

2023-
2024

Classroom Lesson Plans



We provide lessons on a wide range of topics. Most of our lessons can be modified for UPK-6th grade classes, through lessons that are better suited for older students are noted with (3-6). You are not limited to the lessons found below! We can create lessons to align with other topics you are teaching in your classroom.

Animal Science

Bring an animal into your classroom!

We can bring a Goat • sheep • chicken • calf • rabbit • pig
Learn about farm animals through engaging interactions.

+add on activities can include

Food taste test • fiber science • butter making • heart rate/vet science

*all animals are dependent on availability

Engineering & Math

Cucumbers to Pickles, Machines in Ag (3-6), Pizza Food Miles (3-6)

Environmental & Plant Science

Seeds: Sounds of Seeds (3-6), Seed Starting: Seed Balls, Newspaper, Gardens, Hydroponics (3-6), Plant Parts We Eat, Wheat, Maple Syrup, NY Apples, Bees/Beekeeping, Garden Food Web

Food Science & Nutrition

Beef, Citrus Slushie, Garden Salsa, Edible Playdough, Peach Smoothie, An Orange in January, Ice Cream Making, Vitamin Superheroes

Humanities

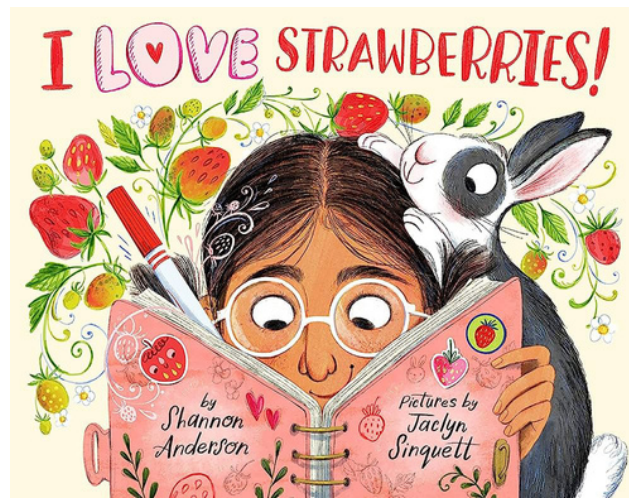
Colonial Times (3-6), Eggs around the World (3-6), Lunches around the World, Three Sisters' Salsa

Seasonal/Holidays

Gingerbread Playdough, Arctic Animals/Reindeer, Veggie Valentine's, Pumpkins (dissections & pumpkin pie in a bag), Cranberries, Evergreens (3-6)

Ag Literacy Week

Taking place every **March**, Educators send volunteers into 2nd grade classrooms, and read an agriculture related novel and complete an activity. This year, educators will read " I love Strawberries." Jolie LOVES strawberries - and she's on an unstoppable (and hilarious) mission to grow her own food from seedling to table in this colorful introduction to the joy of growing the popular perennial. Other grades may participate in Ag Literacy Week, If interested, and educators are available.





Virtual Lessons

Cornell Cooperative Extension | Broome County

Field Trips

Prerecorded Field Trips

We have lots of virtual field trips that can take place over Zoom or a classroom with computer access! Field trips are taped beforehand at a local farm and will be shared over video with an AITC educator as a guide. From horses to greenhouses, and more, there are many options for students to enjoy. Some field trips can have an additional activity kit or giveaway for students.

LIVE Zoom Virtual Field Trips

AITC will be visiting local farms live where students can meet the farmer and take a tour of their farm from the comfort of their classrooms! Be sure to be on the lookout for these events like an apple orchard, dairy farm and so much more! We will be sending emails with registration information in advance of the trip.

Classroom Lessons

We are happy to visit your classrooms to offer engaging and hands-on lessons for you and your students. Each lesson is designed to give students opportunities to explore their food system and agriculture through our lessons. From goat visits to making fresh salsa, we work to tie in lessons with their classroom standards as needed, and have a range of lessons that challenge students to use their science, math, art, and language arts skills. We frequently offer food tastings and items for students to make and take home. Many of our lessons are designed for PK-6th and can be adapted for each grade as needed, though lessons better suited for 3rd grade and above are labeled (3rd-6th).

