

Exploring Phenology with Seed Balls



Grade Levels

Pre K-2

Overview

The following activity is an introductory lesson in the basics of observation skills for young children. In this activity, students will use their senses to observe different plants. Then, they will make seed balls out of clay that can be planted at your school or brought home.

Background

Phenology is the study of the timing of life cycle events, done mostly through personal observations. We can observe how plants change through the year, from when they are seeds, grow leaves, and eventually flowers and fruits.

Real-world Connection

Observation skills are necessary for scientific study and are included throughout the elementary standards. In addition, observation skills are necessary for all aspects of learning academically, socially, and emotionally. Making seed balls gives students tactile connections to the natural world, and a sense of accomplishment and ownership when they choose where to throw their seed balls and watch them grow.

Citizen Science Connection

Nature's Notebook is not critical to completing the activity, rather can be used as an addendum to the activity.

Estimated Time

20-30 mins

Outdoor spaces with access to plants, tables set up inside/outside for take home activity portion

Learning Objectives

Participants will be able to:

- Make at least one observation about the natural world
- Understand that plants grown in phases
- Students will understand the importance of pollinators

Next Generation Science Standards

LS: Life Science			
Kindergarten		Grades 1-2	
K-LS1-1	Use observations to describe patterns of what plants and animals (including humans) need to survive	2-LS2-1	Plan and conduct an investigation to determine if plants need sunlight and water to grow
K-ESS3-1	Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live	2-LS4-1	Make observations of plants and animals to compare the diversity of life in different habitats

Conducting the Activity

Materials

Resources needed

- Plants to observe
- Blank paper
- Crayons/markers
- Air-dry Clay
- Soil
- Wildflower seeds native to your area

Engage

Connect to prior knowledge

- Ask your students about things they typically see outside and encourage them to explain whether it's living/non-living
- Ask your students how they know what is outside vs. what is inside, how did they come to that
- Discuss observation, and what we use to make observations
- Discuss how plants are living, that they grow and change, and that we can observe these changes and what makes them possible (i.e. the presence of pollinators)

RESOURCES

Adapted from:

Exploring Phenology with Seed Balls by Lexie Barrell



NOTES ON ACTIVITY

Conducting the Activity

Explore

Hands-on learning

1. Provide each student with a blank piece of paper and a few different colors of crayons/markers
2. Lead a walk-about around your plant/garden area and encourage students to point out what they see/hear/smell/feel
3. After you have led them through the area, give them a few moments to draw one observation they made and allow them to share it with the group
4. Again, discuss the importance of pollinators to the plants in the garden
5. Provide each child with a small ball of air dry clay and instruct them to flatten it out with their hands
6. Provide each child with a small amount of soil (having pre-filled cups prepared may be helpful), have them sprinkle the soil on top of the air-dry clay until they have a thin layer
7. Provide each child with a small amount of seeds and have them sprinkle them onto their layer of dirt
8. Have each child roll and knead their clay until all three components are thoroughly mixed, and they have formed a small round ball
9. Explain that these seeds will grow wherever they throw their seed balls, and that they can observe their changes
10. Discuss different places that may benefit from the seed balls

Explain

Listening and communicating understanding

- After you have led them through the area, give them a few moments to draw one observation they made and allow them to share it with the group
- Again, discuss the importance of pollinators to the plants in the garden
- Discuss different places that may benefit from the seed balls

Extend

Group projects, real world connections

1. Re-visit your plant area at least once every season, observe and record what has changed. Teachers can enter these observations using *Nature's Notebook*
2. Choose one plant to continuously observe over time

Evaluate

Summarize, check for understanding, assess

- The drawing and reflection pieces embedded within the activity are the best way to evaluate
- Share one observation you made
- Share one thing you know about plant growth and/or pollinators (or one thing you have learned)
- Share one place would benefit from increased plant growth
- Share any questions you may have