

# **STEM ADVENTURE WEEKEND Guidebook**

Lost Pines Scout Reservation  
Capitol Area Council  
September 19-21, 2025



Science, Technology, Engineering & Math  
merit badges and STEM awards  
for Scouts BSA and older youth program  
participants

Version 1.1 (8/05/2025)

# Version History

Version 1 – August 1, 2025

- Original document.

Version 1.1 – August 5, 2025

- Added Plumbing merit badge (pages 8, 11)
- Added Archery, Rifle Shooting, and Shotgun Shooting (related changes on pages 6, 7, 8, 11, 16, 23, 26, and Appendix D)
  - Badge completion requires qualification on the range.
  - All range & target participants MUST attend the safety briefing Friday evening at 8:45 PM following the camp welcome.
  - Scouts MUST sign up for both parts of the merit badge. Part 1 is on Saturday AM or PM and part 2 is on Sunday AM. Any Scout who qualifies and completes the badge on Saturday may report to Lindsay Lodge administration to choose a different available class for Sunday.
  - Rifle and Shotgun participants MUST complete the pre-course requirements in Appendix D and turn them in by 8:00 PM at check-in on Friday. Any scout without paperwork turned in and accepted as complete by the merit badge instructors will be reassigned to a different class. Any scout who checks in after 8:30 PM on Friday will be too late for the range & target sports briefing and should therefore choose other classes or will be reassigned upon check-in.

# WELCOME TO STEM ADVENTURE WEEKEND 2025!

## About

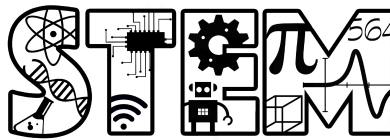
The purpose of this weekend is to provide Scouts opportunities to explore scouting in a STEM-focused camp environment. This is still a camp and fulfills the “outing” part of Scouting. To all our youth participants and adult volunteers, plan to have fun and work hard!

During STEM Adventure Weekend we will:

- Foster enthusiasm in STEM through classes and activities
- Follow Scouting methods, skills, procedures, and values
- Demonstrate youth-led program segments
- Introduce people to a wider variety of Scouting topics
- Provide Scouts and Scouters an opportunity to engage with each other
- Deliver a fun camping experience

STEM Adventure Weekend is hosted by the volunteer STEM Committee of the Capitol Area Council. This event is for Scouts BSA and older youth program participants (Venturers, Sea Scouts, and Explorers).

For younger scouts and their families, our Cub-friendly STEM campout is STEMboree, March 2025 at the council’s Smilin V Scout Ranch in Liberty Hill.



*STEM is part of an initiative that Scouting America has taken on to encourage the natural curiosity of youth members and their sense of wonder about these fields through existing programs. The Capitol Area Council STEM committee echoes those sentiments and has developed STEM Adventure Weekend and other activities and programs to inspire youth to continue delving deeper into STEM topics.*

## Capitol Area Council Primary Staff Contact

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Capitol Area Council STEM Webpage:

<https://www.capitolareascouting.org/activities/stem/>

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## Weekend Overview

Campers spend Friday evening through Sunday noon at the Lost Pines Scout Reservation. See Appendix A for the Lost Pines camp map and Appendix B for directions to camp. Four meals are provided (breakfast, lunch, and dinner on Saturday and breakfast on Sunday). Scouts have the opportunity to take 3 class periods of STEM and participate in other STEM activities. Volunteer instructors are registered merit badge counselors and professionals or serious hobbyists in the fields they are teaching. Classes are on Saturday morning & afternoon and Sunday morning. For the class list, see the next section. Saturday evening activities include a variety of fun STEM events, a movie, and a Star Party. The schedule may change due to weather or other needs and updates will be provided at the event.

### Camp Schedule

	Friday, September 19	
6:00-10:00 PM	Check-in Open	Lindsay Lodge
8:30 PM	Welcome & Orientation	Dining Hall
8:45 PM	Movie & Snacks	Dining Hall
8:45 PM	Range & Target Sports safety briefing	A-building porch
10:30 PM	Lights Out & Quiet Time	
	Saturday, September 20	
6:30 - 8:00 AM	Check-in Open	Lindsay Lodge
7:00 AM	Breakfast	Dining Hall
7:45 AM	Flags	Parade Ground
8:00 - 11:45 AM	Morning Class Session	
12:00 PM	Lunch	Dining Hall
1:00 - 4:45 PM	Afternoon Class Session	
5:00 PM	Dinner	Dining Hall
5:45 – 10:30 PM	Evening Events: STEM in Action	
6:30 PM	Egg drop contest	DOK's Tower
6:30-9:00 PM	Open Climbing & Rappelling	DOK's Tower
6:30-9:00 PM	Flight simulator, Radio around the World, games, branding & more!	Log Cabin area
8:00-10:30 PM	Star Party	Shotgun range
10:30 PM	Lights Out & Quiet Time	
	Sunday, September 21	
7:00 AM	Breakfast	Dining Hall
7:45 AM	Flags & Scout's Own Service	Parade Ground
8:00 -11:45 AM	Morning Class Session	
12:00 PM	Clean up, Check Out, Depart	Lindsay Lodge

## Classes

Table 1: Alphabetical list of class options by instruction period

Saturday Morning	Saturday Afternoon	Sunday Morning
Archery Part 1	Archery Part 1	Archery Part 2
-	Astronomy (+evening)	-
-	Automotive Maintenance	Automotive Maintenance
-	-	Aviation
Chemistry	-	-
Chess	Chess	Chess
Composite Materials	Composite Materials	-
-	COSMIC Biochemistry	COSMIC Biochemistry
COSMIC Computer Hardware	COSMIC Computer Hardware	
COSMIC Mycology	COSMIC Mycology	COSMIC Mycology
-	COSMIC Radio Technologies	COSMIC Radio Technologies
-	-	Drafting
Electronics	Electronics	-
Farm Mechanics	-	-
-	-	Game Design
Golf (disc)	Golf (disc)	Golf (disc)
Model Design & Building	Model Design & Building	-
Orienteering Part 1 of 2	Orienteering Part 2 of 2	-
Personal Management (13+)	Personal Management (13+)	-
Photography	Photography	Photography
Plumbing	Plumbing	-
Radio	-	-
Rifle Shooting Part 1	Rifle Shooting Part 1	Rifle Shooting Part 2
Shotgun Shooting Part 1 (13+)	Shotgun Shooting Part 1 (13+)	Shotgun Shooting Part 2 (13+)
Signs, Signals, Codes	-	-
-	Space Exploration Part 1 of 2	Space Exploration Part 2 of 2
-	-	Veterinary Medicine
Welding	Welding	Welding

- Youth select one class from each of the three periods: Saturday Morning, Saturday Afternoon, and Sunday Morning.

