

## **Title - *Can a new hydroponics system help combat drought?***

**Theme:** - *Communities*

**Team:** *We Are So Dry*

**School, Country:** *John Monash Science School, Australia*

**Student team members** - *Ashley Honeybrook and Chen Wang*

Due to the severe droughts in rural New South Wales and Queensland, if a new sustainable way to utilise hydroponics and save water was made available for the public, this drought would no longer dangerously affect the growth of the crops in these states, which ultimately impacts Australian lives. If this hydroponic irrigation system is used to grow baby gem lettuce, the amount of water used will be reduced by 25% when compared to a conventional system of watering the lettuce manually. Two types of small-scale irrigation systems will be built. The first is a standard irrigation system and the second being a new type of hydroponic irrigation system that will filter water down onto plants in need and then filter back into a lake so then the water can be reused. Baby gem lettuce (*Lactuca Sativa*) will be used in both the experimental and control trials for the use of comparison. The expected outcome of this project is that more water would be left in the hydroponic irrigation system than in the conventional irrigation system after the experiments. Lettuce growth in both groups should be the same, hence creating a new way to combat dying crops in a drought.