Contact us

Sarah Atwood: sa688@cornell.edu

Nicole Huston: nsh63@cornell.edu

Nicole Walker: naw57@cornell.edu

Check out our online resources at www.aitcbroome.org

Live Field Trips

We will be offering live virtual field trips throughout the year to local farms! These will be offered over Zoom and will require preregistration. Many of the field trips will come with a tasting or fresh farm item for the students to enjoy during the trip. The AITC educators will be live on the farm with the farmer. Students and classrooms will have the opportunity to ask questions during the presentation! Be on the lookout for e-mails regarding these opportunities throughout the year.

Check the next page for a more detailed description of lesson offerings.

Virtual Pre-recorded Field Trip Lessons



Lofty Meadows Horse Farm: Visit Ms. Atwood at her horse farm! Ms. Atwood shows students around her horse farm with some student helpers, and shows the different parts of a horse, how she takes care of her horses, and how to ride a horse.

Aukema Family Farm: Located in Chenango Forks, NY, Aukema Family Farm has lots of animals. Students of all ages will get a quick overview of many different animals found on farms, such as sheep, goats, chickens, donkeys and more.

Schaefer's Garden: Learn more about how farmers use greenhouses to grow flowers, fruits, and vegetables inside! Located in Triangle, NY, two field trip options are available; one will show older students the technology, tools, and methods farmers use to grow in greenhouses, and young students will learn about the different parts of a plant and their functions, with a dance party intermission!

Whittaker Dairy Farm: Brandon, a 4-H youth, shows you all around his family's dairy farm in Whitney Point. See where calves live on the farm, tools used on the farm, and how they are able to milk 650 cows every day!



Animal Science

Animal Visit: Calf: Making Butter: During this visit the students will learn how to take care of a calf and its anatomy. All of the students will be able to see and touch the calf. The discussion of what products we get from cows lead into making butter. Each student will make butter by shaking a small container with heavy cream, tasting it with a saltine cracker.

Animal Visit: Goat: During this visit the students learn about the goat's anatomy and how a goat can be cared for. Students will be able to taste test goat cheese, blue cheese, and cheddar cheese. Each student is able to pet the goat and, if time allows, listen to their heart beat with a stethoscope.

Animal Visit: Sheep/Lamb: During this visit the students are able to interact and learn about two types of lambs; hair lamb and regular wool lamb. The students are involved in a discussion of anatomy and care for the lambs. They will be able to touch the lamb and, if time allows, listen to their heartbeats. Each student will be able to take a small piece of wool home.

Animal Visit: Chicken: During this lesson the students learn the differences and similarities of a chicken and other poultry and breeds of chickens. The students will have a chance to pet a live chicken or chick. They will learn anatomy and how to care for the animals.

Animal Visit: Rabbit: 'Peter Rabbit': During this lesson the students will learn about rabbits and how to care for them. Each student will have a chance to pet the rabbit and listen to the story, *Peter Rabbit*. After the read aloud, they will be able to taste test a few foods that a rabbit loves to eat from the story *Peter Rabbit* (carrots, lettuce, and black berries).

Animal Visit: Pig: During this lesson students will learn about pigs and piglets and how to care for them. Interacting with a real pig, they will learn the uses and importance of pig, interesting facts, and about the basic anatomy of a pig. Students will get a chance to pet the pig at the end of the lesson.



Engineering and Math

Machines in Ag: During this lesson the students will learn about different tools that are used in agriculture, both yesterday and today. Students will be challenged to identify the uses of ‘yesterdays’ tools, by being provided photos or real examples of tools, and identifying what the tool was used. Students will then learn about the modern equivalents of those tools as relevant.

Pizza Food Miles: During this lesson the students will discuss what agricultural products are needed to make a pizza. During the discussion the students will learn where many of the common ingredients of pizza traditionally comes from across the United States and world. The students will then calculate the miles of where their food has traveled from to get to their classroom. As time allows, students will make a ‘pizza bite’ to enjoy at the end.

Cucumbers to Pickles: During this lesson Students involved will learn about how and where cucumbers grow. Students will have the opportunity to prepare and sample cucumbers/pickles (Bread & Butter or Dill).

Environmental and Plant Science

Seeds: Below you will find a series of three lessons related to seeds. All three lessons can be done as a series, or 1 or 2 lessons can be done independently.

Sounds of Seeds. (3-6): During this lesson the students will learn about the diversity of seeds by sorting seeds through sound. Students will learn about key words, such as volume and pitch. They will have to determine the characteristics of seeds based on their sound inside of a container, and then sort and identify the seeds. If time allows, students will make and eat popcorn.

