UrbSTEAM

Teaching STEAM through Urban Garden Based Learning in the kindergarten

Educational material
Section 6.
Designing a School Garden (either inside or outside the school)

Co-funded by the European Union

Learning objective

-What is school gardening?

-How do we use school gardening in education?

-What are the steps of school gardening?

-What are the results?

UrbSTEAM

Teaching STEAM through Urban Garden Based Learning in the kindergarten

UrbSTEAM

Teaching STEAM through Urban Garden Based Learning in the kindergarten

Expected results

-To train teachers about school gardening.

-To show the benefits of school gardening.

-To show its steps and results

school garden.

UrbSTEAM

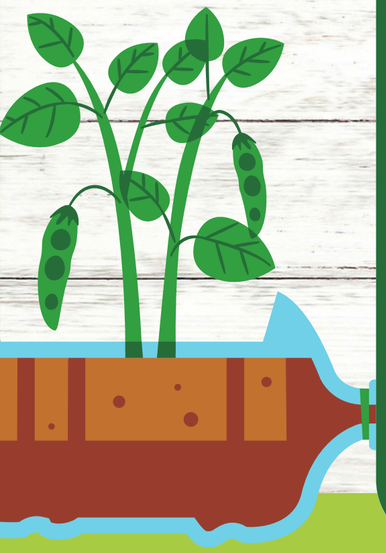
Teaching STEAM through Urban Garden Based Learning in the kindergarten

CONTENTS

UrbSTEAM
Teaching STEAM through Urban Garden Based Learning in the kindergarten

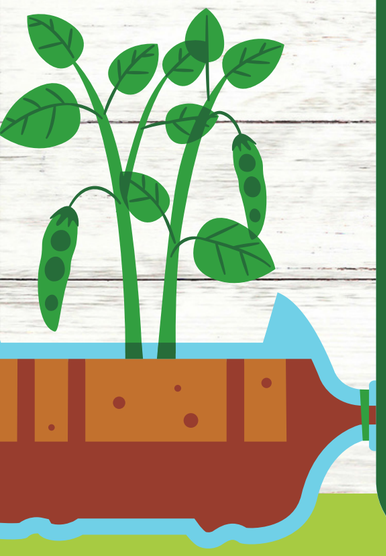
What is school gardening?

"A school garden may be defined as any garden where children are taught to tend flowers, vegetables, or both, by one who can, by teaching the history of plant life, and of their friends and enemies, instill [sic] in children a love of outdoor work and such a knowledge of natural forces and their laws as will develop character and efficiency.'
Greene, Mary Louise (1910). Among the School Gardens. New York: Charities Publication Committee, p. 3.



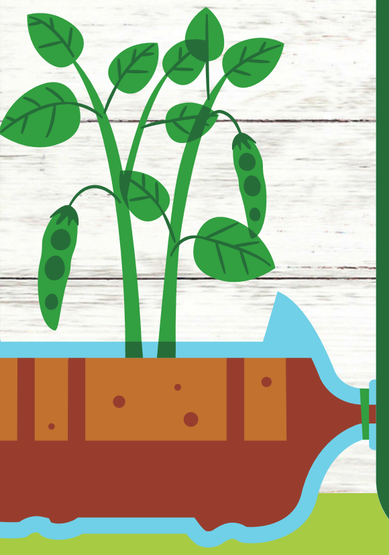
What is school gardening?

School gardens are a beautiful way to use the school yard as a classroom.It will reconnect students with the nature and the true source of their food, as well as teach them valuable gardening and planting concepts and skills related to a variety of subjects including science, art, health, physical education, and social studies, such as and a variety of educational goals, including personal and social responsibility.



What is school gardening?

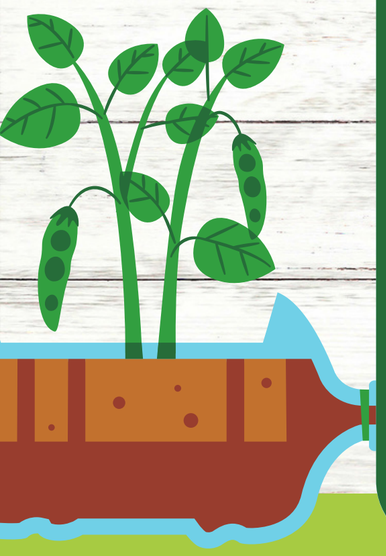
School gardening is a program that involves planting a garden on school grounds to educate children about the environment, good eating habits and other related topics. Students help design, plant and maintain the garden, which is integrated into the school curriculum to provide hands-on learning opportunities.



