

Incorporating Nature in the Interior of Residence



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Abstract

Nowadays due to lack of open space, people are not able to incorporate garden in their residence. People are forced to live in flats and buildings due to high price of tenement houses therefore their dream of making a garden is not possible. So one way of solving this problem is incorporating nature in interiors. For this the researchers have given many options regarding the plants suitable for interiors and how they can be placed in interiors and how the interior can be enhanced. By keeping plants in house one can get fresh air and oxygen inside their house and also the dream of incorporating garden can also be fulfilled. Therefore these options are given and people can use these options for placing plants in interiors. Thus by incorporating nature into interiors it provides aesthetic beauty as well as purifies the air and is also beneficial for environment.

Keywords: Residence, Residential Greenery, Urban Green Space.

Introduction

Man's desire to create a pleasant environment is probably as old as our civilization (Doshi K, 2011). Modern urban lifestyle is associated with chronic stress, insufficient physical activity and exposure to anthropogenic environmental hazards. Urban green space, close to nature such as parks, playground and residential greenery can promote mental and physical health and reduce morbidity and mortality in urban residents by providing psychological relaxation and stress aviation stimulating social cohesion, supporting physical activity, and reducing exposure to air pollutants, noise and excessive heat. (<https://link.springer.com/chapter/10.007/978-3-319-56091-5-11>). Also according to Vastu Shastra, some plants are considered to be lucky and brings good luck as well as positive energy to one's house.

Nature means harmony and balance plants bring nature into the house. Being in nature, or even viewing scenes of nature, reduce anger, fear, and stress and increases pleasant feelings. Exposure to nature not only makes one feel better emotionally, it contributes to one's physical wellbeing, reducing blood pressure, heart rate, and the production of stress hormones. (<https://www.takingcharge.csh.umn.edu/enhance-your/wellbeing/environment/nature-and-us/how-does-nature-impact-our-wellbeing>). Few hours spent in nature, help us relax our mind and body and also recharge our batteries. Following this idea the researcher thought that it would be interesting to create an extension of nature in one's own space, through interior design.

Nature in interior is important for improving the quality of life as well as creates aesthetic beauty. It creates the healthy interaction between man and his immediate environment. One should make the best utilization of the available space in interior with appropriate plants.

Plants improve air quality and also helps to remove smoke, dust and other pollutants from the air. Good planning of plants in interior of residence also offers pleasant environment for the residents.

By using elements like color, line, form, texture, simplicity according to the principles of unity, balance, natural transition, proportion, repetition, emphasis, scale, rhythm leads us to attain the goals of beauty expressiveness and functionalism. Therefore while arranging plants in interior it is important to take into consideration the elements of art and principles of design (Doshi K, 2011).

There are various plants available which can be used in interiors of residence. Each one has distinct feature contributing towards the aesthetics and functional value. Some of them can also be used in combination.

Review of Literature

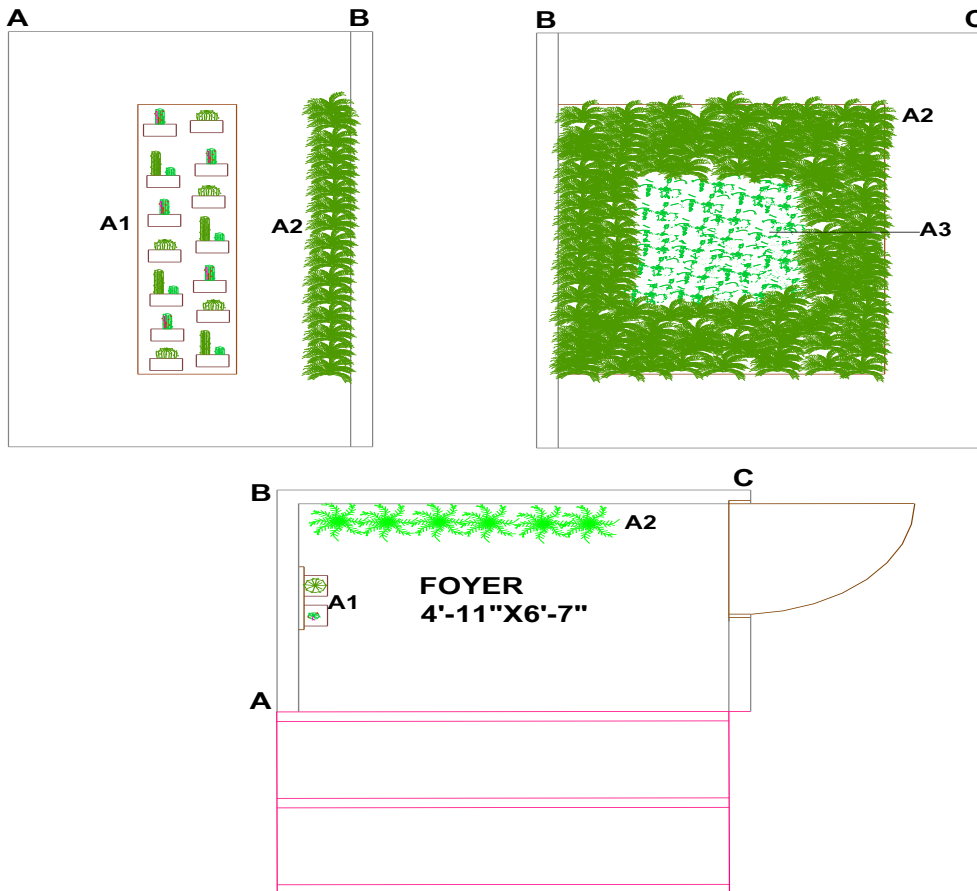
Researches in the area of landscaping and gardening have been conducted by Gupta (2001) on pattern of space utilisation, values, opinions and problems of homemakers regarding residential landscape gardening, Shah (2005) on Japanese garden: A design project for a terrace of a selected residence and a common plot of a residential colony, Shah (2011) study of Community Gardens: Utilization and satisfaction of the residents of selected residential colonies of Vadodara city and Doshi (2011) on developing an ideal outdoor garden design for the residences of Vadodara city and Pavasiya (2014) on Designing a Vertical Garden For a Residential Area. The investigator of the present study came across the

