

# *Green Treasures*

## **FairChild Challenge**

Granville Middle School

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### **Questions we asked our interviewees:**

1. What are ways that you have used plants in the past?
2. What are some interesting things that you have noticed about plants and their uses?
3. What are some ways plants used to be used more often but are a lot less common now?
4. How would you explain the role of plants in your everyday life as a child?
5. What are some ways that plant uses have evolved since you were a kid?
6. Have you ever used any plant-based medicines throughout your life, and what are they?

### **Answers from interviews:**

#### **Sophia's Grandma:**

1. Planted flowers to make outside of house look nicer, planted veggies and herbs to eat, raised house plants, both in the house and at work, used aloe for burns, eaten plants, cooked plant products, and fed pets.
2. Learned that there is so much about plants that we don't know compared to people who lived in earlier times and people in other cultures.
3. Not really, most uses of plants are more recent.
4. Has strong memories of the sides of house having lilies-of-the-valley. When she was little, a fruit and vegetable man would drive up and down the streets in a horse-drawn wagon, and anyone could buy fresh fruits or veggies.
5. Scientists and medical profession have recognized many more medicinal qualities of plants, and that the plants could be a much healthier and more effective way to treat diseases than chemicals made in a lab.

6. Yes, aloe, eucalyptus-based medicine, herbal tea, salve homemade out of herbs and roots.
7. Interesting info: lives by a farm that raises christmas trees to sell. Farm has watercress, and they often will have watercress sandwiches. Prefers veggies over meat. In a gift shop, there were containers of a eucalyptus medicine, bought a few, now wishes she had bought a dozen. Favorite tea to drink is herbal tree.

### **Marie's Grandpa**

1. Used plants for Shade outside the house to help with heating, for food, like salads, fruits, and vegetables, for landscaping, and for decorations around the house.
2. That there are deciduous plants that lose their leaves in the fall, that perennials come back every year, compared to the annuals that die, and have to be replanted. They also can make you feel better, and brighten your day, for example if you get it as a gift, but also in a plant based diet, you feel better when you eat them, as opposed to unhealthy or greasy foods.
3. Plants used to be grown mostly to flavor food, but now we have lots of fake flavors that are used instead of plants. Also plants used to be used a lot more as dividers between houses, but now people will just put a fence, just because it is easier.
4. He would use them when playing outside, and playing golf everyday, his favorite hobby. He would also grow some of his own fruits and vegetables in his backyard.
5. We know more things about plants now, for example, he used to rely on dried herbs, but now he uses for fresh herbs. We also know more about what they can do for us in things like plant based diets.
6. He would use Aloe plants whenever he got a cut or burn doing work, or cooking, or in the summer when he would get a sunburn.

### **Sierra's Grandpa**

1. In the past he has used plants in vegetable gardens. House plants and yard plants for viewing.

2. Watching plants go through various stages you can see the uniqueness of every plant and the joy that it would bring to him to see each one grow - watching the flower bloom or produce fruit or vegetables
3. Dandelions are great examples of this - it used to be eaten a lot because it was free - you could just pick it from your yard. But now since people have lots more money they go to stores and buy that type of thing from a store.
4. Live plant are to enjoy now he gets to watch water and fertilize the plants and enjoys this greatly.
5. Skipped - didn't know how to ask/ answer
6. Growing up if there was ever any burn or cut or something like that and people would just squeeze out some aloe to heal your alement. Growing up there was a women who came to cook for them because his mother died when he was four. So she would have plants for lots of things - mosquito bites, poison ivy, cuts, bruises, etc.

## *Earth's Natural Beauty*

Hippocrates once said, "Nature itself is the best physician." He is known for being "The Father of Western Medicine". He realized the incredible power of the natural world, and that the best way to return somebody to a state of well-being was by using what was already here: nature.

Throughout history, plants have been used for medicine in many incredible ways. They have been used for thousands of years. The first documented use of plants as medicine was in China, around 2800 BC, nearly 5000 years ago. The next big breakthrough was around 400 BC, when Hippocrates started three schools in which students learned how to treat diseases using the natural world.

