



Gilcrease Orchard Field Trip Lesson Plan & Educator Resources

Purpose: The Field Trip Lesson Plan and Educator Resources can help formal and informal educators know what to expect on a **Gilcrease Orchard Staff Led Field Trip**. The Educator Resources include video links about the orchard, lesson plans from “Agriculture in the Classroom”, and more. These can be used pre and post field trip in the classroom. Included in the document are several curriculum points that the staff led field trip supports, but not entirely covered. Bus reimbursement grant for CCSD schools is located at the end of document.

Please send comments or questions to Reservations@thegilcreaseorchard.org

Self-Guided Field Trips: If you’d like to schedule a self-guided field trip where you lead your own field trip, please come on a day we are open to the public. We ask **homeschool groups, pre-school, boy scouts, girl scouts, and similar community groups** come on a day the orchard is open to the public to have a selection of produce to pick and concessions. You can use guide to adjust the information to your needs. Note we do not offer a wagon rides for self-guided field trips.

To schedule a Gilcrease Orchard Staff Led Field Trip:

- Visit <https://thegilcreaseorchard.org/field-trips-and-events/>
- Purchase a booking through the website. Gilcrease Orchard Staff Led Field Trips occur in Spring and Fall.
 - Spring: Mondays, Wednesdays, and Fridays in April and first two weeks of May
 - Fall: Mondays, Wednesdays, and Fridays the last week of September, October, and first week of November
- Cost is \$5 per student & \$5.49 chaperone. In Fall apple cider is available for an additional \$1 per student & chaperone. Teachers are always free. This fee helps pay for the seed, fertilizer, and produce that youth take home.
- Questions or requesting a bus grant application or field trip?
 - Call or text: 725-296-3750 Email: Reservations@thegilcreaseorchard.org

Gilcrease Orchard Staff Led Field Trips consists of:

1. educational presentations on vegetables and fruit, bee hives, and chickens
2. a wagon ride
3. picking in-season fruits or vegetables

In fall students pick pumpkins, in spring they pick carrots, based on the availability of produce.

Need to know:

- Programs are located outdoors, with porta potties available for restrooms. Hand washing stations are located near the picnic area.
- Gilcrease Orchard led programs are geared towards K-3rd grade and are tailored on site to the interests, knowledge level, and needs of the students.
- Students need to wear sturdy closed-toed shoes, dress for weather, hat, sunglasses if warm, jackets, gloves, beanies if cold weather. Each student needs to bring drinking water.

Gilcrease Orchard Staff Led Field Trip Lesson Plan

Introduction Presentation: approx. 20 mins. Location is the outdoor amphitheater in good weather. In winds or mildly inclement weather this can occur in the nearby indoor storage barn.

Welcome to Gilcrease Orchard!

What are we going to do today?: Discuss safety and plan

- We're here to learn about fruit & vegetables here in the outdoor amphitheater

Then we'll split the group up into 2:

- Half will learn about bees and chickens. The other half will go on a wagon ride to pick pumpkins (fall) or carrots (spring) then switch. All will get to do everything.
- *** Note not all groups are split up into 2 groups. Smaller groups or when necessary we keep the groups together.
- As this is a working orchard, please watch your step with uneven ground. We do have tools nearby so please don't touch tools or sharp objects.

Chaperone/Adults Help:

- We will need your help! Everyone can help by walking safely, watching where you step as this is a working orchard with uneven paths and rocks.
- We are here today for the students to learn. We ask chaperones to help throughout the field trip by giving focus to presenters and we will need chaperones help in the pumpkin/carrot patch.

What is an Orchard?

- Who's first time is it to an Orchard? What do you think is an Orchard? An Orchard can be lots of different things. (Have students answer, and positively respond to all answers, goal is to reinforce students confidence and gain understanding of knowledge level)
- An Orchard is a place with lots of trees, fruit, chickens, like a farm but with plants etc.
- Here we have over 8000 fruit trees! That's more than all the students and teachers in your school!