What is school gardening?

A variety of plants including vegetables, fruits, flowers and herbs can be grown in the garden.

School gardening programs are often interdisciplinary, integrating science, math, social studies, and art. They can also enhance student engagement and enthusiasm for study, while fostering a sense of community.



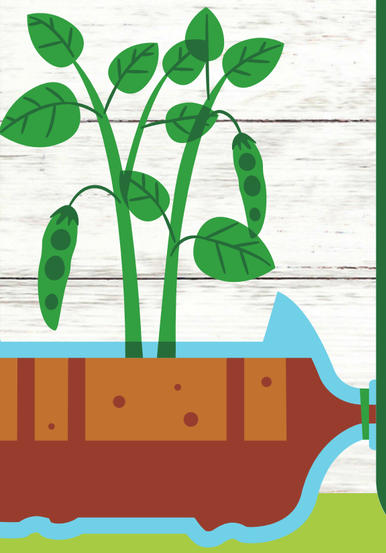
How do we use school gardening in education?

Science

Science may be the easiest academic area to connect with the garden.

Science teachers can use the garden to teach:

- Circle of life
- Plant and animal relationships
- Plant constructions
- Soil erosion
- Weather
- Ecosystems
- Anatomy



How do we use school gardening in education?

Mathematics

Building and designing a garden includes many practical opportunities to use mathematics. But even when the garden grows, students can work with math in nature. Here are some ways to connect gardens and math:

- Measurement
- Comparisons
- Charts and graphs
- Volume
- Assessment
- Proportions
- Data analysis
- Problem Solving

How do we use school gardening in education?

ELA

Teaching English can seem more tedious when it comes to making connections in the classroom, but it doesn't have to be. Students with a special interest in the garden can use it as a great topic for non-fiction writing, persuasive essays, debates, and even as a setting for a fictional story. You can also use the garden to teach:

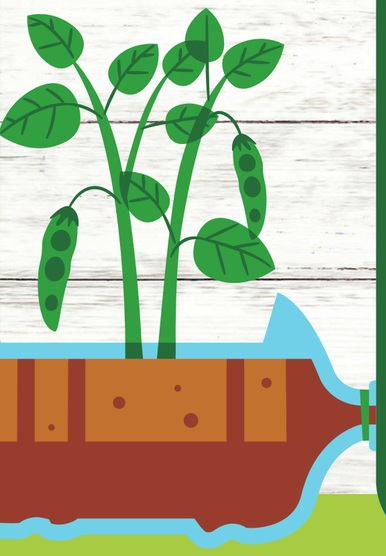
- Diary and observation
- Journalism (create a gardening column in the school paper, for example)
- Research
- Procedural reading

How do we use school gardening in education?

Social studies

Gardening and growing food is how cultures throughout history have survived and fed their community members. Connect the garden project to learn about:

- Different historical periods
- Cultural practices and traditions
- How different cultures have influenced societies around the world
- The history of agriculture



What are the steps of school gardening?

1. Form a Garden Committee
2. Determine goals for your garden
3. Find your location
4. Plan and design your site
5. Examine the materials
6. Sources of funding and information

Sample Timeline for Starting a School Garden

SEPTEMBER

Step one: Build a team of enthusiastic teachers.

Plan a visit to an established school garden.

OCTOBER

Step Two: Make a draft.

NOVEMBER

Step three: Garden management support.

Sample Timeline for Starting a School Garden

DECEMBER/JANUARY

Step Four: Gather Parental Support.

FEBRUARY

Step Five: Select Your Garden Location

Step Six: Notify Landscape Maintenance Crews.

