

# Garden-based learning

From Wikipedia, the free encyclopedia

**Garden-based learning (GBL)** encompasses programs, activities and projects in which the garden is the foundation for integrated learning, in and across disciplines, through active, engaging, real-world experiences that have personal meaning for children, youth, adults and communities in an informal outside learning setting. Garden-based learning is an instructional strategy that utilizes the garden as a teaching tool.

The practice of garden-based learning is a growing global phenomenon largely seen in the United States, the United Kingdom and Australia. As of 2010, the National Gardening Association (<http://assoc.garden.org>) reported over 3,000 school gardens in the United States alone.<sup>[1]</sup>

In some settings garden-based learning strategies are used entirely as the educational curriculum for multiple subjects and in others it supports or enriches the curriculum. Garden-based learning can contribute to all aspects of basic education on varying levels depending on the student and consistency of the garden-based learning program. Aspects of basic education benefits include but are not limited to academic skills, personal development, social development, moral development, vocational and/or subsistence skills, and life skills.



Hierbas aromáticas

## Contents

- 1 Benefits of garden-based learning among children and youth
  - 1.1 Increased nutrition awareness
    - 1.1.1 Student Health
  - 1.2 Increased environmental awareness
  - 1.3 Higher Learning Achievements
  - 1.4 Increased Life Skills
- 2 Keys to successful garden-based learning programs <sup>[8]</sup>
- 3 Core uses for garden-based learning
  - 3.1 Basic education uses
  - 3.2 Beyond basic education uses [1]
- 4 Further reading
- 5 References

# Benefits of garden-based learning among children and youth

Landscape designers, teachers, and others consider school and community gardens to be one of the most notable positive trends in the nation today. These environments can foster science literacy and social skills, while enhancing an awareness of the link between plants in the landscape and our, food, clothing, shelter, and well-being.<sup>[2]</sup>

Gardening projects provide children and youth with the carefree exploration of the natural world that occurs rarely in today's era of indoor living; it can also give young people the chance to develop a wide range of academic and social skills.

Noted benefits of garden-based learning programs among youth include increased nutrition awareness, environmental awareness, higher learning achievements, and increased life skills.

## Increased nutrition awareness

Research indicates that youth who participate in garden-based learning programs increase their consumption of fresh fruits and vegetables, and gain new enthusiasm for fresh, nutritious vegetables they grow. It is the physical act of having the students' plant their own fruits and vegetables that gives them ownership and gets them more involved in their learning. Students can then learn about the nutritional values of food and multiple ways to prepare their own products in healthy ways to further progress their awareness of health issues. These two examples of physical acts of learning are what motivate healthier eating choices in and outside of the school setting.<sup>[1][3][4]</sup>

## Student Health

Teachers also regarded the garden to be very effective at enhancing academic performance, physical activity, language arts, and healthy eating habits. Garden-based learning attempts to combat obesity by introducing students to healthy foods and providing opportunities to for outside experiential learning. Gardening intervention in schools may also aid in the improved health of children for the simple reason that students get 20% or more of their daily food intake from school depending on their socioeconomic backgrounds; families with lower income depending on school lunch even more than others.<sup>[3][5]</sup>

## Increased environmental awareness

Research highlights that high school students gain more positive attitudes about environmental issues after participating in a school garden program. Gardening has also been shown to increase scores on environmental attitude surveys of elementary school children.

Environmental attitude surveys generally include statements like the ones shown below and give the opportunity to rank those statements with a score of 1–5 (Strongly agree, agree, neutral, disagree, strongly disagree) The statements differ in complexity based on the grade level.<sup>[1]</sup>

- I am worried about animals that are going extinct.
- Trying to protect the environment is my responsibility.
- I would come to school on Saturday to plant flowers.

