

# Benefits of School Gardens

The following studies investigated the impacts and benefits of school garden programs.

## Academic:

### Positive impact on student achievement and behavior

- Blair, D. 2009. *The child in the garden: an evaluative review of the benefits of school gardening*. Journal of Environmental Education, 40(2), 15-38.

### Significantly increase science achievement score

- Klemmer, C. D., T. M. Waliczek, and J. M. Zajicek. 2005. *Growing minds: The effect of a school gardening program on the science achievement of elementary students*. HortTechnology 15(3):448-452.
- Smith, L. L., and C. E. Motsenbocker. 2005. *Impact of hands-on science through school gardening in Louisiana public elementary schools*. HortTechnology 15(3):439-443.

## Environmental Attitudes:

### Instill appreciation and respect for nature that lasts into adulthood

- Lohr, V.I. and C.H. Pearson-Mims. 2005. *Children's active and passive interactions with plants influence their attitudes and actions toward trees and gardening as adults*. HortTechnology. 15(3): 472-476.

### Improve environmental attitudes, especially in younger students

- Skelly, S. M., and J. M. Zajicek. 1998. *The effect of an interdisciplinary garden program on the environmental attitudes of elementary school students*. HortTechnology 8(4):579-583.

## Social:

**Study shows that when young children are participating in garden activities they are:** (1) communicating their knowledge about the world to others, (2) conveying emotions, and (3) developing important skills that will help them be more successful in school.

- Miller, D. L. 2007. *The Seeds of Learning: Young Children Develop Important Skills Through Their Gardening Activities at a Midwestern Early Education Program*. Applied Environmental Education & Communication, 6(1):49-66.

### Improve life skills, including working with groups and self-understanding

- Robinson, C.W., and J. M. Zajicek. 2005. *Growing minds: the effects of a one-year school garden program on six constructs of life skills of elementary school children*. HortTechnology 15(3): 453-457.

### Improve social skills and behavior

- DeMarco, L., P. D. Relf, and A. McDaniel. 1999. *Integrating gardening into the elementary school curriculum*. HortTechnology 9(2):276-281.

# Nutrition and Health:

## Positive changes in BMI, and several dietary behaviors

- Spears-Lanoix, E.C., E.L. McKyer, A. Evans, W.A. McIntosh, L. Whittlesey, A.Kirk, D.M. Hoelscher, and J.L. Warren. 2015. *Using Family-Focused Garden, Nutrition, and Physical Activity Programs To Reduce Childhood Obesity: The Texas! Go! Eat! Grow! Pilot Study*. *Childhood Obesity* 11(6): 707-714.

## Review of literature supported idea that youth garden programs have the potential to increase fruit and vegetable intake and increase willingness to try fruits and vegetables.

- Robinson-O'Brien, R., M. Story, and S. Heim. 2009. *Impact of Garden-Based Youth Nutrition Intervention Programs: A Review*. *Journal of the American Dietetic Association*, 109 (2): 273- 280.

## Positive social interaction during gardening, harvesting, sharing, preparing, and eating produce may influence young people's food consciousness and eating habits.

- Libman, K. 2007. *Growing Youth Growing Food: How Vegetable Gardening Influences Young People's Food Consciousness and Eating Habits*. *Applied Environmental Education & Communication*, 6(1): 87-95.

## Increase servings of fruits and vegetables more than students in a non-gardening nutrition education program and a control group

- McAleese, J.D., and L.L. Rankin. 2007. *Garden-Based Nutrition Education Affects Fruit and Vegetable Consumption in Sixth-Grade Adolescents*. *Journal of the American Dietetic Association*. 107 (4): 662-665.

## Increase children's knowledge about the benefits of eating fruit and vegetables and participants reported eating healthier snacks

- Koch, S., T. M. Waliczek, and J.M. Zajicek. 2006. *The Effect of Summer Garden Program on the Nutritional Knowledge, Attitudes and Behaviors of Children*. *HortTechnology* 16 (4): 620-625.

## Increase interest in eating fruits and vegetables and improve attitude toward fruits and vegetables

- Pothukuchi, K. 2004. *Hortaliza: A Youth "Nutrition Garden" in Southwest Detroit*. *Children, Youth and Environments* 14(2):124-155.

## Improve nutrition knowledge and vegetable preferences

- Morris, JL and Zidenberg-Cherr, S. 2002. *Garden-based nutrition curriculum improves fourth-grade school children's knowledge of nutrition and preferences for some vegetables*. *Journal of the American Dietetic Association* 102(1): 91-93.

## Improve attitude toward vegetables and toward fruit and vegetable snacks

- Lineberger, S. E., and J. M. Zajicek. 1999. *School gardens: Can a hands-on teaching tool affect students' attitudes and behaviors regarding fruits and vegetables?* *HortTechnology* 10(3):593-597.