

NAME _____

Make Hybrid Connections

Earth is home to more than 390,000 plant species! They have specific traits, many of which are useful in a plant hybrid. Imagine that you are a horticulture professional traveling the world to research amazing plants and their flowers and fruits. Record the characteristics of four unique plants in the space below.

Plant name:

Region/location:

Climate and habitat:

Characteristics:

How could this plant be used in a hybrid to solve a problem or social need?

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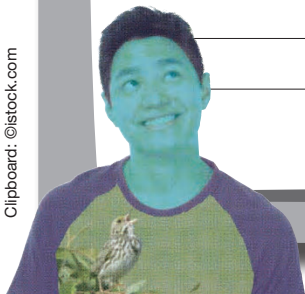
Plant name:

Region/location:

Climate and habitat:

Characteristics:

How could this plant be used in a hybrid to solve a problem or social need?





Plant Mash-Up!

DEADLINE
MARCH 7, 2022



INSTRUCTIONS Consider the characteristics of two existing plants and use them to create your own plant mash-up with new qualities. You can use any plant you can think of, but here are some to get you started. Make sure your final thoughts all fit on this page!



Mint

- * Underground stems help prevent soil erosion
- * Fragrant and tasty leaves contain vitamin A and antioxidants
- * Calms muscles to help treat an upset stomach and aid digestion



Olive Tree

- * Thrives in hot places; provides shelter for birds and small animals
- * Olive fruits can be cured for tasty eating
- * Consuming olive oil may reduce the risk of heart disease



Anise Hyssop

- * Adapted to dry soils so can tolerate drought
- * Attracts pollinators, especially bees, butterflies, and hummingbirds
- * Tasty leaves have a licorice-like scent and flavor



Cucumber Vine

- * Fast-growing vining plant; grows well in wet soils
- * Cucumber fruit is easy to harvest when the vine is grown on a trellis or support wire
- * A delicious source of nutrition and hydration



Sea Thrift

- * Grows well in infertile, dry, well-drained soils
- * Is adapted to life in saline (salty) conditions, such as coastal areas
- * Excellent for preventing erosion on steep, sandy slopes



Big Blue Stem Grass

- * Tall grasses provide nesting materials for birds and small animals
- * Has beautiful blue-green stems and large pink flowering heads
- * Deep roots help resist drought

Name the two plants you are combining:

1. _____ 2. _____

Name the challenge: _____

Illustrate your hybrid below:

In the space below, describe the features of your hybrid and how it will help your community.

Student Name: _____ Student Grade: _____

Teacher Name: _____ Teacher Email: _____

School Name: _____ School Address: _____

School City/State/Zip: _____



BLOOM!



Green-Collar Careers

Horticulture is the art, science, technology, and business of plants. Look inside to explore this field and the careers it offers.

PLUS: Hear from professionals about what they do and why they love it.



Horticulture Heroes

Planting Goodness for Communities and for the Planet

Today's job market is an ever-changing place. Tomorrow's will be, too. But certain industries remain healthy and continue to create good jobs. One of these is the green-collar industry, aka horticulture. Plants are all around us, and passionate professionals are needed to keep it that way. This industry promises to provide careers for years to come.



Arborists help care for, protect, and maintain trees.

free—technology to produce food quickly and efficiently. These tech-savvy workers might spend their mornings reprogramming a bank of carefully timed lights and their afternoons delivering fresh food to local chefs. Other 21st-century green-collar pros might be drone specialists who know how to fly a drone to conduct a survey of a field or forest.

Preserving natural habitats is another line of work that will continue to employ green professionals for many years. These pros take care of trees, maintain our landscapes, and even sometimes build entire ecosystems from scratch. They have training in botany, plant sciences, and other similar fields. Forestry experts help manage forests, harvesting and replanting trees when needed. Grassland experts often work in prairies, conducting controlled burns to simulate the ecologically necessary effects of small wildfires. Arborists treat trees for invasive species, striving to save populations of hemlock, pine, and other threatened trees and the many animals and plants that rely on them.

Imagining and designing landscapes is done by professionals such as landscape architects and urban planners. These experts are trained in multiple disciplines. They understand how to integrate the plant world with the built-up world—providing not just beauty to our cities but also greenery that improves our mental health. Landscape architects know

Wait, What?!

Scientists are exploring the use of spinach to grow vascular tissue for human organ replacements.

Seriously?!

Cities with lots of green space may have less crime than cities without.

It takes a lot of work to put food on our tables, and a wide variety of professionals make that happen. Growers plant, tend, and harvest food in many settings, from large farms to cutting-edge greenhouses and even hydroponic labs. Food inspectors—both public and private—make sure food is clean and safe before it reaches our tables. Scientists work to develop plants that are more nutritious and more efficient and easier to grow than in the past.

