

Teaching Nutrition in the Garden

Gardens offer limitless opportunities for youth to learn and grow. One of the most promising benefits of youth garden programs is to inspire young gardeners to find joy in raising edible crops and then savoring their harvest.

Garden programs are an especially useful tool for diversifying kids' diets because they bring plant foods to life, providing real world experience and full sensory engagement. In the garden, students are getting their hands in the soil, creating an emotional connection to the garden and to what they're growing. They sow the seeds and nurture the plants for weeks or months, building pride and anticipation of the harvest. When it's time to start picking fruits and vegetables, they're primed to really appreciate and enjoy what they've grown. Plus, they're more likely to be open-minded to new dishes prepared with fruits and vegetables they grew themselves.



Here are some ideas for creative programs to help you use gardens as a tool for nutrition education:

Plant a Rainbow

In addition to providing the essential vitamins, minerals, and fiber that keep our bodies working, fruits and vegetables are also linked to preventing health problems, including decreased risk of stroke, cancer, and heart disease; improved memory; and lowered blood sugar levels. These benefits are attributed to phytonutrients (also known as phytochemicals) — substances in plants that are not recognized as vitamins or minerals, but that provide a definite health boost. Various fruits and vegetables contain different levels and kinds of healthful phytonutrients, so to reap the benefits we need to consume a wide variety of produce.

Flipping through a seed catalog or walking through a well-stocked produce aisle is a feast for the eyes. Fruits and vegetables really do come in all the colors of the rainbow. Those colors are due in many cases to phytonutrients that are also plant pigments, each providing different hue — and different health benefits. Nutrition educators have come up with a handy and fun way to communicate the message: "Eat a Rainbow." So, when it's time to plan the garden, plan to plant a rainbow of vegetables!

Getting kids involved in choosing what to grow gets them engaged and committed early on. There are endless options! Have them consider varieties in unusual colors, such as purple beans, yellow carrots, and orange eggplant — if there's room in the garden, grow them side-by-side with their familiar counterparts and do a taste test at harvest time.

Additional Resource

[Eat a Rainbow](#) lesson plan

What Plant Part Are We Eating?

So what plant part is corn? Or celery? Or Brussels sprouts? (Seed, leaf petiole, axillary buds.) Pondering plant parts when we grow and eat different vegetables is a fun way to combine lessons in both botany and nutrition.

Plant parts can offer clues to a food's nutrient content. For example, many underground structures are used by plants to store carbohydrates (food) over the winter, so they'll have the energy they need to sprout in

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spring. That's why carrots, beets, turnips, and potatoes are all relatively high in carbohydrates. Leafy greens, in contrast, have little of those. Seeds, like corn and peanuts, are often high in oils, protein, and carbohydrates, to fuel the growth of the tiny plant embryo within when the seed germinates, until the seedling is large enough to photosynthesize. Ripe fruits often contain lots of sugars. This entices birds and animals that might help disperse the seeds — for example, the animal might digest the flesh of the fruit, but the seeds pass through their digestive tract, to be deposited in their droppings.

Additional Resources

[Plant Parts Salad Activity](#)

[Botany on Your Plate sample lesson](#), Seeds

Plant a Recipe Garden

Grow all the ingredients (or as many as you can) to make a favorite recipe — or plan to give that recipe a new twist with your garden bounty, such as using chopped chard in your taco instead of lettuce!

Pizza Garden: Tomatoes, basil, oregano, peppers and onions.

Salad Garden: Lettuce, carrots, radishes, tomatoes and cucumbers.

Salsa Garden: Tomatoes, garlic, cilantro and peppers.

Taco Garden: Chard, tomatoes, cilantro, hot peppers, onions.

Smoothie Garden: Kale, strawberries, blueberries, mint.

Pickle Garden: Cucumbers ("pickling" varieties are best), carrots, beets. (You can pickle just about any vegetable.)

Additional Resource

[Grow Your Own Salad](#) (indoors)

Plant a Snack Garden

Grow fruits and vegetables that are easy for kids to harvest, wash and eat without any preparation — cherry tomatoes, sugar snap peas, mini carrots, cucumbers and more. Serve with a nutritious dip or two for extra flavor (recipes are in the activity, link below). You'll be encouraging kids to enjoy these healthy substitutes for fat- and sugar-laden chips, candy and cookies.

Additional Resource

[Plant a Snack Garden](#)

Start a Cooking Program

While a sun-warmed tomato eaten fresh from the garden is as nutritious as it is delicious, we humans also like to combine ingredients in creative ways — ways that often up the nutrition ante! Layer slices of that tomato with slices of fresh mozzarella, for example, and you've added some protein and calcium.

The popularity of Jr. Iron Chef competitions is just one piece of evidence that kids love to cook. And understanding the basics of how ingredients come together to form a dish is a skill that serves children throughout their lives. When kids cook and then eat vegetables they've grown in their garden, the process comes full circle. Consider starting a cooking class at your school.

Additional Resources

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[Sauerkraut for School Credit](#)

[Five Tips for an Elementary School Cooking Program](#)

[Fork in the Road takes on Jr. Iron Chef](#)

[Learning Life Skills in the Garden ... and on a Food Truck](#)

Explore Innovative Growing Systems

Most plants grow in soil take up the nutrients they need from it. Plants grown hydroponically receive the necessary nutrients in their water supply rather than from the soil. This enables plants to concentrate their energy on producing leaves and fruits rather than forming extensive root systems to search for water and nutrients. Hydroponic growers use a variety of systems to provide water and nutrients. The systems must also provide roots with the oxygen they need and offer a way for the roots to anchor the plants in place.

Additional Resources

[Simple Straw Aeration Hydroponic System](#)

[Classroom Hydroponics Lesson Plan](#)

[Garden Basic: Hydroponics](#)

Edible Landscaping

Edible landscaping describes the horticultural practice of incorporating plants with edible parts (fruits, flowers, stems, leaves or roots) into a design whose primary function is to be aesthetically pleasing. The tasty and nutritious harvest of the landscape is an exciting secondary benefit. The design may feature only edible plants or include a combination of edible and non-edible, ornamental plants. Unlike traditional food gardens, which are placed in lower traffic areas such as behind the school near a playground or in a backyard, an edible landscape can also be installed in more public areas such as the school's main entrance or a front yard.

Additional Resource

[Edible Landscaping lesson plan](#)

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