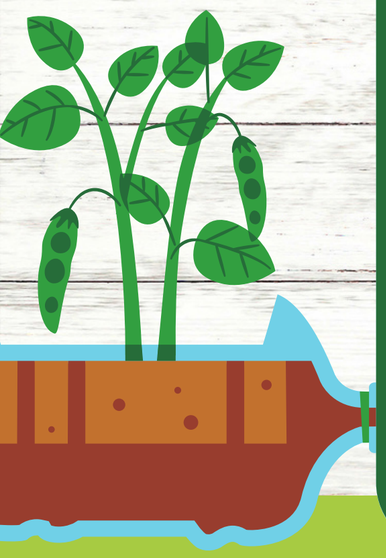
MARCH

Step Seven: Connect with the pros.

Sample Timeline for Starting a School Garden

APRIL

Next Steps: For food gardens, plant seeds with lettuce, spinach, kale, and radishes to make a wonderful spring garden that will produce food that can be used before the school year ends.



Sample Timeline for Starting a School Garden

MAY/JUNE

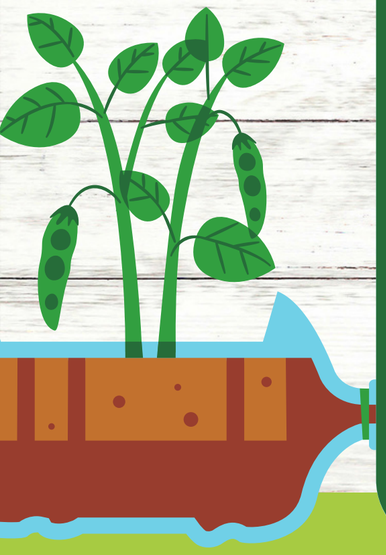
Enjoy the use of the garden. Make sure you have plans for summer garden care.

JULY/AUGUST

For food gardens, plan for fall winter-season crops such as broccoli, kale, lettuce, carrots and spinach.

What are the results?

- Increased knowledge and awareness about the origin of food (food systems)
- Students demonstrate an increased willingness to eat more nutritious foods (ie, fresh fruits and vegetables)
- Students demonstrate increased knowledge of nutrition and understand the importance of healthy eating in promoting wellness
- Students demonstrate an increase in knowledge of healthy eating habits
- Students demonstrate increased ability to identify various plants and produce (i.e. fruits and vegetables)

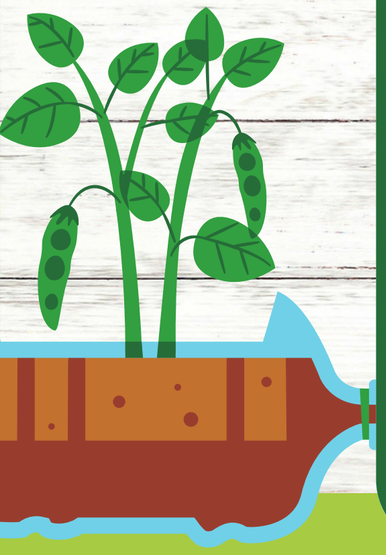


What are the results?

- Students demonstrate an increase in knowledge and appreciation for the natural environment
- Increase knowledge, skills and confidence to plan and implement best practices in horticulture
- Encourages a love of gardening among students which increases their enthusiasm for learning Increased life skills such as leadership, responsibility, teamwork/cooperation, social skills, accountability, focus and patience
- Students demonstrate increased knowledge of the value of a garden

What are the results?

- Increase knowledge and skills through cross-curricular integration in horticulture-related subjects (e.g. science, technology, engineering math, social studies, history, language arts, etc.)
- Increased knowledge and skills among teachers for interdisciplinary integration in gardens
- Students demonstrate positive attitudes towards exercise while gardening
- Students demonstrate an increased knowledge and appreciation of the hard work associated with gardening
- Students, parents and teachers demonstrate increased knowledge, skills, interest and confidence in growing their own food



BIBLIOGRAPHY

- https://www.gcu.edu/blog/teaching-school-administration/how-school-gardens-can-connect-classroom-learning
- https://gardeningtips.in/school-gardening-project-essay-design-plan-importance-and-benefits
- https://files.eric.ed.gov/fulltext/EJ1185760.pdf

THANK YOU FOR YOUR ATTENTION

THANK YOU!