researches under the area of vertical gardening as well as other ways and styles used to improve the quality, aesthetics and functionalism of interior in residents. The investigator found dearth of researches specifically on incorporating nature in interior of residence and its importance.

Therefore the present study was undertaken with focus on importance of nature in interiors as well as its arrangement and to know about different plants used in interiors of the residence.

Objectives of the Study

1. To gather information about different indoor plants suitable for interior of residences.
2. Proposing design for incorporating nature in the interior of residence.



DRAWING 2: FRONT ELEVATION OF FOYER

	A	B	C
1	KEYS		
2	- Foyer		
3	Wall	Sign	Plant name
4	AB	A1	Cactus
5	BC	A2	Fern
6		A3	Peace Lily

Description

Proposed Plant Arrangement for Foyer

Foyer is the room in the house or apartment leading from front door to other rooms, where things like hats, coats are kept.

(<https://dictionary.cambridge.org/dictionary/english/foyer>)

The present Foyer is of size 4'-11" X 6'-7" which is 27.537 sq. ft. After the entrance gate, two stairs are given which is followed by foyer along with it on one wall the main door of the residential unit is given.

Wall AB

Wall AB contains a vertical wall piece in which plants are arranged, which is 6'-6" in height and

Shrinkhla Ek Shodhparak Vaicharik Patrika

1'-6" wide. The wall piece is made up of wood and polished, with shelf like structure in which plants are planted. The plant planted in it is Cactus. The main reason of selecting Cactus in the wall piece is that it does not require much water which also protects the wall piece from damaging.

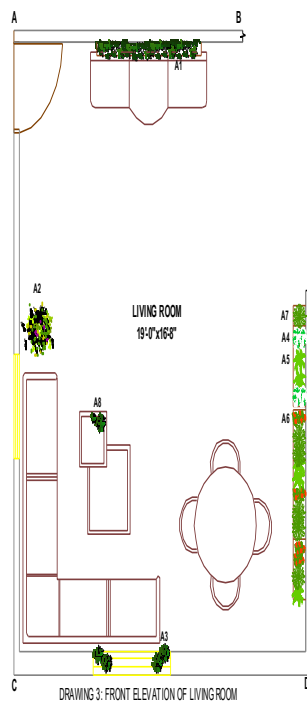
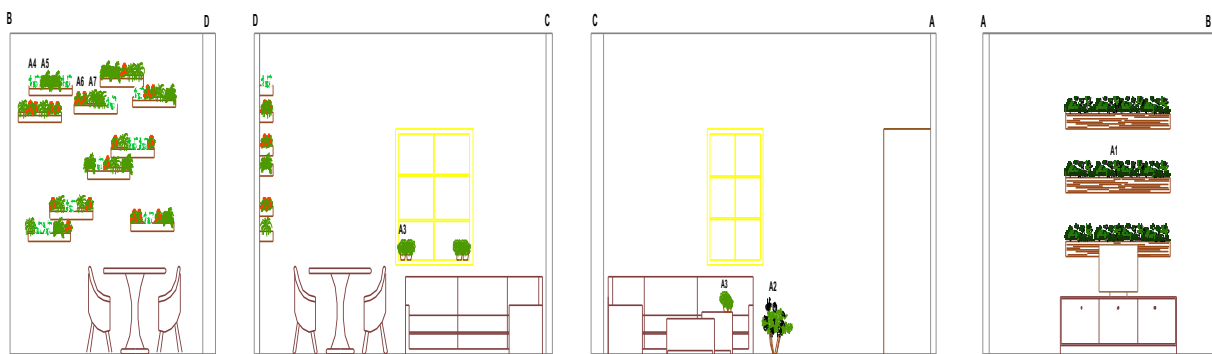
Wall BC

Wall BC is considered the main wall of the Foyer area. It is considered main wall because when the person enters the foyer this is the wall where the eyes first goes, therefore it is essential that the wall is made attractive. To make it attractive and simple vertical gardening is proposed on that wall.