Seed Starting: Starting seeds for students to take home is an engaging way for students to learn about seeds and plants. Students may be able to plant a seed in a variety of ways depending on age.



Seed Balls: During this lesson the students will learn about growing and planting through an interactive read aloud called: What’s in the Garden? The students will be able to make a seed ball to take home (modeling clay, filled with wildflower seeds, and rolled in soil).

Newspaper Garden: During this lesson the students will examine various seeds to find out what they have in common, exploring the diversity of seeds. Younger students will read What’s in the Garden? Students will brainstorm what qualities were needed in order for seeds to grow to their full potential. Using recycled newspaper, each student will make a biodegradable pot to plant a seed. Each student will plant a seed (basil, lettuce, or herbs) to take home.

Hydroponics (3-6): During this lesson the students will learn about soilless growing mediums, and will make a homemade hydroponic system to take home. Students will watch a video “How it Grows: Spinach” to see a hydroponic farm that grows lettuce and greens for market. Afterwards, they will be led through a discussion on the advantages and disadvantages of hydroponic systems.

Plant Parts We Eat: During this lesson the students will learn about the different plant parts and identify fruits and vegetables as their plant part. Students will work individually to identify given fruits and vegetables as a root, stem, leaf, flower, fruit, or seed. They will place each fruit and vegetable in the correct location on the given plant model to make their own ‘edible snack’. They will enjoy their fruits and vegetables with dip at the end.

Wheat: During this lesson the students will learn about wheat and what products that are made from it. They will learn how wheat was processed in ancient times, seeing examples of hand-tools used to grind wheat. If age appropriate, students will separate wheat berries from the stalks in order to process the berries into flour using a hand mill. The students will taste test wheat flour tortillas with salsa.



Maple Syrup: During this lesson the students will learn all about producing maple syrup. Students will learn about sap and different grades of maple syrup, through donations from a local NY maple producer. They will learn about the process to produce maple syrup, seeing some of the tools used.

Each student will enjoy a taste test of syrup, comparing two different flavors/grades.

NY Apples: During this lesson the students will learn about apple production in NYS. They will get a chance to learn about the diversity of apples, by seeing and passing around different apple varieties. Students will leave with an understanding of the production and uses of NYS apples.

Bees/Beekeeping: During this lesson the students will learn the basics of beekeeping through the read aloud of, *The Beeman* by Laurie Krebs and Valeria Cis. After they watch a quick video demonstrating how honey is extracted from the hive, the students will be able to hold and touch different tools the beekeepers use (hive tool, beeswax, hives, frames, beekeeper hat, honey, smoker, etc.). All of the students will taste test two different types of local honey to compare and contrast. They all will receive a local honey stick to take home.

Garden Food Webs: During this lesson students will learn about food webs and food chains as it relates to a garden ecosystem. Students will discuss the definition of food webs and food chains, and then will take part in a 'garden food web game'. Each student will be given a card with one insect, plant, or animal that would exist in a garden, with information on what it eats, and who eats it. Students will one at a time pass a string to another part of the garden it is connected to, until all of the students are connected to each other. Students will discuss in a group circumstances that might affect the food web, and why it is important to have diverse ecosystems.



Food Science & Nutrition

Beef: During this lesson students will learn how, where, and why beef are raised. Students will have the opportunity to play a true/false game and an activity of animal by products used every day. The taste test is beef jerky.

Citrus Slushies: During this lesson students will learn how and where citrus is grown. They will squeeze citrus and make slushies to taste test.

Peach Smoothies: During this lesson students will learn where and how peaches are grown. They will use measurements to prepare the smoothie. Students will be taste testing the smoothie.

Garden Salsa: During this lesson the students will learn about gardens through an interactive read aloud called; What's in the Garden? Each student will help prepare the fresh salsa by chopping or juicing the fruits and vegetables (tomatoes, cilantro, peppers, lime and green onions). All students will taste test the fresh salsa with tortilla chips.

Edible Playdough: During this lesson the students will learn about how Sugar is made and produced. The different kinds of sugars and by products. Students will work in small groups and build ag related sculptures from the edible playdough. They will taste test a small sample.

An Orange in January: During this lesson the students will learn about the life cycle of an orange through a read aloud of the book, An Orange in January. Students will learn about where oranges are grown and how they are produced. The students will make predictions about which will be healthier; a whole orange, orange juice, and oranges in a can. They were all able to taste test a piece of orange, a sample of orange juice, and a piece of orange from a can.