- Scouts have the opportunity to complete most class requirements at STEM Adventure Weekend. Any requirements not completed at camp are noted in Table 2 and may be considered prerequisites or homework.
- To sign up, scouts MUST NOT have completed most of the badge elsewhere. STEM Adventure Weekend is designed as a comprehensive class to give scouts an opportunity to cover all or most of the badge and is not to be used to repeat or complete a badge. A Scout is Trustworthy. Please do not take away this opportunity from another scout.
- Scouts must sign up for both parts of 2-part classes.
- In Table 2 below, "May be completed at camp" means that Scouts have the *opportunity* to complete the merit badge during the weekend if they are able to complete the requirements as written through show/demonstrate/explain/discuss/etc per the guide to advancement.
- Single class means that the material will be presented during one 3.75-hour period. Double class means that the material will be presented over two periods spanning 7.5 hours. Scouts must sign up for both parts of a double class.
- Classes that do not cover all material *may* be marked as complete if the scout completes those requirements ahead of camp and then discusses their completion with their counselor. Most merit badge counselors will work with scouts after camp too.
- Shooting proficiency (qualification) for Archery, Rifle Shooting, and Shotgun Shooting is a requirement to complete the badge. The two-part classes provide extra time on the ranges on Sunday for scouts to attempt to qualify before leaving camp. Any Scouts who qualify and complete the badge on Saturday may report to Lindsay Lodge to choose a different class as available for Sunday.
- COSMIC Award prerequisites are designed to be completed before taking the COSMIC class. Contact staff with any questions.
- For help with completing requirements before or after camp, scouts may ask their counselor; many STEM Adventure Weekend counselors have agreed to work with scouts outside of camp.



Table 2: Class requirements and details

<p><b>Archery</b>  Double class - scouts must sign up for both parts  Requirements: May be completed at camp.  Notes: Badge completion requires qualification on the range. All range &amp; target participants MUST attend the safety briefing Friday evening at 8:45 PM following the camp welcome. Scouts MUST sign up for both parts of the merit badge. Part 1 is on Saturday AM or PM and part 2 is on Sunday AM. Any Scouts who qualify and complete the badge on Saturday may report to Lindsay Lodge to choose a different class as available for Sunday.</p>
<p><b>Astronomy</b>  Single class plus evening star party  Requirements covered (weather permitting): 1, 2, 3, 4, 5, 6a, 7, 8, 9  Requirements not covered: 6b (sketch 4 nights)</p>
<p><b>Automotive Maintenance</b>  Single class  Requirements: May be completed at camp.</p>
<p><b>Aviation</b>  Single class.  Requirements covered: 1, 2, 3  Requirements not covered: 4 (visit), 5e (research)</p>
<p><b>Chemistry</b>  Single class  Requirements: May be completed at camp</p>
<p><b>Chess</b>  Single class plus tournament  Requirements: May be completed at camp  Note: If the tournament (requirement 6) is not completed in class, it may be completed during the STEM in Action activities on Saturday night.</p>
<p><b>Composite Materials</b>  Single class  Requirements: May be completed at camp.</p>
<p><b>COSMIC Biochemistry</b>  Single class  Requirement 1/prerequisite: Chemistry merit badge  Requirements: May be completed at camp  Note: NEW STEM AWARD! See Appendix C for more details.</p>
<p><b>COSMIC Computer Hardware</b>  Single class  Requirement 1/prerequisite: Scout-Parent/Guardian contract for computer use  Requirements: May be completed at camp  Note: NEW STEM AWARD! See Appendix C for more details.</p>

<b>COSMIC Mycology</b> Single class Requirements: May be completed at camp Note: NEW STEM AWARD! See Appendix C for more details.
<b>COSMIC Radio Technologies</b> Single class Requirement 1/prerequisite: Radio merit badge Requirements: May be completed at camp Note: NEW STEM AWARD! See Appendix C for more details.
<b>Drafting</b> Single class Requirements: May be completed at camp.
<b>Electronics</b> Single class Requirements: May be completed at camp.
<b>Farm Mechanics</b> Single class Requirements: May be completed at camp.
<b>Game Design</b> Single class Requirements covered: 1, 2, 3, 4, 5, 6, 7a Requirements not covered: 7b, 7c (blind test your game), 8 (visit a professional)
<b>Golf (disc golf option)</b> Single class Requirements covered: 1, 2A, 2B, 2C, 2D, 2E, 2G Requirements not covered: 2F (play 18 holes - local resources provided)
<b>Model Design and Building</b> Single class Requirements: May be completed at camp.
<b>Orienteering</b> Double class - scouts must sign up for both parts Requirements: May be completed at camp.
<b>Personal Management</b> Single class Requirements covered: 1a, 1b1, 1c, 2a, 2b, 3, 4, 5, 6, 7, 8a, 8b, 9, 10 Requirements not covered: 1b2, 1b3 (discuss with family), 2c, 2d (track for 13 weeks), 8c, 8d (follow one-week schedule) Note: Scouts must be 13 or older to sign up for this class. There is considerable classwork for this badge. It is up to the scout to finish the requirements covered in class or they may contact the instructor outside of class to demonstrate completion.

<p><b>Photography</b></p> <p>Single class</p> <p>Requirements covered: 1a, 2, 3, 4, 5, 6, 7, 8</p> <p>Requirements not covered: 1b (safety video with parent permission)</p> <p>Note: For this class scouts must bring a digital camera &amp; laptop or a phone that includes a camera. There is considerable classwork for this badge. It is up to the scout to finish the requirements covered in class or they may contact the instructor outside of class to demonstrate completion.</p>
<p><b>Plumbing</b></p> <p>Single class</p> <p>Requirements: May be completed at camp.</p>
<p><b>Radio</b></p> <p>Single class</p> <p>Requirements: May be completed at camp.</p>
<p><b>Rifle Shooting</b></p> <p>Double class - scouts must sign up for both parts</p> <p>Requirements: May be completed at camp.</p> <p>Notes: Badge completion requires qualification on the range. Rifle and Shotgun participants MUST complete the prerequisite requirements in Appendix D and turn them in by 8:00 PM at check-in on Friday. Any scout without paperwork turned in and accepted as complete by the merit badge instructors will be reassigned to a different class. All range &amp; target participants MUST attend the safety briefing Friday evening at 8:45 PM following the camp welcome. Scouts MUST sign up for both parts of the merit badge. Part 1 is on Saturday AM or PM and part 2 is on Sunday AM. Any Scout who qualifies and completes the badge on Saturday may report to Lindsay Lodge administration to choose a different available class for Sunday.</p>
<p><b>Shotgun Shooting</b></p> <p>Double class - scouts must sign up for both parts</p> <p>Requirements: May be completed at camp.</p> <p>Notes: Scouts must be 13 or older to sign up for this class.. Badge completion requires qualification on the range. Rifle and Shotgun participants MUST complete the prerequisite requirements in Appendix D and turn them in by 8:00 PM at check-in on Friday. Any scout without paperwork turned in and accepted as complete by the merit badge instructors will be reassigned to a different class. All range &amp; target participants MUST attend the safety briefing Friday evening at 8:45 PM following the camp welcome. Scouts MUST sign up for both parts of the merit badge. Part 1 is on Saturday AM or PM and part 2 is on Sunday AM. Any Scout who qualifies and completes the badge on Saturday may report to Lindsay Lodge administration to choose a different available class for Sunday.</p>
<p><b>Signs, Signals, Codes</b></p> <p>Single class</p> <p>Requirements: May be completed at camp.</p>

<b>Space Exploration</b> Double class - scouts must sign up for both parts Requirements: May be completed at camp. Note: There are two launches required for Requirement 3. Bad weather or a lost rocket could inhibit completion. There is considerable classwork for this badge. It is up to the scout to finish in class or they may contact the instructor outside of class to demonstrate completion.
<b>Veterinary Medicine</b> Single class Requirements: May be completed at camp.
<b>Welding</b> Single class Requirements: May be completed at camp.

