



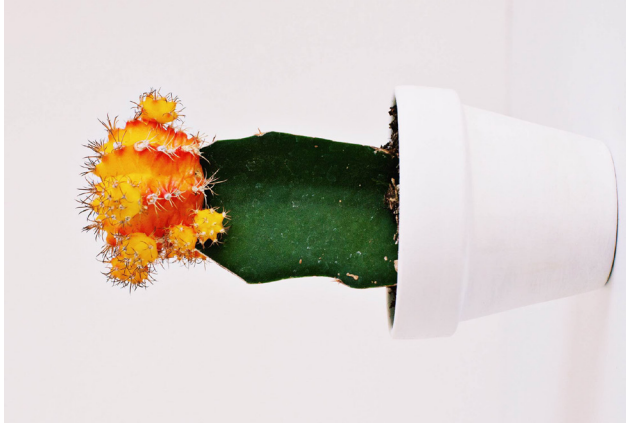
**WATER**

Plants have many different functions that are environmentally friendly and useful to the community. During photosynthesis, plants collect carbon dioxide that they get through little pores in their skin that open and close. They use this carbon dioxide to turn into food in the forms of sugar. Water is one of the most important resources that plants need in order to survive. Some plants, such as cacti, have skins that provide a waxy coating that helps them retain moisture, but many plants get water through their roots. Some plants have stems that act as a reservoir. The plant would expand and contract depending on the amount of water it has the ability to hold. Plants benefit the environment by removing pollutants from water, soil, and air. Phytoremediation helps remove pollutants



Succulents, <http://www.youngs-garden.com/blog/2014-free-succulent-plants/>, 2014.

from the environment. It acts as the most effective and environmentally friendly way to clean soil and water that has been contaminated with toxic metals. Certain plants also have the capability of removing specific chemicals from the soil as a way to make themselves more avoidable from being eaten. In order to provide cooling to the environment, plants go through a cycle called transpiration, which is when plants lose large volumes of water through the leaves in the forms of vapor. This gives the plant advantage because of its cooling effect.



Cactus plant, Sarah Rhodes, 2014.

Rooftop farming in cities have become a more accessible and sustainable way for the city population to gain more fresh produce. In an urban environment, it's not common to gain fresh produce from supermarkets, so rooftop farming has helped provide food security to the people. In order for farmers to create success with rooftop farming, water is a natural resource that is substantial to their garden. With the uneven surfaces in the city, most of the water during rainfalls end up in storm sewers which causes more pollution to end up on side-



With rooftop farms and green roofs, they find a sustainable way to capture the water and use this potential pollution for an important resource. The Brooklyn Grange didn't use typical soil used for gardening, but they purchased a soil mix called Rooflite Intensive, which was specifically designed to use for rooftop farms. The Rooflite Intensive is substantial to the green roofs, especially with its light weight and its effectiveness of retaining moisture and capability of draining excess water. Green roofs help provide the city and markets within the city with fresh produce that help make the environment

produce that help make the environment healthier with the agriculture that produces food without pesticides and fertilizers. In addition to the soil and healthier environment, rooftop farms also help build efficiency. Rooftop farms help build energy efficiency by providing insulation which create warmer temperatures in buildings during the winter and cooler temperatures in buildings during the summer. In many cities, the ground is covered with concrete and pavement which affects the air temperature, increasing the energy used for cooling, causing air pollution. Rooftop farms

causing air pollution. Rooftop farms absorb less heat which help decrease the amount of air pollution throughout the city.