Gilcrease Orchard brief history:

- The Gilcrease family moved here in 1920, over 100 years ago from Reno Nevada! Two brothers Ted (1 year old) & Bill (3 year old) came with their mom (Elda) and dad (Leonard) and started an alfalfa farm with chickens and turkeys.
- Bill and Ted were the two brothers who inherited the orchard and farm.

- Do you have any brothers, sisters, siblings, cousins? Do you think you could start a farm with them and keep it going for over 100 years?
- Now it is a non-profit organization here so you (members of the Las Vegas community) can pick fresh fruit and vegetables.

Vegetables: What is a vegetable?

- A vegetable is the root, stem, or leaf that people can eat.

Vegetable Yoga:

- Root: Stand up and stretch to your toes reaching to our root. Are there roots you like to eat? What about carrots? Yum
- Stem: ok let's reach tall and straight to the sky. Are there stems you like to eat? What about celery?
- Leaf: Shake your hands like a leaf in the wind. Are there leaves you like to eat? Lettuce? Salad?

Fruit: What is a fruit?

- A fruit is the part of the plant that grows with seeds and has skin on the outside. Usually seeds grow on the inside, but not always.
- At the orchard we grow peaches, apricots, pomegranates, pears, apples, and more! What is your favorite fruit?
- Have a selection of fruits in season on the table and show students. Can pass fruit down for hands on discovery.

Fruit or Vegetable?

- Remember fruit have seeds & skin, and vegetables are the root, stem or leaf of the plant.
- Talk about 3 fruits or vegetables, depending upon what is available in the season. Discuss why it is either a fruit or vegetable.

Where do fruits come from? Flowers & Pollination

- Fruit grow from the flowers of a plant. When a bee, insect, and even birds visit a flower to drink nectar, they get covered in pollen. Bees have pollen sacks on their legs to store the pollen. When the bee visits a 2nd flower, some pollen is left. Now the flower has everything it needs to grow into a fruit. We call this pollination. Can you all say pollination?

Activity: Pollination gives us food

- We can thank bees for pollinating lots of food: Presenter reads out loud this list of food, and when the students like something, they rub their tummy and say YUMMMM!

List of Pollinated Foods: and what type of bee pollinates them

ALMOND: honey bees

APPLE: honey bees, blue mason orchard bees

APRICOT: bees

AVOCADO: bees, flies, bats

BANANA: birds, fruit bats

BLUEBERRY: Over 115 kinds of bees, including bumblebees, mason bees, mining bees and leafcutter bee

CHERRY: honey bees, Bumblebees, Solitary bees, flies

CHOCOLATE: midges (flies), stingless bees (Students usually yell for chocolate)

COFFEE (for the adults): stingless bees, other bees or flies

GRAPEFRUIT: bees

GOURDS: bees

MANGO: bees, flies, wasps

MELON: bees

PEACH: bees

PEAR: honey bees, flies, mason bees

PUMPKIN: squash and gourd bees, bumblebees

RASPBERRY and BLACKBERRY: honey bees, bumblebees, solitary bees, hover flies

STRAWBERRY: bees

TEA PLANTS: flies, bees and other insects

TOMATO: bumble bees

VANILLA: bees

- Can we thank the bees? On the 3rd buzz let's thank all the bees! Buzz Buzz Buzz Thank you bees!

Split group in half (if needed):

Half go on the wagon ride to pick pumpkins/carrots and the other half walk to the bees and chickens

Wagon Ride & Pick Produce: approx. 30 mins

Wagon Ride & Presentation: Ride through the orchard learning about fruit trees, burrowing owls, pumpkins/carrots and receive instruction for picking in the field.

- *Note: Wagon has steps to walk up. An accessible ramp is available if indicated to orchard staff prior to program.*

- Wagon rides are only available for Orchard Staff Led Field Trips and not for groups coming on their own during regular hours.
- Information on Pumpkins or Carrots, and facts on Gilcrease Orchard history.
- Information on Burrowing Owls: The wagon ride passes by a constructed wild burrowing owl habitat created in partnership with The United States Fish and Wildlife Service.
- Information on Desert Tortoises: The wagon ride passes by a captive desert tortoise habitat created in partnership with The United States Fish and Wildlife Service, Tortoise Group, and Get Outdoors Nevada.

