Planting Peas and Wish Flags!

Description
Students plant peas and learn what plants need to grow.

Guiding Question
How do we grow food in our school garden?

Big Idea
Our garden needs all the elements to grow.

Learning Objectives:
⇒ Students will be able to identify the conditions needed to grow plants.

Materials:
- Garden Classroom rules Appendix A
- Pea Seeds Appendix B (planting directions)
- Picture of pea plant Appendix C
- Dry erase board + marker
- Fabric
- Markers
- String
- Rulers

Vocabulary:
Germination – The process of seeds developing into new plants
Tendrils – A plant part special to climbing plants

Introduction (10-15 mins)
Welcome students to the outdoor garden classroom. Do garden name game and go over garden classroom rules. Teach call and response.

Discuss that it is spring time and therefore time to start planting in our garden. Our garden is brand new for the season.
Engage (5 mins)
Ask students to think about what the garden needs to grow. Share ideas:

What does our garden need to grow healthy plants?

- Water
- Sunlight (Although there are plants that do thrive in shade, it is better to not explain this too much in depth)
- Nutrient rich soil
- Adequate air and temperature
- Space (without weeds)
- Insects
- Butterflies
- Bees

Write the answers on a dry erase board

Explain that the list we just created will help us make wish flags for the garden. For today’s activities there will be two stations: One to make wishes to bring all the good things to the garden, and one to plant peas.

Engage: Stations (20 mins)

Wish Flags (10 mins)

Reinforce what our garden needs to thrive by going over the list made at the beginning of class: including sun, soil, water, air, space, bees, worms, insects, butterflies, etc. Tell students we are going to be making “Wish Flags” to bring all the good things that we want to the garden. Give each student a square of fabric and markers and have them draw pictures of one of the things named that help the garden grow. They may choose to draw a picture of rain, or a big sun, as some examples. Older students may draw more images together. String the flags up around the garden when finished.

Pea Planting (10 mins)

Have a one inch ditch dug close to the trellis. Show students the planting area and explain how to plant the peas. Let each student hold one pea in their hand and observe it. Talk about the seed. Talk about how it will grow into a pea plant and show a picture. Demonstrate how to plant one seed. Have adults split group in two and work from either side of the row. Have students help each other by holding the ruler to measure distance of seeds. Cover seeds with dirt and water.

How to plant pea seeds:
- Till soil as soon as soil can be worked
- Plant pea seeds 1 inch deep
- Space seeds 2 inches apart
- Lightly pat down the soil to make a flat surface

K-2nd: Explain how to use the ruler to measure depth and spacing of seeds. Have adult assist process with very young students.
3rd-5th: Have students read back of seed packet to find planting instructions on their own

Evaluation:
Students share what they learned about planting peas and what plants need to grow.

Extension:
Read How A Seed Grows by Helene Jordan or From Seed to Plant by Gail Gibbons
Common Core Standards

- Science K.LS1.1 Use observations to describe patterns of what plants and animals need to survive
- Science 2.LS2.1 Plan and conduct an investigation to determine if plants need water and sunlight to grow
- Math K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations
- Math 3.MD.4 Generate measurement data by measuring lengths using rules marked halves and fourths of an inch.
Garden Classroom Rules

· Respect All Living Things
· Walk on paths, not on plants
· Use tools safely
· Harvest with Permission
· Be open and have fun!
Appendix B

Background Info on Peas:

Peas are a cool-season crop. There are three separate varieties: Pisum savitum, which includes both garden peas (sweet pea, inedible pod) and snow peas (edible flat pod with small peas inside), and Pisum macrocarpon, snap peas (edible pod with full-size peas). They are easy to grow, but have a very limited growing season.

Planting

- To get the best head start, turn over your pea planting beds in the fall, add manure to the soil, and mulch well.
- As with other legumes, pea roots will fix nitrogen in the soil, making it available for other plants.
- Peas will appreciate a good sprinkling of wood ashes to the soil before planting.
- Sow seeds outdoors 4 to 6 weeks before last spring frost, when soil temperatures reach 45 degrees F.
- Plant 1 inch deep (deeper if soil is dry) and 2 inches apart.
- Get them in the ground while the soil is still cool but do not have them sit too long in wet soil. It's a delicate balance of proper timing and weather conditions. For soil that stays wet longer, invest in raised beds.
- A blanket of snow won't hurt emerging pea plants, but several days with temperatures in the teens could. Be prepared to plant again.
- Peas germinate best in soil between 50 and 70 degrees
- Peas will germinate in 6-14 days
- A trellis is needed to help the plant grow upward

How to care for pea plants:
- Place the pea plants in an area where they will be able to receive an adequate amount of sunlight
- Water the plants as necessary to keep the soil moist
Appendix C