Ice Cream Making: During this lesson the students will learn the science behind making ice cream and what agricultural products are used. Students will be led through a discussion of milk production, to create an understanding of the timeline of the milk to their home or classroom. Each student will make their own ice cream in a bag to enjoy at the end of the class.

Vitamin Superheroes: During this lesson students will learn about vitamins and why they are important for our health. Students will be led through an age-appropriate explanation of vitamins, and will focus on vitamin C as an example. Students will perform a dance to help them remember the 4 ‘superpowers’ of vitamin C, and will taste test a fruit that is high in vitamin C, kiwifruit. At the end, students will receive a ‘Vitamin C Superhero’ coloring page that features four fruits and vegetables that are high in vitamin C.

Humanities

Colonial Times (3-6): During this lesson the students will learn about what the foods were available during the colonial time period, with a focus on the American Revolution. The students will participate in a game that simulated the hardships of feeding the soldiers during the American Revolution and to visualize the rationed food that they were given. Each student will taste hasty pudding, to sample a common food cooked by the soldiers.

Eggs Around the World (3-6): During this lesson students will be able to explore the importance of culture on our food choices and availability, and learn about different cultures around the world. Students will focus on eggs, and learn about the importance of egg consumption around the world. Students will be led through a matching activity, where in groups, students will be asked to match up an egg dish with its country of origin. Students will be able to see the similarities and differences of specific countries and their food cultures.

Three Sisters’ Salsa: During this lesson the students will learn about the Three Sisters growing system (corn, beans, and squash), and why they are commonly grown together by indigenous communities. The students will learn variations of the Three Sisters legend, as told by different tribes. Students will be able to make Three Sisters’ Salsa and enjoy it with corn tortilla chips.



Lunches Around the World: Students will learn about how culture and geographic affects food choices around the world by focusing on school lunches. Students will see the similarities and differences that exist by being led through a guiding reading of “What’s for Lunch” by Yvonne Duivenvoorden.

Seasonal/Holidays

Gingerbread Playdough: During this lesson the students will learn about the agricultural production of wheat and were able to make wheat into flour using either a grain mill or electric grinder. The students will discuss the different uses for flour. Then the students will work together to make gingerbread scented playdough to take home.

Pumpkin 1: Dissections: During this lesson the students will learn about the life cycle of a pumpkin through a read aloud. The students will have the opportunity to dive in hands first to explore the parts of pumpkin, from the outside color and stem, to the inside filled with seeds and ‘guts.’ The students we be able to try toasted and salted pumpkin seeds.

Pumpkin 2: Pumpkin Pie in a Bag: During this lesson the students will learn about the life cycle of a pumpkin through a read aloud. The students will discuss the different uses and varieties of pumpkins, with real pumpkins. Students will work together to make ‘pumpkin pie in a bag’, and then try their own ‘pumpkin pie’ at the end of class.

Artic Animals/Reindeer: During this lesson the students will learn about real life reindeer through a read aloud and online video clips. The students will be able to see a reindeer cam, listen to reindeer noises, and watch a reindeer race. Each student will make reindeer (wild life) food to place outside, which will consist of dried oats, raisins, dried cranberries, mushrooms, and carrots.



Making Valentines with Beets/ Okra: During this lesson the students will use real produce to help stamp their own Valentine's Day card. Students will use beets and okra to create shapes and stamp their cards. Each student will take their cards to give to someone special.

Cranberries: During this lesson students will learn all about cranberries. Students will be led through a sensory exploration of cranberries, and will be allowed to 'dissect' cranberries to observe their hollow interior and seeds. They will see a demonstration showing how cranberries float when it water, and will learn how farmers will flood fields to make harvesting easier by watching videos of cranberry harvests. At the ends, we will discuss how we eat and use cranberries and students will be able to taste test different types of cranberries, such as dried cranberries, cranberry sauce, cranberry juice, and fresh cranberries.

Evergreens: During this lesson students will get a chance to learn more about evergreen trees, and learn how to identify different evergreen varieties. Students will discuss the uses for evergreens as a holiday decoration. Students will learn that pine is one specific type of evergreen tree, and that there are a variety of other types of evergreens, such as fir and spruce. Working in pairs or small groups, students will be given clues to help identify evergreen varieties and will receive 2 branchlets of evergreens (fir and pine). After identifying the branchlets correctly, they will be allowed to make an evergreen decoration using branchlets, ribbon, pipe cleaners, and other decorations.