Two plants Fern and Peace Lily are selected for this area. Fern plant performs best in shade and

water requirement is rare whereas Peace Lily must be keep away from direct sunlight and water should be given 2-3 times a week.

This plant are arranged in such a manner that the Fern plant is arranged in a rectangular shape with Peace Lily in centre in rectangular shape inside the Fern plant. This arrangement is made on the the wall, therefore for support of plants mesh wire is used. The area in which the arrangement is done is 5'-0" X 6'-6" while the other smaller rectangle of Peace Lily is of 2'-6" X 3'-0". Therefore it gives a combination of White in centre and green around it. The vertical garden is placed at the height of 1'-9" from the floor.



	A	B	C
1	KEYS		
2	- Living Room		
3	Wall	Sign	Plant name
4	BD	A4	Peace Lily
5		A5	Bostern Fern
6		A6	Adenium (Red)
7		A7	Spider Plant
8	DC	A3	Jade Plant
9	CA	A2	Peace Lily
10		A3	Jade Plant
11	AB	A1	English Ivy
12			

Proposed Plant Arrangement of Living Room

In Western architecture, a living room, also called a lounge room, lounge or sitting room, is a room in a residential house or apartment for relaxing and socializing. Such a room is sometimes called a front room when it is near the main entrance at the front of the house. (https://en.wikipedia.org/wiki/Living_room) The present Living Room is of size 19'-0" X 16'-8" which is 319.2 sq. ft. The living room includes a T.V unit, sofa, center table and also a dining table.

Wall BD

Wall BD is designed with shelves with uneven pattern. The shelves are of wooden polished and contains different plants planted in it. There are 10 shelves unevenly placed each containing different kinds of plants which includes Peace Lily, Boston Fern, Adenium (Red), Spider plant.

Peace Lily is to be placed away from the sun whereas water is to be given 2-3 times a week, Boston Fern requires cool place and indirect light and requires regular watering, Adenium (Red) cannot survive in cold temperature and Spider plant requires light sunlight whereas water is to be given 2-3 times a week.

The plants planted in the different shelves are planted with different variations and combination giving attractive look. The plants here give the combination of green, white and red. The shelves are of size 2'-6" X 4".

Wall DC

Wall DC contains a window. The window is of size 4'-6" X 4'-3". On the window sill Jade Plant is placed.

Jade plant requires full sunlight for its growth whereas water should not be splashed on the leaves.

Wall CA

Wall CA contains sofa, window and door. Alongwith its side view of centre table is shown. On the centre table Jade plant is placed. On the floor plant named Peace Lily is placed.

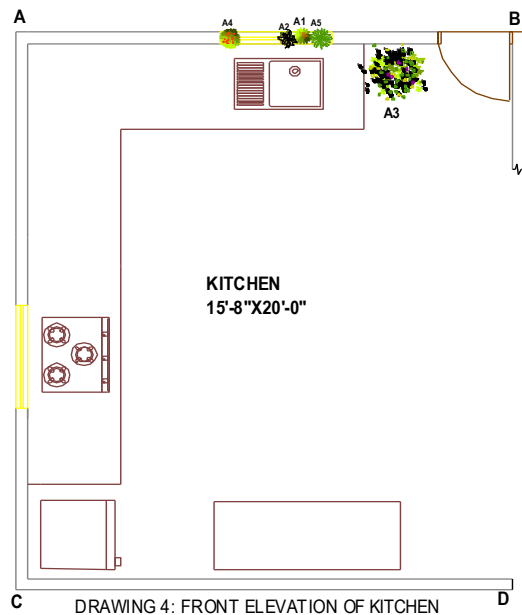
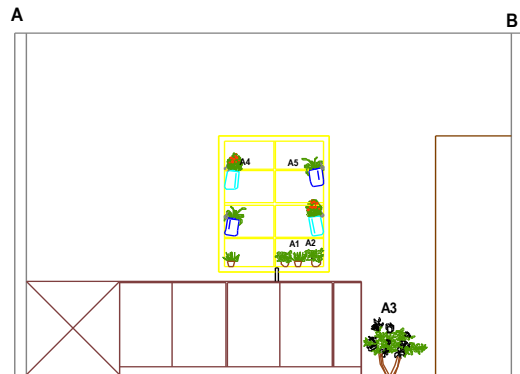
Jade plant requires full sunlight for its growth whereas water should not be splashed on the leaves. Peace Lily is to be placed away from the sun whereas water is to be given 2-3 a week.

