



# THE DISCOVERY GARDEN

...Watching it *GROW!*

## WHY A GARDEN?

The Discovery Garden at Stratford Landing Elementary is intended to inspire and nurture the curiosity of the students, whether it be their curiosity about ecology, or where their food comes from, or why the sky is blue. As our world becomes increasingly global, many of us have paradoxically become less connected to the earth. This has happened in terms of how we think about our food supply, the source of our building materials, so much else that sustains us that we now go and buy from a store.

A garden is one way to remind children that everything we have comes from the earth. It can be a space where we can teach kids about caring for our planet. The best time to start is when children are very young, thus a school garden!

Thankfully, it's also fun! In a garden, learning happens across the curriculum: students can learn about math while they study native grasses or about history while they study pumpkins. Their vocabulary is enriched and their background knowledge is increased through their participation. And a garden serves everyone, regardless of whether a child has regular access to parks and green spaces or has never been to a park at all.

In addition, when students work in a garden, they learn stewardship, both to their school and their community. The children are literally engaged in caring for a piece of land, and as the process unfolds, the students inevitably absorb some of the intricacies around us, such as the change of seasons, life cycles, pollination, etc.

## THE RESEARCH

Research shows that test scores are higher when students are exposed to nature based curriculums. The retention rate for learning by doing is around 75%; it goes to 90% when children teach each other. To that end, Lowell Monke reminds us that "Nature is...the richest resource for firsthand experience." Orion, "Unplugged Schools," Sept/Oct issue, 2007.

## SOLS

Under the guidance of our principal, Ms. Maura Caulfield, the Discovery Garden committee has made certain that this garden will support the standards of learning objectives for the kindergarten, first, and second graders. Michelle Dittman, the first grade teacher and primary science lead at Stratford Landing, has been essential to this process. And Ms. Dittman reports that even with the garden in its most incipient stages, the students are excited about the future courtyard.

## ENVIRONMENTAL CURRICULUMS

Environmental education began several years ago in California in an attempt to engage students and their parents on the subject of food. There was a recognition that school lunches were in urgent need of improvement, and that junk food and soft drinks were making greater incursions into school cafeterias. We all have memories of meeting over mystery meat during lunch. People were thinking that we owed our children something more than food frozen and reheated.

If you're interested in this subject, see [Michael Pollan's](#) letter in the NY Times.

[Alice Waters](#) was one of the pioneers of this movement, and she focused on school lunches, providing extensive guidance on how to prepare fresh, local ingredients for child to eat at school. She also believed that the effort to provide children with healthy lunches must become a part of the everyday education of these kids.

School gardens have been popping up across the country ever since...

## GARDENS IN OUR AREA

If you are interested in visiting established school gardens in our area, Tuckahoe Elementary School in Arlington has had a garden for nearly fifteen years, Hollin Meadows has developed an amazing garden in the last three years, and Daniels Run Elementary has recently been awarded a large grant for its commitment to environmental literacy.

## OUR PLAN

At Stratford Landing, the kindergarten, first, and second graders will have two plots each in the back courtyard area.

The kindergarten team plans to have the students plant pumpkin seeds in the spring. By planting a seed and then caring for it, the kindergarteners will participate in the life cycle of a pumpkin seed, and they will also take ownership of the space where it happens.

The first grade team will plant bulbs in the fall, and then in the spring, the students will be able to examine up close pistils, stamens, and the process of pollination. With the recent and alarming shortage of bees, we are now all more attune to the necessity of this process.

The first graders will also be able to explore our PTA president Kim Mann's worm bin. They will collect fruit and vegetable scraps from the cafeteria and feed these to the worms in the spring. Everyone will be surprised at how fast the leftovers disappear, and the compost produced can be used in the garden.

The second grade team's focus will be the "three sisters," a Native American triad of squash, beans, and corn.

This excerpt from [Renee's Garden](#) offers great ideas to support the second grade curriculum:



The Iroquois believe corn, beans and squash are precious gifts from the Great Spirit, each watched over by one of three sisters spirits, called the De-o-ha-ko, or "Our Sustainers". The planting season is marked by ceremonies to honor them, and a festival commemorates the first harvest of "green" corn on the cob. By retelling the stories and performing annual rituals, Native Americans passed down the knowledge of growing, using and preserving the Three Sisters through generations.

Corn provides a natural pole for bean vines to climb. Beans fix nitrogen on their roots, improving the overall fertility of the plot by providing nitrogen to the following years' corn. Bean vines also help stabilize the corn plants, making them less vulnerable to blowing over in the wind. Shallow-rooted squash vines become a living mulch, shading emerging weeds and preventing soil moisture from evaporating, thereby improving the overall crops' chances of survival in dry years. Spiny squash plants also help discourage predators from approaching the corn and beans. The large amount of crop residue from this planting combination can be incorporated back into the mound at the end of the season, to build up the organic matter in the soil and improve its structure.

Corn, beans and squash also complement each other nutritionally. Corn provides carbohydrates, the dried beans are rich in protein, balancing the lack of necessary amino acids found in corn. Finally, squash yields both vitamins from the fruit and healthful, delicious oil from the seeds.

## **Further Ideas**

The Discovery Garden is not limited to use by the primary grades. All are welcome, whether they want to use the space to journal, perform a play, enjoy an art class, or listen to music. Students are also welcome to use the area for predicting and forming hypotheses, measuring, comparing, drawing graphs, etc.

## **COMING UP!**

Our next task is to build or buy benches or picnic tables so that classes can come easily outdoors and have a comfortable work space available to them. We always consider issues like handicap accessibility and will strive to provide a garden that will accommodate everyone.

## **HOW TO HELP**

There are so many opportunities:

- garden designer
- fundraiser
- grant writer
- teacher liaisons
- summer water calendar
- compost bin design
- composting at lunch
- art design for the garden
- bench and picnic table builder

These are just some ideas. If you have others, please get in touch.

Many thanks,

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**Discovery Garden Committee:** Jenn Casey, Dana Deighton, Sheila Gonsalves, Leisha Heyde, Cathy Hosek, Melinda Hunter, Anne Lawrence, Marianne Little, Kim Mann, Kate Penn, Manley Williams, Cheryl Zdebski.

THE GENESIS OF THE DISCOVERY GARDEN. CHECK BACK AND WATCH HOW IT GROWS!



GROW