### STEM in Action activities Saturday evening

Saturday evening's "STEM in Action" activities give scouts a wide range of real world and hands-on opportunities to enjoy. The program includes:

#### **6:30-9:00 PM: Climbing and Rappelling at the Tower**

Open climb at DOK's tower, the tallest freestanding tower in Texas. Choose your challenge! Maybe knock out a requirement for your Camping merit badge - requirement 9(b)(6).

#### **6:30 PM: Egg drop contest.** Meet at the bleachers near the climbing tower.

Form a team of 4 or more scouts to participate in this engineering design contest. Teams are given limited supplies and time. Who can create a package to safely deliver your egg to the ground after it gets dropped from the top of the climbing tower?

#### **6:30-9:00 PM: STEM activities around the Log Cabin area**

- Flight Simulator - takeoff, fly around, land or crash?
- Radio - chat on the radio around the country and the world!
- COSMIC First Steps - learn about the new STEM award and earn a patch!
- Games - chess tournament, giant Jenga, horseshoes, and others
- Branding - bring a mug, hat, or other item to brand. Multiple options available including the scout symbol (fleur de lis), two "STEM" brands, Lost Pines, and more!

#### **8:00-10:30 PM: Star Party at the Shotgun Range**

[Required for the Astronomy class] Fantastic opportunity to see the stars and other celestial objects under the guidance of amateur astronomers (weather permitting). The Star Party area is a NO FLASHLIGHT zone. Please use red lights

only. If returning to camp from the Star Party after 10:30 PM quiet hours, please continue to use red lights only and please remain silent so as not to disturb others.

### Group Instruction – Setting Expectations in Advance

Some classes have age restrictions, but there is no rank or age limit to attend the weekend event; however, it is imperative that all attendees be attentive and engaged in the interactive environment that is created by the counselors.

Scouts have the *opportunity* to complete nearly all class requirements at STEM Adventure Weekend. Not all badges may be completed at camp, either by design or by the scout's ability to demonstrate proficiency. See Table 2 for details.

### From the Scouting America Merit Badge Group Instruction Guide:

*"For many badges—perhaps even most of them—partial completion is not only acceptable but expected from a merit badge event. ... Simply taking notes, completing a workbook, or listening during a group instruction session does not constitute completing a requirement. To award merit badges in such a manner takes away from the Scout's opportunity for learning and personal growth through exploring the merit badge topic."*

It is essential that the Scouts themselves are capable of performing all requirements as written and without parental assistance.

### From the Scouting America Guide to Advancement:

*"It is acceptable—and sometimes desirable—for merit badges to be taught in group settings. ... We must know that every Scout—actually and personally—completed them. If, for example, a requirement uses words like "show," "demonstrate," or "discuss," then every Scout must do that. It is unacceptable to award badges on the basis of sitting in classrooms watching demonstrations, or remaining silent during discussions."*

### COSMIC Awards

Several COSMIC award classes offered at STEM Adventure Weekend are part of a new Council-approved STEM award program developed by the CAC STEM Committee. The program is ramping up and will soon have additional options, patches, t-shirts and more. Participants completing COSMIC classes will be notified when the award patches are available at the CAC Scout Shop. See Appendix C for a description of the classes offered.

### Nova and Supernova Awards

Starting in 2022, the national Scouting office began sunseting the STEM Nova and Supernova award program and delegating administration to local councils, should they choose to do so. Capitol Area Council is discontinuing support for Nova and Supernova at the end of the year. Any scouts working on Supernova may obtain CAC support through 12/31/2025. The council STEM committee is now focused on support and further development of the Council-approved COSMIC award program.

## Registration

All eligible youth and adult participants may register at this link:

<https://scoutingevent.com/564-94449>

Fees for STEM Adventure Weekend 2025 are:

- Early bird (August 1-17): \$70 youth / \$45 adult
- Regular rate (August 18-September 16): \$85 youth / \$60 adult
- Registration closes at 11:59 PM on Tuesday, September 16

Registration includes your campsite, 3 classes, classroom and supplies, meeting spaces/tables/chairs/restrooms, an event patch, and 3 meals on Saturday and 1 breakfast on Sunday.

Campsites are chosen at check-in on Friday. If your unit is bringing 10 or more people, please contact staff to request a site ahead of time.

Scouts and units from other councils are very welcome to participate in the Capitol Area Council STEM Adventure Weekend! Please reach out to our staff if you have any questions about our council and our events.

Classes without a minimum number of scouts signed up one week before camp may be cancelled and youth will be offered an alternate class. Participants will be notified as soon as possible of any class changes. Camp staff reserves the right to re-balance lopsided classes (switch class time). In the case that a class is cancelled due to unforeseen circumstances, Scouts will be moved into alternate instruction areas as available.

Refunds are subject to the Council's refund policy. Please visit:

<https://www.capitolareascouting.org/refund-policy/>.

Merit Badge Class Changes: Class changes may be made on the BlackPug registration system until registration closes. After that time, there is an opportunity during check-in Friday to make changes in Scouts' schedules. Remember, some classes may be full and no longer available.

- Youth and adults may sign up individually or as a unit.
- Individual scouts may attend with a registered parent/guardian..
- Units shall provide a minimum of 2 adults and strive to send at least 1 adult for every 4 youth attending STEM Adventure Weekend.

There is no rank or age limit to attend this weekend event. However, some classes have age restrictions and it is imperative that all attendees be attentive and engaged in the interactive environment that is created by the counselors. It is

essential that the Scouts themselves are capable of performing all requirements without parental assistance.

**Orienteering** and **Space Exploration** classes have a Part 1 and Part 2 because the merit badge requires more than one class period to complete. Scouts must sign up for both parts.

**Personal Management** and **Shotgun Shooting** participants must be at least 13 years old.



## Youth Protection

All adults must have proof of unexpired Safeguarding Youth Training (SYT, formerly YPT).

Out-of-council participants (adults and youth) will need to show proof of current Scouting America registration at check-in (i.e., a roster printout from [my.scouting.org](http://my.scouting.org)).

Units are encouraged to sign up as a group, including 2 or more registered adult leaders. Per Scouting America youth protection policy, there must be a registered female adult leader 21 years of age or over in every unit serving females.