Wall AB

Wall AB consists the main door as well as the T.V unit. The back side of T.V unit is highlighted with box like structure in which plants are placed. The plant here used for is English Ivy.

English Ivy requires low sunlight whereas less amount of water. Only water once the soil gets dried up.

Three boxes of size 6'-1" X 6" are placed above the T.V unit at the distance of 1'-5" between them. Inside these boxes English Ivy plant is placed which gives attractive look to the wall.



DRAWING 4: FRONT ELEVATION OF KITCHEN

	A	B	C
1	KEYS		
2	- Kitchen		
3	Wall	Sign	Plant name
4	AB	A1	Aloe Vera
5		A2	Heartleaf Philodendron
6		A3	Madagascar Jasmine
7		A4	Goldfish Plant
8		A5	Spider Plant

Proposed plant arrangement for Kitchen

A kitchen is a room or a part of room used for cooking and food preparation in a dwelling or commercial establishment.

(<https://en.wikipedia.org/wiki/Kitchen>)

The present Kitchen is of size 15'-8" X 20'-0" which is 316 sq. ft. The kitchen includes platform, refrigerator and a crockery cupboard.

WALL AB

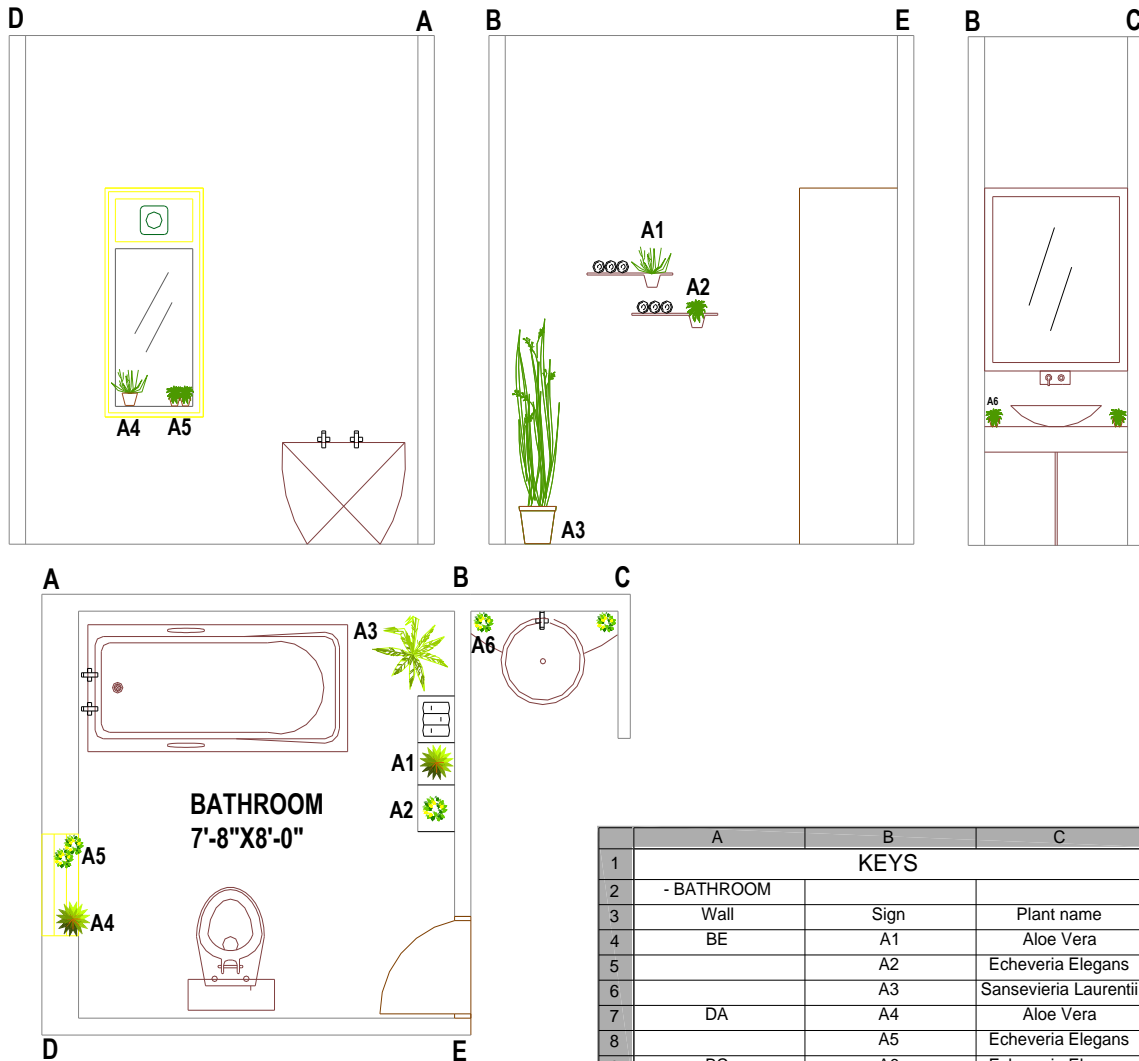
Wall AB in the Kitchen is highlighted the most. The wall consists of a window of size 3'-0" X 4'-0". On the window sill two different plants are placed namely, Aloe Vera and Heartleaf Philodendron. Also on window, plants named Goldfish Plant and Spider Plants are placed in jars. Also against the wall a plant named Madagascar Jasmine is placed.

