WHAT GROWS IN SCHOOL GARDENS?

HEALTHY KIDS

- Fruit & Vegetable Consumption

ENGAGED LEARNERS

- Science Achievement
- Engagement & Science Identity
- Overall Academic Achievement
- Language Learning

RESILIENT, EMPOWERED YOUTH

- Teamwork & Self-Understanding
- Resilience
- Agency
- Responsibility & Maturity

ENVIRONMENTAL STEWARDS

- Pro-Environmental Attitudes
- Care for the Environment

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School Gardens are Growing ...

HEALTHY KIDS

Increased Fruit and Vegetable Consumption
Increased fruit and vegetable (FV) intake can promote health, lower cardiovascular disease, type 2 diabetes, and some cancers. Children in the U.S. do not meet the recommended daily intake for FV, and intake is lowest in low-income and Hispanic populations.[1] Among 12 identified garden studies with dietary measures, all showed increases/improvements in predictors of fruit and vegetable consumption.[2]

ENGAGED LEARNERS

Increased Science Achievement In a study conducted with 647 3-5th grade students in 2005, students who participated in school garden activities as part of their science curriculum scored significantly higher on the science achievement test compared to the students in the control group.[3]

Increased Overall Academic Achievement A synthesis of research from 1990-2010 showed a preponderance of positive impacts on direct academic outcomes with the highest positive impact for science followed by math and language arts.[4]

Increased Engagement and Science Identity
Garden-based activities show promise for supporting students' engagement and learning in science classes and in fostering students' interest in pursuing science long-term. A recent study provides preliminary support for the notion that learning in school gardens has the potential to promote science equity via the opportunity for students to experience different ways of learning science that are engaging and motivating, which in turn may promote students' sense of science identity and science achievement. Participating in learning garden activities seemed to help diverse students not only engage more productively in science class, but also to think of themselves as individuals who could be successful and valued as contributors to the scientific community.[5]

Increased Language Learning for Emergent, Multilingual Learners Students who were learning English showed language gains on pre- and post-oral exams of 2-4 months in a 1-month period of time.[6]

RESILIENT, EMPOWERED YOUTH

Increased Teamwork and Self-Understanding Youth that participated in a year-long garden program increased their teamwork and self-understanding.[7]

Increased Resilience Nearby nature bolsters children's resilience so that those children who have more contact with nature cope better with adversity than those who do not have daily access to nature.[8]

Increased Agency Youth develop a sense of agency in a myriad of ways through active engagement in learning gardens.[9]

Increased Responsibility and Maturity A study of East New York Farms! showed that the program provided a platform from which youth interns could take on responsibility, and demonstrate their competence and growing maturity to themselves and those around them; provided them with opportunities to acquire and develop knowledge, skills, and material compensation, all qualities that have a direct impact on future employment and economic viability. The experience of enhancing the physical appearance of their neighborhood through their collective effort greatly impacted on their perceptions of the role of youth in placemaking. The program presented a vehicle in which participating youth could experience the process of improving their neighborhood and cultivating their sense of agency, while contributing to a community ethos that integrates youth and community development.[10]

ENVIRONMENTAL STEWARDS

Increased Pro-Environmental Attitudes Students participating in the Project GREEN, a program designed to help teachers integrate environmental education into their classroom using a garden, had more positive environmental attitude scores than those students who did not participate.[11]

Increased Sense of Responsibility to Care for the Environment Over the course of a yearlong project called Landed Learning in British Columbia, children's relationship with the environment changed and became more personal. The majority of children shifted from seeing the environment as an object or a place, to a view characterized by the interconnectedness of humans and environment. This relational concept of environment appeared to grow along with their increased experience with plants and nurturing of them. An additional aspect of the connection of the students to the environment was a sense of responsibility to care for the environment that emerged; a kind of moral obligation.[12]

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