



A MORE SUSTAINABLE PLANET
GREEN BAY BOTANICAL GARDEN

So how can you be more sustainable on the landscape while also creating biodiversity? Roll up your sleeves as we dig for some answers at Green Bay Botanical Garden.

Jacob - oh boy! We really need your help on this! Do you know what's missing here? Obviously there's no biodiversity here.

Gianna - Its because that's a monoculture over there. That means they are only growing one type of species. And that looks like wheat stubble. We've got lots going on over here.

Jacob - Plus I don't see any other species of life here either.

Gianna - It's because there's no biodiversity. It may be growing one thing, but it's still an ecological desert without diversity of species.

Jacob - Hey this isn't fair! You look like you're in a jungle! What's all that noise?

Gianna - That's the sound of biodiversity. It starts with all these diverse plants that make a bunch of different ecosystems and that creates a bunch of life.

I think this place is still missing one thing pretty important.

Jacob - Oh Yeah! This is the kind of biodiversity I'm talking about, what kind of jungle is this?

Gianna - This ain't no jungle Tarzan! Just about anyone can grow something like this with just a little gardening savvy.

Jacob - Oh yeah! this is the green bay botanical garden I bet there are experts here. We can learn how to grow biodiversity here. Come on let's go!

Excuse me...So this place is cool and all with all this biodiversity, but it's a botanical garden, how could someone like me plant something like this?

Linda Gustke - You know these plants really don't need a whole lot. They need a place in the soil to grow, a little bit of water, air and sunlight and they're happy. So you don't need to be a botanical garden or have a horticulture degree to have this in your own yard.

You know if you look around you're going to see gardens at school, at businesses, I mean just wandering the street, and even in peoples' backyards so they are all over the place.

Jacob - Seems like a lot of work, I think I'd rather just chill and play computer games. What's in it for me?

Linda Gustke - There is work in the garden, but the benefits are so amazing. Just imagine picking that ripe red tomato and biting into it and the delicious juiciness of it! Because you have grown it in your own backyard. Well with a garden not only are you growing some of your own food, you're also helping the planet you're creating this awesome ecosystem for all the animals and plants that are living in the world around us. So its not only what's in it for you, but its what's in it for the world.

Jacob - Why is it important to plant such a variety of species?

Linda Gustke - Well think about it, if you have just your grassy yard, you have one plant out there. Not all animals that eat plants can eat that grassy yard. So, by planting multiple plants and varieties whether they're flowers, fruits, vegetables you're helping feed the entire world.

Gianna- So they all work together.

Linda Gustke - Yeah exactly. Let me ask you this, are you going to be happier sitting inside by your computer screen or outside in the real world, where the plants are taking that carbon dioxide in the air and turning it into food and plants for everybody and then in turn giving you oxygen to breathe.

Gianna - Making food from CO₂? I don't really get it.

Linda Gustke – Well let's think about it this way. What do you two need to survive and grow?

Jacob- Ah air

Gianna- Food

Jacob- water

Linda Gustke - Exactly, that's all the things that plants need too. Those are the abiotic factors in our ecosystem, the things that are nonliving that all of are biotic factors, all of our living things, need to survive and grow. So the cool thing is, those plants, they're using the carbon dioxide that we breathe out. And then they're respiring, giving off oxygen for us to breathe, it's this cool symbiotic relationship that we have with plants. And all of these abiotic factors forms the foundation for all of life on the planet Earth.

Gianna - Now that takes some serious bio-magic!

Linda Gustke - It is some pretty cool magic. So, those plants they're sucking up water through roots from the ground, then the leaves are grabbing the carbon dioxide from the air. Then inside those leaves the reason they're green is they have chloroplasts filled with chlorophyll and that's where they're grabbing energy from the sun. They're taking that carbon putting it with the hydrogen and the oxygen and creating carbohydrates.

Jacob - Carbohydrates, I think that's what makes up all of our food! Cool! Photosynthesis creates nature's lunchbox. You know if you really think about it, it creates the basis to all food webs.

Gianna - Do you know what other species feeds on nature's lunchbox?

Music

Jacob - After that I'm really ready to start gardening

Gianna - But keep in mind, we're still beginners

Kelle Hartman - That's alright, keep it simple and just remember to plant natives for biodiversity.

Jacob - Why is it important to plant native species?

Kelle Hartman - The native plants are going to be tougher so they won't need as much water or fertilizer. The insects and the animal life that are here already know them, they're familiar with them. So they'll come to them for pollen, nectar, seeds, fruit. Whatever those plants produce, the animals here will already know it and love it.

Gianna - There's about 1,000 native plants, what species are we talking about?

Kelle Hartman - There's plenty for you to be able to choose from. Purple cone flowers are beautiful and the butterflies love them.

Jacob- Cone flowers! Now we're talking pollinators, oh yeah!

Kelle Hartman - Black eyed susan's, wild quinine, hyssop flower all have beautiful flowers throughout the year and the animals here will love them. Remember that you need to plant more than just flowers. It's also important to plant host plants that the caterpillars are going to eat and turn into butterflies which will help to pollinate and visit your cone flowers.

Gianna- Is there anyway we can feed pollinators and us too?

Kelle Hartman - It's simple, if you plant several variety of vegetable plants in with your flowers, the pollinators who are attracted to the flowers, will also help to pollinate your vegetable plants too. So they will produce a huge crop of peas, beans, tomatoes, cucumbers, radishes. They are coming to eat all that nectar and pollen out of your flowers and after they are pollinated then you end up with all these delish vegetables to eat. Everybody wins!

Jacob - Man this soil is very rich. Can't wait to start planting some native species for pollinators!

Gianna - Ah no let's plant radishes and tomatoes

Jacob - Don't you want to feed nature?

Gianna - Don't you want to feed humans?

Jacob - I want to make the planet better!

Gianna - And I want to make the planet better

Jacob - Well we'll see who's right!

Kelle Hartman - Well you can plant for pollinators and for people. You can increase the biodiversity and there's food for everybody! So you're both right!

Jacob - Both right! That's what I thought

Who would've thought something as fun and simple as gardening could have such an impact on our backyard.

Gianna - Yeah just think of the difference it could make if our whole neighborhood planted gardens.

Jacob - or even better yet the whole city planted gardens!

Gianna - or country!

Jacob - So if you believe in making our backyard ecosystems and the entire planet healthier give gardening a try.

Gianna - Hey you might get a green thumb out of it!

Jacob - Wait, is mine turning green?

What? Not sure how to get started? That's easy

Gianna - Visit Green Bay botanical garden where you can get ideas and tons of inspiration.

Jacob - Then you can begin planting your own garden with a blend of biodiversity and sustainability for your yard and life.

Gianna - for free ideas and resources for creating your garden visit gbbg.org and intotheoutdoors.org