

STEM ADVENTURE WEEKEND Guidebook

Lost Pines Scout Reservation
Capitol Area Council
September 24-26, 2021



Science, Technology, Engineering & Math
merit badges and Nova awards
for Scouts BSA,
Venturing and Sea Scouts

Version History

Version 1 – August 1, 2021

- Original document prepared for launch of registration.

Version 1.2 – August 30, 2021

- Updated class schedule and requirements covered/pre-requisites for Archery, Aviation, Radio, Rifle, and Shotgun.
- Change of Admin staff from A-Building to Lindsay Lodge. Friday check-in will be in the parking lot, then Lindsay Lodge. Late check-in and check-out will be at Lindsay Lodge. Lost and found will be kept at the dining hall or Lindsay Lodge.
- Minor editorial and formatting changes.

Version 1.3 – September 7, 2021

- Cancel class options without minimum signups; adjust Table 1 page 8.

WELCOME TO STEM ADVENTURE WEEKEND 2021

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:

- 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
- Foster enthusiasm in STEM

STEM Adventure Weekend is hosted by the volunteer STEM Nova Committee of the Capitol Area Council. This event is for Scouts BSA, Venturers, and Sea Scouts. For younger Scouts and families, our Cub-friendly STEM campout is STEMBoree, March 26-27, 2022.



"STEM is part of an initiative the Boy Scouts of America has taken on to encourage the natural curiosity of youth members and their sense of wonder about these fields through existing programs."

<http://www.scouting.org/stem/AboutSTEM.aspx>

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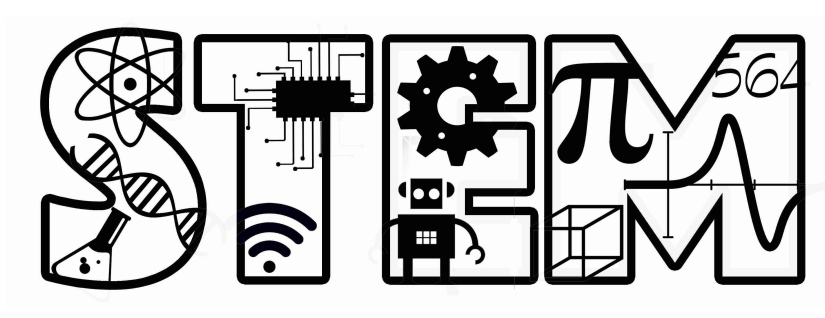
Capitol Area Council STEM Webpage

<https://bsastemnova.org/>

Table of Contents

<i>About</i>	3
<i>Weekend Overview</i>	6
Camp Schedule	6
<i>Classes</i>	7
BSA Nova Awards.....	7
Group Instruction – Setting Expectations in Advance.....	7
Table 1: Class options by instruction period.....	8
Saturday evening activities.....	8
Table 2: Class options with length and completion summary	9
<i>Registration</i>	11
<i>Youth Protection</i>	12
<i>Location</i>	12
<i>Adult Participation</i>	13
<i>Lost Pines Camp Rules & Notes</i>	14
Safe scouting	14
Vehicles.....	14
Sharing Campsites.....	14
Conduct Policy	14
Outdoor Code	15
Tobacco, Vapes, Alcohol, Illegal Drugs, Fireworks, Firearms, Knives and More	15
Visitors and Late Arrivals	15
Lost and Found	15
Camp Staff Areas	15
Health and Safety.....	16
Medications	16
Dietary needs.....	16
Scout Volunteers.....	16
Uniform.....	17
Appropriate clothing and footwear.....	17
<i>Arrival</i>	18
Check-in	18
Medical reminders	18

<i>Around Camp</i>	19
Food	19
Gear	19
Utilities	19
Personal Electronics Policy	20
Restrooms	20
Trash	20
<i>Departure</i>	20
Electronic Completion Report	20
<i>Contact Capitol Area Council</i>	22
STEM Adventure Weekend - Primary Staff Contact	22
STEM Adventure Weekend - Primary Volunteer Contact	22
CAC Main Reception Desk	22
<i>Appendix A – Map of Lost Pines</i>	23
<i>Appendix B – Directions to Lost Pines</i>	24
<i>Appendix C – Class Pre-Requisites/Homework</i>	25
Astronomy	25
Aviation	27
Nova Awards	29
Rifle Shooting	30
Shotgun Shooting	31



Weekend Overview

Campers spend Friday evening through Sunday noon at the Lost Pines Scout Reservation. See Appendix A for the Lost Pines camp map. All meals are provided (3 meals Saturday and 1 breakfast Sunday).