From the Guide to Safe Scouting: All adults staying overnight in connection with a Scouting activity must be currently registered as an adult volunteer or an adult program participant. Adult volunteers must register in the position(s) they are serving in.

A single Scout may sign up with a parent/guardian who is a registered adult volunteer in a troop. If a unit or group of Scouts wish to attend, they need to arrange appropriate adult leader supervision in advance.

This camp relies 100% upon adult volunteers and we ask that groups plan for a ratio of 1 adult for every 4 youth (and a minimum of 2 adults), so that some adults may take turns with camp duties in addition to monitoring your scouts. Areas where we need help are listed on the registration page and include merit badge helpers, Safeguarding Youth ambassadors, serving meals, cleaning restrooms, and other logistics.

Per Scouting America policy:

- Separate tenting arrangements must be provided for male and female adults as well as for male and female youth.
- Youth sharing tents must be no more than two years apart in age.
- Youth and adults must tent separately (even if parent and son or daughter)

## Location

STEM Adventure Weekend is held at the Lost Pines Scout Reservation, 785 FM1441, Bastrop, TX 78602. Lost Pines is comprised of nearly 400 acres on the northern shores of Lake Bastrop. For additional information about Lost Pines, please visit <https://www.capitolareascouting.org/activities/camping/lost-pines/>.

- Campsites are chosen at check-in on Friday evening on a first-come, first-served basis.
- The first person checking in from any unit may reserve space for the whole unit.
- If you know that your unit (or linked units) will have 10 or more people attending, you may contact staff to request a campsite so that your entire group can camp together.
- Campsites that will be available for STEM Adventure Weekend are determined that weekend by the ranger and staff and may depend upon weather, logistics, camp repairs, and other factors.

See Appendix A for a map of Lost Pines.

See Appendix B for directions to Lost Pines.

## Adult Participation

All adults attending camp are expected to help with camp activities and to monitor scouts, and are very welcome to enjoy all meals, the Star Party, movie, and other activities as available to them, but remember the Scouts come first.

This camp relies 100% upon adult volunteers. Areas where we need help are listed on the registration page and include merit badge helpers, Safeguarding Youth ambassadors, serving meals, cleaning restrooms, and other logistics.

Adults with a talent or interest in helping with a specific class or area are asked to please sign up on the registration page and contact the staff as soon as possible so that we can assign class assistants. Please help only as directed by the counselor. Do not take over the class or do the work for the scouts.

Adults are reminded to follow Safeguarding Youth Training (SYT) guidelines at all times. Two-deep leadership is fundamental to the policies of Scouting America.

An adult information and training class for the COSMIC STEM program will be offered on Saturday morning at 10:00 AM in the Dining Hall. This is highly recommended for all adults interested in the STEM program and is required to become a COSMIC counselor and mentor.

Coffee & Internet: Need a quick break? With coffee on and wi-fi available, adult leaders may quietly visit the dining hall. This is primarily a classroom space, so please be mindful of your volume and make the scouts' experience a priority.

Thank you for volunteering your time this weekend!

## Lost Pines Camp Rules & Notes

### Safe scouting

All Scouts must be at camp with a registered adult, either a parent, guardian, or two or more adult leaders who are responsible for them. For multiple youth, two-deep leadership is a Scouting America requirement. For female youth, at least one leader must be a registered female leader 21 years of age or over.

All the Scouting America regulations that apply to your unit's regular campouts apply to STEM Adventure Weekend as well (annual health A&B forms, safeguarding youth training SYT for adults, etc.).  
<http://www.scouting.org/Training/YouthProtection.aspx>

Follow the Guide to Safe Scouting: <https://www.scouting.org/health-and-safety/gss>

### Vehicles

Park in the main parking lot north of Lindsay Lodge. *No vehicles are allowed beyond this point or in the campsites.* If you require special access or assistance, please contact the Primary Staff Contact in advance. The walk from the parking lot is not far. These rules are in place for Scout safety and to reduce dust pollution during the event. The speed limit is 10 MPH everywhere on camp.

### Sharing Campsites

All units should expect to share their campsite with one or more other units. Please be courteous and do not take over the entire campsite including platforms, picnic tables, and pavilions. Campsite selection is chosen on a first-come, first-served basis at check-in on Friday. Units bringing 10 or more people may contact staff beforehand to request a campsite.

### Conduct Policy

The conduct and discipline of the youth in your unit are your responsibility. Please be vigilant in making sure your scouts' behavior is consistent with the Scout Oath and Law. This is a camp policy that we have found to be of mutual benefit.

Your campsite is your home. Entering or loitering around another campsite without that unit's permission invites problems. Lights out is at 10:30 pm. All campers are expected to be in their own campsites by that time.

### Star Party Etiquette

The Star Party on Saturday night offers participants the opportunity to see celestial objects under the guidance of amateur astronomers (weather permitting).

The Star Party area is a NO FLASHLIGHT zone. Please use red lights only when approaching the star party, or better yet use no light and let your eyes adjust to the semi-darkness. If the Moon is out, no light will be needed.

If returning to camp from the Star Party after 10:30 PM quiet hours, please continue to use red lights only and please remain silent so as not to disturb others.

### Outdoor Code

Please abide by the outdoor code while at camp. Do not cut or mar trees. Help your Scouts know the importance of caring for trees and all property.

Ground fires are not permitted in campsites during STEM Adventure Weekend.

Be familiar with the principles of [Leave No Trace](#). Please be considerate of other participants.

Capitol Area Council prohibits the use of hammocks on all properties including Lost Pines Scout Reservation. We appreciate your cooperation.

### Drones

The use of drones and other unmanned aerial vehicles on Capitol Area Council property is prohibited without the express permission of CAC staff and the program director.

### Bicycles and Helmets

Bicycles with helmets are permitted during DAYTIME on camp roads and designated trails only. Riders must always wear a helmet and proper clothing and yield the right of way to individuals who are walking. NO RIDING AFTER DARK. You must walk your bike after sunset.

No Segways, scooters (of any kind), hoverboards, skateboards, or similar wheeled items at LPSR, unless medically necessary.

It is our expectation that riders follow Bicycle Safety from the Guide to Safe Scouting:

### *Bicycle Safety*

Follow these basic safety tips when you ride.

- Wear a properly fitted helmet. Protect your brain; save your life! Bicycle helmets can reduce head injuries by 85 percent, according to the National Highway Traffic Safety Administration (NHTSA).
- Adjust your bicycle to fit. Make sure you can stand over the top tube of your bicycle.
- Assure bicycle readiness. Make sure all parts are secure and working well. Assure that tires are fully inflated, and brakes are working properly.
- See and be seen. Wear clothing that makes you more visible, such as bright neon or fluorescent colors. Wear reflective clothing or tape. Avoid riding at night.
- Watch for and avoid road hazards. Always stay alert. Be on the lookout for hazards, such as potholes, broken glass, gravel, puddles, leaves, animals, or anything that could cause you to crash. If you are riding with friends and you are in the lead, call out and point to the hazard to alert the riders behind you.
- Follow the rules of the road. Check and obey all local traffic laws. Always ride on the right side of the road in the same direction as other vehicles. Go with the flow—not against it! Yield to traffic and watch for parked cars.