Shrinkhla Ek Shodhparak Vaicharik Patrika

Aloe Vera requires 6-8 hours of sunlight and does not require plenty of water, Heartleaf Philodendron is to placed in bright light but not in direct sun and it should be watered well and before watering next time care should be taken that the soil has dried 50%. Goldfish Plant requires plenty of bright

light but should be kept out of direct sunlight and water should be given in plenty and less water should be given in winter. Spider Plant requires light sunlight whereas water is to be given 2-3 times a week.

Beside it a door, opening towards the utility area is given.



DRAWING 5: FRONT ELEVATION OF BATHROOM

Proposed Plant Arrangement of Bathroom

A bathroom is a room in home or hotel for personal hygiene activities, generally containing a sink (basin) and either a bathtub, a shower or both. It may also contain a toilet.

(<https://en.wikipedia.org/wiki/Bathroom>)

The present Bathroom is of size 7'-8" X 8'-0" which is 62.4sq. ft. The bathroom includes a bathtub, water closet and shower. Besides the bathroom the provision of washbasin is given with a mirror and glass partition.

Wall DA

Wall DA consists of a window . The window is a fixed type window with size of 2'-0" X 3'-3" along with it a provision of ventilation is given of size 2'-0" X 10". Therefore in total including the framing the size of

the window is 2'-0" X 4'-6". On the window sill two different plants are placed namely, Aloe Vera and Echeveria Elegans.

Aloe Vera requires 6-8 hours of sunlight and does not require plenty of water, Echeveria Elegans requires bright light and less amount of sunlight and water should be poured in soil and not on the plant, and once it dries up only then next time water should be given.

Wall BE

Wall BE is considered the main wall of the bathroom and is highlighted the most. This wall consists of two shelves one above the other at the height of 4'-6" and 5'-3" from the floor with the width of 1'-9". On one shelf a plant named Echeveria Elegans

is placed and on the other shelf plant named Aloe Vera is placed.

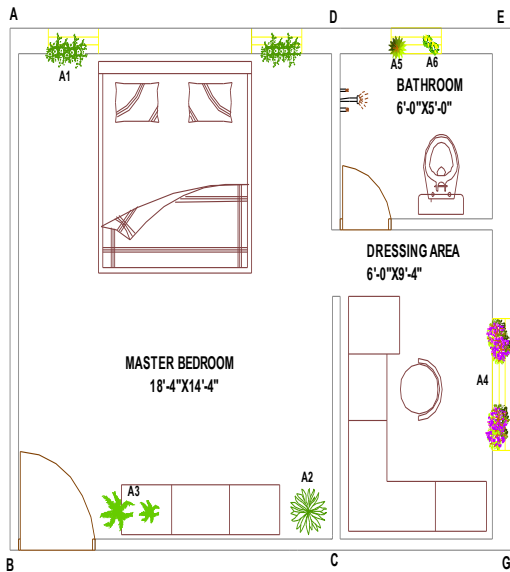
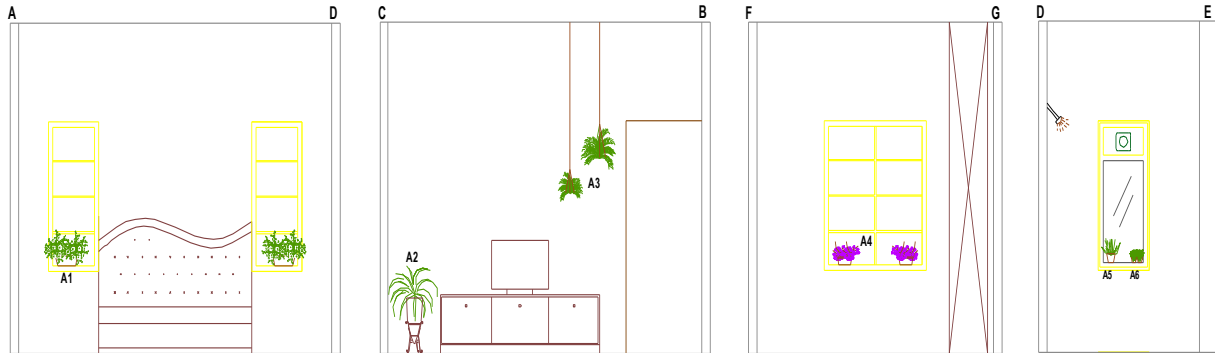
Aloe Vera requires 6-8 hours of sunlight and does not require plenty of water, Echeveria Elegans requires bright light and less amount of sunlight and water should be poured in soil and not on the plant, and once it dries up only then next time water should be given.