Scouts take 3 classes in STEM, either merit badges or Nova awards. All our volunteer instructors are registered merit badge counselors and professionals or serious hobbyists in the field they are teaching.

For the class list, see next section. Classes are on Saturday morning & afternoon and Sunday morning. Saturday evening activities include a variety of fun STEM events, movies, and star party. The schedule may change due to weather or other needs and updates will be provided at the event.

Camp Schedule

Friday, September 24		
6:00-10:00 pm	Check-in Open	Lindsay Lodge
8:30 pm	Welcome & Orientation	Dining Hall
8:30-10:00 pm	Movie/Snacks	Dining Hall
10:30 pm	Lights Out	
Saturday, September 25		
6:00 am	Wake Up	
6:30 - 8:00 am	Check-in Open	Lindsay Lodge
6:45 am	Breakfast	Dining Hall
7:45 am	Flags & Announcements	Parade Ground
8:00 am - 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
6:00 - 10:30 pm	Evening Events	
6:00-8:00 pm	Egg drop contest	DOK's Tower
6:00-10:00 pm	Rockets, Chess, Branding, more	Around camp
8:00-10:00 pm	STEM Movies	Dining Hall
8:00-10:30 pm	Star Party	DOK's Tower
10:30 pm	Lights Out	
Sunday, September 26		
6:00 am	Wake up	
6:45 am	Breakfast	Dining Hall
7:45 am	Flags & Scout's Own Service	Parade Ground
8:00 am -11:45 pm	Sunday Class Session	
12:00 pm	Clean up & Check Out & Depart	Lindsay Lodge

Classes

BSA Nova Awards

Classes at STEM Adventure Weekend are a part of the Nova award program.

"The Boy Scouts of America developed the Nova Awards program to excite and expand a sense of wonder in our Scouts. By working with an adult counselor or mentor, the various modules allow them to explore the basic principles of STEM and discover how fun and fascinating STEM can be. The Supernova awards are offered for those who enjoy a super challenge. For more information about STEM and the Nova Awards program, visit www.scouting.org/stem. Discover how the Nova Awards program helps youth be "Prepared. For Life."

<http://www.scouting.org/stem/AboutSTEM.aspx>

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 merit badge and Nova 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 (see Appendix C for pre-requisites/homework) or by the scout's ability to demonstrate proficiency.

From the BSA 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 BSA 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."

Table 1: Class options by instruction period

Youth select three class periods: Saturday Morning, Saturday Afternoon, and Sunday Morning. Some classes ⁽¹⁾ have a Saturday evening component.

Archery, Environmental Science, Radio, and **Space Exploration** classes have a Part 1 and a Part 2 because the merit badge requires more than one class period to complete. Scouts should sign up for both parts.

Environmental Science and **Shotgun** participants must be at least 13 years old.

Saturday Morning	Saturday Afternoon	Sunday Morning
Nova Shoot ¹	Astronomy ¹	
Archery ² Part 1	Archery ² Part 2	-
Aviation	Aviation	Automotive Maintenance
Chemistry	Chemistry	Drafting
Chess ¹		-
Composite Materials	Composite Materials	Plumbing
Electronics	Electronics	Electronics
Environmental Science Part 1 (13+)	Environmental Science Part 2 (13+)	Supernova Mentor Training (adults)
Model Design & Building	Model Design & Building	
	Nova Whoosh	Nova Drones ³
Nuclear Science	Nuclear Science	Nova Start Your Engines
Radio Part 1	Radio Part 2	
Rifle ²	Rifle ²	Rifle ²
Shotgun ² (13+)	Shotgun ² (13+)	Shotgun ² (13+)
	Signs, Signals, Codes	-
-	Space Exploration Part 1	Space Exploration Part 2
Welding	Welding	Welding

¹ Saturday evening: **Astronomy** and **Nova Shoot** requirements include the Star Party, and **Chess** requirements include participation in the tournament.