Although plants have been used as medicine for quite a while, many uses of plants have come into existence more recently, or become more common recently. For example, when we interviewed an elder member of our community, she mentioned that as a kid, she didn't really use plant-based medicines, but now, whenever she gets a burn, she will put some aloe on it. The idea of using aloe for medicine has been around for a long time, but recently it has become much more common and well known. She said that in her house growing up, her family probably "wouldn't have even considered using a plant for medicine, but now, it's completely commonplace." Many plant-based medicines are like this. Even though they have been around for a longer amount of time, recently they have begun to be much more common in the last few decades.

Even though medicine has been largely influenced by plants, it is not their only use. They are also a large component of the culinary world. For example, when we interviewed a woman in our community, she said that she had used plants throughout her whole life in cooking. She described to us the times when she and her mother would use home-grown tomatoes, lettuce, and onions to have fresh salads every night at dinner.

Plants have been a major part of history's diet not only today, but many years ago, dating back, to before written records. Once written

records were found, scientists notice that plants were everywhere and that they were the core of human civilization.

Not only have plants been used in food, but they have also been used in religion, in fact, plants were used in a form of religion in some of the people that we interviewed. For example, one man said that he and his wife would use plants in tea and use them as a calming method. They said that the plants gave them a form of spiritual connection. These people in our community are an allegory of the world's history. For example, the Lotus Flower is found in the religious history of the Indian Culture.

Lastly, plants have been used throughout time, and in our own community in culture. We can find uses of plants in culture from the beginning of time, in the Bible story of Noah and his Arch, when he sent a dove to land, and it came back with an olive branch. We also found many people who use plants in their culture, for example, one woman told stories of her family owning a farm as a child, and of how they would have a garden in their backyard, and that they would eat the berries, fruits, and vegetables that they grew by themselves.

This experience of the Fairchild Challenge introduced us, and the people we interviewed, to the true importance of plants in our lives. Without plants, we truly could not exist. Though scientists know so much about plants, there will always be more to learn, as we discover more and more ways that plants can be used. Plants are truly the wonders of the world.

-Research pages-

### **How plants have been used throughout history in medicine.**

No one really knows when the first use of plants in medicine took place, but the first documented use took place in 2800 B.C. in China. Much later in history, the Greeks caught on to the plant based medicines in 400 B.C, when Hippocrates, known as the "father of medicine", started three schools to learn how to treat diseases, one aid to health: plants. Later in 50 A.D., the Roman Empire started to learn how to grow, or cultivate plants that would be later used for medical purposes. This idea, within a short period of time, spread throughout the whole Empire, and later spread to the Monks in 800 A.D. These Monks used the previous ideas of herbal medicine to help the sick and injured. Then later in 1100 A.D, the Arabs wrote the *Canon of Medicine*, which sparked the Arabians into using herbal medicine though today. In 1200 A.D, when the Black Death or Bubonic Plague started to spread, the biggest know aid to the plague was different plant based substances, taken in leaves, powder, or tea. Still later in 1500 A.D, a huge step for herbal medicine took place when King Henry II promoted herbal medicine in the parliament. In 1800 A.D, when different drugs and pharmaceuticals were coming into play, common people and doctor began to realise that these drugs were leaving nasty side effects. Back then, the only true fix to these side effects was to make herbal powders that the sick could ingest. Later in 1900 A.D, during WW I, the lack drugs and medicines lead to an even greater dependence on herbs and plants to help heal the wounded soldiers at war. Today, in 2018, plant uses in medicine are being revisited, as second options to harmful drugs and medicines taken. These plant based medicines provide a more natural way of receiving help to cure diseases and illnesses. With the help of research and trials, herbal medicines have continued to grow, and impact the field of medicine.