Both these plants are placed in a pot like structure which are attached to the shelf itself. Besides these plants rolled napkins are placed as accessory purpose.

Wall BC

Wall BC is the wall where the washbasin is placed. A round bowl shaped washbasin is placed against which a mirror is placed. On both the sides of the washbasin plant named Echeveria Elegans is placed.

Echeveria Elegans requires bright light and less amount of sunlight and water should be poured in soil and not on the plant, and once it dries up only then next time water should be given.



DRAWING 6: FRONT ELEVATION OF MASTER BEDROOM

Proposed Plant arrangement for Master Bedroom

A master bedroom is the largest room in the large house or apartment. (<https://www.collinsdictionary.com/dictionary/english/master-bedroom>)

The present Master Bedroom is of size 18'4" X 14'-4" which is 264.96sq. ft, in which it includes a bathroom of size 6'-0" X 5'-0" which is 30sq.ft and a dressing area of size 6'-0" X 9'-4" which is 56.4sq. ft. The master bedroom also includes a bed and a T.V unit. Whereas the bathroom includes shower and a water closet. Similarly the dressing area includes a dressing table and chair attached with a L-shaped wardrobe.

	A	B	C
1	KEYS		
2	- Master Bedroom		
3	Wall	Sign	Plant name
4	AD	A1	Gardenia
5	CB	A2	Spider Plant
6		A3	Boston Fern
	A	B	C
1	Bathroom		
2	DE	A5	Aloe Vera
3		A6	Echeveria Elegans

Wall AD

Wall AD is the main wall of the master bedroom. This wall consists of two fixed windows. The size of the windows is 2'-0" X 4'-6". On the window sill of these windows plant named Gardenia are placed.

Gardenia grows best in morning sun and afternoon shade during hot climates whereas they can tolerate full sun in cooler areas, and it requires regular watering.

These plants have white flowers blooming in them and therefore gives simple and clam look.

Wall CB

Wall BC is on the opposite side of the bed. This wall consists of T.V unit. Besides the T.V unit a plant named Spider plant is placed on the floor. On

the other side of the T.V unit hanging plants are hung. The plant named Boston Fern is used as the hanging plant.

Spider Plant requires light sunlight whereas water is to be given 2-3 times a week, Boston Fern requires at least two hours of indirect sunlight per day and it requires plenty of water.

These hanging plants gives elegant and attractive look. Also the door for the master bedroom is on this wall.

Wall FG

Wall FG is the wall inside the dressing area. This wall is highlighted with a window which is of size 4'-0" X 4'-6". On the window sill plant named Lavender is placed.

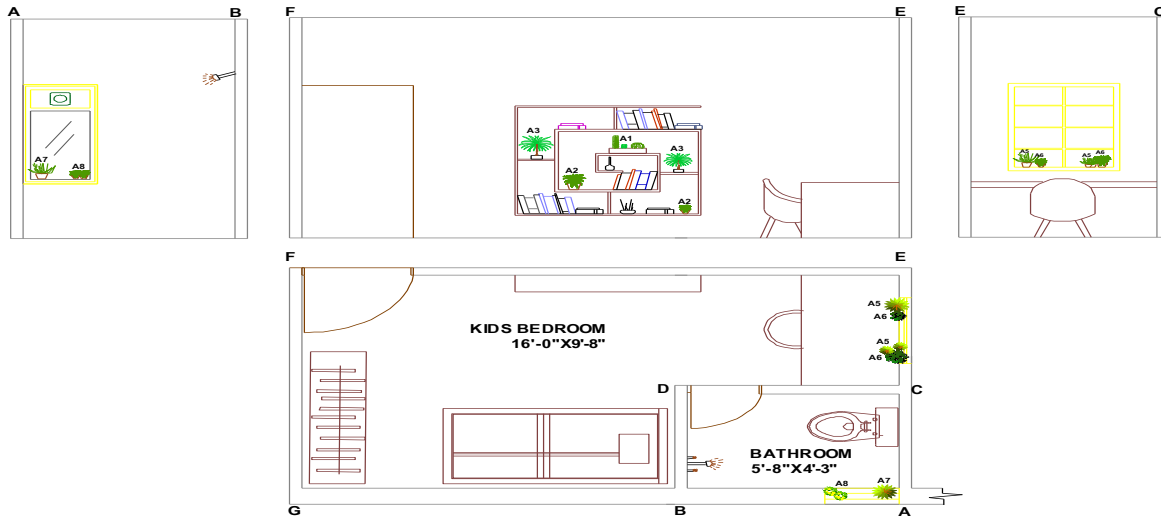
Lavender requires full amount of sun and water it deeply but infrequently when the soil is almost dry.