Environmental awareness and attitudes toward the environment is also seen to improve especially in urban schools where the garden-based learning programs in the schools may be some of the only times these students can connect with the outdoors away from city streets.<sup>[3]</sup>

## Higher Learning Achievements

Studies indicate students that participated in school gardening activities scored significantly higher on science achievement tests compared to students that did not experience any garden-based learning activities. Other research has indicated that weekly use of gardening activities and related classroom activities help improve science achievement test scores. The reasoning behind these improvements is connected to the holistic, integrated, hands-on, project based, cooperative and experiential learning activities that are all aspects of garden based education. In other words, student engagement in class is increased because they are being intrinsically motivated by "real world" experiences in a more informal setting than the classroom.<sup>[1][6]</sup> However, it is important to note the extent to which students improve varies because every student learns differently and has preferred learning styles, which work best for them.<sup>[3]</sup>

## Increased Life Skills

Research has highlighted the many improvements in life skills that can be attributed to children's garden programs. These skills include: enhancement of moral education, increasing appreciation for nature, increasing responsibility, developing patience, increases in relationship skills, and increases in self-esteem, help students develop a sense of ownership and responsibility, and helps foster relationships with family members, peers, and their community.<sup>[7]</sup>



Parkdale Community  
garden volunteer day

## Keys to successful garden-based learning programs <sup>[8]</sup>

Research has indicated that successful garden-based learning programs demonstrate high levels of youth development and leadership, community development and involvement, and participatory evaluation as a regular program feature. Programs are considered to be more successful when children and youth are involved in the entire process of the school gardening program (planning, design, implementation, and evaluation).

### **8 unique features of garden-based learning programs that develop positive qualities in youth:**

1. The program has a positive focus
2. Youth are viewed not as "objects" but as "resources," and have a voice in program planning, development, implementation
3. There is an emphasis on proactive behavior
4. Participants "own" responsibility for their own behavior
5. The program is inclusive ("involves everyone")
6. The program builds a vision
7. Cooperation is emphasized
8. "Hope" is a norm in the program environment or atmosphere

## Core uses for garden-based learning

### **Basic education uses**

#### **Academic Skills**

- To support core academic training, particularly in science and math – real world hands on experiences
- Enrichment of core curriculum in language arts through introduction of new learning landscapes
- To support standards based education in countries with national or regional education standards

#### **Personal Development (Mental & Physical)**

- To add a sense of excitement, adventure, emotional impact and aesthetic appreciation to learning
- To improve nutrition, diet and health
- To teach the art and science of cooking with fresh products from the garden or local farms
- To re-establish the celebratory nature of a shared meal

## **Social & Moral Development**

- To teach sustainable development
- To teach ecological literacy and/or environmental education
- To teach the joy and dignity of work
- To teach respect for public and private property

## **Vocational and/or Subsistence Skills**

- To teach basic skills and vocational competencies
- To produce food and other commodities for subsistence consumption and trade

## **Life Skills**

- To teach about food and fiber production
- To engage children in community service and environmental care
- To involve students in lessons of leadership and decision making

## **Beyond basic education uses [1] (<http://www.ahs.org/gardening-programs/youth-gardening/ncygs/2015-session-descriptions>)**

### **Community Development**

- Gardens often serve as a focal point for community dialogue, capacity building, and partnerships through a shared community garden space.
- Gardens often organize individuals for action – for water delivery, cooperatives, and transportation

### **Food Security**

- Gardens can address hunger at the individual, family, and community levels through planning, growing, and sharing
- Gardens can be the beginning point for teaching and developing food policy

### **Sustainable Development**

- Gardens are an appropriate arena to introduce children to the interconnections that link nature to economic systems and society

### **Vocational Education**

- Gardens represent a historic and contemporary model for developing vocational skills in agriculture, natural resource management, and science

## School Grounds Greening

- Gardens provides practical productive strategies to transform sterile school grounds into attractive and productive learning centers through the process of greening
- Hands-on activities in outdoor classrooms make learning more interesting while demonstrating other benefits such as decreased absenteeism and discipline problems

