SELF-GUIDED FIELD TRIP

9th Grade

JK Community Farm

Field Trip

Objectives & Rules

The JK Community Farm is deeply grateful to the growing community of generous supporters who have fostered the development of our education programming

Young children are naturally curious and creative thinkers, we hope to help children develop a solid foundation for understanding of the natural world, nutrition, and agruculture.. Please use this time to explore the JK Community Farm and make connections with your child's currciulum and nature. Our education activities were carefully curated to meet Virginia's standards of learning for each grade level and integrated into the JK Community Farm.

For our self guided field trips, rules provide the structure necessary for an engaging and productive class. Please be mindful of social distancing at the JK Community Farm, masks are optional as long as distance is maintained. Please be gentle with our plants as they are growing to feed families in our community in need of our help.

Essential Questions

Discuss these questions with your student throughout the field trip.

What are food miles?

What is food security?

Why is healthy soil important?

what is biodiversity?

What is sustainable agriculture?

Food Story

Every food has a story, but for many foods that story is a mystery. Labels and packaging are good places to start invensigating the story behind food. Select a label and answer the following questions. If you dont have a snack with you, try this activity at home.

1. What is the name of the food?
2. Is this a whole food or processed food?
3. How many ingredients are listed on the label?
4. What are the top 3 ingredients (besides water)?
5. What plants or animals is each of these 3 ingredients made from? (use the internet if needed)
6. What is the origin of the food?
7. Where was it processed?
8. Is the package recyclable or compostable?
9. What are the food miles?
10. How does this food's story affect the health of the environment?

Soil Food Web

Activity

Soil is one of nature's most complex ecosystems. It contains a myriad of organisms which interact and contribute to the global cycles that make all life possible.
When these diverse soil organisms interact with one another and with the plants and animals in the ecosystem, they form a web of ecological activity. Biodiversity is essential for food security and nutrition. Grab a trowel and choose a place in the garden to dig and observe the soil food web.

Questions

- Can you identify each Trophic level?
- How can organic farming sustainable increase farm productivity?
- What soil diversity did you observe?
- What are soil organisms responsible for?

1st Trophic Level:
(photosynthesizers)
Plants and Organic Matter

2nd Trophic Level:
(Decomposers, mutualists, pathogens, parasites, root-feeders)
Nematodes, Fungi, Bacteria

3rd Trophic Level:
(Shedders, predators, grazers)
Arthropods, Nematodes, Protozoa

4th Trophic Level:
(Higher level predators)
Arthropods, Nematodes

5th and higher
Birds and [illegible]

Compost and Sustainability

Activity

Start your activity by .finding a rotten pepper on a plant and toss it into the compost! Direct the students attention to the compost pile. Have the student guess the temperature of the compost pile. Ask the student to then read the temperature.

Discuss decomposition with the sudents and what causes the heat.

Questions

- What do you think the temperature is?
- What is the actual temperature?
- What observations can you make about the compost pile? Can you tell what has been composted?
- Why should we compost food instead of throw it away?
- What is the environmental impact of landfills vs. compost?

Materials

Blank Paper
Crayons
Colored Pencils

How do we smell?

Activity

As an adult you will distinguish 10,000 different smells. At the back of your nose is a region called the olfactory epithelium. Your brain has 40 million different olfacory receptor cells.

Head into the greenhouse to put your sense of smell to the test. At each planter filled with herbs take a deep breath through your nose, right down your observations and your guess at identifying the herb.

Questions

- What do you smell?
- Does it remind you of anything?
- Can you identify the herb?

Materials

Blank paper
Crayons
Colored Pencils
Jar with lid
Measuring Tape/ Ruler

Selective Breeding

Activity

Walk down to the pepper plot at the JK Community Farm, ask the student to write down the physical triats of each variety of pepper. Ask the student to touch and smell the pepper. Write down any other traits they can identify.

Offer the student to taste the purple and green bell peppers, and continue to identify. How do the peppers compare? Do they serve different purposes? As a plant breeder, what variety would you grow, and why?

Questions

- Where do seeds come from?
- How do our food choices affect the world around us?
- What does it mean to be a plant breeder?
- Why do you think this is an important role?
- How did people selectively breed to achieve such diversity in crops like tomatoes and peppers?

