

Sophia College (Autonomous)
Bhulabhai Desai Road
Mumbai: 400026

Green Audit Report (2021-2022)



Sophia College (Autonomous)
Bhulabhai Desai Road
Mumbai: 400026
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Introduction

Sophia College (autonomous), founded in 1940, is affiliated to the University of Mumbai. The Governing Body of the Society for the Higher Education of Women in India runs the College. The Religious Sisters of the Sacred Heart of Jesus and lay staff form the staff of the College.

The Society of the Sacred Heart was founded in France in 1800, by St. Madeleine Sophie Barat. It is dedicated mainly to the all-round education of youth. There are now a number of schools and colleges of the Society all over the world, besides widespread innovative non-formal involvements. According to a long-standing tradition, the staff takes a personal interest in the harmonious growth of each student entrusted to their care.

Sophia College (autonomous) is a Christian Minority Institution. Students of all denominations are welcome. The main goal of Sophia is the relentless search for Wisdom, through an education that is holistic and transformative.

Institutional Distinctiveness

A core principle of the college is the persistent search for wisdom, through a comprehensive education system that is relevant for the present as well as the future. Sophia College with its sprawling, and beautiful campus with rich diversity, sufficiently motivates one to engage with, appreciate and benefit from its galaxy of empowering attributes. An effort to get involved with the overall growth and well-being of the students is the purpose that one strives towards; this being one means by which the educational vision of the College is taken forward.

It is hoped that through the varied assets of experiences here in Sophia College, everyone will find meaning, and that their lives may be positively transformed.

Dynamic campus experiences that call for healthy and enriching lifestyle would be one of the priorities. The College certainly adapts to changing situations. There is scope for blended learning, and self-learning with support from teaching staff, experts and through various e-resources. Plans related to these also continuously evolve; much depending on specific situations prevailing in India, Maharashtra and more specifically, in our city Mumbai.

Being a women's college at the outset, Sophia College focuses more on the overall development and transformation of women to the rediscovery of their fuller potential through the holistic education that they engage in here. The best means for empowerment of women, is to educate the young minds in the society especially the women themselves which enable them to transcend and outgrow the patriarchal and restrictive frames of the society. With this view, Sophia College, through various activities like webinars, conferences, discussion forums, artistic, cultural, and theatre events provide adequate structures for students to explore their possibilities and grow beyond the gender restrictions and find themselves as individuals. Sophia College stands for wisdom that leads to discretionary ability to discern and decide between the proper and the improper.

Milestones in the History of the College

During its 80 years Sophia has been committed to responding to the changing needs of women in the society.

During the 1940s, the period of the Freedom Struggle and the early years of Independence, the College focussed on Home Science as well as on the Arts and the Humanities. Stress was also laid on inculcating pride in our national identity. The motto of this College, *Urdhva Mula*, and the crest highlight this.

In the 1950s, as post-independent India was making her entry into the technological world, education in Science was first introduced (initially up to the Inter Science level and from 1967 up to the B.Sc.

level, later extended to the M.Sc. level in three subjects). In the 1960s a thrust was given to the social dimension of education.

During the 1970s importance was given to vocational education. In the 1980s research was given a boost. Excellence and 'Quality Assurance' were the in-words in the 1990s.

In the first two decades of the 21st Century the focus is on transformative education through networking and collaboration as well as through outreach work and extension of educational services to the community with special emphasis on the needs of women.

Through it all, commitment to women's empowerment, to excellence and to integrity have grown deeper and stronger.

A brief history of the College

- The campus and land in the vicinity belonged to the erstwhile East India Company. A part of the vast property was given to the Parsi family of Ashburner in the early 19th Century
- The main building was named Somerset House after Sir Henry Somerset one of the Commanders-in-chief of the Bombay Presidency.
- 1800 – The Society of the Sacred Heart is founded by Madeleine Sophie Barat.
- 1882 – The property was acquired by the Honorable Badruddin Tyabi. He built Somerset Annexe the nucleus of the present science building.
- 1917 – Mr. Hormusji Noshervanjee Vakeel bought the property and added the east-west wing.
- 1923 – The house was purchased by the Maharaja of Indore, who used it as a winter residence.
- 1937 – The Maharaja of Bhavnagar bought the house.
- 1939 – His Grace Archbishop Roberts S. J. of Bombay invites the Sacred Heart nuns to start a women's college in Bombay.
- 1940 – The Society of the Sacred Heart bought the Somerset House, Somerset Annexe, some out-houses and the grounds.
- 1940 – The Home and Social Culture centre is formally declared open by His Grace Archbishop Roberts and the name Sophia College (autonomous) (AUTONOMOUS) is adopted; Mother Andersson is the first principal.
- 1941 – The Arts Faculty is started. The University of Bombay grants temporary affiliation to the college for First year and Intermediate classes.
- 1942 – Extension of affiliation is granted for Bachelor of Arts classes.
- 1945 – Sophia motto, crest and colours adopted.
- 1950 – The University of Bombay grants permanent affiliation to the college.
- 1952 – The Science Faculty is started with classes up to the Intermediate Science level.
- 1966 – THE SILVER JUBILEE YEAR : The Intermediate Science course is extended up to the Bachelor of Science degree
- 1975 – Junior college is introduced.
- 1978 – The Post graduate Diploma Course in Clinical Analysis is started.
- 1990-91 – THE GOLDEN JUBILEE YEAR

- 1993 – The Post graduate Diploma course in Quality Assurance in the Food Industries is introduced.
- 2001 – The Sophia Centre for Women's Studies and Development is inaugurated.
- 2003 – The Bachelor of Mass Media Course is introduced.
- 2011 - Certificate Course in Bioinformatics is introduced.
- 2011 - PhD Programme in Applied Biology is introduced.
- 2013 - Bachelor of Science - Information Technology is introduced.
- 2018 – College was granted status of Autonomy.

Mission

To provide women with higher education of an excellent quality together with opportunities for self-growth through an academic experience combining curricular and extra-curricular activities.

Vision

Empowerment of women through a holistic education which fosters independent thought and responsible action.

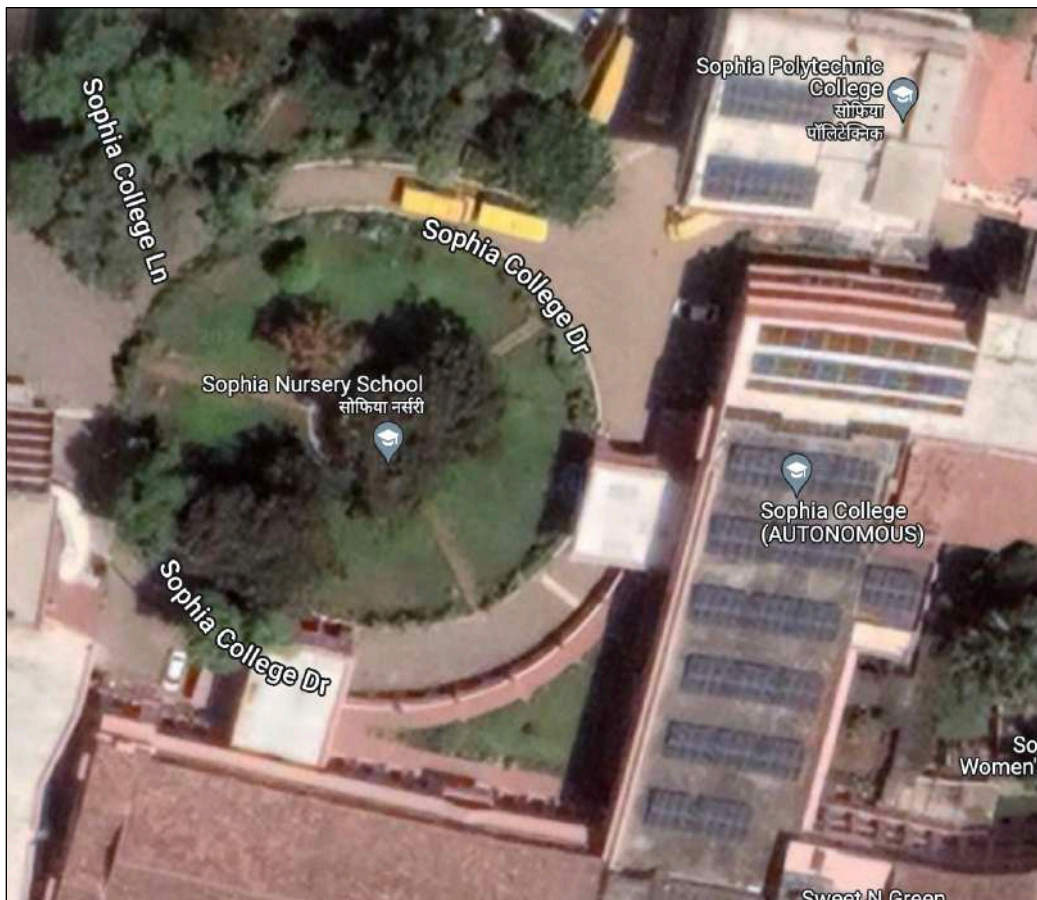
Goals

1. To enable each student to develop her full intellectual potential through a focussed academic experience that is simultaneously rich, extensive and collaborative.
2. To offer students scope for critical thinking and discernment, leading to the development of value-based convictions.
3. To help students develop a degree of self-reliance and determination to respond with courage and sensitivity to personal and social issues.
4. To generate among students an awareness of women's issues, human rights and environmental issues, so that they understand and respond constructively to these.
5. To sensitize students to look at the world from the perspective of the less privileged and to respond with concern and in a humane manner.
6. In the context of globalization, to foster in students a sense of national identity that is secular and multicultural, with respect and tolerance of all cultures and religions.
7. To encourage Christian students to develop their religious convictions in an atmosphere of respect for other faiths and for each individual's personal beliefs."

Annual Theme of the year 2021 – 22 : Hope, Courage and Resilience



Google map showing Sophia college and adjacent buildings



Rooftop Solar panels



A verdant green campus with a rich variety of flora and fauna





Photo courtesy – Dr Medha R., Dr Andrea C., Sr Patricia, Shreyas W.



Sophia College for Women, founded in 1941 is run by the Religious Sisters of the Sacred Heart of Jesus under the aegis of the Governing Body of the Society for the Higher Education of Women in India.

Since its inception, Sophia College, now in its 81st year, has been responding to the changing needs of women in our society. The aim has been to meet the demands of the new age learner by encouraging cognitive development with growth in wisdom, fusing a global perspective with local sensibility and self-reliance with a spirit of service.

Sophia College, today, is a NAAC re-accredited 'A' Grade college with a CGPA of 3.70 out of 4 in the third cycle(2015),was granted Autonomy in 2018 and DBT Star status in 2020 . The focus of the College is to provide quality higher education for women from junior college to the post-graduate level, with undergraduate courses in Arts, Science, Mass Media, and Information Technology, in addition to vocational training. The College aims to make Sophia educational experience vibrant and student centred. To that end, the College is equipped with a state-of-the-art Library and Information Centre, science laboratories, five computer laboratories, multiple audio-visual rooms, an instrumentation Room, a Convention Centre, Counselling Centre, Placement Cell, gymnasium, basketball and badminton courts.