### Tobacco, Vapes, Alcohol, Energy Drinks, Illegal Drugs, Fireworks, Firearms, Knives, and More

Adult leaders should not allow the use of tobacco/vape products at any Scouting America activity involving youth participants. In addition, tobacco use in the presence of Scouts is not permitted at camp. Adult Leaders wishing to use tobacco products or vape may do so only in the main parking lot north of Lindsay Lodge. The consumption, possession, or use of any alcohol, illegal drug or controlled substance is strictly forbidden on any Capitol Area Council property. We will enforce all local, state, or federal laws where violations involving the above are reported. Violators will be asked to leave camp.

Because of the potential health risks, energy drinks are to be discouraged at all Scouting events. <https://www.scouting.org/health-and-safety/safety-moments/energy-drinks/>

Fireworks, personal firearms and ammunition, and personal bows and arrows, of any type are not allowed at camp.

Camp policy prohibits the carrying of fixed-blade knives except for the purposes of OA ceremonies and Living History night.

Do not touch or take home any wild animal.

Pets of any kind are not allowed on camp. Service animals are allowed, and if you have such a furry friend, we ask that you please notify camp staff beforehand.

### Visitors and Late Arrivals

No visitors are allowed. Only registered participants and staff are allowed around camp. Any non-registered persons arriving for any reason must park in the main parking lot and go immediately to Lindsay Lodge to check-in.

Any scouts who check in after 8:30 PM on Friday will be too late for the range & target sports briefing and should therefore choose other classes or will be reassigned upon check-in.

### Lost and Found

Lost and found will be kept at the dining hall or Lindsay Lodge. Please take only what belongs to you from the lost and found areas. Unclaimed items will be kept at the CAC Frank Fickett Scout Training Center for 30 days before being donated to a charitable organization.

### Camp Staff Areas

Scouts are not allowed in the camp staff areas at any time. We ask adults to help enforce this policy.

### Health and Safety

The Health and Safety of the Scouts and Scouters is a primary consideration at Lost Pines. We provide a Health Lodge staffed with one or more persons trained to handle minor accidents or illness.

### Medications

Medications to be taken at camp must be controlled by the unit leader. All medications must be in the proper original containers labeled with the patient's name, medication name, and written dosage directions. Adults may dispense medications to scouts but must never allow medication to be in the possession of a scout.

The only exceptions to the carry rule are epi pens, inhalers, and other medical devices which the scout is trained on and needs to carry on their person for extreme emergencies. Please include this form with your medical form: [https://www.capitolareascouting.org/wp-content/uploads/2023/07/epi\\_pen\\_and\\_inhalers\\_cac.pdf](https://www.capitolareascouting.org/wp-content/uploads/2023/07/epi_pen_and_inhalers_cac.pdf)

### Special dietary needs

*Special dietary needs are noted on the registration form* and will be verified during your check-in. Staff will do their best to accommodate special dietary needs including vegetarian, gluten-free, and allergies, and will communicate with individuals noted as such and whether they cannot accommodate any dietary restrictions. A refrigerator/freezer and microwave will be provided for food brought by any individuals with special dietary needs that cannot be accommodated. Food should be in Ziploc-style bags labeled and dated with the individual's name and unit number. All Scouts must be accompanied by an adult when getting food in the kitchen area.

### Scout Volunteers

During check-in and at camp notification times, units will be asked to volunteer Scouts for a variety of activities. Some of these include:

*Flags:* A group of scouts are needed to raise the flags on Saturday and Sunday mornings and lower flags on Saturday evening.

*Grace:* Scouts will be asked to volunteer to lead the camp in grace before meals. The Lost Pines Grace or the Philmont Grace are always appropriate, but other graces may be used if they are appropriate for the variety of religious beliefs that are present. If you have any questions, you may check with the camp staff.

*Scout's Own Service:* Scouts will be asked to help to lead the Scout's Own Service, held Sunday at 7:45 AM in the parade ground. If your Chaplain's Aide or other Scouts wish to participate in the service, please sign up at check-in. All are welcome to attend.

### Uniform

While wearing the field uniform (class A) is always appropriate, it is not required for STEM Adventure Weekend. If it is your unit or personal preference, it is recommended for flags, Sunday service, and while travelling to and from camp.



### Appropriate clothing and footwear

Any Scout-appropriate clothing is acceptable. Not permitted are caps, t-shirts, etc., with words or pictures not representing the best spirit of the Scout Oath and Law.

For safety reasons, *closed shoes (sneakers or boots) are to be worn at all times* (except in your tent, at the pool, or in the shower). No Crocs or hiking sandals.

A shirt *with sleeves* must be worn at all times except during any aquatic program time. Swimsuits should be one-piece, or tankinis that cover the midriff, no bikinis.

Welding participants must have long pants (jeans) and hiking boots and a long-sleeved shirt are recommended. No synthetic clothing materials - choose cotton or other natural fibers in case of sparks.

### STEM Gear for Sale

New and vintage STEM and Eclipse shirts, mugs, patches, and other items will be available for purchase while supplies last at the check-in/out location Lindsay Lodge. Items for the new COSMIC program will be available soon.

## Arrival

The speed limit is 10 MPH everywhere at Lost Pines Scout Reservation. This is for everyone's safety and also reduces dust pollution during the event. Watch for pedestrians and bicycles.

STEM Adventure Weekend camp check-in is Friday 6:00-10:00 PM or Saturday 6:30-8:00 AM.

*No vehicles are allowed in camp past the main parking lot.* Participants should park in the main parking lot and walk to check in at Lindsay Lodge. See the map in Appendix A. Please do not bring backpacks or other gear into Lindsey Lodge. After checking in, carry your gear to your campsite. The walk from the parking lot is not far.

Only camp staff and personal vehicles displaying disabled/handicap plates or signs are allowed in the central camp area - and please contact the Primary Staff Contact in advance to make arrangements.

### Check-in

- Every participant attending camp (youth and adult) must report to Lindsay Lodge for check-in upon arrival at camp.
- Turn in a copy of parts A&B of the [Annual Health and Medical Release](#) (AHMR) forms. Each person must turn in his/her form individually to the health officer for review.
- Adults will need to provide proof of Safeguarding Youth Training completion (SYT, formerly YPT)
- Out-of-council participants (adults and youth) will need to show proof of current Scouting America registration
- Everyone gets a wristband.
- All scouts get a nametag and class schedule.
- All adults get a nametag and service schedule.
- Sign up for a campsite and locate it on the map.
- Sign up for scout opportunities (flags, grace, scout's own service).
- Optional: buy t-shirts and other STEM gear. Patches for this event are given to participants at check-out.
- Carry your gear from the parking lot to your campsite and set up camp.
- Join the camp orientation at 8:30 PM in the dining hall, followed by a movie and the range & target sports safety briefing.
- Lights out and quiet time at 10:30 PM.

