COASTAL ROOTS FARM
NOURISHING COMMUNITY

School and Group Visit Options

Program activities are subject to change due to seasonal availability and weather conditions.

Farm Exploration & Play (recommended: Pre-K)

What: See, feel, smell, and taste all the joys Coastal Roots Farm has to offer. Students will find thrills in interacting with nature and exploring where their food comes from.

Students will...

- Make nature-based art
- Interact with farm chickens and compost worms
- Participate in a color match nature hunt

Why: Understanding and caring for the environment, food, and our communities begins at a young age through joyful interactions that inspire curiosity. In order to raise a generation of kids that care for the world, they must first fall in love with it!
(Source: *Cultivating Joy & Wonder*)

Cultivating *My Plate* Nutrition (recommended: K - 8th grade)

What: There is no better way to talk about healthy eating than amidst the rainbow of produce grown on the Farm. See how nutrients travel from soil to seed and end up nourishing our bodies.

Students will...

- Create My Plate seed art to recognize the components of a well-balanced meal
- Harvest farm-fresh produce to make a healthy snack
- Plant a seedling to start their own garden at school or home
- Understand the importance of nutrient-rich soil in growing nutrient-rich food

Why: To gain consciousness of the way their food choices affect their bodies and be empowered with knowledge and skills to make healthy food and beverage choices.

As stated by the Center for Disease Control and Prevention (CDC), nutrition education in schools is a vital part of health education by providing:

- Consistent and accurate messages about good nutrition.
- Ways to learn about and practice healthy eating.
- Access to nutritious and appealing foods.

Welcome to the Farm (recommended: K - 2nd grade)

What: Enjoy an exciting day on the Farm, digging into how food is grown and learning more about who grows it.

Students will...

- Participate in an “Ask a Farmer” Q&A session
- Identify different fruits and vegetables and what they need to grow
- Gain a basic understanding of agriculture
- Taste produce grown on the Farm

Why: To understand that humans interact with plants and the natural world through agriculture in order to obtain basic needs.

- K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.
- K-ESS3-1. Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.
- 1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.
- 2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.

Pollination on the Farm (recommended: K - 2nd grade)

What: Can you imagine a world without fruit, flowers, chocolate or honey?! Learn how pollination works and the role of pollinators in producing many of our favorite foods.

Students will...

- Observe pollinators in action
- Play a game to understand how animals play a part in plant pollination
- Compare the reproductive structures on different farm flowers
- Create flower press art

Why: To understand that pollination is an essential process in plant survival and reproduction, a process we rely heavily on in food production.

- 1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.
- 1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.
- 2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose
- 2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.

Exploring Textures in the Soil (recommended: 3rd - 5th grade)

What: Practice being a soil scientist for the day and experiment with different soil textures around the farm.

Students will...

- Create mosaic art from plants, rocks, and soil collected on the Farm
- Taste farm-fresh produce and understand how soil helps it grow
- Observe different soil textures under a microscope
- Conduct an experiment to test Coastal Roots Farm's soil texture

Why: To understand the different components that make up soil, why they're all necessary, and which is best to use when starting a garden or planting something new

- 2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.
- 4-ESS2-1. Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.
- 5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.
- 5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment

Produce Plant Parts (recommended: 3rd - 5th grade)

What: Learn the importance and function of each plant part and how we can enjoy all of them in a tasty farm fresh treat.

Students will...

- Observe and draw different plant structures
- Learn each plant part's main function
- Identify fruits and veggies that represent each of the plant parts
- Prepare and enjoy a farm-fresh, plant part salad taco

Why: To understand different plant structures, their specialized roles in the plant system, and how humans utilize them.

- 1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.
- 2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.
- 4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
- 5-PS3-1. Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.

Dirt Made My Lunch (recommended: 3rd - 5th grade)

What: Experience first-hand the importance of soil health and how farmers influence the soil to impact what grows.

Students will...

- Interact with soil and compost hands-on in a soil mapping activity
- Observe and taste different plants that live in diverse soils
- Plant a seedling to start their own gardens
- Feed compost worms and map out the process of cycling nutrients

Why: To understand the role of soil in producing food and how nutrients cycle in and out of a soil system.

- 3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
- 4-ESS3-2. Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.
- 5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.
- 5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

Saving Water in the Garden (recommended: 4th - 5th grade)

What: With increasing concerns of drought and water pollution, students will reflect on technologies that can be used to reduce their negative impacts on waterways.

Students will...