² Friday evening safety briefing: **Archery, Rifle,** and **Shotgun** classes will have a mandatory safety briefing Friday evening after the 8:30 pm camp welcome.

³ **Nova Drones** is a CAC beta test program. See Appendix C for more info.

Saturday evening activities at STEM Adventure Weekend include an egg drop contest, chess tournament, STEM movies (that can count towards the Nova awards), Star Party, STEM branding, rockets, catapults, and more.

Table 2: Class options with length and completion summary

Scouts have the opportunity to complete nearly all class requirements at STEM Adventure Weekend. Any requirements not completed at camp may be considered homework.

See Appendix C for a detailed list of requirements that will need to be completed outside of class for **Astronomy, Aviation, Rifle, Shotgun**, and the **Nova awards**.

- Pre-requisites: Scouts should discuss any pre-requisite requirements with their counselor during camp.
- Homework: For help with completing requirements after camp, scouts should ask their counselor; many counselors have agreed to work with scouts after camp.
- Shooting proficiency (qualification) for **Archery, Rifle**, and **Shotgun** is a requirement to complete the badge. Extra time on the ranges may be provided for scouts that do not qualify within their class period.

In the table below, "*May be completed at camp*" means that Scouts have the *opportunity* to complete the merit badge or Nova award during the weekend if they are able to complete the requirements as written through show/demonstrate/explain/discuss/etc.

Other classes *may* be completed if scouts complete all pre-requisites/homework ahead of camp and discuss with their counselor.

Class Options	Length	Requirements
Archery	8 hours (2 parts)	May be completed at camp. Requires safety briefing Friday evening and qualifying on the range.
Astronomy	4 hours +	Not completed at camp. Pre-requisites or homework and the Star Party.
Automotive Maintenance	4 hours	May be completed at camp.
Aviation	4 hours	Not completed at camp. Pre-requisites or homework including an airport visit.
Chemistry	4 hours	May be completed at camp.
Chess	4 hours +	May be completed at camp. Requires participation in the tournament Saturday.
Composite Materials	4 hours	May be completed at camp.
Drafting	4 hours	May be completed at camp.
Electronics	4 hours	May be completed at camp.
Environmental Science	8 hours (2 parts)	May be completed at camp. Scouts must be 13+ years old.

Model Design and Building	4 hours	May be completed at camp.
Nova Designed to Crunch	4 hours	Not completed at camp. Pre-requisites or homework (as with all Nova awards).
Nova Drones	4 hours	Not completed at camp. Pre-requisites or homework (as with all Nova awards).
Nova Shoot	4 hours +	Not completed at camp. Pre-requisites or homework (as with all Nova awards) and the Saturday Star Party.
Nova Start Your Engines	4 hours	Not completed at camp. Pre-requisites or homework (as with all Nova awards).
Nova Whoosh	4 hours	Not completed at camp. Pre-requisites or homework (as with all Nova awards).
Nuclear Science	4 hours	May be completed at camp.
Plumbing	4 hours	May be completed at camp.
Radio	8 hours (2 parts)	May be completed at camp.
Rifle	4 hours +	May be completed at camp. Requires pre-requisites, safety briefing Friday night, and qualifying on the range.
Shotgun	4 hours +	May be completed at camp. Requires pre-requisites, safety briefing Friday night, and qualifying on the range. Scouts must be 13+ years old.
Signs, Signals, and Codes	4 hours	May be completed at camp.
Space Exploration	8 hours (2 parts)	May be completed at camp.
Welding	4 hours	May be completed at camp.
Supernova Kickstarter	4 hours	Not completed at camp. This class is an introduction to the Dr. Harris Supernova.
Supernova Mentor Training (adults)	2 hours Sunday	Adult training for Nova Counselors (recommended) and Supernova Mentors (required). No registration necessary.