This plant is generally of lavender color and therefore acts as emphasis in the dressing area.

Wall DE

Wall DA consists of a window. The window is a fixed type window with size of 2'-0" X 3'-3" along with it a provision of ventilation is given of size 2'-0" X 10". Therefore in total including the framing the size of the window is 2'-0" X 4'-6". On the window sill two different plants are placed namely, Aloe Vera and Echeveria Elegans.

Aloe Vera requires 6-8 hours of sunlight and does not require plenty of water, Echeveria Elegans requires bright light and less amount of sunlight and water should be poured in soil and not on the plant, and once it dries up only then next time water should be given.



DRAWING 7: FRONT ELEVATION OF KIDS ROOM

	A	B	C
1	KEYS		
2	-Kids Bedroom	Sign	Plant name
3	Wall	A1	Cactus
4	FE	A2	Echeveria Elegans
5		A3	Ponytail Plam
6		A5	Aloe Vera
7	EC	A6	Echeveria Elegans
8			
9	Bathroom		
10	AB	A7	Aloe Vera
11		A8	Echeveria Elegans

Proposed Plant Arrangement for Kids Bedroom

Kids bedroom is a room in a house specially designed for the kids in the family including their needs such as a bed a study table and a wardrobe and other things as per requirement.

The present Kids Bedroom is of size 16'-0" X 9'-8" which is 156.8 sq.ft, in which it includes a bathroom of size 5'-8" X 4'-3" which is 24.94 sq.ft. The kids bedroom includes a bed, study table, wardrobe and bookshelf.

Wall AB

Wall AB is the wall inside the bathroom. This wall consists of a window. The window is a fixed type window with size of 2'-0" X 3'-3" along with it a provision of ventilation is given of size 2'-0" X 10". Therefore in total including the framing the size of the window is 2'-0" X 4'-6". On the window sill two

different plants are placed namely, Aloe Vera and Echeveria Elegans.

Aloe Vera requires 6-8 hours of sunlight and does not require plenty of water, Echeveria Elegans requires bright light and less amount of sunlight and water should be poured in soil and not on the plant, and once it dries up only then next time water should be given.

Wall FE

Wall FE is the main wall of the kids bedroom. Therefore it is highlighted with a spiral shaped bookshelf. The shelf contains some books as well as some plants and some showpiece to give it an attractive look. The bookshelf is 1'-0" above the floor and is of size 5'-0" X 5'-0". The plants placed in the bookshelf are, Cactus, Echeveria Elegans and Ponytail Plam .

Shrinkhla Ek Shodhparak Vaicharik Patrika

Cactus grows well in hot climate and does not require much water, Echeveria Elegans requires bright light and less amount of sunlight and water should be poured in soil and not on the plant, and once it dries up only then next time water should be given and Ponytail Plam requires bright indirect light to full sun and water should be given every 3-4 weeks.

Also this wall includes door of the kids bedroom.

Wall EC

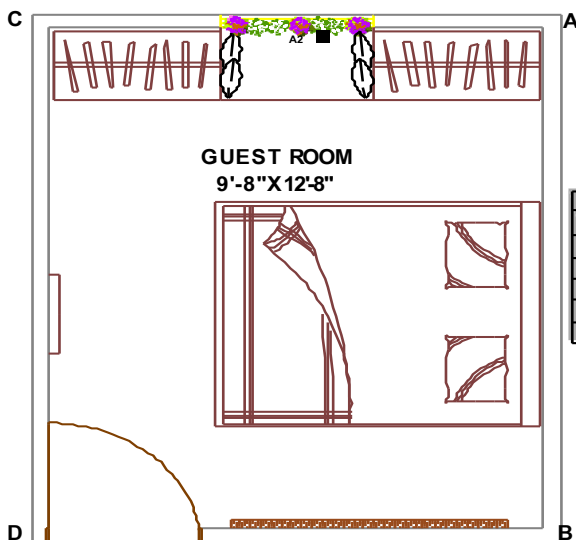
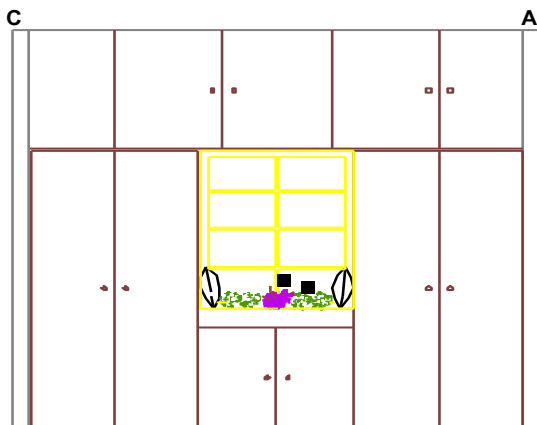
Proposed plant arrangement for Guest Bedroom

A guest room is a room generally meant for

Wall EC includes the study table, chair and a window. This wall has a attached study table. The window is of size 3'-0" X 4'-0". On the window sill two plants namely, Aloe Vera and Echeveria Elegans are placed in combination of each other.