Pick Pumpkins (in Fall): Each student gets 1 pumpkin. Adults/chaperones will help cut and write names on pumpkins. Closed-toe sturdy shoes are important. Walking safely in the field is important too.

Pick Carrots (in Spring): Each student gets to pick several carrots and places them in a bag to carry. Picking carrots requires digging with hands into loosened soil. Chaperones and adults may need to help students pick carrots.

Switch:

Group on wagon gets dropped off at chickens/bees. Group at chickens/bees loads up on wagon.

Bee Presentation:

- Bees are important for pollinations to have fruits and vegetables
- Three types of bees, workers, drones, and the queen bee.
- Queen Bee is female, and she can lay over 3000 eggs a day!
- Drones are male bees. They mate with virgin queens so that the queen can lay viable eggs.
- When most eggs hatch they are worker bees. Worker bees are all female. Worker bees go get nectar and do most of the work around the hive. They clean, repair, and build combs in the hive. They forage for water and food, store and create honey, and protect the hive from predators. They also take care of the queen and young larvae.
- Discuss and show beekeeping suit and how it keeps beekeepers protected
- Discuss honey information
- Show the differences between the bees at the presentation hive. Try and find the Queen, as she usually has a group of worker bees surrounding her.
- Show the waggle dance that worker bees. That's how the bees communicate with each other.
- Let youth ask questions and answer.

Chicken Presentation:

- There are many varieties of chickens. We have about 30 different varieties with many colors and sizes.
- Chickens eat a variety of food including fruits, vegetables, seeds, insects, and meat. They are omnivores.
- Chickens can make about 30 different sounds to communicate. Hens are female chickens and males are called roosters.
- Roosters call and wake up the hens to warn them of danger.
- Hens lay eggs, about 1 per day. Eggs come in different colors. Hens need to incubate, or keep the eggs warm if they are to hatch into a chick.
- Hens are fantastic mothers and will protect their chicks from predators like coyotes, or foxes. The chickens at the orchard are fenced in to help protect them from natural predators like owls, hawks, and coyotes.
- Chickens can fly, and they can also run over 25 miles per hour.
- They can see in color, have dreams when sleeping.
- What are some of your favorite foods that are made with eggs?
- Cake, Cookies, scrambled eggs, French toast, hard boiled eggs, and deviled eggs
- Let's say thank you chickens for delicious eggs! On 3 say Thank you chickens!
- Pass eggs around to see the different colors of eggs.
- Let youth ask questions and answer.

End of Program: Gilcrease Orchard Led Programs are approx. 1.5 hours long.

- Optional: Classes may stay to eat lunch or snack at the shaded picnic area. Note we do not have an indoor area for lunch. There are porta potties and hand washing stations near the picnic area.
- Concessions may be available after the program but we cannot guarantee any or certain products available. Students are able to purchase their own items if they have funds.
- Teachers, please plan to load pumpkins on to bus or have students carry pumpkins or carrots.

Additional Resources for Educators:

Resources can be used as pre and post activities to connect your students to Gilcrease Orchard and further support curriculum points.