Registration

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

<https://scoutingevent.com/564-46126>

Fees for 2021 are \$80/youth and \$40/adult.

A \$10 early bird discount for youth will be applied through August 31.

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

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.

For the Council's refund policy please visit <https://www.bsacac.org/refund-policy/>.

Merit Badge Class Changes: There is an opportunity during check-in Friday to make changes in Scouts' schedules. Remember, some merit badges may no longer be available.

Youth and adults may sign up individually or as a troop. Individual scouts may attend with a single parent/guardian. Troops 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 merit badge and Nova counselors. It is essential that the Scouts themselves are capable of performing all requirements without parental assistance.

Environmental Science, Radio, and Space Exploration classes have a Part 1 and Part 2 because the merit badge requires more than one class period to complete. Scouts should sign up for both parts.

Environmental Science and Shotgun participants must be at least 13 years old.

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.

Youth Protection

All adults must have unexpired Youth Protection Training.

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

A single Scout may sign up with a parent or guardian. If a troop or group of Scouts wish to attend, they need to arrange adult supervision in advance.

This camp relies 100% upon adult volunteers and we ask that groups plan for a ratio of 1 adult to 4 youth (and a minimum of 2 adults), so that some adults may help with camp outside of monitoring scouts. Areas where we need help are cooking, serving, cleaning, water delivery, equipment & paperwork runners, and other logistics.

Per BSA 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 http://www.bsacac.org/activities/our_camps/lost_pines.

Campsites are assigned by staff Friday evening on a first-come, first-served basis during check-in. 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, movies, and other activities.

Areas where we most need adult help are cooking and serving; and also cleaning, water delivery, equipment & paperwork runners, and other logistics.

Adults with a talent or interest in helping with a specific class or area are asked to please volunteer with the Primary Event Contacts 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 youth protection training guidelines at all times. Two-deep leadership is a fundamental tenant of the policies of the Boy Scouts of America.

An adult training class on the STEM Nova program will be offered on Sunday morning. No pre-registration is required. This is highly recommended for all Nova counselors and is required to become a Supernova mentor.

Coffee & Internet: Need a 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 parent, guardian, or adult troop leaders who are responsible for them. For multiple youth, two-deep leadership is a BSA requirement. For female youth, at least one leader must be a registered female leader 21 years of age or over.

All the BSA regulations that apply to your unit's regular campouts apply to STEM Adventure Weekend as well (annual health A&B forms, youth protection training 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.* Only camp staff and personal vehicles displaying disabled/handicap plates or signs are allowed in the central camp area. If you require special 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. Speed Limit is 10 MPH everywhere.

Sharing Campsites

All Troops should expect to share their campsite with one or more other Troops. Please be courteous and do not take over the entire campsite including platforms, picnic tables, and pavilions.

Conduct Policy

The conduct and discipline of the youth in your troop 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 troop's permission invites problems. Lights out is at 10:30 pm. All campers are expected to be in their own campsites by that time. If coming back late from the Star Party, please be quiet and do not 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.

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

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

Tobacco, Vapes, Alcohol, Illegal Drugs, Fireworks, Firearms, Knives and More

Adult leaders should not allow the use of tobacco/vape products at any BSA 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. Fireworks, pets, personal firearms and ammunition, and personal bows and arrows, of any type are not allowed at camp.

In addition, camp policy prohibits the carrying of fixed-blade knives except for the purposes of OA ceremonies and Living History night. Do not take home any wild animal. Pets of any kind are not allowed on camp unless they are a service animal. Violators will be asked to leave camp.

Visitors and Late Arrivals

All visitors to camp must park in the main parking lot and walk to Lindsay Lodge to check in immediately upon their arrival at camp.

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 Fickett 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 are epi pens, inhalers, and other medical devices which the scout is trained on and needs to carry on their person for extreme emergencies.