Sophia College (Autonomous) is under Mumbai University. It is a degree College with two streams – Arts and Science. Junior College is also there. The College also runs PG and Doctoral programs. It offers B.A., B.A.SCJ, B. Sc., B.Sc. IT, M.A., M. Sc., Ph.D., PG Diploma programmes

Year 2021 – 2022

S. No.	Level	Streams	Number of Subjects
1.	Junior College	Arts	12
		Science	5
2.	Senior College Under graduate Degree programmes/ subjects	Arts	10
		BASCJ	1
		Science	7
		B.Sc.IT	1
3.	Senior College, Post graduate Degree programmes/ subjects	Arts	1
		Science	3+1
4.	Senior College, Post graduate Diploma	Science	1
5.	Senior College, Doctoral Programme	Science	3

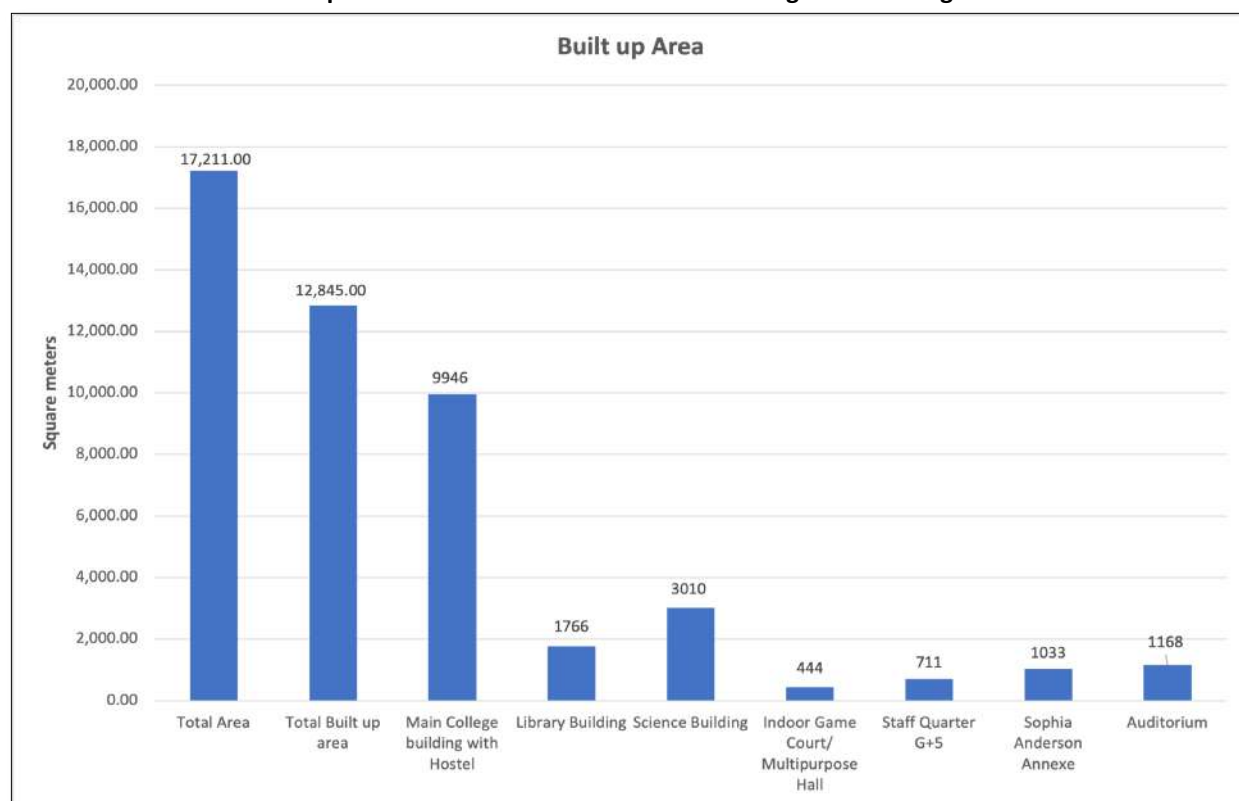
Infrastructure

Total Land Area of the Sophia Campus : 4.296 Acres/4.586 Acres
 Total Built up area. : About 3 Acres
 Approximate area under Green Cover : About an Acre
 Approximate percentage of Green Cover : About 25%

Built up Area of various Buildings

Location	Built up area (Square Meter)	Remarks
Total Area	17,211.37	Index figure 2% for built up
Total Built up area	12,845.46	
Main College building with Hostel	9946.00	
Library Building	1766.44	+ 155.60 = 1922.04 Sq. Meter
Science Building	3010.00	
Indoor Game Court/ Multipurpose Hall	444.80	
Staff Quarter G+5	711.40	
Sophia Anderson Annexe	1033.42	+332.20 = 1365.62 Sq. Meter
Auditorium	1168.00	
		18,545.32 including the floors

Built up areas of the various constructed buildings in the College



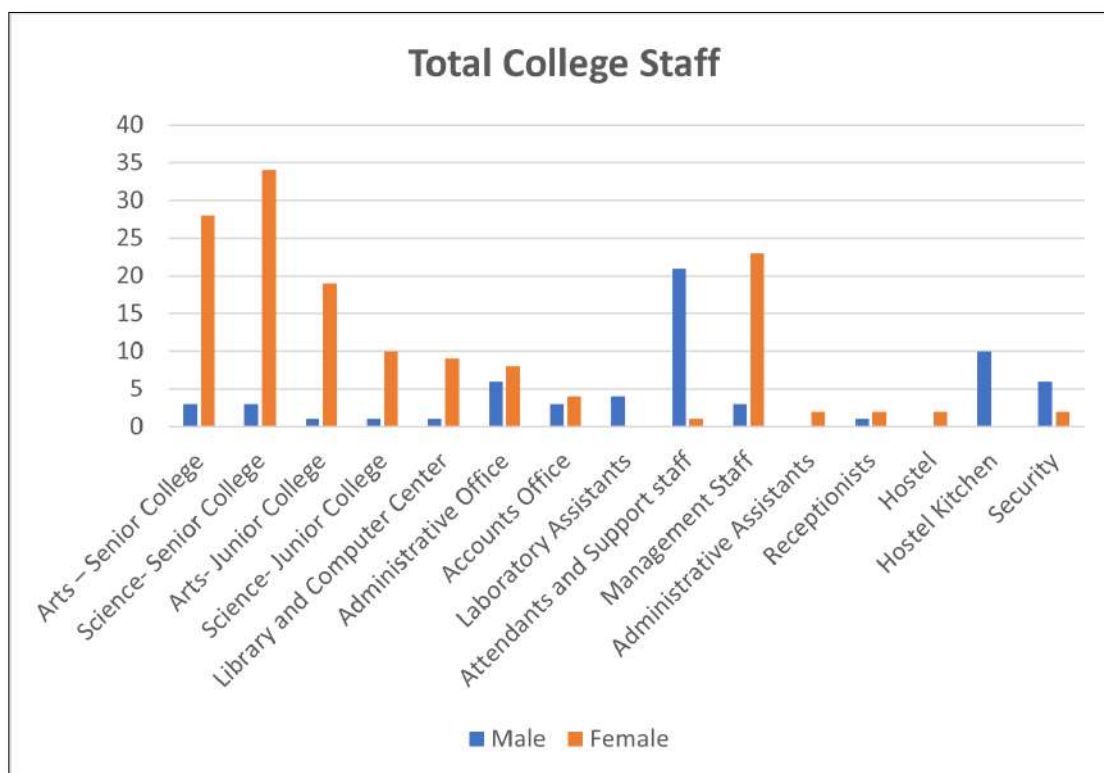
Data of Employees

Number of Employees (2021 – 2022)

S. No.	Category	Male	Female	Total
1.	Teaching Staff	8	91	99
2.	Nonteaching staff	54	53	108

Data of Employees category and gender wise

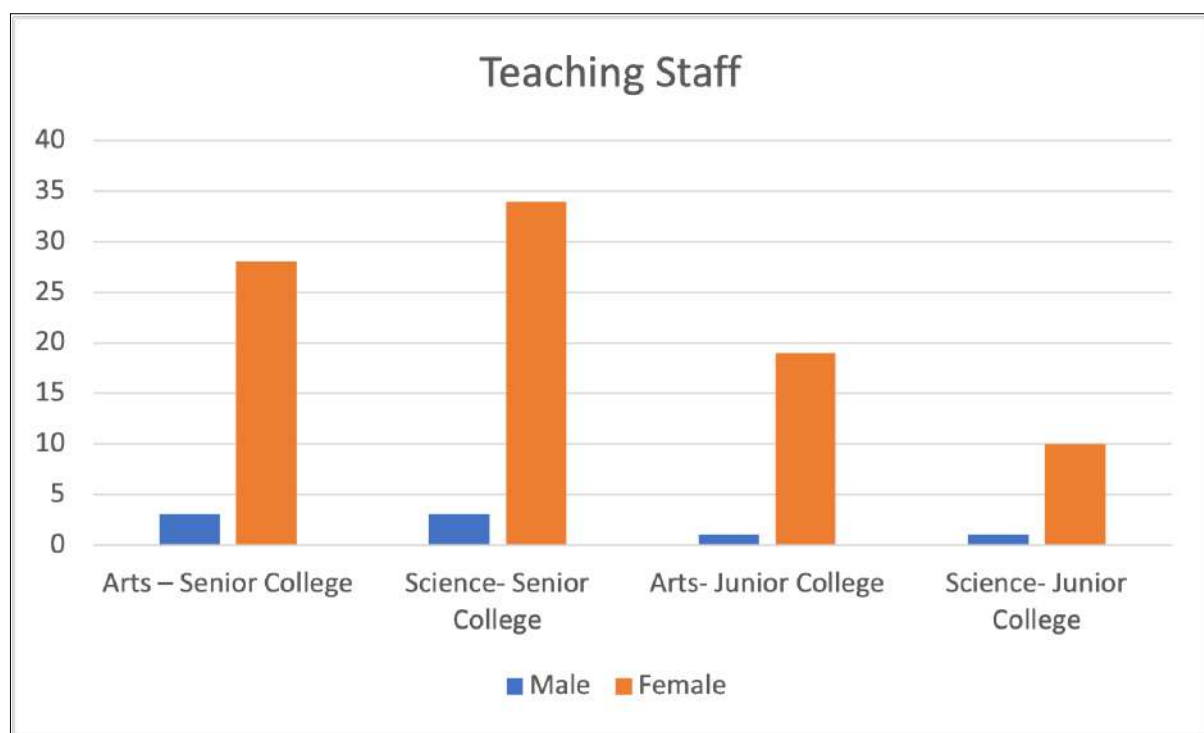
S. No.	Category	Male	Female	Total
1.	Arts – Senior College	3	28	31
2.	Science- Senior College	3	34	37
3.	Arts- Junior College	1	19	20
4.	Science- Junior College	1	10	11
5.	Library and Computer Center	1	9	10
6.	Administrative Office	6	8	14
7.	Accounts Office	3	4	7
8.	Laboratory Assistants	4	0	4
9.	Attendants and Support staff	21	1	22
10.	Management Staff	3	23	26
11.	Administrative Assistants	0	2	2
12.	Receptionists	1	2	3
13.	Hostel	0	2	2
14.	Hostel Kitchen	10	0	10



Gender wise distribution of employees

Number of employees - Teaching (2021-2022)

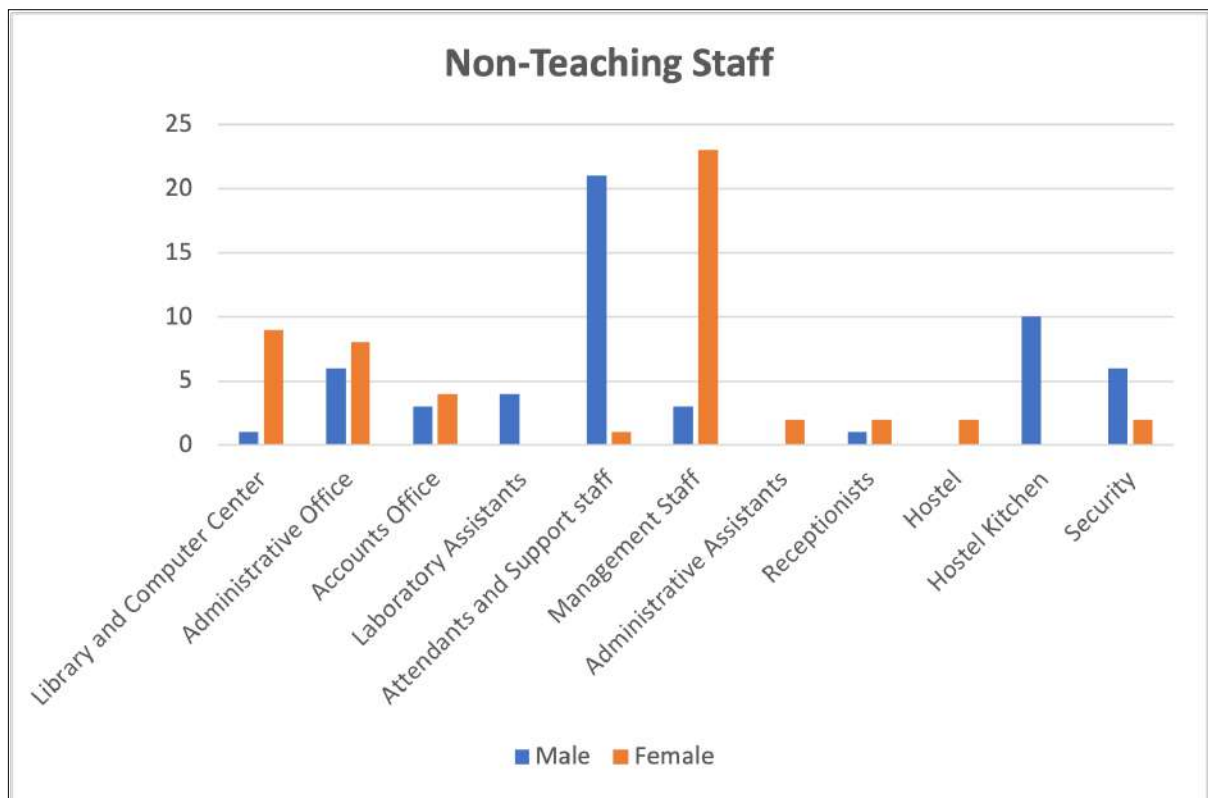
	Category	Male	Female	Total
1.	Arts – Senior College	3	28	31
2.	Science- Senior College	3	34	37
3.	Arts- Junior College	1	19	20
4.	Science- Junior College	1	10	11
	Total	8	91	99



Gender wise distribution of teaching staff

Number of employees – Non-teaching (2021-2022)

S. No.	Category	Male	Female	Total
1.	Library and Computer Center	1	9	10
2.	Administrative Office	6	8	14
3.	Accounts Office	3	4	7
4.	Laboratory Assistants	4	0	4
5.	Attendants and Support staff	21	1	22
6.	Management Staff	3	23	26
7.	Administrative Assistants	0	2	2
8.	Receptionists	1	2	3
9.	Hostel	0	2	2
10.	Hostel Kitchen	10	0	10
11.	Security	6	2	8
	Total	55	53	108