- **Video: FOX5 Las Vegas “Where the water comes from for Gilcrease Orchard”:**
 - https://www.youtube.com/watch?v=U_4fkolouSg
 - It’s an agricultural oasis in the northwest part of the Las Vegas Valley. Gilcrease Orchard is 60 acres of fruit trees and vegetables that survive here thanks to an artisan well.
- **Gilcrease Orchard Videos:**
 - **How to Pick:** <https://www.youtube.com/@TheGilcreaseOrchardLasVegas/featured>
 - **How to harvest different vegetables:** <https://thegilcreaseorchard.org/recipes/#recipes>
 - **Outdoor Nevada:** <https://www.pbs.org/video/outdoor-nevada-gilcrease-orchard-and-sanctuary/>
- **Video: Nevada Science Center Video: VFT: Farming in Las Vegas at Gilcrease Orchards**
 - Video shows how to pick carrots, benefits of bats, eggs, chickens, history, disease, climate issues, and growing in the heat.
- **Apple Cider Production Video:**
 - [How it's Made - Gilcrease Orchard Apple Cider](#)
- **UNLV Special Collections: Collection of historical pictures and records for the Gilcrease family and Gilcrease Orchard**
- **Agriculture In The Classroom:** <https://agclassroom.org//> & <https://agclassroom.org/teacher/>
 - Lesson Plans, videos, and more!
 - [A is for Apples](#)
 - [Freshest Fruits](#)
 - [Pumpkins... Not Just For Halloween \(Grades K-2\)](#)
 - [Honey Bees: A Pollination Simulation](#)
 - PDF activity sheet [Anatomy of a Worker Bee](#) , [Anatomy of a Worker Bee Answer Sheet](#)
 - [Eggology \(Grades K-2\)](#)
 - [From Hen to Home \(Grades K-2\)](#)
- **Desert Tortoise Resources:**
 - <https://www.reviewjournal.com/entertainment/food/pumpkin-patch-is-open-at-gilcrease-orchard-in-las-vegas-1866598/attachment/families-watch-a-desert-tortoise-at-gilcrease-orchard-in-las-vegas-thursday-sept-26-2019/>
 - <https://www.fws.gov/species/desert-tortoise-gopherus-agassizii>
 - <https://tortoisegroup.org/desert-tortoise-info/>
- **Burrowing Owl Resources:**

- <https://www.fws.gov/species/burrowing-owl-athene-cunicularia>
- <https://www.birdandhike.com/Wildlife/Birds/21-Strig/2-Strig/Buow/ Buow.htm>
- <https://www.reviewjournal.com/life/volunteers-help-make-life-easier-for-burrowing-owls-in-valley/>
- **Bee Resources:**
 - <https://www.pollinator.org/pollinated-food>
 - Nevadabugs.org PDF of Nevada Bee Identification Guide: <https://nevadabugs.org/wp-content/uploads/2017/03/Nevada-Bee-Guide-small-size.pdf>

Curriculum Supported:

Note these points are supported and are not covered entirely in the Gilcrease Orchard Staff led field trips.

NGSS Curriculum Supported:

<p>Students who demonstrate understanding can:</p> <p>K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive. [Clarification Statement: Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.]</p>		
<p>The performance expectation above was developed using the following elements from the NRC document <i>A Framework for K-12 Science Education</i>:</p>		
<p style="text-align: center;">Science and Engineering Practices</p> <p>Analyzing and Interpreting Data Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.</p> <ul style="list-style-type: none"> Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. <hr style="border-top: 1px dashed black;"/> <p style="text-align: center;"><i>Connections to Nature of Science</i></p> <p>Scientific Knowledge is Based on Empirical Evidence</p> <ul style="list-style-type: none"> Scientists look for patterns and order when making observations about the world. 	<p style="text-align: center;">Disciplinary Core Ideas</p> <p>LS1.C: Organization for Matter and Energy Flow in Organisms</p> <ul style="list-style-type: none"> All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. 	<p style="text-align: center;">Crosscutting Concepts</p> <p>Patterns</p> <ul style="list-style-type: none"> Patterns in the natural and human designed world can be observed and used as evidence.
<p><i>Connections to other DCIs in kindergarten: N/A</i></p> <p><i>Articulation of DCIs across grade-levels:</i> 1.LS1.A ; 2.LS2.A ; 3.LS2.C ; 3.LS4.B ; 5.LS1.C ; 5.LS2.A</p>		
<p><i>Common Core State Standards Connections:</i></p> <p><i>ELA/Literacy -</i> W.K.7 Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (K-LS1-1)</p> <p><i>Mathematics -</i> K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of/less of” the attribute, and describe the difference. (K-LS1-1)</p>		

* The performance expectations marked with an asterisk integrate traditional science content with engineering through a Practice or Disciplinary Core Idea.