- Shape wells, mounds, and swales to move and control water flow
- Learn the cultural context of an olla and its water saving capabilities
- Practice techniques to determine soil moisture level
- Conduct a water runoff experiment

Why: To understand the importance of saving water and identify techniques to save water in their own garden at school or home.

- 4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction
- 4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time
- 5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.
- 5-ESS2-2. Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.

The Power of Plants (recommended: Middle School - High School)

What: Dissect the role of each plant part has in harnessing the sun's energy and how our society uses plants for food, medicine, and textiles.

Students will...

- Observe stomata, chloroplast, xylem, and root nodules under a microscope
- Identify and label plant part functions in a botanical drawing
- Create natural dyes from a variety of plant parts
- Discuss our reliance on plants and the importance of them in many industries

Why: To deeply understand the biology and anatomy of each plant part and their roles in helping the plant successfully grow, reproduce, and function.

- MS-LS1-2. Develop and use a model to describe the function of a cell as a whole and ways the parts of cells contribute to the function.
- MS-LS1-4. Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.
- HS-LS1-2. Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.
- HS-LS1-5. Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.

Pursuing Justice through the Corners of our Field (recommended: Middle - High School)

What: Food is culture, family, health, and life. Students will engage in intentional conversations on how to promote fair access to fresh food for all on an individual, community, and global scale.

Students will...

- Understand the concepts of food inequality and justice
- Identify food justice solutions they can promote in their own communities
- Cultivate or harvest produce to benefit food insecure communities

Why: To understand food inequality as a problem within the food system and feel empowered to find and implement positive change.

Character education guiding principles touched on, as stated in California *Education Code* Section 233.5(a):

- **Compassion** – Kindness. The desire to help others in distress. To show kindness and concern for others in distress by offering help whenever possible.
- **Initiative** – Eagerness to do something. To take responsible action on your own, without prompting from others.
- **Responsibility** – Accountability. To consider oneself answerable for something. To demonstrate that you consider yourself to be accountable for your actions and that you follow through on your commitments.

FBI (Fungi, Bacteria, Invertebrates): Good vs. Bad (recommended: Middle - High School)

What: Picture this – you come home from school hungry for a snack. You reach into the pantry, pull out a jar of peanut butter, and open it up to see a layer of mold! Learn the causes of food spoilage and ways our food system prevents contamination.

Students will...

- Preserve farm produce
- Experiment with preservation methods to prevent microbial activity
- Practice basic laboratory skills
- Calculate the efficacy of a compost system in diverting waste from the landfill

Why: To understand the basic needs of living things by learning how to stay safe when cooking, storing food, and composting.

- MS-LS2-1. Organisms, and populations of organisms, are dependent on their environmental interactions both with other living things and with nonliving factors.
- MS-ESS2-1. Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.
- HS-PS1-5. Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.
- HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.

Turnip the Heat: Cycling Nutrients (recommended: Middle - High School)

What: The Farm's hot compost operation is a unique feature of organic and sustainable growing methods. Explore the Farm's closed-loop system and walk away with the tools to start your own compost!

Students will...

- Observe organisms found in compost and soil under a microscope
- Prepare and mount microscope slides
- Build a backyard compost pile
- Compare decomposition at different stages and in different environments

Why: To deeply understand the process of composting and importance of diverting food waste from landfills by using natural cycles of decomposition.

- MS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.
- HS-LS2-3. Construct and revise and explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions
- HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biological diversity.

Volunteering at Coastal Roots Farm (recommended: Middle - High School)

What: Work alongside our Education Team in helping maintain our production spaces as we fulfill our mission of nourishing the community.

Students will...

- Complete garden tasks relevant to the season
- Get dirty working as a farmer for the day to feed local food insecure communities
- Give back to their community

Why: To understand the origins of food, gain perspective on the food system, and deepen connection to the planet. This experience will encourage students to think about their health and consumer choices while reflecting on the food choices that are accessible to their fellow community members.

Recipes from the Sun (recommended: High School)

Why: While preparing and enjoying a farm-fresh recipe, students will analyze the differences between eating local, seasonal produce and conventional produce from the grocery store.

Students will...

- Participate in a seed to table activity
- Recognize the importance of food choice on overall health and wellbeing
- Discuss the impact our food system has on the environment and resources
- Harvest culinary herb bundles to take home

Why: To understand the process and resources utilized in producing food from seeds in a field to meals on a plate while practicing basic culinary skills.

- HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.
- HS-LS4-5. Evaluate the evidence supporting claims that changes in environmental conditions may result in (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.
- HS-ESS2-2. Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.