Gender wise distribution of non-teaching staff

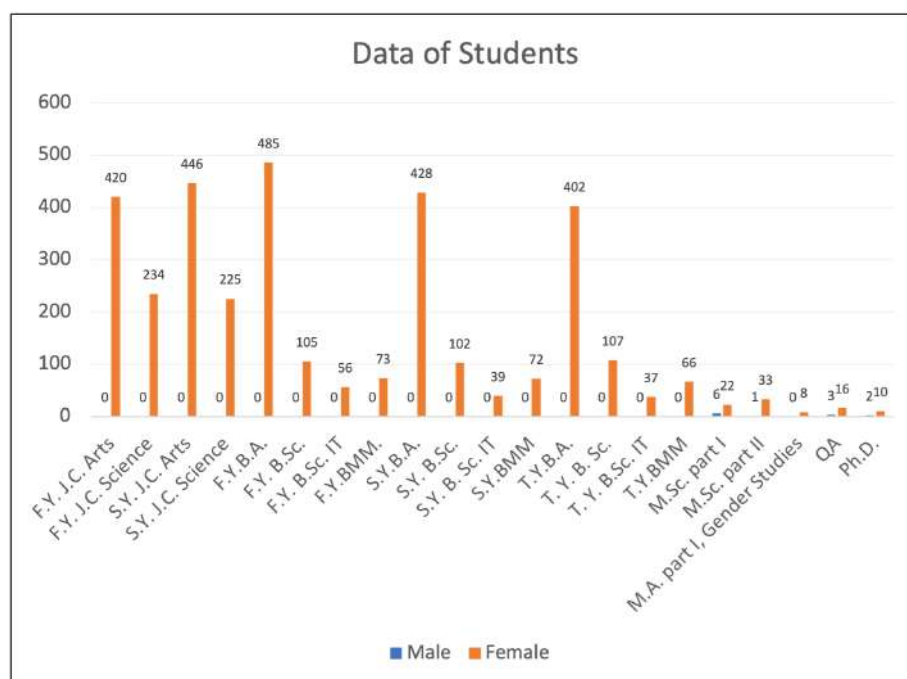
Apart from Teaching and non- teaching staff who are employed by the College there are other people who have their establishments in the College premises:

1. College Canteen – 14
2. Coffee shop 1 in the Canteen extension - 1
3. Coffee shop 2 near the driveway - 2
4. Book store - 3
5. Photocopying centre 1 in the Sophia Andersson Annexe - 2
6. Photocopying centre 2 near the driveway - 1
7. Members of families of teaching staff members in Gurukul
8. Members of families of support staff members in the staying on the campus quarters

Data of Students

Number of Students (2021 – 2022)

S. No.	Class	Male	Female	Total
1	F.Y. J.C. Arts	0	420	420
2	F.Y. J.C. Science	0	234	234
3	S.Y. J.C. Arts	0	446	446
4	S.Y. J.C. Science	0	225	225
5	F.Y.B.A.	0	485	485
6	F.Y. B.Sc.	0	105	105
7	F.Y. B.Sc. IT	0	56	56
8	F.Y.BMM.	0	73	73
9	S.Y.B.A.	0	428	428
10	S.Y. B.Sc.	0	102	102
11	S.Y. B. Sc. IT	0	39	39
12	S.Y.BMM	0	72	72
13	T.Y.B.A.	0	402	402
14	T. Y. B. Sc.	0	107	107
15	T. Y. B.Sc. IT	0	37	37
16	T.Y.BMM	0	66	66
17	M.Sc. part I	6	22	28
18	M.Sc. part II	1	33	34
19	M.A. part I, Gender Studies	0	8	8
20	QA	3	16	19
21	Ph.D.	2	10	12



Gender wise distribution of students

Areas for Green Audit

Refuse – Reduce – Reuse – Recycle – Replenish

Educational Goal 4 of Sophia College is:

“To generate amongst students an awareness of women’s issues, human rights and **environmental issues** so that they understand and respond constructively to these.”

With goal number four in mind the staff and students of the College endeavor/ strive towards making the campus eco- friendly. The various clubs of the College organize various activities to move forward towards a green Sophia.

One of the primary focus of Sophia College has been to inculcate environmental consciousness and sustainability amongst its stake holders. This approach encourages the staff and students to work towards Greening Sophia.

Every year a number of environment sensitization activities are initiated and the sensitization continues and sustains through different batches of students in the subsequent years. The primary focus is to continue to create awareness with a concerted effort.

A number of activities are organized to create awareness by various student clubs through:

- Save electricity campaign
- Save water campaign
- Anti-plastic campaign
- Campus cleaning drive
- Beach cleaning drive
- Waste segregation and kitchen composting
- Best out of waste and recycling
- Tree plantation drive in the locality
- Celebration of World Environment Day
- Activities on National Pollution Day

A. Energy Management

A conscious effort is made to create awareness amongst the stakeholders to save electricity. Labels have been displayed to conserve energy.

The new equipment and instruments are being purchased taking into consideration their star ratings. Air conditioners are used only where it is mandatory.

The College architecture with its high ceilings, cross ventilation and good illumination automatically reduces the use of lights and fans.

Save Electricity has been under taken by NSS to spread awareness about usage of alternate energies. The activities conducted were: Spreading awareness among children, a questionnaire was prepared and distributed on electricity consumption and conservation, poster making, T-shirt painting to promote the importance of saving electricity, comparison of College electricity bill .

Moving towards renewable energy source:

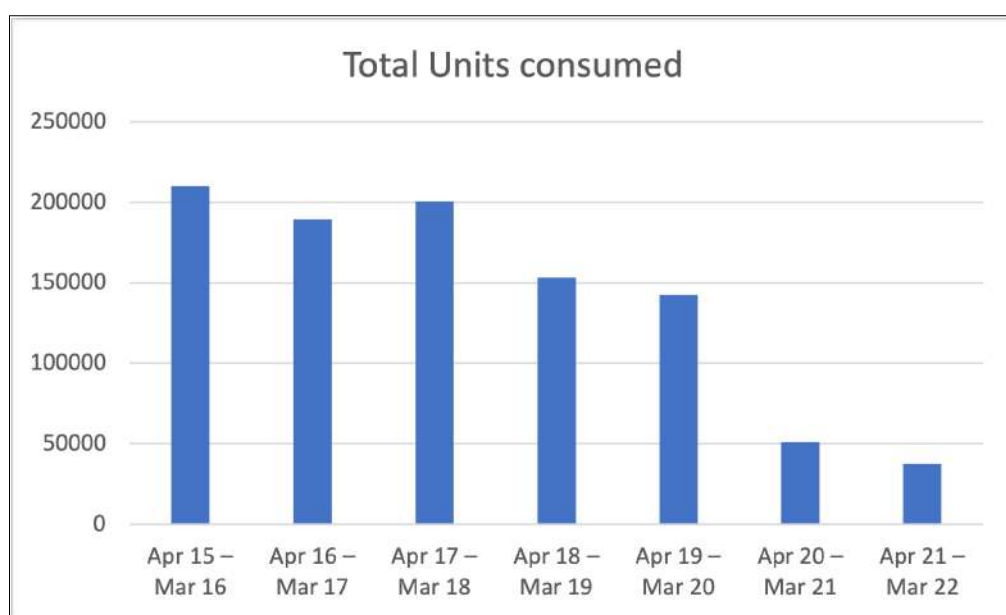
- By the end of 2016 and early 2017 solar panels of **15KWP** sponsored by Sunteck Realities Ltd. was set up on the terrace over the library. Solar inertia company executed the project.
- In June 2017, Godrej Agrovet sanctioned a solar project of 64.02KWP(**12.8 KWP** over the Science Building and **51.2 KWP** over the main building). Cleanmax company executed the project in May – June 2018.

The project was inaugurated by Mr Balram Yadav on 31st August, 2018 Installation of both the units of solar panel was accompanied by installation of Net Metering. The use of alternate renewable energy has sustained through the past years. The College has benefitted after installation of the solar panels in terms of significant reduction of annual consumption of electricity units(approximately about 25% annually). The Net metering system installed helps to divert the excess daily energy harnessed as against the daily consumption, to Brihanmumbai Electricity Supply and Transport Undertaking (BEST). This normally happens during the holidays and vacations, when the College is closed.

Table of Units consumed in the past seven years 2015- 2022(in the meters which were later connected to Solar Power)

Month & Year	Units consumed	
Apr 15 – Mar 16	210372	
Apr 16 – Mar 17	189554	15 KWP solar panels installed in Jan 17
Apr 17 – Mar 18	200708	
Apr 18 – Mar 19	153513	64 KWP solar panels installed in Jun 18
Apr 19 – Mar 20	142478	
Apr 20 – Mar 21	51096	Drop in consumption – predominantly online classes due to Covid
Apr 21 – Mar 22	37471	Drop in consumption – predominantly online classes due to Covid

Units consumed in the past seven years



Details of Air conditioners

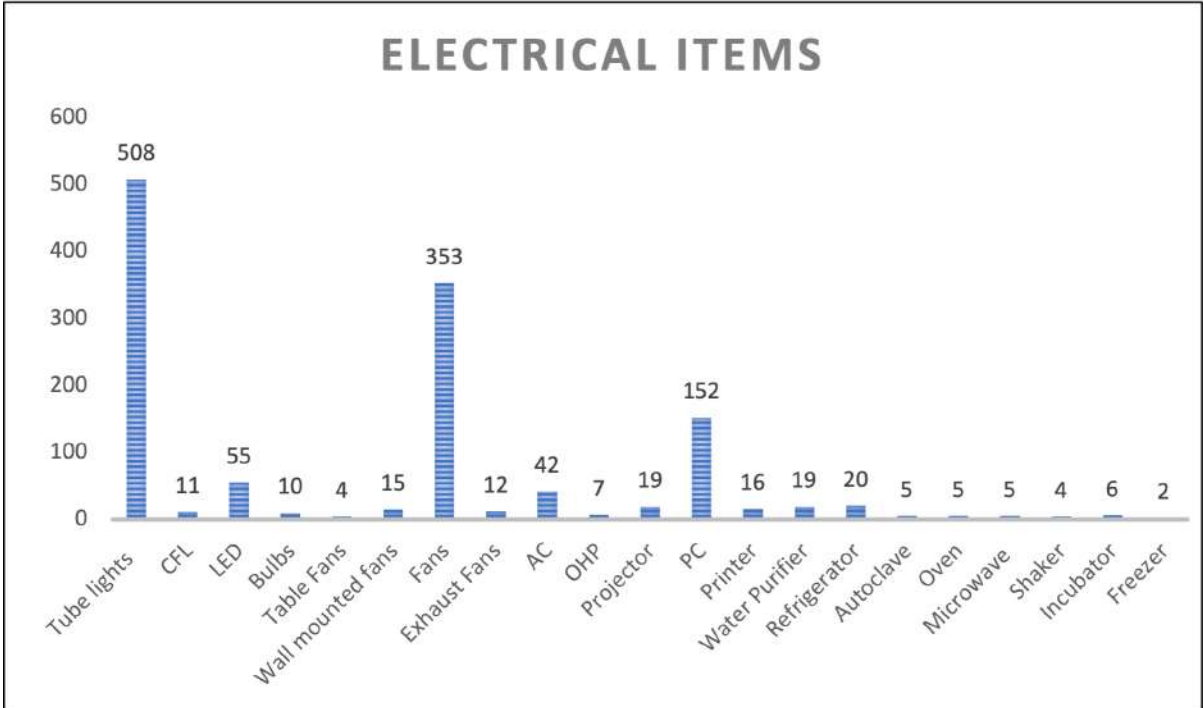
S. No.	Location of Air Conditioners	No. of AC's
1.	Arts Building	22
2.	Science Building	31
3.	Gurukul	4
4.	Sophia Andersson Annexe	13
5.	Guest Room	1

Details of LCD projectors

S. No.	Location of LCD projectors	Number
1.	Arts Building	5
2.	Science Building	10
3.	Sophia Andersson Annexe	16
4.	Library building	3

Details of Electricals

S. No	Items	Number
1	Tube lights: Labs 148 + 360 others	508
2	CFL	11
3	LED	55
4	Bulbs	10
5	Table fans	4
6	Wall mounted fans	15
7	Ceiling fans: Labs 79 + 274 others	353
8	Exhaust fans	12
9	OHP	7
10	Projector	34
11	Desktop computer	152
12	Printer	16
13	Water purifier	19
14	Refrigerator	20
15	Autoclave	5
16	Oven	5
17	Microwave	5
18	Shaker	4
19	Incubator	6
20	Air Conditioners	71



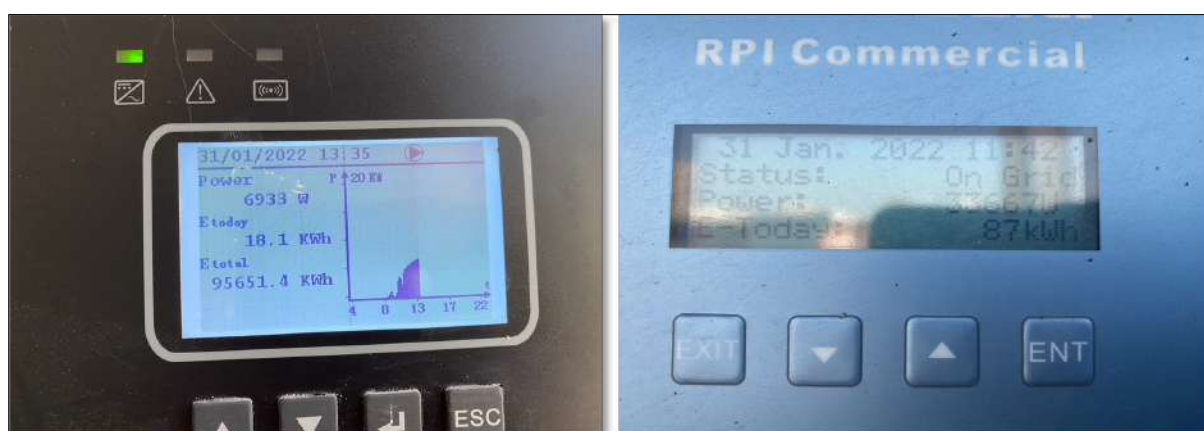
Number of electricals in the College



Solar panels – Main building



Solar panels



Meter reading display of the Solar Panels

B. Water Management

The Municipal water is supplied to the College. The use of water in the College is for drinking, cooking, gardening, bathing, washroom.

