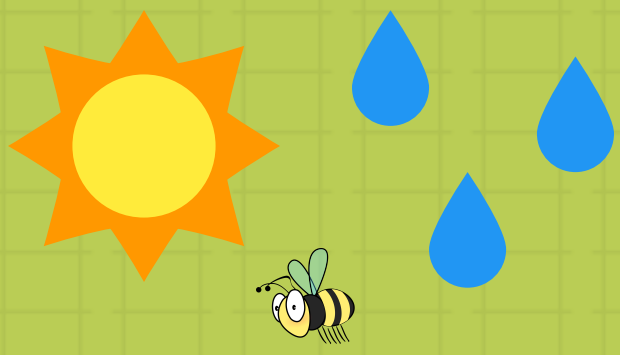
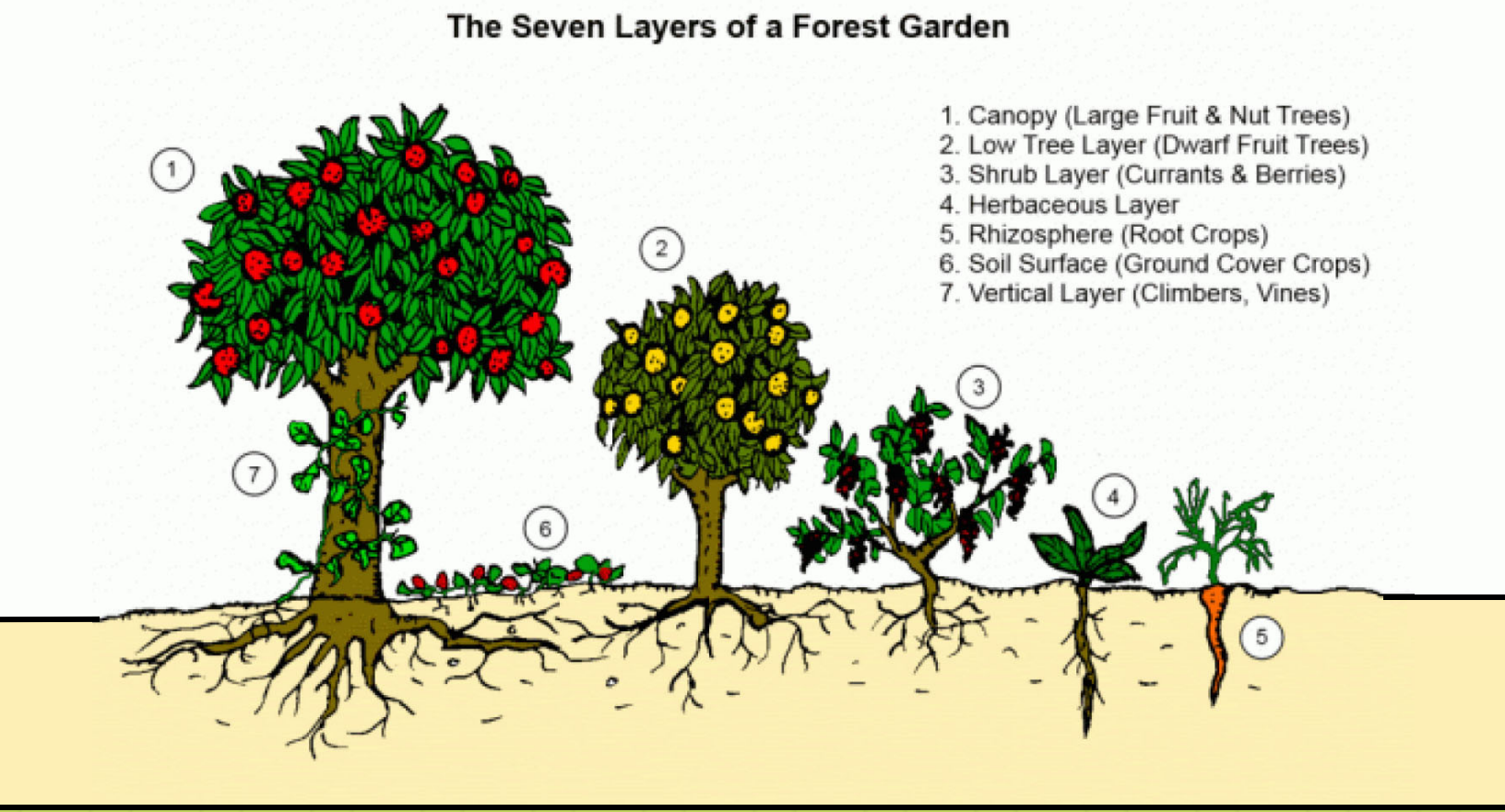
Welcome to Bellemeade Park's Youth Garden - Food Forest