## Further reading

1. Eames-Sheavly, M.(1999). *Sowing the Seeds of Success*- This 28-page booklet details the organizational steps needed to initiate a gardening project that involves kids and the community, and to ensure program success over the long term. Key chapters highlight how to define roles and responsibilities, form and manage partnerships, create an identity, raise funds, and more [2]  
(<http://www.hort.cornell.edu/gbl/pubs/sowingseeds.pdf>).
2. Center for Ecoliteracy & Life Lab Science Program. *Getting Started: A Guide for Creating School Gardens as Outdoor Classrooms*. To order this publication, write to Life Lab Science Program or Center for Ecoliteracy [3]  
(<http://www.ecoliteracy.org/sites/default/files/uploads/getting-started-2009.pdf>)
3. Williams, D. and Brown, J. (2011). "Learning Gardens and Sustainability Education: Bringing Life to Schools and Schools to Life" [4]  
([http://www.jsedimensions.org/wordpress/content/review-of-learning-gardens-and-sustainability-education-bringing-life-to-schools-and-schools-to-life\\_2013\\_05/](http://www.jsedimensions.org/wordpress/content/review-of-learning-gardens-and-sustainability-education-bringing-life-to-schools-and-schools-to-life_2013_05/)).
4. Wright, W. and Rowell, L. (2010). *Examining the Effect of Gardening on Vegetable Consumption Among Youth in Kindergarten through Fifth Grade*- This study examined the effects of gardening on elementary school youth. It relates overall vegetable consumption to widespread gardening programs. [5]  
([https://www.wisconsinmedicalsociety.org/\\_WMS/publications/wmj/pdf/109/3/125.pdf](https://www.wisconsinmedicalsociety.org/_WMS/publications/wmj/pdf/109/3/125.pdf)).
5. Bucklin-Sporer, Arden, and Rachel Kathleen Pringle. *How to Grow a School Garden: A Complete Guide for Parents and Teachers*. Portland, Or.: Timber, 2010. Print. — This book is a guide about planning, starting, and maintaining school gardens for parents, teachers, and school administrators. [6]  
([http://www.timberpress.com/books/how\\_grow\\_school\\_garden/bucklin-sporer/9781604690002](http://www.timberpress.com/books/how_grow_school_garden/bucklin-sporer/9781604690002))

## References

1.
  1. Fisher-Maltese C, Zimmerman T. 2015. "A Garden-Based Approach to Teaching Life Science Produces Shifts in Students' Attitudes toward the Environment," *International Journal of Environmental and Science Education*. 10(1): 51–66.

2. "Cornell Garden Based Learning: Resources for Gardeners & Educators". 2015 Oct. Ithaca (NY): Cornell University Cooperative Extension: <http://gardening.cce.cornell.edu>
3. Berezowitz C, Bontrager Yoder A, Schoeller D. July 2015. "School Gardens Enhance Academic Performance and Dietary Outcomes in Children," *Journal of School Health*. 85(8): 508–518.
4. Gibbs L, Straiger P, Johnson B. 2013. "Expanding Children's Food Experiences: The Impact of a School-Based Kitchen Garden Program," *Journal of Nutrition Education and Behavior*. 45(2): 137–146.
5. Bontrager Yoder A, Liebhart J, McCarty D. 2014. "Farm to Elementary School Programming Increases Access to Fruits and Vegetables and Increases Their Consumption Among Those With Low Intake," *Journal of Nutrition Education and Behavior*. 46(5): 341–349.
6. Skinner E, Chi U. 2012. "Intrinsic Motivation and Engagement as 'Active Ingredients' in Garden-Based Education: Examining Models and Measures Derived From Self-Determination Theory," *The Journal of Environmental Education*. 43(1): 16–36.
7. Desmond, D., J. Grieshop, and A. Subramaniam. (2002). Revisiting garden based learning in basic education: Philosophical roots, historical foundations, best practices and products, impacts, outcomes, and future directions.
8. Glavin, Chris. "Keys to successful garden-based learning programs | K12 Academics". [www.k12academics.com](http://www.k12academics.com). Retrieved 2015-11-21.

Retrieved from "[https://en.wikipedia.org/w/index.php?title=Garden-based\\_learning&oldid=729686672](https://en.wikipedia.org/w/index.php?title=Garden-based_learning&oldid=729686672)"

Categories: Educational programs

---

- This page was last modified on 13 July 2016, at 21:39.
- Text is available under the Creative Commons Attribution-ShareAlike License; additional terms may apply. By using this site, you agree to the Terms of Use and Privacy Policy. Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a non-profit organization.