There is a conscious effort to reduce the usage of water in the wet laboratories. Students are encouraged to be frugal with water usage while performing experiments. Semi micro analysis practical have been introduced in Chemistry to reduce use of chemicals and water. Leaky taps are immediately attended to.

Labels for water saving have been displayed.



In order to spread awareness on the significance of saving water, activities such as : essay writing on saving water, photography contest, spreading awareness through a video, questionnaire distribution, movie Screening and discussion, peace walk with posters, oath to save water, session on rainwater harvesting.

Rain water harvesting was tried at a very basic level. The coliform count was found in the water after analysis. Efforts to install a borewell and reach the water table was not successful. It is proposed to try boring once again and direct all the rain water to the common water table i.e. basically recharge the ground water.

Data of the water storage tanks

No.	Building	Location	Number	Under -ground/ Over ground	Type	Capacity (Litres)
1	Main College		1	UG	Concrete	1,62,000
			1	OG	Concrete	65,000
			3	OG	SAA	15,000
		Room 1	1	OG	Concrete	19,000
		Terrace room 18,19,20,	4	Upper level		26,000
		KP Community Terrace	2			
2	Domestic Quarters		1		Metal	1,800
3	Science Building	Sc VP office	1	GF	Concrete	28,000

			1	OG, Terrace	Concrete	40,000
4	Gurukul		1	UG	Concrete	14,463
5	Nursery Ground		1	OG	Concrete	25,704
6	Nursery Ground (Near Poly technic)		1	OG	Concrete	54,054
7	Behind Bhabha Hall		1	OG	Concrete	25,980
8	Behind Bhabha Hall		1	OG	Metal	12,960
9	Behind Bhabha Hall		1	OG	Metal	12,960
10	Side of Bhabha Hall		4	OG	Sintex	40,000
11	Nursery		2	OG	Sintex	20,000

The Schedule of water tank cleaning – Have not been cleaned for the last five years except two.

Data of Electric pumps for water

S. No.	Location of Electric pump	Number	Power (HP)
1.	Outside Kitchen	2	1.5
2.	Behind Staff Canteen	2	1.5
3.	Behind Science Building	2	1.5

Data of Water Purifiers in the College

Sr. No.	Broad location of Water filters and Purifiers	Exact location	Capacity (litres/ hour)	Remarks
1.	Arts Building	Basement Gym	120	19 water purifiers
		GF Staff Tea Room	240	
		GF Staff Dining Room	120	
		GF College Kitchen	240	
		FF Hostel 30 corridor	120	
		SF Staff Room	120	
		SF Corridor outside class room no 8	120	
		TF Hostel 40 corridor	120	
2.	Science Building	FF near the lift	120	
		TF Main Passage	120	
3.	Sophia Andersson Annexe	GF	120	

Chemical Tests for Potability of Water By Students

On 22nd February 2022, water samples were collected from various locations within the college, to analyse the potability using the INDION water potability test kit, and the results were as follows:

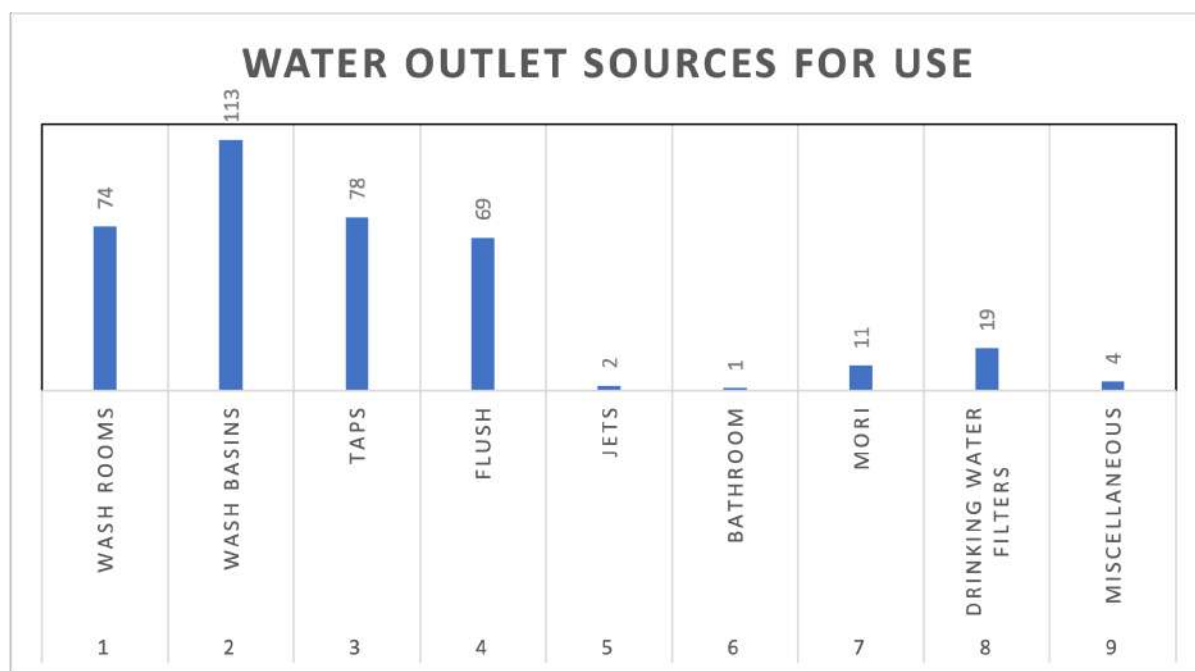
Samples (22.02.22)	pH	Alkalinity (ppm)	Hardness (ppm)	Chloride (ppm)	Fluorides (ppm)	Iron	Nitrate	Chlorine
Canteen	7	50	50	50	0.0	N E G A T I V E	N O T D E T E C T E D	N O T D E T E C T E D
Library	7	50	50	50	0.0			
Science Building	8.5	100	100	50	0.0			
Hostel Kitchen	7.5	50	100	50	0.0			
Women's Centre	7	50	100	50	0.0			
Gym	7.5	50	75	100	0.0			

From the above observations, it was concluded that water samples collected from various locations in Sophia College have all the minerals within permissible limits and were deemed to be safe for human consumption.

The College proposes to give the water samples for analysis of potability to NABL accredited Public Testing Laboratory.

Data of various water outlet sources for use

S. No	Water outlet sources for use	Number
1	Wash Rooms	74
2	Wash Basins	113
3	Taps	78
4	Flushes	69
5	Jets	2
6	Bathroom	1
7	Mori	11
8	Drinking water Filters	19
9	Miscellaneous	4



Bar chart of various water outlet sources for use

Sophia College Quarterly Water Bills paid to MCGM

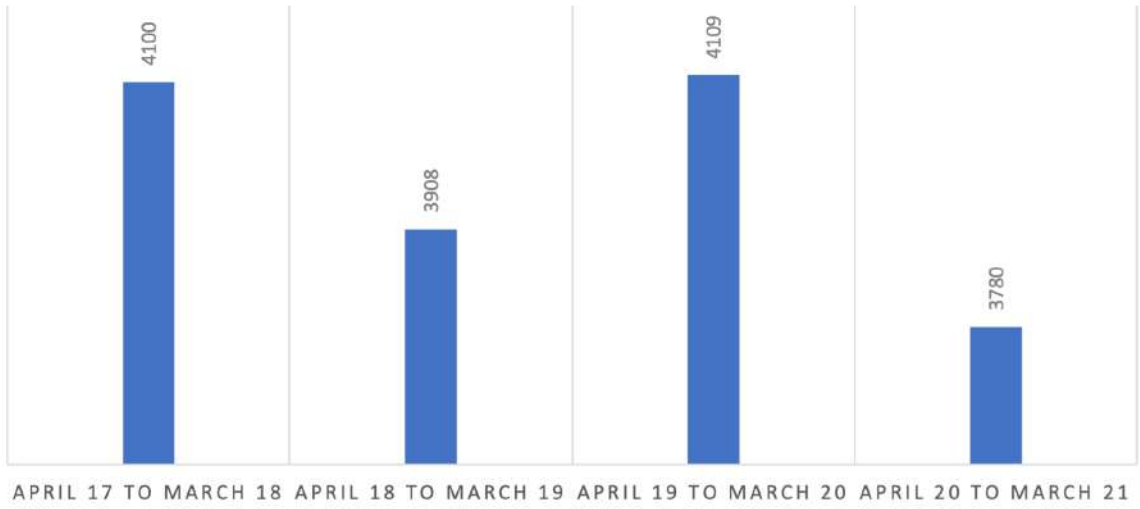
S. No.	Bill for the tenure	Meter no.	Rate per KL (Rs.)	Actual consumption (KL)	No. of Days	Bill amount (Rs.)
1.	5 th April'17 to 3 rd July 17	9158244	4.91	713	89	6786
2.	3 rd July'17 to 6 th Oct'17	9158244	4.91	1177	95	11322
3.	6 th Oct'17 to 6 th Jan'18	9158244	4.91	1040	92	10788

4.	6 th Jan'18 to 6 th Apr'18	9158244	4.91	1170	90	10733
5.	6 th Apr'18 to 9 th Jul'18	9158244	5.09	1222	94	10724
6.	9 th Jul'18 to 8 th Oct'18	9158244	5.09	863	91	9586
7.	8 th Oct'18 to Dec – Jan 19'	9158244	5.09	901	88	8546
8.	4 th Jan'19 to 4 th Apr'19	9158244	5.09	922	90	7978
9.	4 th Apr'19 to 8 th Jul'19	9158244	5.22	903	95	9842
10.	8 th Jul'19 to 5 th Oct'19	9158244	5.22	878	89	8663
11.	5 th Oct'19 to 4 th Jan'20	9158244	5.22	1769	91	17198
12.	4 th Jan'20 to 3 rd Apr'20	9158244	5.22	559	91	5711
13.	3 rd Apr'20 to 3 rd Jul'20	9158244	5.64	566	91	5853
14.	3 rd Jul'20 to 5 th Oct'20	9158244	5.64	1092	94	11220
15.	5 th Oct'20 to 4 th Jan'21	9158244	5.64	1058	91	10894
16.	4 th Jan'21 to 5 th Apr'21	9158244	5.64	1064	91	11202
17.	5 th Apr'21 to 6 th Jul'21	9158244	5.94	1097	92	11645
18.	6 th Jul'21 to 6 th Oct.'21	9158244	5.94	1272	92	13845
19.	6 th Oct.'21 to 5 th Jan'22	9158244	5.94	1272	91	13855
20.						