Dietary needs

Special dietary needs are noted on the registration form and will be verified at check-in. Staff will do their best to accommodate special dietary needs and will communicate with individuals noted as such. 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 Troop 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, Troops 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.

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 pm in the parade ground. If your Chaplain's Aide or other Scouts wish to participate in the service, please contact staff 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 desired, it is recommended for daily morning flags, Sunday service, and 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 aquatic program time. Swimsuits should be one-piece, or tankinis that cover the midriff, no bikinis.

STEM Gear

STEM t-shirts will be available at camp while supplies last for \$15. The design is shown below. The shirts are light blue this year (not black as pictured below).

Vintage STEM shirts, mugs, patches, and other items will also be available for purchase at check-in, on Saturday evening, or on Sunday during check-out.



Arrival

STEM Adventure Weekend camp check-in is Friday 6:00-10:00 pm or Saturday 6:30-8:00 am. Participants should park in the main parking lot and walk to check in at Lindsay Lodge. Should health & safety considerations dictate, check-in may occur in the parking lot.

After checking in, plan to carry your gear from the parking lot to your campsite. Only camp staff and personal vehicles displaying disabled/handicap plates or signs are allowed in the central camp area - 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. Speed Limit is 10 MPH everywhere.

Check-in

- Each person 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 Youth Protection Training completion.
- Everyone gets a wristband.
- Scouts get a nametag and class schedule.
- Sign up for a campsite and locate it on the map.
- Optional: buy t-shirts and other STEM gear. Event patches will be handed out 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. Watch a STEM movie.
- Lights out at 10:30 pm.

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

http://www.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, but please do bring and clean your own mess kit if you wish to help us further reduce waste. Camp fees cover 3 meals Saturday, 1 breakfast Sunday, plus snacks during the movies on Friday and Saturday nights. As always, leaders are welcome to come early, stay late, serve loud, and help in the kitchen!

For any dietary allergies, restrictions, or questions, please note it on the registration form and notify the Primary Staff Contact as soon as possible. Please mention any dietary issues 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 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. Campsites have limited electricity. Camp staff has access to electricity for emergencies. For any health issues needing electricity, 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.

We ask that all Scouts and Scouters refrain from using devices at other times for any non-Scouting related activities. Playing video games, watching YouTube, TV, 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 other participants so as not to disturb them.

Restrooms

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

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 your campsite and bathhouse are clean, one adult must check out in the A-Building (Administration Building) to pick up reports, 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 Scouts' belongings are there.

Be careful going home!

Electronic Completion Report

Blue cards will not be provided or signed at STEM Adventure Weekend. Instead, each 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."

A few days after camp, an email notice will be sent to all registrants indicating that all requirements have been entered into the system and that you may now access these final completion reports for each Scout.

This report is a record of a Scout's progress in the pursuit of completing merit badges and Nova awards. 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 page 8 concerning Group Instruction expectations.

As with a blue card, the electronic completion report should be turned in to your Scoutmaster and then the Advancement Chair of your unit 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, Director of STEM, Conservation and Sustainability

Jessica is responsible for the Distinguished Conservation Award and STEM programs, and oversees conservation work and research on our council's camping properties. She reports to the Program Director.

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STEM Adventure Weekend - Primary Volunteer Contact

Dr. Tim Urban, STEM Nova Committee Chair

Tim has been volunteering for more than 14 years in the Capitol Area Council as a STEM advocate and resident rocket scientist.

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CAC Webpage

<https://www.bsacac.org>

CAC STEM Webpage

<https://bsastemnova.org>

CAC Main Reception Desk

(512) 617-8611

Teresa Northcutt, Program Director

Teresa supervises year-round activities and programs, including summer and winter resident camps.

Office: (512) 617-8650

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teresa.northcutt@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 BSA National offices.

