

# 2012 年臺灣國際科學展覽會

## 優勝作品專輯

國家：Hong Kong

編號：100027

作品名稱

**Fast Fabulous Flush**

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作者姓名

**Ma Wai Sum**

## **Abstract**

Water is very vital in our lives as we cannot live without it. However our world is now facing a serious problem. Owing to the increasing population, water resources are scarce. In recent years, we can see that droughts have been affecting millions of people around the globe.

In the meantime, people in developed countries have been wasting huge amount of water for flushing the toilet. According to the US Environmental Protection Agency, 30% of household water goes toward flushing the toilet. Countries like China, US, Canada and UK are still using fresh water in flushing, consuming 190 million L of fresh water every day, not to mention the energy needed in pumping the water.

In fact, it is not necessary to use so much water to flush away substances like tissue, hair, urine etc. The water we used is far more than we need. However, as we cannot control how much water is used when we flush, all water in the cistern is flushed away.

Realizing the seriousness of water shortage and wastage in flushing, we tried to invent a device to conserve water by controlling the amount of flushing water used. Firstly, we study the principle of normal flushing system so as to understand why flushing cannot be controlled. Then, we tried to think of ways to control flushing. We have tried various methods and materials. After the 6-month testing and modification, we successfully invented Fast Fabulous Flush. It is a device which can be fit into existing cistern to conserve water.

With our invention, users can control the amount of water flushed according to needs, so as not to waste unnecessary water. Our invention costs a low price which is no more than 2 US dollar. Also, it can be fit into existing cistern within 3 minutes with simple installation process. Most importantly, flushing water can be conserved effectively. It is estimated that around 200L of water can be saved per household every day.

## 評語

能善用巧思，改善沖水馬桶，使具節水功能，能依實際需求手動控制沖水量，且採用器材簡易、成本極低，進入市場容易，具實務應用價值。