## **How plants have been used throughout history in food.**

Plants have been used as food for many species throughout history. It is impossible to say when plants became a food source. They have been used ever since the first animal that lived on Earth. Since then, many species have grown to rely on plants as food. Organized agriculture, instead of just gathering plants, began around 10,000 BC. This really began with nine basic crops: rice, emmer wheat, einkorn wheat, hulled barley, peas, lentils, bitter vetch, chickpeas, and flax. In 10,000 BC, depending on where in the world you were, there would be different combinations of these crops growing. As time went on, many other crops were grown and harvested. Around 7,000 BC, sugarcane and a few types of root vegetables began to be grown New Guinea. In 6-5,000 BC, the potato was domesticated, along with beans and bananas, in different places around the globe. As time goes on, the human race continues to cultivate certain types of food, so that by 1 AD, around a hundred types of edible plants have been grown by humans. Many of these foods, we still enjoy today. During the Middle Ages, many types of edible plants spread throughout the world. Many foods, as well as techniques for growing them, were brought to Europe from Asia. These include sugar, rice, cotton and fruit trees such as the orange. Another big breakthrough for the spread of foods throughout the globe came with the Columbian Exchange. Many new foods, such as corn, potatoes, sweet potatoes, and manioc, were brought to Europe from the New World. Europe also brought new foods to the Americas. These include wheat, barley, rice, and turnips. In the past 200 years, we have continued to find new ways of growing and harvesting food. With the British Agricultural Revolution, crop rotation, irrigation, and the use of fertilizers all began to develop. Now, agriculture has spread to all of the corners of the globe. Almost all humans rely on plants as a food source, and many farms worldwide provide for these people. For thousands of years, humans have relied in plants as food, and that still continues today.

## **How plants have been used throughout history in religion.**

Many plants throughout history have been used for various religious reasons. One example of this is Jasmine. The flower of the plants has been used in many instances as offerings to gods. During religious occasions women would wear Jasmine flowers in garlands to show dedication to the gods.

Another example is a Water Lily, also known as a Lotus. These flowers were often used as offerings in Indian temples. The lotus is a symbol of purity and innocence. The flower has great association with gods such as Goddess Saraswati, Goddess Lakshmi, Lord Vishnu and Lord Brahma.

A different plant used in religion is the White sandalwood. The stalk like wood is frequently used in religious pujas to make "Chandan Pastes." These pastes are put on the heads of gods and of the worshipers. The oils from the tree are also used in incense, and offered in the sacred Yajna fires.

Another plant, Tulsi or Holy Basil, has been used in various instances of religious importance. There are two types of Tulsi that are worshiped in India. One is Rama Tulsi, it has light green leaves and is larger in size than the other; Krishna Tulsi, that has dark green leaves and is important for worship of Vishnu. These plants are often grown in special pots outside of Hindu homes. They are also found next to temples specifically for Varanasi.

And finally, Hiptage or Helicopter Flower was used in religious ways throughout history. In ancient times the flower filled the town of Vrindavan. It created a beautiful and fragrant atmosphere for those who desired peace in the city. This was the reason that the presence of Atmuktaor Hiptage trees began in the town.

## **How plants have been used throughout history in culture.**

Throughout history, plants have taken on very important and symbolic roles in many cultures. Thousands of years ago, agriculture and plants were the hearts of many civilizations. Additionally, many cultures have relied, and often still do, on the use of plants as shelter. However, while some uses of plants in culture are necessary, many uses of plants are more pleasure-oriented. For example, plants have been used, or incorporated, into pieces of art for hundreds of years. Many pieces of art show landscapes of nature, or just flowers or leaves. All of these pieces were inspired by real plants. And many of these natural pieces of art are in important museums. Plants are also a big part of many movies. When a landscape that is beautiful and full of life appears, it often resembles peace, no matter how temporary it may be. The reason plants are used as symbols for peace is simple, and has been around for many years. In the tale of Noah's Ark, a dove was sent out. It returned with an olive branch. This olive branch represents peace, hope, and joy. But there is a reason that a plant was used as a symbol for hope, even then. Plants are symbolic for peace and love because those are the feelings humans have when they are actually surrounded by plants. Many cultures have realized that plants bring the feeling for hope and love, and so they bring that into their culture, through movies, books, and art. Everywhere plants are used, they can represent hope, or love, or peace. From when they were used as food for humans and animals, to now, when they are parts of some of the most incredible medicines, plants have always had enormous impacts on culture and life.