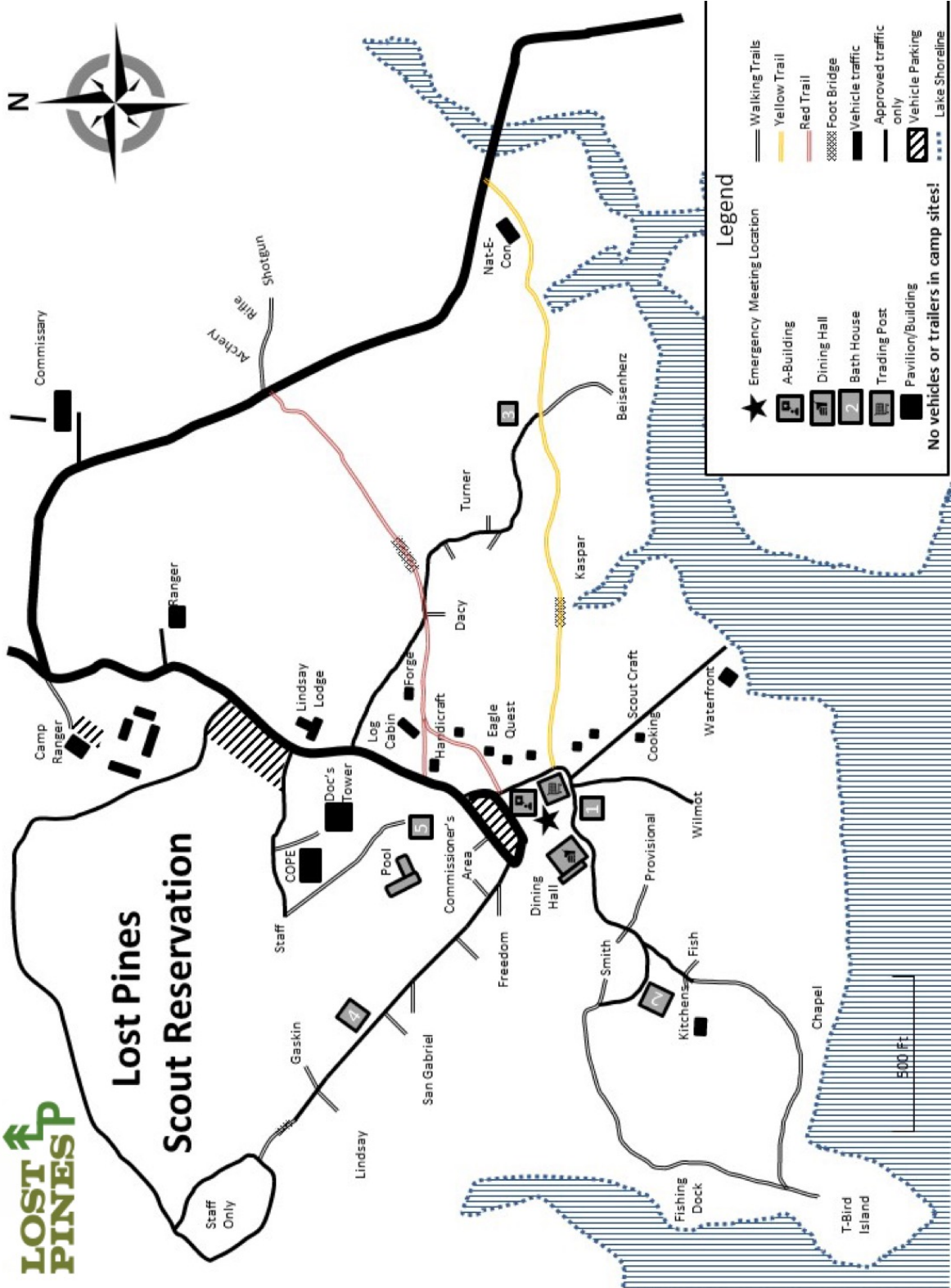
Office: (512) 617-8613

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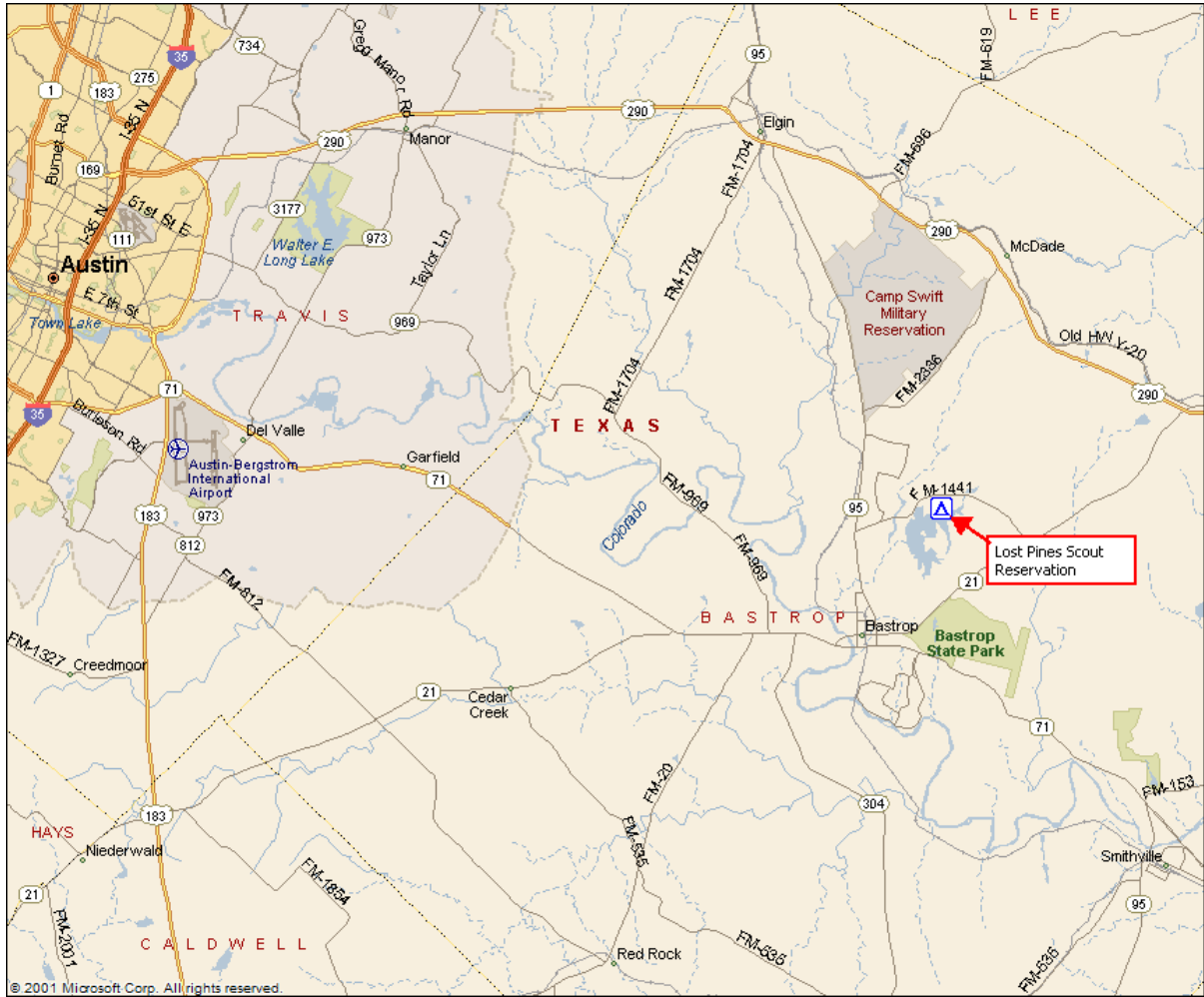
jon.yates@scouting.org

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 – Class Pre-Requisites/Homework

Astronomy

Any of the requirements involving written materials and drawings may be prepared in advance and brought to the class for credit. Requirements 5(b) and 6(b) require extra time and preparation, as outlined below:

- 5b Using the Internet (with your parent's permission), books, and other resources, find out when each of the five most visible planets that you identified in requirement 5a will be observable in the evening sky during the next 12 months, then compile this information in the form of a chart or table.
- 6b Sketch the phase and the daily position of the Moon at the same hour and place, for four nights within a one-week period. Include landmarks on the horizon such as hills, trees, and buildings. Explain the changes you observe.