Unlike a ***"Food Desert"*** where communities lack access to fresh, healthy food such as fruits and vegetables, a ***"Food Forest"*** is a concept that many cities are now embracing to make food available to under-served areas. This is accomplished by following the concepts that are found in a healthy forest, hence the name ***Food Forest***. Although the food is not always grown fully inside a forest, the ecological principles of a healthy forest do play a role.

So, What Are These Principles?

1. Grow plants in layered heights
2. Maximize sun exposure
3. Water for hydration
4. Enhance soil quality
5. Rely on native pollinators
6. Honor the concept of "Keystone Species"





Grow Plants in Layered Heights

A natural forest grows most successfully in layers. There are tall trees, medium-tall trees, shrubs, vines, forest floor plants, and roots (tubers). A Food Forest has a similar set-up...taller fruit/nut trees (pecan), medium-tall fruit trees (mulberry or pear), bushes (blueberry or tomato), vines (blackberry), ground plants (cabbage or cilantro), and roots (carrots and beets). Some of these plants are perennials (grow every year on their own). Others are annuals (have to be replanted each growing season).

Soil Quality

Soil Quality is one of the most important features of any Youth Garden - Food Forest. Here are some basic things we can do to create better soil

- Prevent soil erosion
- Don't use excess or artificial fertilizers
- Reduce pollution (makes acid rain)
- Minimize Exotic (non-native) plants
- Avoid soil compaction and over-tilling
- Maintain soil nutrient quality

Sun Exposure

At least 8 hours a day of full sun.

Water for Hydration

1 inch per week (rain or hand watered)

Enhance Soil Quality

To maintain nutrient quality in our soil with natural fertilizers, we can utilize "composting" or "vermiculture". Natural decomposers (fungi, insects, earthworms and microbes/ bacteria) break down dead plant and animal matter to release their nutrients. These nutrients can then be worked back into the garden beds to enrich the soil. Plus, with the additional help from snails, spiders, and even crayfish, the soil will be less compacted, and better aerated for improved water saturation.