Growing food is a hot area for innovation in the green-collar industry. Entrepreneurs are developing vertical farms that can be built in cities, delivering fresh food to local families and businesses. Some of these facilities rely on cutting-edge hydroponic—soil-



Botanists research plants to discover their properties and use what they learn to solve problems.

how to choose the right plants for any setting, balancing many priorities, such as beauty, budget, and water use. Urban planners work at a larger scale, using plants to make the city more functional. These experts understand that plants can reduce air pollution, make businesses more appealing to customers, and filter runoff water before it enters the sewer system.

Creating scenes of beauty using flowers is the work of florists. These professionals spend their days designing

flower arrangements of all kinds. Floriculturists, on the other hand, develop new breeds of flowers, using the latest technology. The work of these professionals improves society in many ways. Studies show that the presence of flowers improves people’s mental health and can even help hospital patients recover faster.

Research in plant biology remains a crucial field of work as well. Botanists and other researchers spend their careers solving some of our biggest problems, including how to fight plant diseases and hold off invasive species. Some even travel deep into the world’s jungles to look for plants that might help cure human diseases, such as cancer.

The future is bright for anyone looking to work in the green-collar industry. Whether you want to help save the world—by feeding a growing population, fighting climate change, or protecting nature—or simply want to spend time outside working in the natural world, there is a career waiting for you.

Well, That Makes Sense:

Researchers have found that being around nature lowers stress levels and reduces anxiety. Hospital patients with access to greenery have shorter stays and lower heart rates.

Good to Know!

Urban greenery also helps businesses—improving property values, boosting occupancy rates in rental real estate, and helping to create jobs.



Landscape architects use their knowledge of plants and aesthetics to create both beautiful and functional spaces.

Breaking Ground

We talked to two young professionals who are keepin' it green in horticulture careers

Name: Nicole Sherry

Title: Head Groundskeeper, Baltimore Orioles

Education: B.A. degree in agriculture (with a minor in horticulture); Applied Agricultural Associates degree

Tell us about what you do. My daily routine usually starts with observation, labor, adapting, and learning about grass and soil and weather. It ends with the challenge of facilitating a baseball game through to the finish.

What inspired you to work in horticulture?

The inspiration started by being fascinated by how certain plants could adapt to adverse conditions. For instance, how certain seedpods can only release their seeds to establish new life from fire.

What is your favorite thing about your work? I learn something new



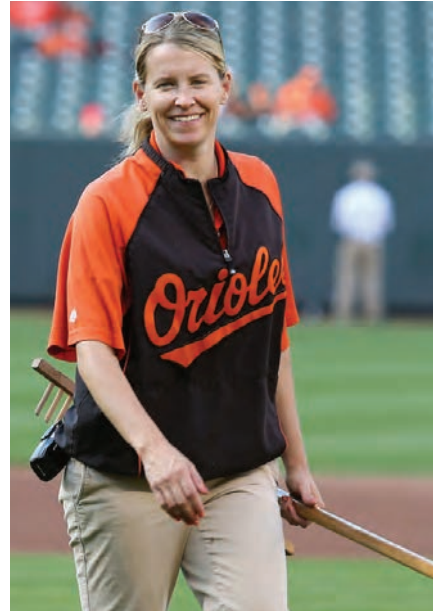
about science, grass, and weather every day. I also get to be a hidden part of the baseball game by providing an optimal surface for our Orioles to play on.

What was the best surprise you encountered in the industry?

The biggest surprise was that my love for plant science and the game of baseball could be combined.

Why do you think horticultural work is important for the world?

Learning about plants can help us in so many aspects of life—



NICOLE SHERRY PHOTOS COURTESY OF TODD OLSZEWSKI, THE BALTIMORE ORIOLES © 2014.

nourishment, mental health, and environmental health.

What advice would you give to someone thinking about entering the profession? Keep an open

mind that is always ready to adjust because science is constantly changing.

In the Field!

Name: Josh Guy

Title: Trials Manager

Education: B.S. degree in Agricultural Sciences

Tell us about what you do. As Trials Manager for Handpicked Vegetables, I work to plan, grow, and test new vegetable varieties. I get to test both in the hydroponics lab and outside in the garden.

What is your favorite thing about your work? No two days are exactly alike. I love the ability to transition between indoor and outdoor work.



What was the best surprise you encountered in the industry? There is a sense of camaraderie and

cooperation. While competition can be fierce, the level of respect and friendliness I've encountered is unmatched.

Why do you think horticultural work is important for the world? Horticulture provides a

great deal of the diversity in food options. A world without the huge array of fruits and vegetables would leave us with some pretty boring dinner plates.

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