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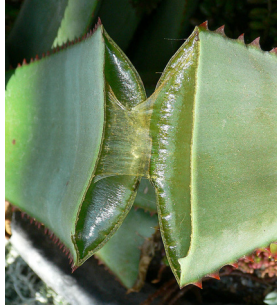


Rooftop Farming in Cities and the Microclimate on Rooftops

Rooftop farming in cities are very useful in terms of microclimate for the building as well as the city as a whole. Rooftop gardening helps the building keep warm during the winters because the soil captures the heat. In the summer the current black, metal, tar roofs make the city and the building so hot, while the rooftop garden would reflect the heat, keeping the building and the city a bit cooler. It allows organic growing and selling organic food a lot easier since they are in charge of what pesticides (if any) being used on the produce. Although rooftop farming has its perks, its main problem is dealing with the wind that destroys the crops as well as the need to have a large and steady building for the rainwater collection or the issue of runoff water.

Plants with Leaves that Collect and Store Water

Succulents are plants that have leaves that are thicker and ‘fleshy’ than usual, to be able to retain water in areas that are very dry. These plants, such as aloe, are able to collect water within the tubes of their thick leaves.



Picture from Longwood Gardens taken by Rauf654 On May 1, 2005.

Plants that Transform CO2 to O2

Photosynthesis is the process, used by plants and other organisms, of converting light energy from the sun (carbon dioxide) with water to produce sugar (glucose) as a way of fueling itself.

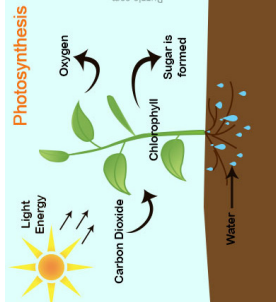


Photo by: Nicks J Last Updated: August 23, 2016

Plants that Provide Cooling

Plants provide cooling by absorbing the carbon dioxide and emitting oxygen into the air. By emitting oxygen, they cool the landscape through transpiration, releasing excess water into the air from their leaves. Surrounding plants and environment cools themselves from the evaporated water.

Plants that Filter Pollutants from Water

Specific plants like grass, reeds, bamboo, irises etc. help filter pollutants from water by their ability to absorb and break down the pollutants. It is one of the most natural yet advanced processes that help with water purification although the increase of buildings and structure limit the accessibility of these plants to go through this process.

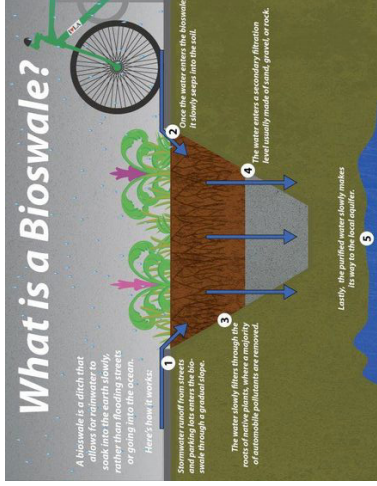
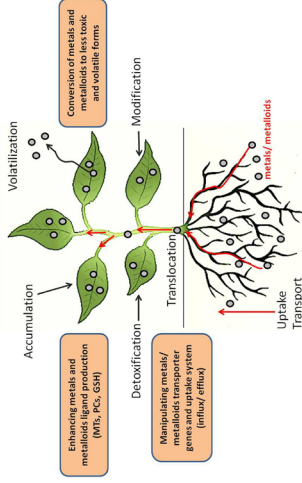


Photo by: Food by Bri, food and farming

Plants that Remove Pollutants from Soil

Certain plants have the ability to cleanse the soil of the Earth's toxins. This process is called phytoremediation, which is the plants' ability to absorb certain metals from the soil.



Picture by: Front. Plant Sci., 15 March 2016

Plants that Filter Pollutants from Air

While plants are absorbing the carbon dioxide and processing it into oxygen, they are also absorbing some particles from the air creating a cleaning effect.

Urban Agriculture Mind Map