Healthy Soil = ***Healthy Food*** = ***Healthy People***

Composting Pile

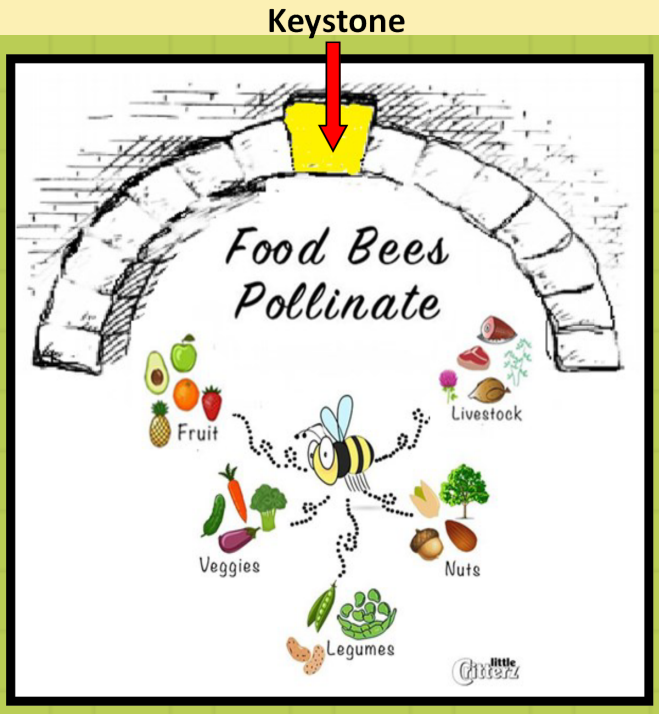
To add nutrients back into the soil the easiest method is to compost materials that can break down. This includes grass clippings, weeds, saw dust, autumn leaves, vegetable scraps (NO meat scraps), egg shells, coffee grounds, etc. These items get layered, along with a nitrogen-rich manure, in an area that stays warm (in the sun) and moist (not soaking wet). Periodically, the pile is turned over to add air (oxygen) to the decomposing matter. Eventually, it will break down into "compost" which is full of nutrients to be worked back into the soil as natural fertilizer.

Vermiculture with Earthworms

Another way to return nutrients back into the soil is to use **Earthworms** as your recyclers. This is called ***vermiculture***. Earthworms are very efficient in recycling paper, cardboard, egg shells, vegetable matter, etc. as well. They have the same requirements as a regular compost pile, but do so in the shade, ***not sun!*** The worms create ***"castings"*** (droppings) rather than compost, which are also very nutrient-rich for the soil. Check out the vermiculture set-up we have here to get an idea whether that would work for you at home.

Keystone Species

For every successful ecological system ***(habitat)*** in Nature there is something called a ***"Keystone Species"***. The ***Keystone Species*** is the member at the top of the entire eco-system which keeps it running smoothly, and controls what goes on with all of the other members (directly or indirectly). As the top member in its system, it cannot be successfully replaced by any other member, and continue to function as a healthy habitat. This is how it is the ***Keystone Species.*** Much like the "Keystone" in a structural arch, if it is missing or compromised in any way, then the entire arch (or system) will collapse. For example, in the ocean the shark is the ***Keystone Species***...on the African savanna it is the plant-eating elephant. In our Food Forest eco-system, we consider our pollinating bees our ***Keystone Species.*** Without them our Youth Garden would fail to produce fruits and vegetables, and we would have no food.



Native Pollinators

Bees and other insects are responsible for pollinating our crops. Without them we would have very few fruits, nuts or vegetables to eat. We can support these insects by planting native plants, live we have added here in Bellemeade Park. We can also stop using pesticides, insecticides, chemicals and artificial fertilizers which are harmful to our insects and animals.

Growing Mushrooms for Food

Although we think of mushrooms (fungi) as decomposers in compost piles, some varieties are edible for people. When fungi are spreading inside rotting wood, they eventually create "fruiting bodies" on the outside of the wood, which we commonly call "mushrooms".

Mushrooms are how fungi reproduce and spread. Mushrooms are also a very good source of protein. We can grow our own mushrooms to eat in a shady area, like the forest. All we need is: fresh logs (not chemically sprayed), holes drilled in the logs, the mushroom spawn to stuff into the holes, and a food grade wax to cover the filled holes so they will not dry out. We keep the logs cool and moist in the shade, so the fungi can do their work inside the logs.

After that we wait...and wait! Anywhere from 3-9 months later, the fruiting bodies (mushrooms) will start to grow on the outside of the logs. Now they are ready for us to harvest and eat! Look at this special "mushroom growing logs" we have on display here.

DO NOT **eat any wild mushrooms you find in the woods. Wild mushrooms may be poisonous. We only eat the mushrooms we grown ourselves!**

Virginia Master Naturalist Riverine Chapter

Sign designed and created by Diane Moxley, Virginia Master Naturist, Riverine Chapter and Tracy Marino.