



# Why Garden in New York State Schools?







Cornell Garden-Based Learning
Department of Horticulture
Cornell University
http://blogs.cornell.edu/garden/

### School gardens offer numerous benefits to children



Let's take a look at the research...

### School gardening enhances students' lives



School gardening has been shown to increase selfesteem, help students develop a sense of ownership and responsibility, help foster relationships with family members, and increase parental involvement.

Alexander & Hendren (1998)

# School gardening promotes higher quality learning





Students tend to learn more and better when they are actively involved in the learning process.

McCormick et al. (1989)

## School gardening promotes higher quality learning



In a project that involved integrating nutrition and gardening among children in grades one through four, the outcomes went well beyond an understanding of good nutrition and the origin of fresh food, to include enhancing the quality and meaningfulness of learning.

Canaris, Irene. (1995).

## School gardening enhances learning for all students





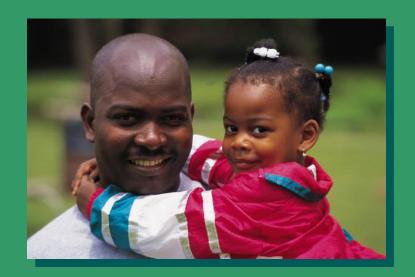
Children with learning disabilities, who participated in gardening activities, had enhanced nonverbal communication skills, developed awareness of the advantages of order, learned how to participate in a cooperative effort, and formed relationships with adults. Sarver (1985)

# School gardening fosters parental involvement



Parents who are highly involved at school are more likely to be involved in educational activities with their children at home.

-National Center for Educational Statistics (1997)



# School gardening can meet NYS Learning Standards

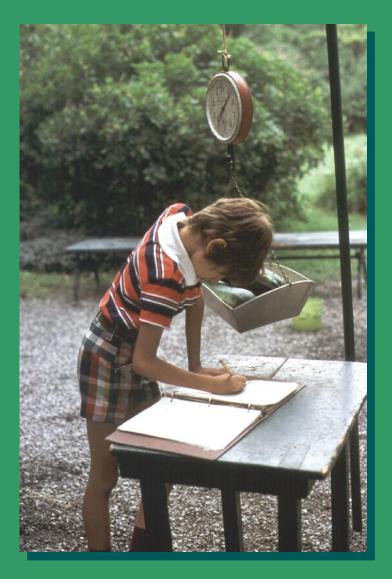






Classrooms using *GrowLab* indoor gardens and *GrowLab* curriculum scored significantly higher than control classrooms in students' understanding of key life science concepts and science inquiry skills.

National Gardening Association (1992)



Third, fourth, and fifth grade students who participated in school gardening activities scored significantly higher on science achievement tests compared to students that did not experience any garden-based learning activities.

Klemmer et al. (2005)

(Health, Physical Education, Family & Consumer Sciences)



Elementary school and junior high school students gained more positive attitudes about environmental issues after participating in a school garden program.

Waliczek & Zajicek (1999)

(Health, Physical Education, Family & Consumer Sciences)





After gardening, students have shown increased knowledge about nutrition, plant ecology, and gardening.

Pothukuchi (2004)





### Health, Physical Education, Family & Consumer Sciences





After gardening, children have shown more positive attitudes toward fruit and vegetable snacks.

Lineberger (1999).

### Health, Physical Education, Family & Consumer Sciences



Consumption of fruits and vegetables, as a habit in childhood, is an important predictor of higher fruit and vegetable consumption as adults and can help to prevent or delay chronic disease conditions.

Heimendinger & Van Duyn (1995)

### Health, Physical Education, Family & Consumer Sciences





After gardening, kids possess an appreciation for working with neighborhood adults, and have an increased interest for improvement of neighborhood appearance. Pothukuchi (2004).

# Career Development and Occupational Studies

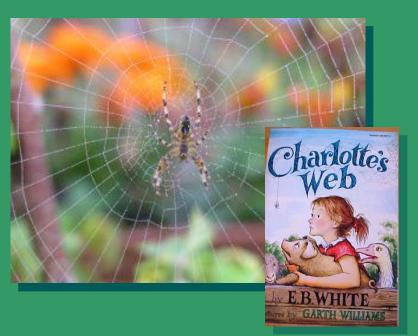




Gardening programming positively influenced two constructs: "working with groups" and "self-understanding."

Robinson, & Zajicek (2005).

#### English Language Arts





In a summer school project that used a whole language approach with gardening as the central theme, the most significant student gains were in self-esteem and achievement in reading, reading comprehension, spelling, and written expression.

Sheffield (1992)

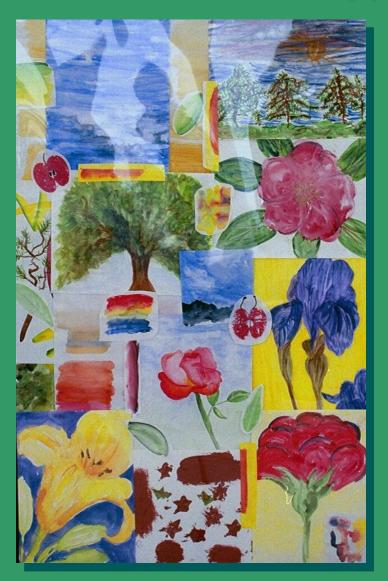
#### Social Studies



Linking storytelling with garden programs may serve to educate children about the processes that underlie and interweave diverse cultures' seasonal traditions.

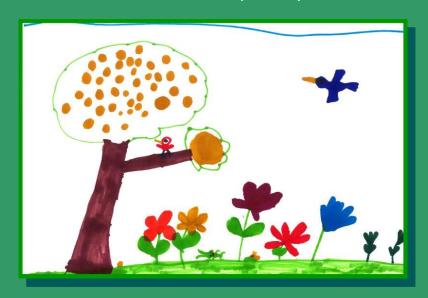
Bowles (1995)

#### The Arts



Gardens are often the most accessible places for children to learn about nature's beauty, interconnections, power, fragility, and solace.

Heffernan (1994)



Art students show the fruits of their creativity inspired by beautiful outdoor settings.

#### Diversity





Gardening can be an ideal vehicle for introducing elements of multicultural education.

Eames-Sheavly (1994)

#### Cultural Appreciation







Gardening helps young people understand the value of diversity by exploring historical contributions from cultures worldwide to what we eat today.

### Gardening can bring any aspect of the curriculum to life







Gardening isn't an add on, but rather an integral part of the whole curriculum.

#### We rely on plants for everything



Gardening is a way to help us recognize our dependence on, and connectedness with, plants.

#### Garden in New York State Schools!



Educators in gardening classrooms and schools have little doubt about the benefits students reap from their living garden laboratories.

#### Got Gardening?