Materials

Blank Paper
Colored Pencil
Crayon

Adaptation and Domestication

Activity

Plants and animals have behaviors and structures that increase their chance to survive and reproduce.
As you explore the JK Community Farm discuss adaptation and genetic mutations with the student. Can they name any examples of adaptation in nature?

Questions

- How are characteristics of plants and animals passed down?
- How do animals and plants help to ensure their survival?
- What is natural selection and how does it work?
- Can you find an example of adaptation or genetic mutation on a plant growing at the farm?

Materials

Blank Paper
Colored Pencil
Crayon

Seed Parts and Sprouting Starts

Activity

Enter the greenhouse and take time to explore the herbs growing in the planters and the seedlings growing in the trays. Ask the student to try identifying the plants as they walk through.

The life of nearly all plants we eat start as a seed. Seeds come in different shapes and sizes, but all share common parts and contain everything needed to reproduce and grow.

Questions

- Can you find a seedling shedding its seed coat?
- The first leaves that emerge from the seed are called cotyledons, can you identify them?
- A monocot has one cotyledon, and a dicot has two, can you identify them?
- Why do we start seeds in the greenhouse?
- Can you guess what is the largest plant seed? (a coconut)

Materials

Blank Paper
Colored Pencil
Crayon
Magnifying glass

Food Miles

Activity

With the global food system, it has become increasingly cheaper to buy distantly produced goods. However, along with lower prices comes the added repercussions to the environment and our health. Produce loses 30% of nutrients three days after harvest.

As you explore the JK Community Farm discuss why sourcing food locally is important to the consumer, farmer, and environment.

Questions

- How long after harvest is produce reaching the grocery store?
- What are food miles?
- Do you know where your food comes from?
- How does this impact the future of agriculture and food access?

Materials

Blank Paper
Colored Pencil
Crayon

Food Choices

Activity

Explore the JK Community Farm and discuss.

How do you make decisions about what to eat? What is important to you? This short reflection will help your student think through priorities when making food choices.

Things to consider: animal welfare, appearance, cost, culture, environment, sourcing, nutrition, convenience, season, smell, taste, texture, weather

Questions

- What are different situations in which your priorities change?
- What were your priorites in elementary school? How do you think they will change as an adult?
- Are there any priorities that you want to be higher on your list?
- Does your family share your priorities?

Materials

Blank Paper
Colored Pencil
Crayon

Explore and Discuss

At the JK Community Farm

Nutrition

Food contains nutrients that our bodies need to live and grow. Nutrients allow us to move, think, digest, rebuild, and heal.

We get the most nutrients from our food when it is local, seasonal, colorful, and organic.

Bee Hives

Discuss how bees play an essential role in agriculture - pollinating crops, increasing yields and producing honey.

Over 1/3 of the food we eat relies on pollination by bees.

Food Insecurity

Food Insecurity is when a person or family does not have consistent access to enough food for a healthy life.

The JK Community Farm donates all of the food grown to local food pantries to make sure everyone has access to healthy food

Here are some tips to cultivate a culture of caring in young children

Offering opportunities for outdoor play will promote an essential connection to nature. Through caring relationships with nature, our food and our communities, children become interested in engaging in a healthy and just present and future.

Duration

Try to keep the duration of the project short. Young children's interests change rapidly .Service learning will be most effective if children start and finish the project in a short amount of time.

Listen

Listen to children when they have an idea for making a difference. Ask them questions to guide their thinking about what may or may not be feasible.

Make Connections

Help children make connections between their interests, experiences, and learning by asking, "how can we help?" and "Is there something we can do?"

is everything clear?

Please find Samantha and Farmer Mike at the Farm for any questions.
We'd love to help!
www.jkcommunityfarm.org

Thank you for a lovely field trip

We hope you had a great time and learned a lot! Below is some additional information on the farm!

Volunteer

We welcome volunteers of all ages throughout the season to join us for planting and harvesting projects. Sign up is available at www.jkcommunityfarm.org/volunteer

Donate

As a nonprofit, we rely on our community to help us grow. This year the JK Community Farm will donate 135,000 lbs of healthy food to the food insecure in our region, but we need your help to expand. www.jkcommunityfarm.org/donate

Follow

Keep up with the farm and events on social media @jkcommunityfarm

We're on instagram, Facebook, and LinkedIn!