

VIRTUAL FIELD TRIPS



For over 30 years, Pathfinder Ranch has been proud to offer the regions' schools high quality and affordable outdoor education programming. Now, teachers can bring that Pathfinder experience into their virtual classrooms with our new Virtual Field Trips. Each trip includes a 90-minute live, interactive video call paired with experiential activities for students to complete at home as they engage and follow along.

Pricing:

Virtual Field Trip Options		Cost (for up to 30 students) per trip	Additional cost per extra student (up to 40 maximum)
Tier 1	Lorax Townhall Animal Ecology	\$475	\$5
Tier 2	Freshwater Farm & Garden	\$515	\$5
Tier 3	Astronomy Mad Science Fair Birds & Nature	\$565	\$5

*Receive a \$25 discount when you schedule 2 trips or a \$50 discount when you schedule 3 trips. Self-print & no-ship discounts also available. Please ask for more information.

Each 90 minute Virtual Field Trip includes:

- Facilitation from 1-2 Pathfinder Ranch naturalist instructors
- Activity materials and handouts in pre-sorted, ready to distribute student packages shipped to your school
- Recommendations for optional pre- and post-trip extensions
- Personalized content and student accommodations, based on *your* students' needs

We're now scheduling for Fall 2021!

Call (951)659-2455, x.12 or email

sarah@pathfinderranch.com to make a reservation.

Virtual Field Trip Options

Virtual Field Trip options are divided into three groups based on cost. Prices are for each individual option. Package options are listed on page 1 and described in more detail on page 7. Detailed descriptions of each option follow on pages 3-6.

Group 1 | starting at \$475

Lorax Townhall - Following a theatrical retelling of *The Lorax*, students break into special interest groups to discuss and debate who should become the steward of the last truffula tree seed of them all.

Animal Ecology - Students receive virtual introductions to the animals in our Nature Center, including Gwar the Ball Python, Sheldon the Box Turtle, and Terwilliger the Chinchilla, and have the opportunity to vote on snacks to give the animals, ask questions, and explore adaptations through creative activities.

Group 2 | starting at \$515

Freshwater - After reviewing and modeling the hydrological cycle with a game, students identify why clean water is so important and put their engineering design skills to work as they build a water filtration system.

Farm & Garden - Students explore what plants and animals need to survive, how energy flows through systems, and the factors that can affect an organism's growth as they plant seeds, play games, view our farm and garden, and craft with alpaca fiber.

Group 3 | starting at \$565

Astronomy - Students will glide through the stars as they learn about our solar system, model seasonal changes in visible constellations, and figure out why the visible stars in the night sky change throughout the year.

Mad Science Fair - After reviewing how scientists engage in inquiry and investigation, students conduct a set of experiments to draw conclusions about the properties of matter and chemical reactions.

Birds & Nature - Nature is everywhere, and students will explore the nature in and around their own homes as they observe bird calls, learn how to decode the mysteries of bird language, and dissect a real owl pellet to learn about adaptations, interconnectedness, and the ways people are a part of nature, too.

Virtual Field Trip Detailed Descriptions

Lorax Townhall

In this experiential virtual field trip, students will explore civic responsibility, complexity of environmental issues, and the principles of debate. Following a theatrical retelling of *The Lorax*, students break into special interest groups to discuss and debate who should become the steward of the last truffula tree seed.

CA state science standards addressed:

- 5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.
- MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

Materials provided:

- Mind maps and graphic organizers for townhall meeting

Session highlights:

- Select students assist in a theatrical retelling of Dr. Seuss' *The Lorax*
- Work in small groups to develop arguments, rebuttals, and questions as a part of an environmentally-focused debate

Animal Ecology

In this experiential virtual field trip, students will get up close and personal with the animals of our Nature Center, including Gwar the Ball Python, Sheldon the Box Turtle, and Terwilliger the Chinchilla. Following introductions to each animal and their species characteristics, students will have opportunities to vote on snacks for select animals, ask questions, and explore grade-specific science concepts.

CA state science standards addressed:

- 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.
- 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.
- MS-LS1-8. Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.