Aloe Vera requires 6-8 hours of sunlight and does not require plenty of water, Echeveria Elegans requires bright light and less amount of sunlight and water should be poured in soil and not on the plant, and once it dries up only then next time water should be given.

Lavender requires full amount of sun and water it deeply but infrequently when the soil is almost



	A	B	C
1	KEYS		
2	- Guest Bedroom		
3	Wall	Sign	Plant name
4	BD	A1	English Ivy
5	CA	A2	Levender
6		A3	Gardenia

DRAWING 8: FRONT ELEVATION OF GUEST ROOM

outsiders which includes friends and relative, who are given this room during their stay in one's residence.

The present Guest Bedroom is of size 12'- 8" X 9'-8" which is 125.44 sq. ft. It includes a bed and a wardrobe which is the most required furniture for guest room.

Wall CA

Wall CA is covered with a full sized wardrobe. In between the wardrobe a window is given. The window is of size 3'-0" X 4'-0". On the window sill two plants are placed namely, Lavender and Gardenia.

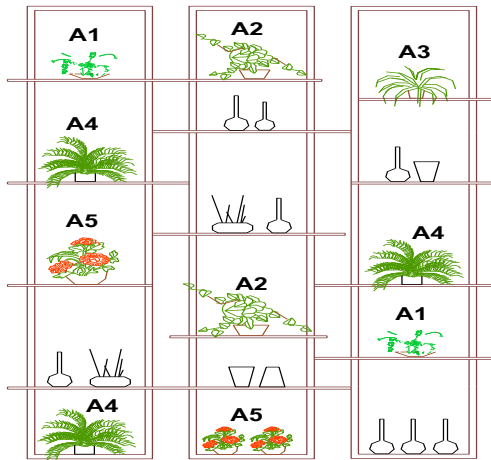
dry, Gardenia grows best in morning sun and afternoon shade during hot climates whereas they can tolerate full sun in cooler areas, and it requires regular watering.

Wall BD

Wall BD is highlighted with a vertical gardening. The vertical gardening is 1'-9" above the floor with height of 6'-6" and width of 3'-0". The plant used for vertical gardening is English Ivy.

English Ivy requires bright, indirect light and before watering soil should be checked as English Ivy are kept slightly on dry side.

Also this wall includes the door opening of the guest bedroom.



Drawing 9: Front Elevation of Partition

	A	B	C
1	KEYS		
2	- Partition		
3	Wall		
4		Sign	Plant name
5		A1	Peace Lily
6		A2	Money Plant
7		A3	Spider
8		A4	Boston Fern
		A5	Adenium (Red)

Partition

Generally a partition is placed to divide the space into two sections in case of large area, or for aesthetics purpose and sometimes even for privacy. The partitions are of various types and can be in various forms and shapes.

The present partition is placed in the space between the Living room and the bedrooms. The size of the partition is of size 5'-0" X 8'-0". It is a wooden finished partition with shelf like structure which are unevenly placed. The partition includes some plants as well as some showpiece to give an attractive look. The plants placed in the partition are, Peace Lily, Money Plant, Spider Plant, Boston Fern and Adenium (Red).

Peace Lily must be keep away from direct sunlight and water should be given 2-3 times a week, Money Plant requires full bright light and should be watered 2-3 times a week, Spider Plant requires light sunlight whereas water is to be given 2-3 times a week, Bostern Fern requires at least two hours of indirect sunlight per day and it requires plenty of water and Adenium (Red) cannot survive in cold temperature.

These plants are unevenly placed in combination with the showpiece.

Conclusion

Nowadays due to lack of open space, people are not able to incorporate garden in their residence. People are forced to live in flats and buildings due to high price of tenement houses, therefore their dream of making a garden is not possible. So one way of solving this problem is incorporating nature in interiors. For this the researchers have given many options regarding the plants suitable for interiors and how they can be placed in interiors and how the

interior can be enhanced. By keeping plants in house one can get fresh air and oxygen inside their house and also the dream of incorporating garden can also be fulfilled. Therefore these options are given and people can use these options for placing plants in interiors. Thus by incorporating nature into interiors it provides aesthetic beauty as well as purifies the air and is also beneficial for environment.

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