Students who demonstrate understanding can:

2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.*

The performance expectation above was developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Developing and Using Models Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, or storyboard) that represent concrete events or design solutions.</p> <ul style="list-style-type: none"> Develop a simple model based on evidence to represent a proposed object or tool. 	<p>LS2.A: Interdependent Relationships in Ecosystems</p> <ul style="list-style-type: none"> Plants depend on animals for pollination or to move their seeds around. <p>ETS1.B: Developing Possible Solutions</p> <ul style="list-style-type: none"> Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. (secondary) 	<p>Structure and Function</p> <ul style="list-style-type: none"> The shape and stability of structures of natural and designed objects are related to their function(s).
<p><i>Connections to other DCIs in second grade: N/A</i></p> <p><i>Articulation of DCIs across grade-levels:</i> K.ETS1.A ; 5.LS2.A</p> <p><i>Common Core State Standards Connections:</i></p> <p><i>ELA/Literacy —</i> SL.2.5 Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings. (2-LS2-2)</p> <p><i>Mathematics —</i> MP.4 Model with mathematics. (2-LS2-2) 2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. (2-LS2-2)</p>		

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The section entitled “Disciplinary Core Ideas” is reproduced verbatim from *A Framework for K-12 Science Education: Practices, Cross-Cutting Concepts, and Core Ideas*. Integrated and reprinted with permission from the National Academy of Sciences.

Students who demonstrate understanding can:

3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. [Clarification Statement: Changes organisms go through during their life form a pattern.] [Assessment Boundary: Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.]

The performance expectation above was developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Developing and Using Models Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.</p> <ul style="list-style-type: none"> Develop models to describe phenomena. <p>-----</p> <p style="text-align: center;"><i>Connections to Nature of Science</i></p> <p>Scientific Knowledge is Based on Empirical Evidence</p> <ul style="list-style-type: none"> Science findings are based on recognizing patterns. 	<p>LS1.B: Growth and Development of Organisms</p> <ul style="list-style-type: none"> Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles. 	<p>Patterns</p> <ul style="list-style-type: none"> Patterns of change can be used to make predictions.
<p><i>Connections to other DCIs in third grade: N/A</i></p> <p><i>Articulation of DCIs across grade-levels:</i> MS.LS1.B</p> <p><i>Common Core State Standards Connections:</i></p> <p><i>ELA/Literacy —</i> RI.3.7 Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur). (3-LS1-1) SL.3.5 Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details. (3-LS1-1)</p> <p><i>Mathematics —</i> MP.4 Model with mathematics. (3-LS1-1) 3.NBT Number and Operations in Base Ten (3-LS1-1) 3.NF Number and Operations—Fractions (3-LS1-1)</p>		

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- [SL.1.1a](#) - Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).
- [SL.1.3](#) - Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.
- [SL.1.2](#) - Ask and answer questions about key details in a text read aloud or information presented orally or through other media.
- [SL.2.3](#) - Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.
- [SL.3.1c](#) - Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.
- [SL.3.2](#) - Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
- [SL.3.3](#) - Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

Dear CCSD Educator:

You have one or more classes that have already attended or scheduled for field trip at Gilcrease Orchard. Gilcrease Orchard offers bus reimbursement for CCSD yellow school buses up to \$500 each bus. We will not reimburse for private/charter buses. If your school would like to take advantage of our CCSD yellow school bus reimbursement grant, please fill out and return it by Nov 31st including a copy of the CCSD school bus invoice.



If you have any questions call/text Gilcrease Orchard Office Manager Moneb at (702) 409-0655 or email Moneb@thegilcreaseorchard.org

Gilcrease Orchard Field Trip Bus Grant Form

Name of School:
Address:
Phone Number:
Principal's Name:
Grade Level / Number of Students:
Date of Field Trip:
Cost of Bus(es):
Signature of Principal:
Date:
Is the Bus Invoice/Bus Receipt Included? Note: We will not reimburse for private/charter buses.

To submit email a signed copy of this form & bus invoice by
Nov 31st 2023 to Moneb@thegilcreaseorchard.org

Please allow 2-4 weeks for processing. Thank you!

