



Vertical Greening Makes an Amazing Change

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When we are driving or walking past our school, Santa Rosa de Lima, English Secondary, something new absolutely deserves our attention. It does not only help rejuvenating us when we are physically or mentally exhausted, but also serves as a reminder of the need to nurture the wonderful creations of God. Thanks to the amazing Vertical Greening Project, the empty brick walls on the two sides of the school main entrance have been transformed artfully into colourful GREEN WALLS!

The transformation is not merely for decorative purposes. It adds life and provides long-term benefits, besides giving pleasurable experiences, reminding everyone of the importance of building a sustainable future together.

In the scholastic year 2013-2014, hosted by the Macao Association of Environmental Protection Industry, the Green Environmental Protection Association of Macao and Santa

Rosa de Lima, English Secondary, and co-organized by the Environmental Protection Bureau, the Vertical Greening Project acted as one of the green initiatives in promoting and raising the awareness of environmental issues. It proved to all of us that a little bit of nature can be introduced to where we live, no matter how small that space may be.

Given the scarcity of land resources, vertical greening – an innovative approach to greening up the available space other than utilizing ground resources, such as growing plants on the sides of the walls of a building – may optimize the usage of land space in an intensive manner. With vertical greening, the limitedness of space is no longer a barrier to urban greening. Vertical greening has thus been widely adopted to create more green spaces within a congested urban confine in recent years. In Macao, government departments and environmental organizations have been



engaged in the promotion and implementation of vertical greening since 2010. For example, we can see hanging baskets of plants and flowers used to decorate tourist spots, green roofs installed in some of the markets, waste collection stations, etc.

Santa Rosa de Lima, English Secondary, became the first school in Macao to implement vertical greening. The school principal, Sr. Judith Yuen Mei Fun Alice, expressed her support to the project, “The Vertical Greening Project lets students get their hands dirty and have fun while educating them on the importance of our natural environment and of the need to love and take care of plants.” Feeling grateful and enchanted, she would like to see further development on vertical greening in more different places as well.



Implementing vertical greening on the two sides of the school main entrance offers benefits which are both aesthetic and functional. Firstly, with added aromas, the

green walls make our environment cleaner, more attractive and more comfortable. They can also show the creativity of modern art. Secondly, they can help provide fresh air. Thirdly, they can serve as a barrier to the traffic noise in this bustling city. Fourthly, they can help absorb the heat, thus lowering the overall temperature for the enhancement of energy efficiency. At the very least, they can be a visual reminder to spread a creative eco-friendly message: Let’s go green!

The Vertical Greening Project started with two seminars held in Santa Rosa de Lima, English Secondary, on 22 and 29, October 2013 respectively. At the two seminars, the concept of vertical greening was introduced. More information was given on irrigation, plant choices, weather, site considerations and other requirements of plants. They also provoked discussion on the implementation of vertical greening. For example, regarding the prevention of the breeding of mosquitoes, it was noted that there would be special attention paid to the drainage system to avoid water logging.

Next, we had a competition named ‘Design Our Green Walls’. Around 100 students joined this competition. They had to design the walls, using plants of various colours such as red and green. The best designs were combined and used for the project. Through their participation in the competition, students’ creativity was triggered and shown.



The Vertical Greening Project gave students a better perspective on plant growth. After attending the seminars, they were given an opportunity to do planting and physically monitor the growth changes, the structure and functions of plants in different seasons. An expert was invited to give presentations about the soil and plants and demonstrate planting techniques. Then students got their hands dirty, mixing soil and planting the walls.

Prior to planting, six steel frame structures were built carrying up to one thousand one hundred and twenty pots altogether. For convenience and easy maintenance, the green walls were designed with an automated drip-irrigation system, which maximizes the use of water and minimizes waste.

Participants of the Vertical Greening Project mainly included teachers and students from the Ecology Club, the Geography Club, the Discovery Club, and Primary 3 and Form 3 Extracurricular Activity Class - Happy Farming, and other students across different levels. They all enjoyed the process of planting and looked forward to seeing the green walls take shape. Students were interested to know more about vertical greening and appreciated the idea of having green walls in the school.

The Vertical Greening Project is not

the only “green” element our school has introduced. A rooftop garden was installed, further demonstrating sustainability and green living for our students. Students can get a better picture of the ecosystem by observing the plants and possibly the birds and insects being attracted. It has become a trend to lead a greener lifestyle today, but we still have a long way to go.

With improvement in environmental science and technology, we look forward to seeing better environmental protection practices in school, at home and in the community. We cannot just sit back and hope somebody else does something. Instead, in our everyday lives, we should all endeavour to reduce our ecological footprint through adopting sustainable practices such as simply turning off lights and fans when they are not needed, avoiding any pointless purchases to reduce unnecessary waste and many more. Keep in mind that even a small change makes a difference.