Sophia College Annual Water Bills paid to MCGM

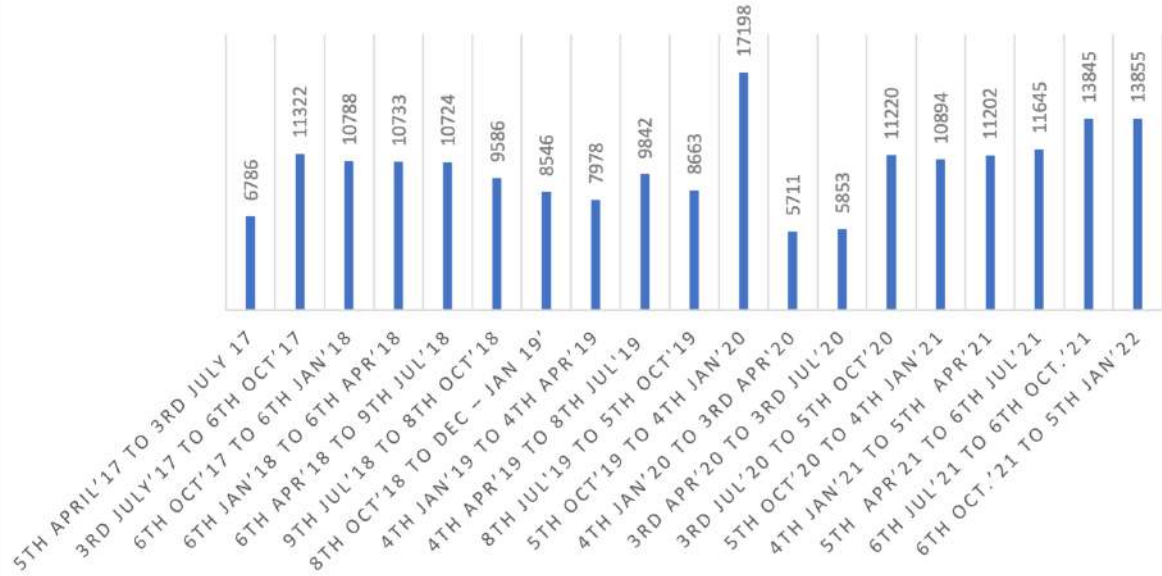
S.No.	Bill for the tenure	Meter no.	Rate per KL In Rs	Actual consumption in KL	No. of Days	Bill Amount In Rs
1.	5 th April'17 to 6 th Apr'18	9158244	4.91	4100	366	39629
2.	6 th Apr'18 to 4 th Apr'19	9158244	5.09	3908	363	36864
3.	Apr' 19 to Apr'20	9158244	5.22	4109	366	41414
4.	3 rd Apr'20 to 3 rd Apr'21	9158244	5.64,5.64,5.64,5.22	3780	366	39169
5.	5 th Apr'21 to 5 th Apr'22	9158244	5.94	1097+1272+1273+	92+92+91	11645+ 13845+ 13855+

ANNUAL CONSUMPTION OF WATER IN KL

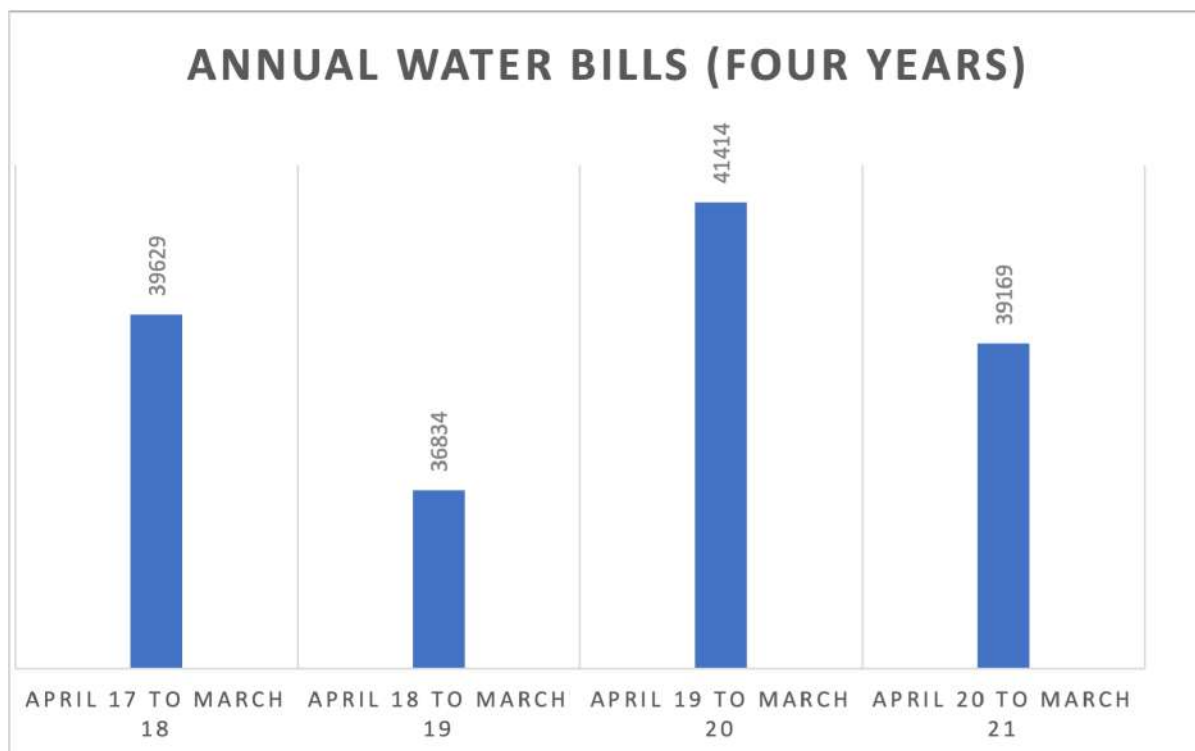


Bar chart of Water Bills paid to MCGM for the last 5 years

WATER BILLS OF LAST 5 YEARS



Annual Water consumption for the last 5 years



Annual Water Bills paid to MCGM for the last 4 years

C. Materials Management

1. Chemical pollution – To reduce the usage of chemicals in the laboratory, the department of Chemistry has introduced some green experiments at the second year level.
2. E - waste management – e-waste awareness sessions and e – waste collection drive is undertaken by various student clubs of the College. In the first effort about 5kgs were collected. The College was issued a green certificate by Eco Friend Industries.
3. Reducing use of plastics – The Canteen and the coffee shops have been requested by the College Union Committee to reduce the use of plastics. The plastic cups, straws, spoons, food packaging materials have been replaced by environment friendly materials.
4. Bisleri project was undertaken to encourage recycling of plastic. The ‘Bottles for change’ is an initiative by the Bisleri International Limited to create awareness on plastic recycling. This project entailed plastic collection every 4 months, for safe disposal. The staff and students submitted the plastics that they collected throughout the months. With the objective of reducing plastics, the volunteers performed skits in the first year and second year classes. They also made posters related to the topic to spread awareness.
5. Moving towards paperless functioning – The various departments are consciously trying to reduce the usage of paper for official documentation work. Students are encouraged and advised to reuse the posters of various college events by using both sides of the paper.
6. Clean campus – The College Union Committee members took up the role of campus cops and made the students aware of ‘mission clean campus’ to maintain the clean environment of the College.

D. Waste Management

The College has over the years tried many ways of Waste Management which included segregation of dry non- biodegradable and wet biodegradable waste and thereafter composting and vermicomposting. The traditional methods were found not to be sustainable on a large scale. Approximately 70 to 80 Kg waste is generated daily from the College Canteen and Hostel kitchen when the College is fully functional. To overcome the problem the College has purchased a Bio composter of 100 Kg capacity which reduces the wet waste by 90%. The compost generated is utilized in enriching the soil of Sophia College garden. Excess amount is for the staff to use.



Nevertheless the various clubs of the College and College Union Council continue to create awareness through various activities about segregation of wastes and small scale composting among the students.



Bio composter turns wet garbage into compost

Shri. Vishvas Pandurang Mote
Assistant Commissioner, D' Ward

MUNICIPAL CORPORATION
OF GREATER MUMBAI
मुंबई नगरपालिका

Office of the Assistant Commissioner
D' Ward, Municipal Office Building,
Jobanputra Compound, Grant Road (W),
Mumbai - 400 007.
Tel. No. : 2366 1426 Extn. - 301
Personal : 23665201
Fax No. : 2381 0386
Mobile No. : 9167494003

Date

Sub: Seminar on Environmental & Waste Management awareness,
Public Health.
And
School Administration's Expectation from civic administration.

Dear Madam / Sir,

As we all are aware we have taken our planet and the Earth for granted and all of us in some way or the other have contributed to the depletion of natural resources and destruction of nature and our environment. Global warming has caused and continues to cause natural calamities across the world. The time has come for each and every one of us to look at our own carbon footprint and to take responsibility for restoring the balance in nature. Unchecked & frequent changes in daily climate have caused rise in dengue and malaria diseases in recent times.

We are happy to inform you that the D Ward BMC office in Mumbai has started taking steps towards protecting the environment by keeping the city of Mumbai clean.

The BMC D Ward office and Global Green Resource Foundation (GGRF) would like to invite 1 or 2 senior teachers / representatives / student representatives for a seminar, where GGRF will be sharing information and creating awareness about the importance of conscious nature and the environment and what practical steps each one of us can take to bring about a change.

Our learned & dedicated Medical officer Health & Pest Control Officer will share information to arrest spreading of Dengue, Malaria & Leptospirosis. These learning will then be shared with your students who can be taught to become more aware and take positive actions and steps in their homes and city to reduce, reuse and recycle waste material including paper, plastic etc.

I invite 1-2 representative to attend the seminar / workshop on 11.10.2018 at 9:30 am mentioned below:

Conference Room 2nd floor, D Ward BMC Office
Jobanputra Compound, Nana Chowk,
Grant Road (W),
Mumbai - 400 007.

Sincerely,
Shri. Vishvas Pandurang Mote

E. Ecology Management

Sophia is fortunate to have a well maintained and nurtured verdant green campus, which attracts a lot of fauna. The greenery around and the well ventilated campus ensures a healthy surrounding for all its stake holders.

Sophia College had established a Herbal Garden in the year 2003.

- More than 125 genera of flowering, ornamental and fruiting plants. There are many species and varieties within each genus. **The list is attached as appendix 1.**
- 63 trees have been identified, labelled and numbered.
- An exclusive herbal garden with identified plants of more than 50 different genus.
- There is wide variety of fauna in the campus. The flowers in the garden attract a wide variety and number of butterflies.



The unidentified gets identified

F. Safety Management

- About 200 CCTV cameras
- Total nine security guards
 - Three at the main gate and two at the side gate in the day time,
 - Two at the main gate at night when the side gate is locked.
- Railings on the staircases for safety.
- Ramps for the senior citizens.
- Girls hostel in the premises.
- Teaching and support staff quarters in the campus.
- The Science Building is equipped with smoke detectors and smoke alarms
- Fire extinguishers are installed
- First aid boxes – at wardens desk, in the sick room, Women’s centre
- Session on first aid, disaster management
- Emergency Telephone Numbers are displayed

S. No.	Location of Fire Extinguishers	Number	Capacity (kg)
1.	Reception	1	4
2.	Accounts Office/Admin Corridor	1	4
3.	Warden/ Principal’s office	1	4
4.	College Kitchen	1	5
5.	Hostel 30 corridor	1	4
6.	Hostel 40 corridor	1	4
7.	Room 13 & 14	1	4
8.	Room 7 & 4 corridor	1	4
9.	Room 1&8 corridor	1	4
10.	Room 19	1	5
11.	QA Corridor	1	2
12.	Canteen Extension	1	4/6
13.	Canteen Extension	1	4/6
14.	FF Computer Lab	1	6
15.	FF Computer Lab	1	4
16.	Staff Room	1	5
17.	Library	1	4/6
18.	Library	1	4/6
19.	Women’s Centre GF	1	5
20.	B.Sc.IT	1	4
21.	Gym	1	
22.	MPH	1	
23.	SRTC	1	
24.	Women’s Centre FF	1	6
25.	B.Sc.IT TF	1	
26.	Sc Bldg. Cabin	1	

S. No.	Location of LPG Gas Cylinders	Number
1.	Science Building common pipeline	20
2.	Life Science and Biology	7
3.	Food lab 18,19,20	2
4.	QA	4
5.	College Kitchen	10
6.	Canteen	9
7.	Hostel	Nil
8.	KP Community	2
9.	College Community	2
10.	Gurukul	
11.	Support staff Quarters	
12.	Guest room 1 Fatima Sadan	1
13.	Guest room 2	

G. Green activities organized by the various clubs of the College to sensitize and create awareness amongst the stake holders

S. No.	Year	Club	Activity organized
1	2014-15	NSS	<ul style="list-style-type: none"> • Greenesha project
		Nature Club	<ul style="list-style-type: none"> • Revived the student maintained garden, de-weeding of the triangular terrace
		Sigma Sophia	<ul style="list-style-type: none"> • Eco Rangoli competition • Tree Plantation Drive
		SSRI	<ul style="list-style-type: none"> • Animal welfare • Tree Plantation Drive, adopted a plant or tree • Spot – fix - Cleanliness
2	2015-16	NSS	<ul style="list-style-type: none"> • Garden project • Tree plantation at Aarey • Beach cleaning activity at Girgaun • CAMPUS Cops – on campus Swachha Bharat initiative • Fire safety talk with Zoology • World Wetland Conservation day
		Nature Club	<ul style="list-style-type: none"> • Best out of waste competition • Paper recycling drive
		SSRI	<ul style="list-style-type: none"> • Sanitary Napkin Collection Drive
3	2016-17	NSS	<ul style="list-style-type: none"> • Van mahotsav week • Swachha Bharat: cleanliness of the College Campus and the surrounding areas • Rally on anti polythene drive • Eco club – recycling workshop, e-waste management, save Sahyadri

