

## VERTICAL GREENERY FOR INTERIOR SPACES MADE EASY

# DIY VERTICAL GREENERY AT HOME

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In an increasingly high-density and high-rise environment, many urban planners, architects and builders are making use of vertical greenery to keep high-rise dwellers in touch with nature. To date, in Singapore, such vertical greenery is mostly seen only in public and semi-public spaces, often through the efforts of public and/or commercial institutions and developers. Only a handful of individuals have brought vertical greenery into their own homes. In land-scarce Singapore, over 90% of our residences are in the sky. As land prices increase, apartments are also getting smaller. Vertical greening allows us to stay in touch with nature without losing valuable floor space. However, amongst others, the lack of information and know-how about vertical greenery, as well as the high costs of most proprietary systems for vertical greening, are the reasons why vertical greenery has not taken off in a big way in domestic interior spaces. In addition, the systems developed for the building industry were not designed with the interior spaces of homes and the needs of the individual home owners in mind.

As such, the Centre For Urban Greenery and Ecology (CUGE) Research collaborated with

the Ngee Ann Polytechnic's School of Life Sciences and Chemical Technology and School of Engineering to develop a simple, inexpensive and attractive vertical greening system for residential homes.

This product borrows ideas from submissions for a design competition organised in October 2009, in which the students of Ngee Ann Polytechnic's School of Life Sciences and Chemical Technology were tasked to create a portable do-it-yourself vertical greenery system. Researchers from National Parks Board Singapore's Centre For Urban Greenery and Ecology (CUGE) and Ngee Ann Polytechnic lecturers then put their heads together to draw out some of the good ideas behind the students' submission and created a product that is user-friendly and practical for home owners.

The final invention consists of a stackable system of modules for the support. Each unit can work singly, or in stacks of threes or sixes. The single units and those in stacks of threes may be free-standing on the floor, while the three- or six-unit system can be mounted onto

the wall. The single units can also be displayed as miniature gardens on the table.

The system is simple to assemble, easy to maintain and aesthetically pleasing. Already patent-registered, it is designed to fit in most living rooms, balconies or other suitable locations in the homes. Users are able to arrange series of flexible and modular vertical systems to suit their imaginations when greening their walls to provide a maximum impact. The self-regulating water requirement in each planting module allows a steady water supply over extended periods. With an efficient drainage system, plant stress due to lack of water or over watering is prevented, thus removing the guess work on manual watering and providing a healthy growing environment indoors.

For those who are more adventurous and wish to build an entire vertical green wall from scratch, the team has also provided help in the form of an instructional DVD to help them start their vertical greening at home. The DVD comes with an instruction booklet and is available for purchase at the Garden Shop of the Singapore Botanic Gardens.