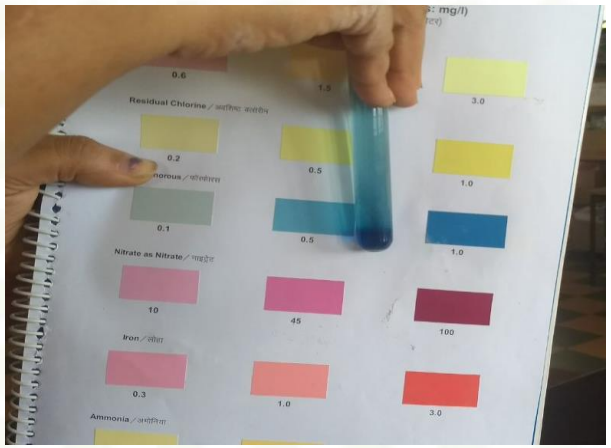





- TARA
Testing Kit





pH

Residual Chlorine
Nitrate as Nitrate
Iron
Ammonia

- TARA
Testing Kit

Nitrate


DiST 3

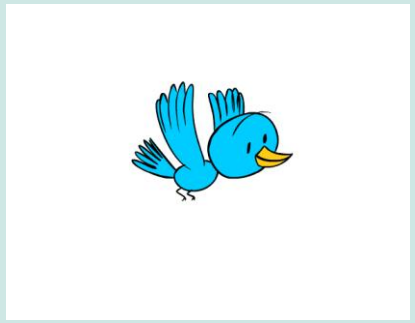
Microorganisms present in fresh water :

Blue green algae
Euglenoids
Chlamydomonas
Chlorogonium
Diatoms
Volvax
Carteria
Lepocinolis
Eudorina
Chlorella

Video -4&
video-5

Chapters completed:

1.Study area and mapping
2.Tree study(species, oxygen , leaves
3.Butterfly
4.Bird
5.Water Body
6.Food Mile
7.Story of Sand



Thank You