

2018 Colorado 4-H State Conference Workshop Descriptions

Workshop Options: (check all that apply) – 1 \$10 fee applied for unlimited workshops

Tuesday 1-230PM

| Track | Civic & Leadership | Explore CSU | Explore CSU | STEM | Explore CSU | FCS |
|-----------------------|---|---|--|--|---|---|
| Workshop Title | Will you help me with this Application? | College of Engineering | Little Shop of Physics | Python: it's not a snake, it's a language | Stadium Tours | From Ewe to you |
| Description | This is a question any scholarship committee, employer, or record book judge would love you to ask. Come discover how your record book story (all the records for that matter) is directly related to your future endeavors. You will also walk away with confidence and new skills used for scholarship, school, and job applications. | Explore Engineering – Come learn about the different engineering majors that Colorado State University has to offer and the types of careers graduates go into. After a brief presentation, then be challenged in an engineering open-design challenge. | <p>The Little Shop of Physics seeks to: Find creative ways to share the wonder of science with people of all ages, backgrounds and interests.</p> <p>Present a unique hands-on science experience to a diverse range of K-12 students. Involve undergraduates in significant and meaningful service.</p> <p>Share ideas and insights with current and future teachers. The Little Shop of Physics has always been a hands-on program, something that sets it apart from other science outreach programs. Students are the scientists in the Little Shop of Physics. But we don't just teach science, we teach that science is something anyone can do, that it is field that is interesting and accessible to anyone. We believe—and we demonstrate—that any one, of any age, can understand science at some level. Our expertise in developing such lessons allows us to provide teachers of any grade level tools that they can use to incorporate science into their curriculum inexpensively and effectively. Currently, we share these ideas in workshops with over 300 teachers each year.</p> | You will learn basic Python programming. It is expected that you know how to operate a computer, but no programming knowledge is required. We will be learning: basic syntax, useful commands, and control of the language. At the end we will be doing a fun competition to test our new Python knowledge. You will learn some basics but will be able to read and understand the purpose of more complex structures. You will walk away knowing how to read Python and have a solid foundation for programming classes in the future while having fun. | It's an in depth tour of the brand new Sonny Lubick Field at CSU Stadium. The tour covers about a mile of ground, making stops at the Smith Alumni Center, the New Belgium Porch, the Indoor Club level, the Stadium Club level, the Markley Family Hall of Champions, and the offices for CSU Football operations. The tour will cover information such as an overview of the construction process, the different student and alumni resources located in the stadium, football operations, and of course, all of the CSU pride showcased in the building. | Learn about wool and other fibers, perform experiments, and create fiber art. You will get to felt and dye wool, practice wool judging and fiber idea, and explore the sheep industry and more! |

Tuesday 3-430PM

| Track | Civic & Leadership | Civic & Leadership | STEM | FCS | Explore CSU |
|-----------------------|---|--|---|--|--|
| Workshop Title | Setting S.M.A.R.T. Goals | Will you help me with this Application? | Electrostatics | Textile Tech | College of Engineering |
| Description | <p>Goal Setting is something that every 4-Her should be familiar with. At this year's 2018 Senior Leadership Retreat, participants participate in this workshop by the 2017-2018 State 4-H Officer Team about setting S.M.A.R.T Goals and how they can achieve those goals.</p> | <p>This is a question any scholarship committee, employer, or record book judge would love you to ask. Come discover how your record book story (all the records for that matter) is directly related to your future endeavors. You will also walk away with confidence and new skills used for scholarship, school, and job applications.</p> | <p>In this electrifying Workshop we will spark your interest in physics. Electrostatics is the study of stationary electric charges or fields. Unlike electric currents, you can have a lot of fun with static electricity. Have you ever been shocked as you grabbed a door handle after walking on carpet? Have your socks ever stuck to your shirt when you pulled them out of the dryer? Have you ever wondered why these things happen? In this workshop, you will learn about and experiment with static electricity. Not to mention build your very own static electric generator. Sign up and learn about charges, explore multiple ways to build generators and do some shocking tricks.</p> | <p>Practice your design skills at Textile Tech. Learn about design elements and principles, web-based design programs, and responsible media usage as you gain the skills to create a one-of-a-kind fabric print. Bring your phone to take pictures for your design!</p> | <p>Explore Engineering – Come learn about the different engineering majors that Colorado State University has to offer and the types of careers graduates go into. After a brief presentation, then be challenged in an engineering open-design challenge.</p> |

