

JMB STEM Lesson Plan

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Trego Food Bank

June 30, 2023

- Vehicles Line Up For Food





Pleasantville Community Garden

Task Overview

Community Garden Project

Students will select desired features of a school/community garden that could grow food for the school and community. Students will then design a garden on graph paper, including dimensions to scale for beds and fencing. Students will be able to explain water system and reason for bed design for each specific planting, i.e. vegetables, fruits, flowers.

Standards

ISP 1: Use Critical and Creative Thinking to Define Challenges and Seek Solutions

ISP 2: Collaborate and Use Appropriate Tools to Engage in Iterative Design

ISP 3: Communicate Solutions Based on Evidence and Data

ISP 4: Recognize and Use Structures in Real-world Systems

Activity Goals

Students will engage in the practice of design skills and evaluate designs based on criteria, constraints and standards.

Students will learn basics of creating a garden including requirements like spacing, soil, harvest and planting dates, costs, etc.

Students will compare farming vs backyard gardening.

Materials

- Graph Paper
- Pencils
- Colored Pencils
- Rulers
- Tape Measures
- Garden Catalogs
- List of Reputable
Garden Websites Etc.
- Garden Books



Before

1. Discuss the line at our local food bank on Fridays at ten am. Show picture of line of cars a mile long stretching from the community hall to railroad tracks. Students will watch the video about the Pleasantville Community Garden created by 12 year old Devin Juros.

a. Have students brainstorm some ideas about how they could help combat food scarcity in our community.

b. Discuss pluses and minuses of having fresh fruits and vegetables available to food bank.

c. Ask: what do you need to consider when growing a garden in NW Montana?

d. Discuss farming vs. gardening

During



1. Student will research fruit and vegetable needs of community and school, sort through catalogs for desired plants, soil requirements for plants (how much, what type of beds do plants grow best in) and create layout for design. They will also research fencing as that is going to be one of the biggest constraints.

a. Have students speak with cook and food bank coordinator to find out what amounts of fresh fruits and vegetables are required to feed community for a year.

b. Students will comb through catalogs to decide what variety will grow best in NW Montana.

c. Students will design a garden plan detailing the bed size including height, width, and length to grow 12 months worth of a specific vegetable or fruit. Some students may decide to design a pollinator border required for the space. Students need to include a plan for watering plants.

d. Students will create a table that includes when seeds or plants go in the ground, when they would be harvested. They need to include amount of sun required, depth and spacing, amount of seeds needed to purchase, tools required for planting, weeding, watering, building beds, etc. They need to decide if they are going to start from seed or plants.

After



1. Students will discuss the cost to build the garden plan, including labor to install fences and garden beds. If possible we will build some beds and plant some vegetables or fruit bushes/trees at the very least a pollinator border.

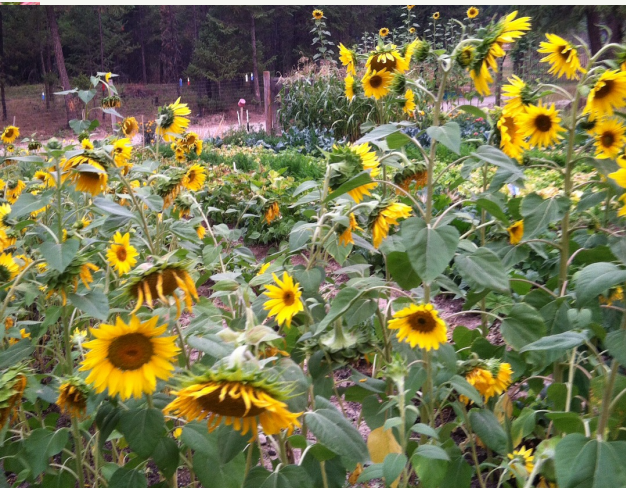
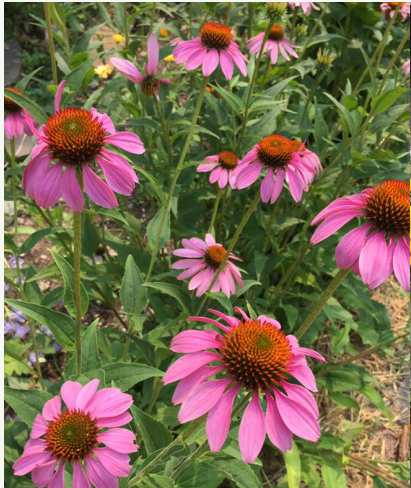
2. Fruit trees might be the best option as they could have small chicken wire protectors and not require a giant fenced area right away. Raspberry bushes are also a possibility as they might fit in the fenced area surrounding the teacherage. A pollinator border is also a good start and many flowers are growing around the school that the deer do not seem to eat.

3. During the lesson students will find that soil could be the most costly expense and decide they want to start with a compost pile fed by the school cafeteria.

Diverse Learners

Accommodations • Modifications • Differentiations

The biggest challenge we have at our school are students who are poor readers, either they do not decode at all or they just struggle to read because of poor vocabularies and lack of practice. One great thing about gardening, is there are multitudes of garden videos, blogs, and podcasts dedicated to gardening and they can choose to research how to grow vegetables, fruits, and or flowers from a wealth of quality sources.



Resources

- <https://www.almanac.com/>
- <https://www.gardenary.com/about>
- <https://www.fourseasonfarm.com/>
- <https://johnjeavons.org/>
- <https://rodaleinstitute.org/>
- <https://podcasts.apple.com/us/podcast/the-no-till-growers-podcast-network/id1441886206>
- <https://themarketgardener.com/>