

## Lasagna Garden Bed Lesson

Grade Level: 4th

Season: Fall

Larger IGS Unit: Gardens

Essential Question: How does decomposition work in the garden?

Objective: Students will know how to make a lasagna garden bed, and understand the process that turns the lasagna into rich soil.

Materials:

- Mixture of nitrogen/ green sources or organic waste: food waste/ grass clippings/ compost
- Mixture of carbon/ dry sources of organic waste: newspaper, dry leaves
- Cardboard
- Watering cans

Introduction:

- What happens to leaves when they fall off the trees in the woods? Bodies of animals when they die in the woods? Have you ever taken a walk in the woods and come across an old tree stretched across the path, with moss and mushrooms growing on it and hundreds of spiders and bugs making their home in it? You have seen the beginnings of the way in which an important part of the soil is made. This part, which comes from dead plants and animals, is called organic matter. How do you think these dead plants and animals become soil? What do you think organic matter adds to the soil?
- How do you make regular lasagna? (layer pasta, sauce and veggies, cheese)
- What do you think the ingredients for our outdoor lasagna might be?
  - (organic matter: 1. Compost (fresh organic matter like the stuff from our jars – this stuff is full of nitrogen – helps microorganisms to develop their bodies = food!), 2. Mulch (dry organic matter –this stuff is full of carbon – energy source for all living organisms), 3. Moist cardboard on the bottom (creates a nice habitat for worms on the bottom – another carbon source)
- Draw on the board:
  - First layer: noodles! – moist cardboard
  - Second layer: sauce, meat, and veggies: 4-6 inches of compost
  - The cheese: 6 inches of carbon layer
  - Water
  - Let cook for 3-6 months

Activity (*step by step explanation*):

- Create teams for each task

- Measure garden bed area (can be done ahead of time)
- Turn soil in garden bed area (can be done ahead of time)
- Place moist cardboard over garden bed area
- Place 4-6 inches of compost over garden bed area
- Place 6 inches of carbon layer over the area
- Water the bed

Wrap up/ Assessment (*final discussion, activity, or worksheet to assess student understanding of objective*):

- Ask children/have them write/draw: What does the garden bed look like now and how will it look in the spring? How will it change? Who will live in the lasagna bed?

Extensions (*how could this lesson be expanded in future lessons?*):

- Connect with compost in a jar and other soil experiments