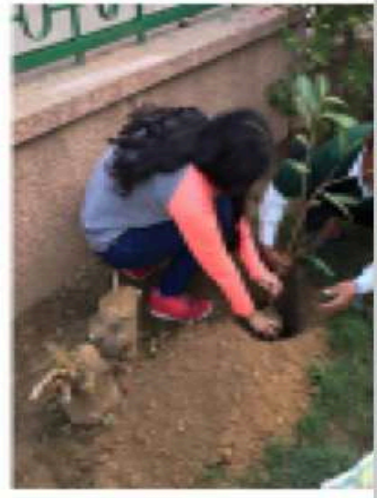
			<ul style="list-style-type: none"> • Save electricity and save water • Disaster Management, two day workshop • Youth for cleanliness • Health and hygiene
		Sigma Sophia	•
		Nature Club	<ul style="list-style-type: none"> • Film on Global Warming • Paper collection and recycling
4.	2017-18	NSS	<ul style="list-style-type: none"> • Swachha Bharat : cleaning drive, Save electricity and water- short film • Waste to Compost • Eco club – e-waste • Disaster Management club • Health and Hygiene
		Sigma Sophia	<ul style="list-style-type: none"> • E-waste collection • Segregation of paper and plastic waste • With SSRI - Spectacle frame collection
		Nature Club	<ul style="list-style-type: none"> • Movie Below Eight • Essay writing on Climate Change • Paper recycling drive
		SSRI	• Sanitary Napkin Dispenser drive with ELS
5.	2018-19	NSS	<ul style="list-style-type: none"> • Van Mahotsav 7.7.18 planting saplings • Swachha Bharat Project – Kitchen waste segregation and its conversion to compost • NSS&SSRI : Collection of banned plastic items and submission to BMC • Bags from used clothes
		Sigma Sophia	<ul style="list-style-type: none"> • Sigma and Nature club: E – waste collection drive • Hands on session on Bioplastics
		Nature club	• Paper drive
4.	2019-20	NSS	<ul style="list-style-type: none"> • Campus cleaning • Survey on Waste segregation and management • E Waste Collection drive • Bisleri Project- plastic recycling • Tree Plantation Project • Paper bags from newspapers • Save electricity • Save water project • World Environment day
		Sigma Sophia	<ul style="list-style-type: none"> • Talk on E waste Disposal • E waste Collection drive
		Nature Club	<ul style="list-style-type: none"> • Beach Clean - up drive • E waste Collection drive
		SSRI	•
5.	2020-21-22	NSS	<ul style="list-style-type: none"> • On the occasion of World Nature and Conservation Day, the volunteers carried out a tree plantation drive and planted various saplings in their residential areas • Beach clean up at Girgaum Chowpatty • National Pollution Day: Best out of waste, poster making, 2nd to 6th December 2021

			<ul style="list-style-type: none">• As the end of the year drew near, Save Water(6th to 11th February 2022) and Save Electricity(1st to 7th February 2022) projects were organised to spread awareness. The volunteers educated their residential societies and relatives on the importance of saving electricity and water and shared tips to achieve the same.• Dec 2021 – NSS and global green resonance foundation – plastic collection drive• Sep 29,21 - NSS and global green resonance foundation – Webinar by Mr. Ajay Rajpoot on plastic waste recycling and management• Jul 24,21 NSS with Greening Bharat NGO webinar on zero waste lifestyle by Ms. Garima Nirmal and Ms. Preeti Bajeta
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Tree planting by NSS

Tree Plantations – Amarsons, Societies



Bisleri project – Plastic recycling and beach cleaning by NSS



Anti-plastic Campaign



Waste segregation and kitchen composting





Campus cleaning by NSS students and Session on E- waste awareness & collection of E- waste by Sigma Sophia club

E – waste disposal certificate



efi **ECO FRIEND INDUSTRIES**
10 Maya, S College St., Dadar (W),
Mumbai 400028, Maharashtra, INDIA

MPCB / CPCB Authorized E-Waste Disposal Facility
MPSB Consent No. BO/MPCB/RO(HQ)/R/B - 1703000632 Date 14/03/2017

Green Certificate

for E-Waste Disposal

Certificate Sr. No.: 145 / 12019

This is to certify that
M/s. Sophia College
Address: B Desai Road
Road name: _____

City: Mumbai State: Maharashtra
Pin Code: 400026 Country: INDIA has disposed 15 Kg (in figures)
fifteen Kg (in Words)
of Electronic/Electrical Waste with Eco Friend Industries on dt. 12/12/2019

Issued by _____
For and on behalf of
ECO FRIEND INDUSTRIES

H. Other sensitization activities

1. To commemorate 150 years of Mahatma Gandhi many different activities were organized by the College to promote his ideologies. Amongst many one was Khadi Fashion Show. The revolutionary cloth, in these turbulent times, is a solution for the major environmental crisis that the earth is facing. With more emphasis on sustainability in the textile industry, embracing eco-friendly and consciously weaved clothes is a step forward. Khadi has low carbon footprint as it requires limited electricity and no energy for its manufacturing. A meter of khadi fabric consumes three litres of water, while one meter of mill-produced fabric requires 55 litres of the natural resource. Hence, the use of khadi is a solution to environmental sustainability.



2.
 - a) Junior College Science and Arts students have Environmental Sciences as one of their subjects.
 - b) Department of Life Sciences have two papers on Environmental Sciences as a part of their Applied Component subject at the third year level. All the students do project work on environment as a mandatory part of their syllabus.
 - c) Many UG and PG students and staff of various departments have undertaken environmental survey and research with an objective of improving our ecosystem.
 - d) For more than a decade now every year the Department of Life Sciences has been designing and printing Calendars, book marks, separators, cards, envelopes, file covers, coasters, table mats depicting the flora and fauna of Sophia College with their identification.



Allamanda cathartica - commonly known as Golden trumpet. It belongs to the family Apocynaceae.

Sophia College, established in the year 1941, is an institution committed to the cause of higher education for women, ensuring their integrated development and empowerment. It has been awarded a NAAC rating of 3.7 points out of 4 and an A grade. Subsequently the college attained autonomous status in July 2018. The academic programs offered in the college are specially designed for students to develop critical thinking and leadership skills which help them to push boundaries to succeed both professionally and personally. The college campus is verdant with trees, shrubs and herbs of both medicinal as well as ornamental value and provides an environment conducive to experiencing biodiversity first hand, a refreshing diversion from the academic rigour that the courses demand.

SOPHIA COLLEGE
(AUTONOMOUS)

NAAC Reaccredited 'A' Grade (3rd cycle) with an 'A' (2013)

Hibiscus rosa-sinensis - commonly known as shoe flower. It belongs to the family Malvaceae.

Sophia College, established in the year 1941, is an institution committed to the cause of higher education for women, ensuring their integrated development and empowerment. It has been awarded a NAAC rating of 3.7 points out of 4 and an A grade. Subsequently the college attained autonomous status in July 2018. The academic programs offered in the college are specially designed for students to develop critical thinking and leadership skills which help them to push boundaries to succeed both professionally and personally. The college campus is verdant with trees, shrubs and herbs of both medicinal as well as ornamental value and provides an environment conducive to experiencing biodiversity first hand, a refreshing diversion from the academic rigour that the courses demand.

SOPHIA COLLEGE
(AUTONOMOUS)

NAAC Reaccredited 'A' Grade (3rd cycle) with an 'A' (2013)

I. Travel :

- Most of the students travel by the local transports – bus or local train depending on their residential location. Few also travel by their two wheelers.
- Most staff also avail of local transports for travel.
- About 15 staff members travel by their own four wheeler private vehicle. Few staff members also travel by their own two wheelers.
- There is one staff electric vehicle in the College.
- Travel from College to Station or Station to College is under taken by bus, shared taxi or walking.

Future Plans:














- Focussed effort on conservation of paper
- Mug initiative in the staff canteen to reduce use of paper mugs
- Promote car -pooling for travel
- Bore well to recharge water table
- Energy saving bulbs
- Flush adjustment for dual water dispensing
- Motion sensor lights
- Mock Drills
- Training Calendar for staff and students
- Testing for Potability of water by NABL accredited laboratory


















Acknowledgement:

















- Dr Sr Ananda Amritmahal
- Dr Anagha Tendulkar Patil
- Sr Teresa Pereira
- IQAC
- SHEWI Office
- Accounts Office
- Administrative office


















Appendix 1


















List of plants in Sophia College Campus

















S. No.	Name of the plant	T	H/M	F	O	FV	Remarks
1.	Common name: Rosary Pea Botanical name: <i>Abrus precatorius</i> Family: <i>Fabaceae</i> (Pea family)						
2.	Common name: Fire Dragon Botanical name: <i>Acalypha godseffiana</i> Family: <i>Euphorbiaceae</i> (Castor family)						
3.	Common name: Copperleaf, Green Acalypha / Red Acalypha Botanical name: <i>Acalypha wilkesiana</i> Family: <i>Euphorbiaceae</i> (Castor family)						
4.	Common name: Chikoo, Sapodilla Plum Botanical name: <i>Achras zapota</i> Family: <i>Sapotaceae</i> (Mahua family)						
5.	Common name: Malabar Nut Botanical name: <i>Adhatoda vasica</i> Family: <i>Acanthaceae</i> (Ruellia family) Synonyms: <i>Justicia adhatoda</i>						
6.	Common name: Desert Rose, Adenium Botanical name: <i>Adenium obesum</i> Family: <i>Apocynaceae</i> (Oleander family)						
7.	Common name: Bush Allamanda, Oleander-Leaved Allamanda Botanical name: <i>Allamanda neriifolia</i> Family: <i>Apocynaceae</i> (Oleander family)						
8.	Common name: Golden Trumpet Vine, Allamanda Vine Botanical name: <i>Allamanda cathartica</i> Family: <i>Apocynaceae</i> (Oleander family)						
9.	Common name: Elephant's ear Botanical name: <i>Alocasia amazonica</i> , Family: <i>Araceae</i> (Arum family)						


















10.	<p>Common name: Aloe vera, Gheekumari, Khorpad</p> <p>Botanical name: <i>Aloe vera</i></p> <p>Family: <i>Asphodelaceae</i> (Aloe family)</p> <p>Synonyms: <i>Aloe barbadensis</i>, <i>Aloe indica</i>, <i>Aloe vulgaris</i></p>						
11.	<p>Common name: Shell Ginger, Pink porcelain lily</p> <p>Botanical name: <i>Alpinia zerumbet 'Variegata'</i></p> <p>Family: <i>Zingiberaceae</i> (Ginger family)</p>						
12.	<p>Common name: Devil's Tree, Saptaparni</p> <p>Botanical name: <i>Alstonia scholaris</i></p> <p>Family: <i>Apocynaceae</i>(Dogbane family)</p>						
13.	<p>Common name: Flamingo flower, Anthurium</p> <p>Botanical name: <i>Anthurium andraeanum</i></p> <p>Family: <i>Araceae</i> (Arum family)</p>						
14.	<p>Common name : Christmas tree</p> <p>Botanical name: <i>Araucaria columnaris</i></p> <p>Family: <i>Araucariaceae</i></p>						
15.	<p>Common name: Bread Fruit</p> <p>Botanical name: <i>Artocarpus altilis</i></p> <p>Family: <i>Moraceae</i> (Mulberry family)</p>						
16.	<p>Common name: Jackfruit, Katahal, Phanas</p> <p>Botanical name: <i>Artocarpus heterophyllus</i></p> <p>Family: <i>Moraceae</i> (Mulberry family)</p> <p>Synonyms: <i>Artocarpus integer</i>, <i>Artocarpus integrifolia</i>, <i>Artocarpus jaca</i></p>						
17.	<p>Common name: Asparagus Fern, Sprenger Asparagus</p> <p>Botanical name: <i>Asparagus densiflorus</i></p> <p>Family: <i>Asparagaceae</i> (Asparagus family)</p> <p>Synonyms: <i>Asparagus aethiopicus</i></p>						
18.	<p>Common name: Neem</p> <p>Botanical name: <i>Azadirachta indica</i></p> <p>Family: <i>Meliaceae</i> (Neem family)</p> <p>Synonyms: <i>Melia azadirachta</i>, <i>Antelaea azadirachta</i></p>						
19.	<p>Common name: Buddha Belly Bamboo</p> <p>Botanical name: <i>Bambusa vulgaris var. waminii</i></p> <p>Family: <i>Poaceae</i> (Grass family)</p> <p>Synonyms: <i>Bambusa vulgaris</i></p>						