Wednesday 830-10AM

| Track | Civic & Leadership | STEM | STEM | Explore CSU | Explore CSU | Explore CSU | STEM |
|-----------------------|--|-------------------------|--|---|--|---|---|
| Workshop Title | Setting S.M.A.R.T Goals | What's Your H Woodcraft | Paper Roller Coasters (Part 1 of 2 workshops) | College of Engineering | Tour the Gregory Allicar Museum of ART | Entomology Museum | Spa Chemistry |
| Description | Goal Setting is something that every 4-Her should be familiar with. At this year's 2018 Senior Leadership Retreat, participants participate in this workshop by the 2017-2018 State 4-H Officer Team about setting S.M.A.R.T Goals and how they can achieve those goals. | More details to come... | Learn the engineering design process as you build your own paper roller coaster. Compete against other groups to build a roller coaster that is exciting, reliable and cost effective. | Explore Engineering – Come learn about the different engineering majors that Colorado State University has to offer and the types of careers graduates go into. After a brief presentation, then be challenged in an engineering open-design challenge. | The Gregory Allicar Museum of Art invites individuals to engage with art and each other to inspire fresh perspectives and wonder. The museum is a catalyst for visual literacy and critical thinking that instills a passion for learning. www.artmuseum.colostate.edu | The vast majority of Earth's different kinds of living organisms are insects and their relatives, the arthropods, especially insects. Generally, humans do not like living with most of these little creatures, but actually cannot live without them. These often tiny organisms keep the green plants going, are the ultimate garbage disposals, and serve as food for at least 40% of all other animals. Yet, these same insects and arthropods can cause more misery and harm to humans than anything else including wars, famines, and natural disasters. Participants should come prepared to "look, listen and touch" living insects such as hissing cockroaches and other living arthropods such crabs, tarantulas, and giant millipedes. Additionally, participants will be introduced to the array of careers in entomology and the degrees programs in entomology and related fields available at Colorado State University. | Have you ever wondered how they make soap or lip balms? Do you have a favorite flower or spice that you like the smell of? In this class you will learn how to make a lip balm and soap. We will be using curriculum developed by Utah State University Extension to learn what ingredients go into lip balm and soap. You will be taking home your own lip balm and soap from class. |

Wednesday 1030 – 12PM

| Track | Civic & Leadership | STEM | STEM | Healthy Living | Ag/An Sci | Explore CSU |
|-----------------------|---|-------------------------|--|--|------------------------------|---|
| Workshop Title | Experience The world in 4-H | What's Your H Woodcraft | Paper Roller coasters (Part 2 of 2 workshops) | My "H" is Health | Science of Sausage Making | Horticulture |
| Description | You will learn about other countries through the eyes and presentations of inbound exchange students from Austria, England, France, Germany, N. Ireland, Scotland, and Wales. They will share the similarities and differences of their youth programs as compared to 4-H in the United States. | More details to come... | Learn the engineering design process as you build your own paper roller coaster. Compete against other groups to build a roller coaster that is exciting, reliable and cost effective. | Learn to create a healthy living plan for your 4-H club, community, Country and our world. To promote healthy living in these areas, one must first develop a self-care strategy. In this workshop, participants will explore strategies in healthy eating, exercise and mindfulness habits for success. The workshop will also look at how to engage in creating healthy environments. You will learn techniques on how to reduce your carbon footprint and help develop 4-H club and community events that limit the amount of waste they produce. Please join in this interactive workshop that is bound to make the best better. | More detail coming soon..... | Learn-By-Doing Planting activity (participants will take their project home) More info on activity to follow. An informative tour of the Horticulture facility will cover Horticulture as a profession and career choice. The facility is state-of-the-art and is conducting cutting-edge practices in controlled plant production. |

