



Seeds K- 1

SUMMARY

Students plant lettuce seeds outdoors, direct seeding.

OBJECTIVE

Students learn the life-cycle of a seed and to grow food.

SPECIFIC OUTCOMES

- Plants need light, water and soil to survive and grow.
- Compare cost of seed and soil to the cost of plant in the store.

MATERIALS

A garden bed with organic soil

A water source and watering cans

Lettuce seeds of different varieties

A few examples of lettuce varieties from the store (wash).

Research ahead the cost of lettuce(s) in the grocery store

paper plates

Magnifying lenses

Paper napkins (optional: ranch dressing)

Sunny weather

Colored pencils and paper for drawing

MAKING CONNECTIONS in Sustainable Agriculture:

THE PROJECT DEMONSTRATES ECONOMIC VIABILITY

- Look at the cost of the seed compared with the cost of the plant.
Which is more expensive?
What else are we paying for when we buy our food?
(Time and effort to grow it, water, the costs of trucking it to, and keeping it in, a grocery store refrigerator and so on.)

THE PROJECT IS SOCIALLY RESPONSIBLE:

The source of our food is the **seed** and the soil.

Nutrition is important at every age; we care for our bodies.

You can grow your own food (self-esteem, empowerment).

We can all grow food, no matter how young we are.

THE PROJECT USES ENVIRONMENTALLY SOUND PRACTICES:

Nutrition can come from our compost bin, rather than a human made (synthetic) **fertilizer**. That compost comes from our grass clippings and the food we don't eat, so nothing is wasted; it just turns back into rich soil. Problem pests can be removed by hand, rather than with **pesticide** spray. Then those chemicals won't get into our water supply.

Grade Level

preK - Grade 1

Subject Areas

Science, Math, Writing, Art, Oral skills

Key Concepts

- Plant growth and adaptations
- Soil concepts: properties of color, texture and ability to hold water; ability to support plants, including those in our food supply; various types of soil; composting as a way to make soil.
- Patterns and systems (of growth).

Key Cognitive Skills

- categorizing, planning (determining the needs of lettuce and how these will be met), investigation, costs versus gains, counting, manual dexterity, cooperation, imagination, oral communication, patience.

Duration

This is designed as a full-day experience, with interdisciplinary opportunities plus time to share and grow as a class team.

Setting

Outside for direct seeding into beds.
Indoors for art, writing, seed study and categorization.

Vocabulary Choices:

fertilizer
nutrition
pesticide
season
seed
sow

Background Information:

The school calendar was built on agrarian shedule so children could help out on the farm.

NC Standard Course of Study:

Grade One Math Competency Goals
Competency Goal 3: The learner will demonstrate an understanding of classification, pattern, and seration.

3.1 Describe objects by their attributes; compare and order.

3.2 Sort by given attribute/ by more than one attribute; explain sorting rules.

3.3 Sort objects by own rule; explain sorting rule.

3.6 Find and correct errors in patterns.

3.7 Identify patterns in the environment.

Competency Goal 4: The learner will exhibit skills in using measurement.

4.4 Use time related words in daily vocabulary.

4.6 Use information on a calendar.

NATIONAL STANDARDS SKILLS:

OBSERVING

COMPARING

CLASSIFYING

ORGANIZING

SORTING

COMPARING AND CONTRASTING

FARMER CONTACTS:

To reach Farmer Jay Hamm, call Carolina Farm Stewardship Association, 542-2042.

For any other assistance,

Screech Owl Farm School: 542-0333, or CCCC Sustainable Agriculture Program, Robin Kohanovich: 542-6495 ext 229

PROCEDURE:

ENGAGE (10 Minutes)

Today we're going to **sow** seeds! Show lettuce and the tiny seed. Isn't it incredible that a big plant like this comes from this tiny seed? How many of you like lettuce? Who has grown their own before? (Share stories.)

EXPLORE (15 Minutes)

Sprinkle lettuce seeds onto paper plates for small groups to study. Talk about how all the parts of the plant are contained in that little seed. Amazing! Read the seed pack to see if it is the **season** to plant.

EXPLAIN (45 Minutes)

- Ask how we plant these seeds, and what the seed needs to live: soil, sun, water - all in balance. What would threaten them? (If the needs get out of balance, e.g. no water, too much sun. Predators could eat them.)
- Describe your procedure for class management. Suggestion: take small groups of 5-8 out at a time. Have one student drag the trowel through the soil (across the bed) to make a little furrow. Take turns dropping in their seeds into the furrow according to the instructions on packet.

Inside groups can:

- 1) Look at different seeds with magnifying glasses and draw them.
- 2) Group them according to different strategies: size, color, type, the **season** they grow etc. Put the different types of seeds into categories.
- 3) Make up stories about their seed's life in the garden. What sorts of adventures will the young lettuce have? (Guide them as they create their tales. Record for them or have them draw the stories; write as they can.)

EXPAND (30 Minutes) "Let's Take it One Step Further"

Lunch: When everyone has gathered back and all is planted, circle up on the floor and talk about the cost of lettuce compared to the cost of the seed. Hand out napkins with samples. Taste samples. They might do a comparison taste test. How does lettuce taste without any dressing?

EVALUATE (45 Minutes) "You Tell Me"

Choose one puppet to be a grandparent or an adult friend, and one to be the student who planted lettuce today. The puppets talk about what the student did in school today. Suggest that the adult puppet ask about how the student will care for the lettuce. Rotate around the room. Listen to their conversations. Do they know how to care for the seeds out in the garden? (Some may wish to perform their skit for the class.)

EXTENSIONS:

Class discussion: What are the rewards of growing our own food? (Joy, learning, knowing we can, saving money, survival skills, healthy food.)