

IGS Curriculum: 4th Grade

Connections to Curriculum Frameworks and MVPS Power Standards: (including, but not limited to)

- Science:
 - PS 4 Understand the components of a basic food chain including the sun, producers, consumers, and decomposer, and how change in one part affects the population of other animals
 - PS 6 Give examples of how changes in the climate or environment affect the survival of organisms in the ecosystem
 - ETS1.A: Defining engineering problems: possible solutions to a problem are limited by available materials and resources (constraints). The success of a designed solution is determined by considering the desired features of a solution (criteria). Different proposals for solutions can be compared on the basis of how well each one meets the specified criteria for success or how well each takes the constraints into account.
 - ETS1.C: Optimizing the design solution: different solutions need to be tested in order to determine which of them best solves the problem, given the criteria and constraints
 - LS1.A: Structure and Function: plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction
 - ESS2.E: Biogeology: living things affect the physical characteristics of their regions

- Math:
 - PS 4 Apply the area and perimeter formula for a rectangle in real world and mathematical problems
 - PS 8 Create and utilize a line plot and relate it to other types of graphs (bar, circle, pictograph)

- Social Studies:
 - 4.11 Describe the climate, major physical features, and major natural resources in each region. (G)
 - 4.14 Identify the five different European countries (France, Spain, England, Russia, and the Netherlands) that influenced different regions of the present United States at the time the New World was being explored and describe how their influence can be traced to place names, architectural features, and language. (H, G)
 - 4.15 Describe the diverse nature of the American people by identifying the distinctive contributions to American culture
 - 4.23 On a map of North America, locate Mexico and its major cities. (G)

- 4.24 Describe the climate, major physical characteristics, and major natural resources of Mexico and explain their relationship to the Mexican economy. (G)
- 4.25 Identify the language, major religion, and peoples of Mexico. (H)
- MVPS 4. Describe the diverse nature of the American people by identifying the distinctive contributions to American culture from several different ethnic groups.

Connections to IGS Learning Goals:

- Appreciate the farming profession
- Know that everyone can grow food
- Understand the connection between healthy soil, healthy plants and healthy people

Essential Questions:

- What is soil?
- Where does soil come from?
- How does soil form?
- Where does food come from?
- Why do we have farms?
- What is waste?
- How do humans and plants affect each other?

Fall (September – November):

Lessons:

- Exploring the garden food chain
- Fall in the garden experiments
 - Soil temperature
 - Plant categorizing/tallying
 - Worm tallying
- Fall plant identification
- Decomposition in a mulch bed/lasagna garden
- Corn: Introduction
 - Seed saving
- Fall Harvest
 - Salsa making

Field Trips:

- “Fall/corn on the farm” @ the Farm Institute or another island farm
- Gleaning corn @ Morning Glory Farm (September)

Winter (December – March):

Lessons:

- Winter in the garden experiments
 - Soil temperature
 - Plant categorizing/tallying
 - Worm tallying
- Soil experiments
 - Soil samples in a jar
 - Soil tests (clay, sand, silt, compost)
- Mexico and the history of corn
- Corn and its routes across the world

Spring (April – June):

Lessons:

- Create garden and/or farm food chain
- Spring in the garden experiments
 - Soil temperature
 - Plant categorizing/tallying
 - Worm tallying
- Design garden beds using geometry
- Plant in mulch bed/lasagna garden
- Planting corn in the school garden

Field Trips:

- “Spring on the farm” @ The Farm Institute or other island farm