Wednesday 130 – 3 PM

| Track | Explore CSU | Explore CSU | STEM | STEM | Explore CSU | Explore CSU |
|-----------------------|---|---|---|--|--|---|
| Workshop Title | Solar Cars STEM | Stadium Tours | Let There Be Light | Python: it's not a snake, it's a language | Little Shop of Physics | Entomology Museum |
| Description | Using raw materials such as gears, propellers, motors, solar cells, wood, and plastic, teams learn about engineering design principles and iterative prototyping as they design a car that 1) moves, 2) goes straight, 3) goes fast, 4) can climb a hill. | It's an in depth tour of the brand new Sonny Lubick Field at CSU Stadium. The tour covers about a mile of ground, making stops at the Smith Alumni Center, the New Belgium Porch, the Indoor Club level, the Stadium Club level, the Markley Family Hall of Champions, and the offices for CSU Football operations. The tour will cover information such as an overview of the construction process, the different student and alumni resources located in the stadium, football operations, and of course, all of the CSU pride showcased in the building. | With more than 1,000 patents, Thomas Edison is known as America's greatest inventor. Come tap into your inner inventor and create a Mason Jar Edison Lamp. You will learn basic electricity components as you apply the engineering design process. Illuminate your life. | You will learn basic Python programming. It is expected that you know how to operate a computer, but no programming knowledge is required. We will be learning: basic syntax, useful commands, and control of the language. At the end we will be doing a fun competition to test our new Python knowledge. You will learn some basics but will be able to read and understand the purpose of more complex structures. You will walk away knowing how to read Python and have a solid foundation for programming classes in the future while having fun. | The Little Shop of Physics seeks to: Find creative ways to share the wonder of science with people of all ages, backgrounds and interests. Present a unique hands-on science experience to a diverse range of K-12 students. Involve undergraduates in significant and meaningful service. Share ideas and insights with current and future teachers. The Little Shop of Physics has always been a hands-on program, something that sets it apart from other science outreach programs. Students are the scientists in the Little Shop of Physics. But we don't just teach science, we teach that science is something anyone can do, that it is field that is interesting and accessible to anyone. We believe—and we demonstrate—that any one, of any age, can understand science at some level. Our expertise in developing such lessons allows us to provide teachers of any grade level tools that they can use to incorporate science into their curriculum inexpensively and effectively. Currently, we share these ideas in workshops with over 300 teachers each year. | The vast majority of Earth's different kinds of living organisms are insects and their relatives, the arthropods, especially insects. Generally, humans do not like living with most of these little creatures, but actually cannot live without them. These often tiny organisms keep the green plants going, are the ultimate garbage disposals, and serve as food for at least 40% of all other animals. Yet, these same insects and arthropods can cause more misery and harm to humans than anything else including wars, famines, and natural disasters. Participants should come prepared to "look, listen and touch" living insects such as hissing cockroaches and other living arthropods such crabs, tarantulas, and giant millipedes. Additionally, participants will be introduced to the array of careers in entomology and the degrees programs in entomology and related fields available at Colorado State University. |

Thursday 9-1030AM

| Track | Civic & Leadership | Explore CSU | Healthy Living | Ag/An Sci | FCS | Explore CSU | Ag/An Sci |
|-----------------------|---|---|---|--|-----------------|--------------|---|
| Workshop Title | Experience the world with 4-H | Fisheries and Wildlife Management as a career | Bleed green and Eat your Greens | Livestock Judging Reasons | From Ewe to you | Horticulture | My hip bone is connected to what? |
| Description | You will learn about other countries through the eyes and presentations of inbound exchange students from Austria, England, France, Germany, N. Ireland, Scotland, and Wales. They will share the similarities and differences of their youth programs as compared to 4-H in the United States. | Join Colorado Fisheries and Wildlife managers and learn how the Colorado Department of Wildlife manages our wildlife populations as a career. Activities will include various trapping and biological data collection techniques used in the field for large and small wildlife species. Also learn how CSU's Fisheries and Wildlife Program can prepare you for a career as a manager of Colorado's natural resources. | This is not hard to do especially when the "greens" are grown and harvested in your backyard (or from the Horticulture-Greenhouse tour.) Come discover several ways to make lettuce and veggies delicious and fun! You get to sample of course. | CSU Livestock Judging Team coaches will work with judging contest participants and coaches to improve their reasons giving skills. Participants should bring their reasons notes from the contest. | | | Have you ever struggled with learning the anatomy of your animal projects? Were you ever asked in showmanship, what bone is connected to the hip bone? Me neither, but wouldn't you like to engage in a fun interactive session that will help you learn the anatomy of the species you are interested in and prepare to answer those types of questions? You will participate in a hands on activity where you will build an animal and prepare to address those tough questions in the show ring. |