20.	<p>Common name: Ceylon spinach, Indian spinach, Malabar Spinach, Vine spinach •</p> <p>Botanical name: <i>Basella alba</i></p> <p>Family: <i>Basellaceae</i> (Basella family)</p>						
21.	<p>Common name: Dwarf White orchid tree, Dwarf white bauhinia, Safed Kachnar</p> <p>Botanical name: <i>Bauhinia acuminata</i></p> <p>Family: <i>Caesalpinaceae</i> (Gulmohar family)</p>						
22.	<p>Common name: Butterfly tree, Pink butterfly tree, Purple bauhinia, Purple orchid tree, Rakta chandan</p> <p>Botanical name: <i>Bauhinia blakeana</i></p> <p>Family: <i>Caesalpinaceae</i> (Gulmohar family)</p>						
23.	<p>Common name: Begonia</p> <p>Botanical name: <i>Begonia obliqua</i></p> <p>Family: <i>Begoniaceae</i></p>						
24.	<p>Common name: Painted Leaf Begonia</p> <p>Botanical name: <i>Begonia rex</i></p> <p>Family: <i>Begoniaceae</i></p>						
25.	<p>Common name: Curry Leaves</p> <p>Botanical name: <i>Bergera koenigii</i></p> <p>Family: <i>Rutaceae</i> (Citrus family)</p> <p>Synonyms: <i>Murraya koenigii</i>, <i>Chalcas koenigii</i></p>						
26.	<p>Common name: Bougainvillea, Lesser Bougainvillea, Booganbel</p> <p>Botanical name: <i>Bougainvillea glabra</i></p> <p>Family: <i>Nyctaginaceae</i> (Bougainvillea family)</p>						
27.	<p>Common name: Great Bougainvillea, Booganbel</p> <p>Botanical name: <i>Bougainvillea spectabilis</i></p> <p>Family: <i>Nyctaginaceae</i> (Bougainvillea family)</p>						
28.	<p>Common name: Magnificent Angel's Trumpet</p> <p>Botanical name: <i>Brugmansia x insignis</i></p> <p>Family: <i>Solanaceae</i> (Potato family)</p>						
29.	<p>Common name: Life Plant, Mother of Thousands, Miracle Leaf,</p> <p>Botanical name: <i>Bryophyllum pinnata</i></p> <p>Family: <i>Crassulaceae</i></p> <p>Synonyms: <i>Kalanchoe adalae</i></p>						

30.	<p>Common name: Flame of the Forest, Palash, Dhak, Tesu</p> <p>Botanical name: <i>Butea monosperma</i></p> <p>Family: <i>Fabaceae</i> (pea family)</p> <p>Synonyms: <i>Butea frondosa</i>, <i>Erythrina monosperma</i>, <i>Plaso monosperma</i></p>						
31.	<p>Common name: Peacock Flower</p> <p>Botanical Name: <i>Caesalpinia pulcherrima</i></p> <p>Family: <i>Caesalpinaceae</i>(Gulmohar family)</p>						
32.	<p>Common name: Artist’s pallet, Heart of Jesus</p> <p>Botanical name: <i>Caladium bicolor</i></p> <p>Family: <i>Araceae</i> (Arum family)</p>						
33.	<p>Common Name: Calathea</p> <p>Botanical Name: <i>Calathea ornata ‘Roseolineata’</i></p> <p>Family: <i>Marantaceae</i></p>						
34.	<p>Common name: Madame Galen Trumpet Creeper</p> <p>Botanical name: <i>Campsis x tagliabuana</i></p> <p>Family: <i>Bignoniaceae</i> (Jacaranda family)</p>						
35.	<p>Common name: Canna</p> <p>Botanical name: <i>Canna indica</i></p> <p>Family: <i>Cannaceae</i> (Canna family)</p>						
36.	<p>Common name: Canna, keli</p> <p>Botanical name: <i>Canna spp</i></p> <p>Family: <i>Cannaceae</i> (Canna family)</p>						
37.	<p>Common name: Chilli</p> <p>Botanical name: <i>Capsicum frutescens</i></p> <p>Family: <i>Solanaceae</i> (Potato family)</p>						
38.	<p>Common name: Papaya, Pawpaw, Papita, Pappayi,</p> <p>Botanical name: <i>Carica papaya</i></p> <p>Family: <i>Caricaceae</i> (Papaya family)</p>						
39.	<p>Common name: Amaltas</p> <p>Botanical name: <i>Cassia fistula</i></p> <p>Family: <i>Caesalpinaceae</i></p>						
40.	<p>Common name: Periwinkle, Vinca, Sadabahar, Sadaphuli</p> <p>Botanical name: <i>Catharanthus roseus</i></p> <p>Family: <i>Apocynaceae</i> (Oleander family)</p> <p>Synonyms: <i>Vinca rosea</i></p>						



















41.	<p>Common name: Spider plant, Musli</p> <p>Botanical name: <i>Chlorophytum comosum</i></p> <p>Family: <i>Liliaceae</i> (Lily family)</p>						
42.	<p>Common name: Veldt Grape</p> <p>Botanical name: <i>Cissus quadrangularis</i></p> <p>Family: <i>Vitaceae</i></p>						
43.	<p>Common name: Lemon</p> <p>Botanical name: <i>Citrus limon</i></p> <p>Family: <i>Rutaceae</i></p>						
44.	<p>Common name: Bleeding Heart Vine, Bleeding Glory Bower, Bag Flower</p> <p>Botanical name: <i>Clerodendrum thomsoniae</i></p> <p>Family: <i>Verbenaceae</i> (Verbena family)</p>						
45.	<p>Common name: Butterfly Pea</p> <p>Botanical name: <i>Clitoria ternatea</i></p> <p>Family: <i>Fabaceae</i> (pea family)</p>						
46.	<p>Common name: Thatch Palm</p> <p>Botanical name: <i>Coccothrinax barbadensis</i></p> <p>Family: <i>Arecaceae</i> (Palm family)</p>						
47.	<p>Common name: Coconut, Nariyal, Naral, Shriphal</p> <p>Botanical name: <i>Cocos nucifera</i></p> <p>Family: <i>Arecaceae</i> (Palm family)</p>						
48.	<p>Common name: Croton</p> <p>Botanical name: <i>Codiaeum variegatum</i></p> <p>Family: <i>Euphorbiaceae</i> (Castor family)</p>						
49.	<p>Common name: Country Borage</p> <p>Botanical name: <i>Coleus amboinicus</i></p> <p>Family: <i>Lamiaceae</i> (Mint family)</p>						
50.	<p>Common name: Coleus</p> <p>Botanical name: <i>Coleus blumei</i></p> <p>Family: <i>Lamiaceae</i> (Mint family)</p>						
51.	<p>Common name: Dracaena Mahatma, Good Luck Plant, Ti Plant</p> <p>Botanical name: <i>Cordyline terminalis</i></p> <p>Family: <i>Agavaceae</i> (Agave family)</p> <p>Synonyms: <i>Cordyline fruticosa</i></p>						
52.	<p>Common name: Insulin plant</p> <p>Botanical name: <i>Costus igneus</i></p> <p>Family: <i>Zingiberaceae</i> (Ginger family)</p>						














53.	<p>Common name: Crossandra, Firecracker Flower Botanical name: <i>Crossandra infundibuliformis</i> Family: <i>Acanthaceae</i> (Ruellia family)</p>						
54.	<p>Common name: Sago Palm Botanical name: <i>Cycas revoluta</i> Family: <i>Cycadaceae</i></p>						
55.	<p>Common name: Garlic Vine Botanical name: <i>Cydista aequinoctialis</i> Family: <i>Bignoniaceae</i> (Jacaranda family) Synonyms: <i>Mansoa alliacea</i>, <i>Bignonia aequinoctialis</i>, <i>Adenocalymma alliaceum</i></p>						
56.	<p>Common name: Lemon Grass Botanical name: <i>Cymbopogon citratus</i> Family: <i>Poaceae</i></p>						
57.	<p>Common name: Bermuda Grass, Doob, haryali, dhurva Botanical name: <i>Cynodon dactylon</i> Family: <i>Poaceae</i> (Grass family)</p>						
58.	<p>Common name: Umbrella palm Botanical name: <i>Cyperus alternifolius</i> Family: <i>Cyperaceae</i> (Sedge family)</p>						
59.	<p>Common name: Flame Tree, Gulmohar Botanical name: <i>Delonix regia</i> Family: <i>Caesalpiniaceae</i> (Gulmohar family)</p>						
60.	<p>Common name: Variegated Flax Lily, Flax lily Botanical name: <i>Dianella tasmanica</i> 'Variegata' Family: <i>Liliaceae</i></p>						
61.	<p>Common name: Dieffenbachia, Dumb Cane Botanical name: <i>Dieffenbachia amoena</i> Family: <i>Araceae</i> (arum family)</p>						
62.	<p>Common name: Rainbow Plant Botanical name: <i>Dracaena marginata</i>'tricolor' Family: <i>Agavaceae</i> (Agave family)</p>						
63.	<p>Common name: Song of India Botanical name: <i>Dracaena reflexa</i> Family: <i>Agavaceae</i> (Agave family)</p>						
















64.	Common name: Moldavian dragon head Botanical name: <i>Dracocephalum moldavica</i> Family: <i>Lamiaceae</i> (mint family)						
65.	Common name: Male Fern Botanical name: <i>Dryopteris filix-mas</i> Family: <i>Dryopteridaceae</i>						
66.	Common name: Variegated Sky Flower, Golden Duranta, Golden Dewdrop, Nilkanta Botanical name: <i>Duranta erecta</i> 'Variegata' Family: <i>Verbenaceae</i> (verbena family)						
67.	Common name: Cardamom, Malabar cardamom, Ceylon cardamom Botanical name: <i>Elettaria cardamomum</i> Family: <i>Zingiberaceae</i> (Ginger family)						
68.	Common name: Money Plant Botanical name: <i>Epipremnum aureum</i> Family: <i>Araceae</i>						
69.	Common name: Flame Violet, Episcia Botanical name: <i>Episcia cupreata</i> Family: <i>Gesneriaceae</i> Synonyms: <i>Achimenes cupreata</i>						
70.	Common name: Caribbean Copper Plant Botanical name: <i>Euphorbia cotinifolia</i> Family: <i>Euphorbiaceae</i> (Castor family)						
71.	Common name: Snow Bush Botanical name: <i>Euphorbia leucocephala</i> Family: <i>Euphorbiaceae</i> (Castor family)						
72.	Common name: Crown of Thorns Botanical name: <i>Euphorbia milii splendens</i> Family: <i>Euphorbiaceae</i> (Castor family)						
73.	Common name: Christmas flower, Poinsettia Botanical name: <i>Euphorbia pulcherrima</i> Family: <i>Euphorbiaceae</i> (Castor family)						
74.	Common name: Devil's backbone Botanical name: <i>Euphorbia tithymaloides</i> <i>variegata</i> Family: <i>Euphorbiaceae</i> (Castor family)						
75.	Common name: Banyan tree, Barh, Bargad, Vat Botanical name: <i>Ficus bengalensis</i> Family: <i>Moraceae</i> (mulberry family)						




















76.	Common name: Weeping Fig Botanical name: <i>Ficus benjamina</i> Family: <i>Moraceae</i> (mulberry family)						
77.	Common name: Hairy fig, Devil fig Botanical name: <i>Ficus hispida</i> Family: <i>Moraceae</i> (mulberry family)						
78.	Common Name: Furcraea Botanical name : <i>Furcraea gigantea 'Striata'</i> Family : Amaryllidaceae						
79.	Common Name: Barbertron Daisy Botanical name : <i>Gerbera jamesonii</i> Family : Asteraceae (Sunflower family)						
80.	Common Name: Natal Lily Botanical name : <i>Gladiolus natalensis</i> Family : Iridaceae (Iris family)						
81.	Common name: Mexican lilac Botanical name: <i>Gliricidia sepium</i> Family: <i>Fabaceae</i> (Pea family) Synonyms: <i>Gliricidia maculate</i>						
82.	Common name: Globe Amaranth, Gomphrena, Bachelor's buttons Botanical name: <i>Gomphrena globosa</i> Family: <i>Amaranthaceae</i> (amaranth family)						
83.	Common name: Gurmar Botanical name: <i>Gymnema sylvestre</i> Family: <i>Asclepiadaceae</i> (Milkweed family)						
84.	Common name: Botanical name: <i>Heterotis rotundifolia</i> Family: <i>Asclepiadaceae</i> (Milkweed family)						
85.	Common name: White Ginger Lily Botanical name: <i>Heydichium coronarium</i> Family: <i>Zingiberaceae</i> (Ginger family)						
86.	Common name: Erect Lobster claw Botanical name: <i>Heliconia stricta</i> Family: <i>Heliconiaceae</i> (heliconia family)						
87.	Common name: China Rose, Chinese hibiscus, Gurhal, Jaswand Botanical name: <i>Hibiscus rosa-sinensis</i> Family: <i>Malvaceae</i> (mallow family)						












88.	<p>Common name: Showy Spider lily</p> <p>Botanical name: <i>Hymenocallis speciosa</i></p> <p>Family: <i>Amaryllidaceae</i> (Nargis family)</p> <p>Synonyms: <i>Hymenocallis erosa, Pancratium speciosum, Pancratium formosum</i></p>						
89.	<p>Common name: Balsam, Garden balsam, Rose balsam, Spotted snapweed,</p> <p>Botanical name: <i>Impatiens balsamina</i></p> <p>Family: <i>Balsaminaceae</i> (Balsam family)</p>						
90.	<p>Common name: Busy Lizzy</p> <p>Botanical name: <i>Impatiens walleriana</i></p> <p>Family: <i>Balsaminaceae</i> (Balsam family)</p>						
91.	<p>Common name: Ixora, Jungle geranium, Rugmini</p> <p>Botanical name: <i>Ixora coccinea</i></p> <p>Family: <i>Rubiaceae</i> (coffee family)</p>						
92.	<p>Common name: Jasmine</p> <p>Botanical name: <i>Jasminium spp</i></p> <p>Family: <i>Oleaceae</i> (Jasmine family)</p>						
93.	<p>Common name: Peregrina, Spicy Jatropha</p> <p>Botanical name: <i>Jatropha integerrima</i></p> <p>Family: <i>Euphorbiaceae</i></p> <p>Synonyms: <i>Jatropha coccinea, Jatropha pandurifolia, Jatropha hastata</i></p>						
94.	<p>Common name: Australian bottle plant, Physic nut, Buddha belly plant</p> <p>Botanical name: <i>Jatropha podagrica</i></p> <p>Family: <i>Euphorbiaceae</i> (Castor family)</p>						
95.	<p>Common name: Shrimp Plant</p> <p>Botanical name: <i>Justicia brandegeana</i></p> <p>Family: <i>Acanthaceae</i> (ruellia family)</p>						
96.	<p>Common name: Common Crape Myrtle</p> <p>Botanical name: <i>Lagerstromia indica</i></p> <p>Family: <i>Lythraceae</i> (Crape Myrtle family)</p>						
97.	<p>Common name: Lantana, Raimuniya, Tantani</p> <p>Botanical name: <i>Lantana aculeata</i></p> <p>Family: <i>Verbenaceae</i> (Verbena family)</p>						