Any persons entering camp outside of main check-in hours (Friday 6:00-10:00 PM and Saturday 6:30-8:00 AM) must check in with the Primary Staff Contact at

Lindsay Lodge. Likewise, any participant leaving camp for any reason before Sunday dismissal must log their departure with the Primary Staff Contact.

#### Medical reminders

Please bring a COPY of your AHMR medical forms. Do NOT bring your original. Medical forms not picked up at the conclusion of the weekend will be destroyed.

All injuries should be referred to camp medical staff. Current medical forms (Parts A & B) are required for all attendees.

[https://filestore.scouting.org/filestore/HealthSafety/pdf/680-001\\_AB.pdf](https://filestore.scouting.org/filestore/HealthSafety/pdf/680-001_AB.pdf)

## Around Camp

### Food

Meals are served cafeteria style in our air-conditioned Dining Hall. Please bring a reusable water bottle. Camp mugs are also encouraged. Disposable plates and silverware will be provided. You may bring and clean your own mess kit utensils if you wish to help us further reduce waste.

Camp fees cover 3 meals Saturday, 1 breakfast Sunday, plus snacks during the movie on Friday night.

Please note any dietary restrictions on the registration form. For dietary questions, notify the Primary Staff Contact as soon as possible. Please double-check any dietary restrictions when you check in with the medical personnel at Lindsay Lodge upon arrival.

*No food in campsites:* Lost Pines has many stinging, biting, and clever critters that adore smellables – please, no food is allowed in campsites, not even in coolers. If you absolutely must have extra food at camp, please leave it stored safely in your vehicle in the parking lot.

### Gear

You will need your own tent and personal gear (sleeping bag, water bottle, clothes, toiletries). Bring rain gear just in case.

Bring non-aerosol bug repellent and sunscreen. Aerosols harm the environment, deteriorate tent waterproofing, and are fire hazards. Look for sunscreen without chemicals that harm marine life:

<https://oceanservice.noaa.gov/news/sunscreen-corals.html>

The Lost Pines camp store will NOT be open. Stores in downtown Bastrop are about 9 miles away. A Scout is helpful and thrifty - most items you can share, make out of duct tape, or live without.

### Utilities

Lost Pines has potable water. Some campsites have limited electricity. Camp staff have access to electricity for emergencies. For any health issues needing electricity at your campsite (CPAP), please contact the Primary Staff Contact as soon as possible.

### Personal Electronics Policy

Some classes may use electronics as tools for their STEM classes. Scouts are not to use devices during class unless instructed by the counselor.

Enjoy the sights and sounds of the outdoors! We ask that all Scouts and Scouters refrain from using devices at other times for any non-Scouting related activities. Playing video games, watching videos, or listening to the radio are not appropriate at camp. There are plenty of activities at STEM Adventure Weekend and acres of forest at Lost Pines to explore to engage youth and adults.

Mobile phone coverage may be available, but we ask that you not use phones unless necessary. If you must take a call, please step away from participants so as not to disturb them.

### Restrooms

Bathhouses at Lost Pines have single-stall restroom and shower facilities. Follow attire, footwear, and safeguarding youth training policies at all times. Only wear shower shoes in the shower – always wear closed-toed shoes to and from the facilities.

All bathhouses will need to be cleaned before check-out. Campsites are assigned your closest bathhouse to help keep clean.

### Trash

Please help keep Lost Pines clean and pick up trash anywhere you see it. All buildings have trash containers. Please help us patrol the camp before you check out on Sunday. Leave No Trace.

## Departure

- Once classes have finished and your campsite is clean, please check the cleanliness of the bathhouse.
- When you are ready to depart, one adult from your unit must check out in Lindsay Lodge to log out your group and pick up event patches and medical forms. Any medical forms left at camp will be shredded for privacy protection.
- STEM t-shirts and other gear will be available for sale. Please be sure to check the lost & found to see if any of your unit's belongings are there.
- Be careful going home!

## Electronic Completion Report

Blue cards will not be provided or signed at STEM Adventure Weekend. Instead, each registered Scout will receive an Electronic Completion Report accessible through the *Black Pug* registration system.

From the Guide to Advancement: *"Councils are encouraged to take advantage of innovations such as ... various computer-generated spreadsheets, etc. Units and other councils are expected to accept these alternative forms of documentation as long as the documentation provides the information necessary to track and record the Scout's progress."*

The instructor will call roll at the beginning of each class. After the class, the instructor will turn in the class list and requirements actually and personally completed by each scout. See also the section concerning Group Instruction expectations.

After camp, an email will be sent to all registrants indicating that all requirements have been entered into the *Black Pug* system and that you may now access the final completion reports for each Scout. This report is a record of a Scout's progress in the pursuit of completing merit badges.

As with a blue card, the electronic completion report should be turned in to your unit leader and Advancement Chair for proper verification and recording of your achievements during the STEM Adventure Weekend.

## Contact Capitol Area Council

### STEM Adventure Weekend - Primary Staff Contact

#### **Jessica Snider, Assistant Director of Support Services**

Jessica is responsible for many camps including Conservation and STEM programs, and oversees conservation work and research on our council's camping properties.

Office: (512) 617-8651

Cell: (512) 632-9395

*jessica.snider@scouting.org*

### STEM Adventure Weekend - Primary Volunteer Contact - Program Director

#### **Dr. Tim Urban, CAC VP of STEM**

Tim has been volunteering for more than 18 years in the Capitol Area Council as a STEM advocate and resident rocket scientist.

(512) 627-0472

*drtimurban@gmail.com*

### CAC Webpage

<https://www.capitolareascouting.org/>

### CAC STEM Webpage

<https://www.capitolareascouting.org/activities/stem/>

### CAC Main Reception Desk

(512) 617-8611

### Ron Settele, Director of Support Services

Ron is responsible for developing council camping and training programs, the Scout Shop and our council's support staff. He reports to the Scout Executive.

Office: (512) 617-8636

Cell: (972) 822-0984

*ron.settele@scouting.org*

### Jon Yates, Scout Executive

Jon supervises our council's professional staff. He reports to our council's Executive Board as well as the Southern Region and Scouting America National offices.