Materials provided:

- Graphic organizers for exploring grade-specific science concepts

Session highlights:

- Virtual interactions with at least 3 different animals.

Freshwater

In this hands-on virtual field trip, students will become water experts as they explore Lied Lake from a distance -- solidifying their understanding of the hydrologic cycle, engineering a solution to dirty water, and learning along the way about why clean water is so important to humans and the environment.

CA state science standards addressed:

- 5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.
- 3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- 3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
- 3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.
- MS-ESS2-4. Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.
- MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.
- MS-ETS1-2. Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.

Materials provided:

- Water cycle game card
- Materials for building a simple water filtration system
- Non-toxic water contaminants

Session highlights:

- Design, build, test, and perfect a simple water filtration system.

Farm & Garden

In this hands-on virtual field trip, students explore what plants and animals need to survive, how energy flows through systems, and the factors that can affect an organism's growth as they plant seeds, play games, view our farm and garden, and craft with alpaca fiber.

CA state science standards addressed:

- 5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.

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- 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.
- MS-LS1-5. Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

Materials provided:

- Alpaca fiber
- Energy flow game cards
- Seeds and planting materials

Session highlights:

- Set up a seed growth experiment.
- Create felted alpaca dryer balls while "meeting" animals on the farm.

Astronomy

In this hands-on, virtual field trip, students will glide through the stars as they learn about our solar system, model seasonal changes in visible constellations, and figure out why the visible stars in the night sky change throughout the year.

CA state science standards addressed:

- 5-ESS1-1. Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth.
- 5-ESS1-2. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.
- MS-ESS1-1. Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.
- MS-ESS1-2. Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.
- MS-ESS1-3. Analyze and interpret data to determine scale properties of objects in the solar system.

Materials provided:

- Materials for constructing solar system and night sky models

Session highlights:

- Construct a variety of models for understanding the cyclical changes of the night sky.
- Take a virtual tour of the solar system.

Mad Science Fair

In this hands-on virtual field trip, students will begin by reviewing how scientists engage in inquiry and investigation; then, students conduct a set of experiments to draw conclusions about the properties of matter and chemical reactions.

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CA state science standards addressed:

- 5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen.
- 5-PS1-2. Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.
- 5-PS1-3. Make observations and measurements to identify materials based on their properties.
- 5-PS1-4. Conduct an investigation to determine whether the mixing of two or more substances results in new substances.

Materials provided:

- Pre-measured packets of sugar, sand, corn starch, and Alka Seltzer tablets
- Cups and measuring spoons for mixing

Session highlights:

- Conduct a series of experiments to determine properties of matter

Birds and Nature

In this hands-on virtual field trip, students will discover that nature is everywhere, as they explore the nature in and around their own homes, observe bird calls, learn how to decode the mysteries of bird language, and dissect a real owl pellet. Topics covered include adaptations, interconnectedness, and the ways people are a part of nature, too.

CA state science standards addressed:

- 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.
- 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.
- MS-LS1-5. Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.
- MS-LS1-8. Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.

Materials provided:

- Owl pellets (1 per student) and dissection materials
- Bone identification guide

Session highlights:

- Get to know your nearby nature and learn to interpret bird language
- Dissect an owl pellet

Packages and Discounts

Not sure which field trip to choose? Trying to stretch your dollars as far as possible? Consider putting together a package of two, three, or more options!

Discounts are also available for groups that would like to print their own materials and/or pick up material boxes instead of having them shipped. To customize a package for you and your students, please contact us for assistance.

Self-print & No-ship discounts

- Self-print discounts are only available for field trips that include printed materials (Lorax Townhall, Animal Ecology, Astronomy, and Birds & Nature). To qualify for this discount, the group leader *must* agree to print and distribute materials to students for their virtual field trip. Discount amounts vary depending on virtual field trip option and total number of students.
- No-ship discounts are available for all field trips. To qualify for this discount, the group leader *must* agree to pick-up materials from Pathfinder Ranch (located at 35510 Pathfinder Road in Mountain Center, CA) on a mutually agreed upon date in advance of the scheduled virtual field trips. Discount amounts vary depending on the virtual field trip and package options selected.
- For more information about self-print and no-ship discounts, please contact us to customize a virtual field trip package.