98.	<p>Common name: Lantana, Raimuniya, Tantani</p> <p>Botanical name: <i>Lantana camara</i></p> <p>Family: <i>Verbenaceae</i> (Verbena family)</p>						
99.	<p>Common name: Joy Perfume Tree, name: <i>Magnolia champaca</i></p> <p>Family: <i>Magnoliaceae</i> (magnolia family)</p> <p>Synonyms: <i>Michelia champaca</i></p>						
100.	<p>Common name: Mango, Aam, Amba</p> <p>Botanical name: <i>Mangifera indica</i></p> <p>Family: <i>Anacardiaceae</i> (Cashew family)</p>						
101.	<p>Common name: Sensitive Plant, Touch-me-not</p> <p>Botanical name: <i>Mimosa pudica</i></p> <p>Family: <i>Mimosaceae</i> (Touch-me-not family)</p>						
102.	<p>Common name: Window leaf, Split-leaf philodendron, Monstera</p> <p>Botanical name: <i>Monstera deliciosa</i></p> <p>Family: <i>Araceae</i> (arum family)</p>						
103.	<p>Common name: Drumstick tree, Senjana, Shevga</p> <p>Botanical name: <i>Moringa oleifera</i></p> <p>Family: <i>Moringaceae</i> (drumstick family)</p>						
104.	<p>Common name: Banana, Kela</p> <p>Botanical name: <i>Musa paradisiaca</i></p> <p>Family: <i>Musaceae</i> (Banana family)</p>						
105.	<p>Common name: Mussaenda, Red Flag Bush</p> <p>Botanical name: <i>Mussaenda erythrophylla</i></p> <p>Family: <i>Rubiaceae</i> (coffee family)</p>						
106.	<p>Common name: Mussaenda</p> <p>Botanical name: <i>Mussaenda phillipica</i></p> <p>Family: <i>Rubiaceae</i> (coffee family)</p>						
107.	<p>Common name: Sword Fern</p> <p>Botanical name: <i>Nephrolepis exaltata</i></p> <p>Family: <i>Lomariopsidaceae</i></p>						
108.	<p>Common name: Oleander, Kaner</p> <p>Botanical name: <i>Nerium oleander</i></p> <p>Family: <i>Apocynaceae</i> (oleander family)</p> <p>Synonyms: <i>Nerium indicum</i></p>						

109.	<p>Common name: Holy basil, Tulsi</p> <p>Botanical name: <i>Ocimum tenuiflorum</i></p> <p>Family: <i>Lamiaceae</i> (Mint family)</p> <p>Synonyms: <i>Ocimum sanctum</i></p>						
110.	<p>Common name: Creeping Wood Sorrel</p> <p>Botanical name: <i>Oxalis corniculata</i></p> <p>Family: <i>Oxalidaceae</i> (Wood sorrel family)</p>						
111.	<p>Common name: Cardinal's Guard</p> <p>Botanical name: <i>Pachystachys spicata</i></p> <p>Family: <i>Acanthaceae</i></p>						
112.	<p>Common name: Knot Grass, Paspalum Grass</p> <p>Botanical name: <i>Paspalum notatum</i></p> <p>Family: <i>Poaceae</i> (Grass family)</p>						
113.	<p>Common name: Blue Passion Flower, Jhumkalata, Krishna Kamal</p> <p>Botanical name: <i>Passiflora caerulea</i></p> <p>Family: <i>Passifloraceae</i> (Passion flower family)</p>						
114.	<p>Common name: Red Passion Flower, Scarlet Passion Flower, Red Granadilla</p> <p>Botanical name: <i>Passiflora coccinea</i></p> <p>Family: <i>Passifloraceae</i> (Passion flower family)</p>						
115.	<p>Common name: Copperpod, Peela gulmohar</p> <p>Botanical name: <i>Peltophorum pterocarpum</i></p> <p>Family: <i>Caesalpiniaceae</i> (Gulmohar family)</p>						
116.	<p>Common name: Pentas, Star flower, Star cluster</p> <p>Botanical name: <i>Pentas lanceolata</i></p> <p>Family: <i>Rubiaceae</i> (Coffee family)</p>						
117.	<p>Common name: Emerald vine Philodendron</p> <p>Botanical name: <i>Philodendron billietiae</i></p> <p>Family: <i>Araceae</i></p>						
118.	<p>Common name: Philodendron ceylon</p> <p>Botanical name: <i>Philodendron ceylon</i></p> <p>Family: <i>Araceae</i> (Arum family)</p>						
119.	<p>Common name: Philodendron Prince of Orange variegated</p> <p>Botanical name: <i>Philodendron erubescens</i></p> <p>Family: <i>Araceae</i> (Arum family)</p>						
120.	<p>Common name: Philodendron</p> <p>Botanical name: <i>Philodendron spp</i></p>						

	Family: <i>Araceae</i> (Arum family)						
121.	Common name: Amla, Indian gooseberry, Aonla Botanical name: <i>Phyllanthus emblica</i> Family: <i>Phyllanthaceae</i> (Amla family) Synonyms: <i>Embllica officinalis</i>						
122.	Common name: Betel Vine, Betel Botanical name: <i>Piper betle</i> Family: <i>Piperaceae</i> (Pepper family) Synonyms: <i>Piper chawya</i> , <i>Piper malamiris</i> , <i>Piper densus</i>						
123.	Common name: Long Pepper, Indian long pepper Botanical name: <i>Piper longum</i> Family: <i>Piperaceae</i> (Pepper family)						
124.	Common Name: Lettuce tree, Cabbage tree Scientific Name: <i>Pisonia alba</i> , <i>Pisonia brunoniana</i> Family: <i>Nyctaginaceae</i>						
125.	Common name: Plumbago, Cape Leadwort, Nila chitrak Botanical name: <i>Plumbago auriculata</i> Family: <i>Plumbaginaceae</i> (plumbago family) Synonyms: <i>Plumbago capensis</i>						
126.	Common name: White Plumeria, White Frangipani, Gulchin, Champa Botanical name: <i>Plumeria alba</i> Family: <i>Apocynaceae</i> (oleander family)						
127.	Common name: Wild Plumeria, Fiddle leaf Plumeria Botanical name: <i>Plumeria pudica</i> Family: <i>Apocynaceae</i> (oleander family)						
128.	Common name: Red Plumeria, Frangipani, Lal gulachin, Chapha Botanical name: <i>Plumeria rubra</i> Family: <i>Apocynaceae</i> (oleander family)						
129.	Common name: Pachouli Botanical name: <i>Pogostemon heyneanus</i> Family: <i>Lamiaceae</i> (Mint family)						

130.	<p>Common name: False Ashoka, Indian Mast Tree</p> <p>Botanical name: <i>Polyalthia longifolia</i></p> <p>Family: <i>Annonaceae</i> (Sugar Apple family)</p>						
131.	<p>Common name: Moss rose, Portulaca</p> <p>Botanical name: <i>Portulaca grandiflora</i></p> <p>Family: <i>Portulacaceae</i> (moss rose family)</p>						
132.	<p>Common name: Guava, Amrood, Peru</p> <p>Botanical name: <i>Psidium guajava</i></p> <p>Family: <i>Myrtaceae</i> (Bottlebrush family)</p>						
133.	<p>Common name: Pomegranate</p> <p>Botanical name: <i>Punica granatum</i></p> <p>Family: <i>Punicaceae</i> (pomegranate family)</p>						
134.	<p>Common name: Rangoon Creeper</p> <p>Botanical name: <i>Quisqualis indica</i></p> <p>Family: <i>Combretaceae</i> (Rangoon creeper family)</p>						
135.	<p>Common name: Rhaps Palm</p> <p>Botanical name: <i>Rhapis excelsa</i></p> <p>Family: <i>Arecaceae</i></p>						
136.	<p>Common name: Moses in the Cradle, Oyster plant,</p> <p>Botanical name: <i>Rhoeo compacta</i> <i>,Tradescantia spathacea</i></p> <p>Family: <i>Commelinaceae</i> (Dayflower family)</p> <p>Synonyms: <i>Rhoeo spathacea</i></p>						
137.	<p>Common name: Castor bean, Arandi</p> <p>Botanical name: <i>Ricinus communis</i></p> <p>Family: <i>Euphorbiaceae</i> (castor family)</p>						
138.	<p>Common name: Rose, Gulab</p> <p>Botanical name: <i>Rosa indica</i></p> <p>Family: <i>Rosaceae</i> (rose family)</p>						
139.	<p>Common name: Snake Plant, Mother-in-law's tongue</p> <p>Botanical name: <i>Sansevieria trifasciata</i></p> <p>Family: <i>Ruscaceae</i> (Butcher's Broom family)</p>						
140.	<p>Common name: Sita Ashok</p> <p>Botanical name: <i>Saraca indica /Jonesia asoka</i></p> <p>Family: <i>Caesalpiaceae</i> (Gulmohar family)</p>						

141.	<p>Common name: Schefflera</p> <p>Botanical name: <i>Schefflera arboricola</i></p> <p>Family: <i>Araliaceae</i></p>						
142.	<p>Common name: Peace lily, Cobra plant</p> <p>Botanical name: <i>Spathiphyllum wallisii</i></p> <p>Family: <i>Araceae</i> (Arum family)</p>						
143.	<p>Common name: Indian Snakeweed, Blue snakeweed, Kariyartharani</p> <p>Botanical name: <i>Stachytarpheta indica</i></p> <p>Family: <i>Verbenaceae</i> (Verbena family)</p>						
144.	<p>Common name: Arrowhead Plant, Syngonium</p> <p>Botanical name: <i>Syngonium spp.</i></p> <p>Family: <i>Araceae</i> (arum family)</p>						
145.	<p>Common name: Crape jasmine, Moonbeam, Carnation of India, Chandni, Tagar</p> <p>Botanical name: <i>Tabernaemontana divaricata</i></p> <p>Family: <i>Apocynaceae</i> (Oleander family)</p> <p>Synonyms: <i>Ervatamia divaricata</i>, <i>Nerium coronarium</i></p>						
146.	<p>Common name: Variegated Jewel of Opar</p> <p>Botanical name: <i>Talium paniculatum variegata</i></p> <p>Family: <i>Talinaceae</i></p>						
147.	<p>Common name: Bush Clock Vine, King's Mantle</p> <p>Botanical name: <i>Thunbergia erecta</i></p> <p>Family: <i>Acanthaceae</i> (Ruellia family)</p> <p>Synonyms: <i>Meyenia erecta</i></p>						
148.	<p>Common name: Sweet Clock Vine, White Lady</p> <p>Botanical name: <i>Thunbergia fragrans</i></p> <p>Family: <i>Acanthaceae</i> (Ruellia family)</p>						
149.	<p>Common name: Tree Marigold</p> <p>Botanical name: <i>Tithonia diversifolia</i></p> <p>Family: <i>Asteraceae</i> (Sunflower family)</p>						
150.	<p>Common name: Wishbone plant</p> <p>Botanical name: <i>Torenia spp</i></p> <p>Family: <i>Linderniaceae</i></p>						

151.	Common name: Yellow Alder Botanical name: <i>Turnera ulmifolia</i> Family: <i>Passifloraceae</i> (Passion flower family)						
152.	Common name: Yellow Dots, Creeping daisy, Wedelia Botanical name: <i>Wedelia trilobata</i> Family: <i>Asteraceae</i> (daisy/Sunflower family)						
153.	Common name: Ginger Botanical name: <i>Zingiber officinale</i> Family: <i>Zingiberaceae</i>						



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Key for the remarks column:

1.		T - Tree cartoon for trees
2.		H/M - Herbal /Medicinal cartoon for plants of herbal/medicinal use
3.		F - Flowers cartoon for plants cultivated for flowers
4.		O - Ornamental cartoon for plants grown for their foliage
5.		FV- Fruit cartoon for plants whose parts – leaves, stems, flowers, fruits are edible

Note:

1. The list given above is not exhaustive but symbolic. The actual number and varieties of plants are much more than those listed here. The plants which were identified have been recorded here.
2. In some cases the species within a genus may not match.