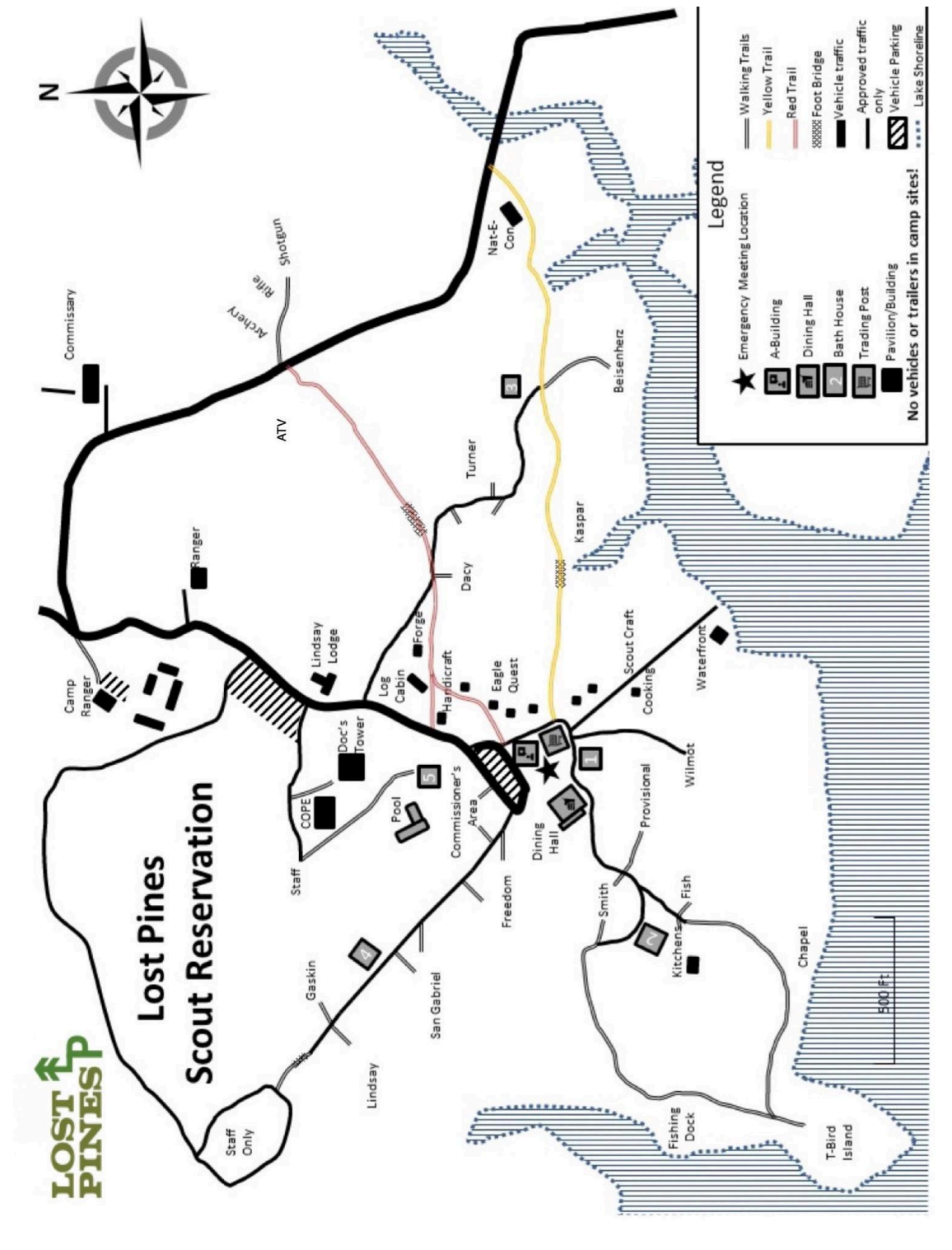
Office: (512) 617-8613

Cell: (512) 496-3289

*jon.yates@scouting.org*

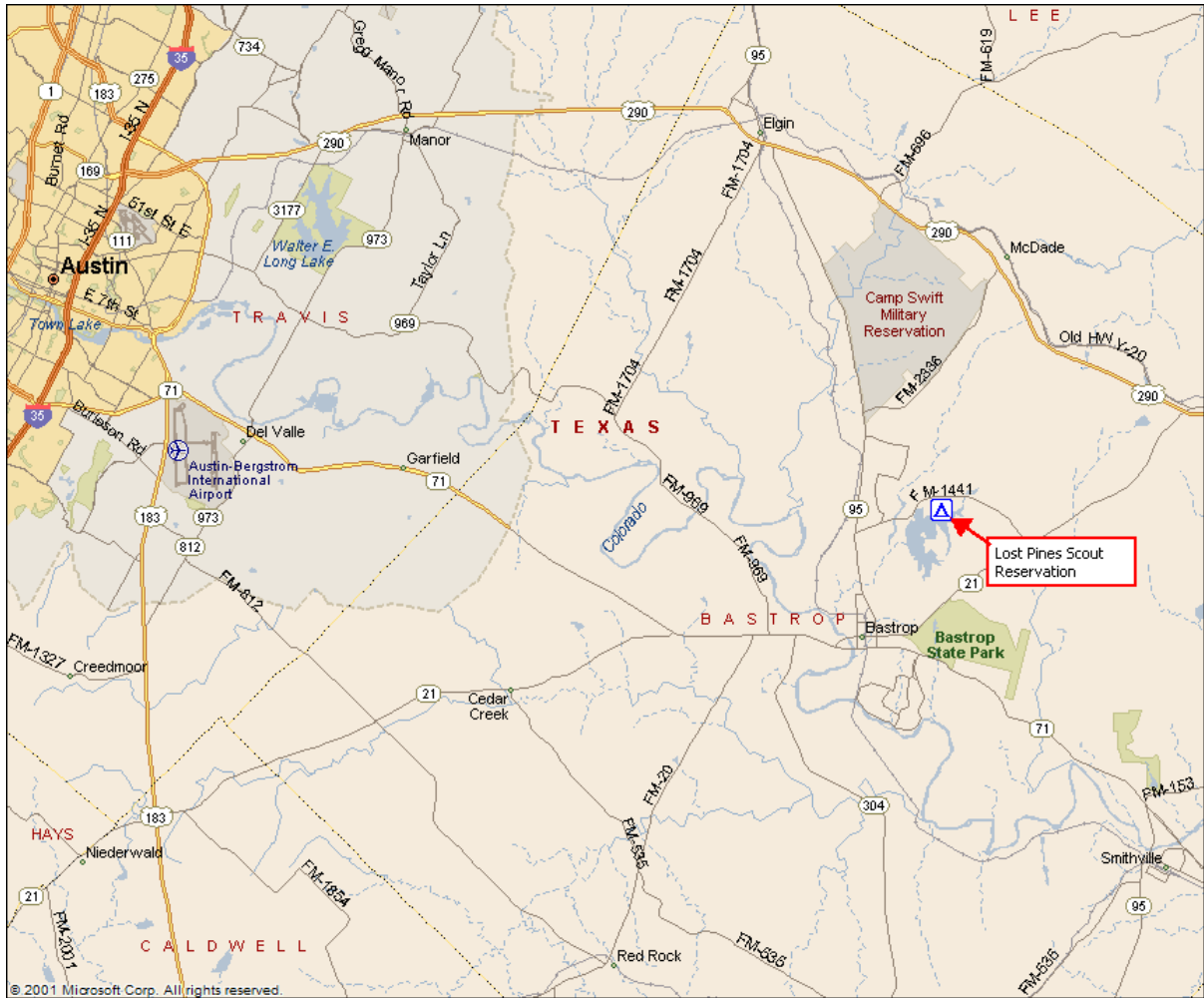
Please reach out if you have any questions about our event.