Thursday 11-1230PM

| Track | Civic & Leadership | Ag/An Sci | STEM | Explore CSU | STEM | Healthy Living | STEM | Ag/An Sci | STEM | Ag/An Sci |
|-----------------------|--|------------------------------|----------------|--|--|---|--|-----------------------------------|--|--|
| Workshop Title | Growing Minds Changing Lives Everyday | Science of Sausage Making | Electrostatics | Fisheries and Wildlife Management as a career | Take the Engineering Challenge (Part 1 of 2 workshops) | My "H" is Health | Gizmos and Gadgets | Equine Form & Function | Spa Chemistry | Horse Judging Reasons |
| Description | <p>4-H members already have the skills that they need to positively impact the lives of others around them. However, for there to be a significant impact, 4-H members must first take action, and apply their knowledge in a manner that will be well received. Join the Colorado State Officer Team though hands on activities to learn how to make an impact on those around you.</p> | More detail coming soon..... | | <p>Join Colorado Fisheries and Wildlife managers and learn how the Colorado Department of Wildlife manages our wildlife populations as a career. Activities will include various trapping and biological data collection techniques used in the field for large and small wildlife species. Also learn how CSU's Fisheries and Wildlife Program can prepare you for a career as a manager of Colorado's natural resources.</p> | <p>Is your idea of fun making something simple super complicated? Do you love designing cool contraptions? Is your idea of elegance the ultimate Rube Goldberg* machine? How adept are you at taking simple tasks and making them crazy complex? If you love solving problems, using interesting materials beyond their original purpose, designing unexpected solutions and putting physical science ideas to work, you will love this Rube Goldberg Design Challenge. In this two part workshop you will have 3 hours to build your contraption and compete in the challenge. There will even be prizes! And you will help us experiment as we look for ways to create a state challenge. (* Rube Goldberg machines use a long series of energy transfer steps to accomplish a simple task!)</p> | <p>Learn to create a healthy living plan for your 4-H club, community, Country and our world. To promote healthy living in these areas, one must first develop a self-care strategy. In this workshop, participants will explore strategies in healthy eating, exercise and mindfulness habits for success. The workshop will also look at how to engage in creating healthy environments. You will learn techniques on how to reduce your carbon footprint and help develop 4-H club and community events that limit the amount of waste they produce. Please join in this interactive workshop that is bound to make the best better.</p> | <p>Do you like figuring out how things work? Do you like inventing your own creations using technology? Join us for this fun workshop filled with hands-on inventing, problem solving, and creativity. Create app-enabled games, pranks, and crazy contraptions. We will be using the little Bits Gizmos and Gadgets kit to come up with our tech creations. Check it out! http://bit.ly/4h_gizmo</p> | <p>More detail coming soon...</p> | <p>Have you ever wondered how they make soap or lip balms? Do you have a favorite flower or spice that you like the smell of? In this class you will learn how to make a lip balm and soap. We will be using curriculum developed by Utah State University Extension to learn what ingredients go into lip balm and soap. You will be taking home your own lip balm and soap from class.</p> | <p>This workshop will be for contestants in the Horse judging contest and their coaches to help them improve on their reasons skills. The CSU Horse Judging team coaches will be working with the kids. Participants will need to bring their reasons note from the contest to this session.</p> |

Thursday 2-330PM

| Track | Civic & Leadership | Explore CSU | STEM | Healthy Living | STEM | FCS | Ag/An Sci |
|-----------------------|---|--|---|---|--|---|---|
| Workshop Title | Identify your character, but why limit yourself | Tour the Gregory Allicar Museum of ART | Let there be light | Bleed green and Eat your Greens | Take the Engineering Challenge (Part 2 of 2 workshop) | Textile Tech | My hip bone is connected to what? |
| Description | You will identify what your character is. First you must know and understand yourself, but why be limited by your skills, when you can build a team of talent? This session will help you learn about yourself, understand other personality traits and how best to work together to build effective teams. This session will have a lot of hands on learning as an individual and with groups. Come learn how to turn your limitations into puzzle pieces that once placed into position you can create a masterpiece! | | With more than 1,000 patents, Thomas Edison is known as America's greatest inventor. Come tap into your inner inventor and create a Mason Jar Edison Lamp. You will learn basic electricity components as you apply the engineering design process. Illuminate your life. | This is not hard to do especially when the "greens" are grown and harvested in your backyard (or from the Horticulture-Greenhouse tour.) Come discover several ways to make lettuce and veggies delicious and fun! You get to sample of course. | Is your idea of fun making something simple super complicated? Do you love designing cool contraptions? Is your idea of elegance the ultimate Rube Goldberg* machine? How adept are you at taking simple tasks and making them crazy complex? If you love solving problems, using interesting materials beyond their original purpose, designing unexpected solutions and putting physical science ideas to work, you will love this Rube Goldberg Design Challenge. In this two part workshop you will have 3 hours to build your contraption and compete in the challenge. There will even be prizes! And you will help us experiment as we look for ways to create a state challenge. (* Rube Goldberg machines use a long series of energy transfer steps to accomplish a simple task!) | Practice your design skills at Textile Tech. Learn about design elements and principles, web-based design programs, and responsible media usage as you gain the skills to create a one-of-a-kind fabric print. Bring your phone to take pictures for your design! | Have you ever struggled with learning the anatomy of your animal projects? Were you ever asked in showmanship, what bone is connected to the hip bone? Me neither, but wouldn't you like to engage in a fun interactive session that will help you learn the anatomy of the species you are interested in and prepare to answer those types of questions? You will participate in a hands on activity where you will build an animal and prepare to address those tough questions in the show ring. |