



# 12th 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 agriculture.. Please use this time to explore the JK Community Farm and make connections with your child's curriculum 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 investigating the story behind food. Select a label and answer the following questions. If you don't 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 small mammals  
JK COMMUNITY FARM

# 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 olfactory 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

# Sustainable Agriculture



## Activity

As the world population increases, American agriculture must meet the global needs for food. Explore the farm and discuss how sustainable farming techniques used at the JK Community Farm help to conserve land and water resources. Explore the causes of hunger, and evaluate potential solutions. Can you develop a 5 step plan to feed the world? Why is sustainability important?

## Questions

- What are the environmental impacts of agriculture?
- How has food insecurity changed over time?
- What is the difference between malnutrition and famine?
- What does food insecurity mean to you?
- Do you believe you can make a difference?

## Materials

Blank Paper  
Crayons  
Colored Pencils

# Selective Breeding



## Activity

Walk down to the pepper plot at the JK Community Farm, ask the student to write down the physical traits 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

# 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

# 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 Insecurity and Volunteerism



## Activity

The JK Community Farm was designed to alleviate hunger with healthy food. 100% of the food grown is donated to food pantries in our region, and planted and harvested with the help of volunteers

As you explore the JK Community Farm discuss the role you can play at the farm or ways that you believe the farm can improve to better serve the community. Record your thoughts and share them in the basket at the top of the farm!

## Questions

- What does the farm need?
- How much food will the farm donate this year?
- How many people in our region are facing food insecurity?
- Why is access to healthy food important?
- How would you like to get involved

## 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 priorities 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](http://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](http://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](http://www.jkcommunityfarm.org/donate)

## Follow

Keep up with the farm and events on social media

[@jkcommunityfarm](https://www.instagram.com/jkcommunityfarm)

We're on instagram, Facebook, and LinkedIn!



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