














Project Title: True Light Green Roof






Purpose of the Project: The project aimed to lower down the top roof classroom temperature, to improve the air quality in our school, to provide a green land for the living creatures in the community and to raise students' awareness of environmental conservation, through installation of a 337.5 m² green roof.

The plant *Zoysia japonica* needs a humid climate to survive. They grow to approximately 0.5 mm width. It is hairy near the base and exhibits short inflorescence. They grow approximately 8 to 20 mm long.

Automatic irrigation system was installed to water the grass three times a day.

| | | | |
|----------------------|--------------|--|--|
| | Time | | |
| Implement Green Roof | Roof in 2014 |  | |
| | July 2017 |  |  |
| | August 2017 |  | |
| | Sept 2017 |  | |
| | 20 Oct 2017 |  | |
| Class tour | | Green ambassadors introduced the green roof to each class together with its function and importance. |  |

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|--------------------------------------|--|---|--|
| | |  | |
| <p>Training ambassador</p> | |  | |
| <p>Testing air quality</p> | |  <p>S3 students studied the air pollutants on Cross Curricular Learning Day.</p> |  |
| <p>Testing green roof protection</p> | |  <p>Temperature was regularly taken by two thermometers that were installed on fifth floor with and without green roof protection.</p> |  |

| | | |
|---------------|---|---|
| Board display |  <p data-bbox="504 680 895 757">Enrich students' awareness of environmental protection</p> |  |
| Exhibition |  | <p data-bbox="948 779 1254 999">Hundreds of primary school students, parents and alumina came to know more about True Light Green Roof.</p> |
| Green Plant | <p data-bbox="504 1021 895 1339">In order to enhance the awareness of protection of the earth we live and to reduce carbon dioxide emission, we have an activity to grow a green plant daffodil in January.</p>  |  |
| Bird Watching | <p data-bbox="504 1547 895 1818">The number of birds, which was reportedly found on our green roof, included Spotted Dove, Black-collared Starling, Crested Myan, Chinese Bulbul and Tree Sparrow.</p> | |

| Temperature taking | The temperature of the building was regularly taken by each class green ambassador. There was a significant difference in temperature between the green roof surface and the roof surface without vegetation. | | | | | | |
|----------------------|---|--|--|--|--|--|--|
| Temperature recorded | Date & Time of Measurement** 量度日期及時間** | Temperature on the vegetated layer 於植物層上的溫度 | Temperature on the roof ground <u>without</u> vegetation covered 於天台地面上 (未有被植物覆蓋) | Temperature at the ceiling underneath the vegetation layer 於植物層以下樓層的天花板 | Temperature at the ceiling underneath <u>without</u> vegetation layer covered 於天台對下樓層(但未有被植物層遮掩)的天花板, | Room Temperature underneath with vegetation layer covered 於植物層對下樓層的室溫 | Room Temperature underneath <u>without</u> vegetation layer covered 於天台對下樓層(但未有被植物層遮掩)的室溫 |
| | 16/5/2018 9:40 | 32 | 44 | 30.3 | 29.8 | 30 | 30.2 |
| | 17/5/2018 11:45 | 47 | 53 | 30.7 | 31 | 30.5 | 30.7 |
| | 18/5/2018 9:45 | 42 | 47 | 31.6 | 30.8 | 31 | 30.8 |
| | 21/5/2018 1:30 | 43 | 48 | 32.6 | 34.5 | 33.9 | 32.5 |
| | 4/1/2019 10:15am | 18.5 | 18.6 | 18.5 | 18.2 | 18.6 | 18.7 |
| | 7/1/2019 1:00pm | 29 | 28 | 20.7 | 20.2 | 20.7 | 21 |
| | 14Jan2019 10:30am | 23 | 20 | 20.1 | 19.7 | 19.9 | 19.7 |
| | 17/1/2019 9:00am | 18 | 17 | 17 | 17.1 | 17 | 17 |