## Appendix A – Map of Lost Pines





## Appendix B – Directions to Lost Pines



785 FM 1441, Bastrop, Texas 78602

To reach Lost Pines Scout Reservation from Austin using Hwy 290:

East on Highway 290 to Elgin.

South on Highway 95 approximately 12.8 miles to FM 1441.

East on FM 1441 3.4 miles.

South into Lost Pines Scout Reservation.

Or, reach Lost Pines Scout Reservation from Austin using Hwy 71:

East on Highway 71 to Bastrop.

North on Highway 95 approximately 3.8 miles to FM 1441.

East on FM 1441 3.4 miles.

South into Lost Pines Scout Reservation.

(Report to Lindsay Lodge for check in)

## Appendix C – COSMIC Award

The CAC STEM committee is happy to announce a new council STEM award program: the COSMIC award (Challenges Of STEM: Mountaintop experiences In CAC). The volunteer STEM committee has developed a program, process, and awards that promise to be relevant, adaptable, and expandable to new STEM content in the future.

The COSMIC program has recently been approved by the Capitol Area Council board. As the program officially ramps up, we will soon have patch awards, t-shirts, additional programs, and more. Scouts who earn COSMIC class completions at STEM Adventure Weekend will earn the special COSMIC patch award for their class. Participants will be notified when the award patches are available at the CAC Scout Shop

Every scout may earn the COSMIC First Steps patch at the “STEM in Action” evening activities on Saturday. This is a short introduction to basic STEM concepts and the award program.

Adult training for the COSMIC award program will be held during STEM Adventure Weekend.

See also the CAC website for more about the COSMIC awards.

### COSMIC Biochemistry

Prerequisite: Chemistry merit badge

Biochemistry is the study of chemical processes within and relating to living organisms. Plants, animals, and single-celled organisms all use the same basic chemical compounds to live their lives. Biochemistry is not about the cells or the organisms. It's about the smallest parts of those organisms (molecules) and the processes that create biological compounds. This hands-on class will cover:

- Safety Data Sheets and the Globally Harmonized System
- Proteins and enzymes
- DNA and RNA
- Pathogens, Polysaccharides, Phospholipids, and plenty more!
- Learn about immunology, genetics, pharmacology, and nutrition
- And more!

## COSMIC Computers

Prerequisite: Write and sign a personalized contract with your parent/guardian that outlines rules for using the computer and mobile devices, including what you can download, what you can post, and consequences for inappropriate use.

This class is a comprehensive introduction to computer hardware and for understanding its role in modern technology. The award covers fundamental concepts, components, and their applications including:

- Definition of a computer
- Importance of computers in professional jobs
- Hardware components for different server types and understanding the components needed for virtualization, database, and storage servers
- Types of servers: Tower, rack, and blade servers, and their use cases
- Computer hardware components: CPU, RAM, HDD, motherboard, PSU, PCI
- Networking concepts: OSI model, wired and wireless connections, components required for internet connectivity
- Storage concepts: IOPS, latency, RAID levels, SATA vs. SSD drives
- IT careers: System Administrator, Software Developer, Technical Support
- And more!

## COSMIC Mycology

Mycology, the exciting study of mushrooms and other types of fungi, is a journey into the world of these incredible organisms. Fungi are unique life forms, different from plants and animals, and they have special roles in nature. Mycology helps us understand and appreciate these fantastic creatures that can be found in many places, like forests and even in your backyard. In this COSMIC award you will learn:

- Safety rules for handling fungi
- The role and environmental impact of mushrooms in the ecosystem
- Nutritional benefits of mushrooms
- Life cycle of a mushroom
- Identify at least ten different species of mushrooms
- Study the role of lichen in ecosystems
- And more!

## COSMIC Radio Technologies

Prerequisite: Radio merit badge

So, you've earned your Radio Merit Badge, and your eyes opened when you realized that modern life would be impossible without radio. Get ready to learn more as you discover the intricacies of radio communications! The award includes:

- Learn the dangers of working with radio equipment, including RF exposure and burns, electrocution, soldering dangers, and climbing concerns.
- Discuss various radio terms and their relevance to modern radio operations from Doppler Shift to Multipath Interference, Spectrum, Frequency, and Modulation
- Discover the fascinating history of radio.
- Learn about the design of the Wi-Fi system at your local scout camp.
- Make radio contact through an amateur satellite or the International Space Station.
- And more!

## Appendix D – Range & Target Sports Prerequisite Requirements

### Rifle Shooting

In order to complete the badge:

- Scouts must complete the following pre-course requirements and turn them in at check-in Friday. Any scout without paperwork completed may be reassigned to a different class.
- Scouts must attend the safety briefing Friday evening following the camp welcome at 8:45 PM.
- Scouts must sign up for both parts of the merit badge (part 1 on Saturday AM or PM and part 2 on Sunday)

Please note that the Rifle pre-work listed below is keyed to the numbering in the workbook, not the merit badge pamphlet. The workbook link is <http://usscouts.org/usscouts/mb/worksheets/Rifle-Shooting.pdf>

In addition, the following links will also be helpful for completing some of the requirements:

- For Texas Gun Laws:  
<https://www.nrila.org/gun-laws/state-gun-laws/texas/>
- For Texas Hunting Laws:  
<https://tpwd.texas.gov/regulations/outdoor-annual/>

Complete these before you come to camp:

- 1a - 1i. (Please complete all of section 1)

Option A (Please complete the section for Rifle Shooting (Modern Cartridge Type) only):

- 2a
- 2b (please write the three rules; you will demonstrate the rules during the qualification shoot)
- 2c
- 2d
- 2e (please write the five fundamentals; you will demonstrate the fundamentals during the qualification shoot)
- 2f
- 2g
- 2i
- 2k

At camp:

- 2h, 2j, 2l, and 2m will be completed during class time.

## Shotgun Shooting

In order to complete the badge:

- Scouts must complete the following pre-course requirements and turn them in at check-in Friday. Any scout without paperwork completed may be reassigned to a different class.
- Scouts must attend the safety briefing Friday evening following the camp welcome at 8:45 PM.
- Scouts must sign up for both parts of the merit badge (part 1 on Saturday AM or PM and part 2 on Sunday)

The workbook link is

<http://usscouts.org/usscouts/mb/worksheets/Shotgun-Shooting.pdf>

In addition, the following links will also be helpful for completing some of the requirements:

- For Texas Gun Laws:  
<https://www.nraila.org/gun-laws/state-gun-laws/texas/>
- For Texas Hunting Laws:  
<https://tpwd.texas.gov/regulations/outdoor-annual/>

Complete these before you come to camp:

- 1a - 1i. (Please complete all of section 1)

Option A (Please complete the section for Shotgun Shooting (Modern Shotshell Type) only):

- 2a
- 2b (please write the three rules; you will demonstrate the rules during the qualification shoot)
- 2c
- 2d
- 2e
- 2f
- 2h
- 2j

At camp:

- 2g, 2i, and 2k will be completed during class time.