Scouts who come prepared with the materials for 5(b) and 6(b) can expect to complete the merit badge requirements at camp, assuming good visibility for star observation during the evening hours, as required by requirements 4(a) and 4(b).

5. Do the following:

- a. List the names of the five most visible planets. Explain which ones can appear in phases similar to lunar phases and which ones cannot, and explain why.

Five Most Visible Planets Phases? Why?

Five Most Visible Planets	Phases?	Why?

- b. Using the Internet (with your parent's permission), books, and other resources, find out when each of the five most visible planets that you identified in requirement 5a will be observable in the evening sky during the next 12 months, then compile this information in the form of a chart or table.

Planet Name					
Month					
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					

- b. Sketch the phase and the daily position of the Moon, at the same hour and place, for four nights within a one week period. Include landmarks on the horizon such as hills, trees, and buildings.

Date: __/__/__ Time: _____	Date: __/__/__ Time: _____	
Date: __/__/__ Time: _____	Date: __/__/__ Time: _____	
East	South	West
<p><u>Suggested procedure:</u> <i>First check to see whether it is a morning or evening moon and chose a time to view the moon. Avoid an observation period when there will be a new moon. Choose a time and place you are going to be able to observe the moon each day. On the first day, sketch the relative position of the moon across the southern horizon noting its height and shape (phase). Draw some landmarks on the sketch as points of reference. On the same drawing, repeat this at the same time each day for the next three days, showing the height and shape of the moon for each observation. <u>Note the date and time of your observation next to each sketch of the moon.</u> If the sky is overcast and the moon is not visible, either extend the observations until you can make four of them, and/or using the other observations, estimate where the moon would have been and what shape it would have been on the overcast day(s) and indicate that what is an estimate due to overcast sky.</i></p>		

Aviation

Any of the requirements 4 (A, B, or C) and 5 may be prepared in advance and brought to the class for credit.

Do ONE of the following:

- a. Visit an airport. After the visit, report on how the facilities are used, how runways are numbered, and how runways are determined to be "active."

How the facilities are used

How runways are numbered,

How runways are determined to be "active."

- b. Visit a Federal Aviation Administration facility - a control tower, terminal radar control facility, air route traffic control center, or Flight Standards District Office. (Phone directory listings are under U.S. Government Offices, Transportation Department, and Federal Aviation Administration. Call in advance.)

Report on the operation and your impressions of the facility.

- c. Visit an aviation museum or attend an air show.

Report on your impressions of the museum or show.

5. Find out about three career opportunities in aviation.

1.	
2.	
3.	

Pick one and find out the education, training, and experience required for this profession. _____

Education:

Training:

Experience:

Discuss this with your counselor, and explain why this profession might interest you.

Nova Awards

All of the NOVA Awards require parts 1 and 2 be completed outside of class time.

- Requirement 1 is to read, watch or in some combination total 3 hours of the STEM area covered, make a list of questions, and discuss with your counselor.
- Requirement 2 is to compete one of the merit badges that are listed for that award and discuss with your counselor.

The discussion portions of 1 and 2 may be possible to complete before, during, or after camp at the discretion of your instructor.

See <https://www.scouting.org/stem-nova-awards/awards/> for the complete list of requirements.

Nova Drones (CAC Beta Test)

The Nova Drones class is a beta test (unofficial trial run) before submitting this award to BSA for consideration as a new national award. Requirements 1 & 2 are similar to other Nova awards as described above. Homework includes option 6b which requires passing the FAA TRUST test: <https://www.scouting.org/the-recreational-uas-safety-test/>

The abbreviated version of the requirements is listed below.

1. Read/watch 3 hours of material related to drones.
2. Complete ONE merit badge from the following list:

Archeology	Environmental Science	Programming
Aviation	Fire Safety	Robotics
Emergency Preparedness	Forestry	Search & Rescue
Engineering	Photography	Weather
3. Know your drone – define the following parts...
4. Find out how drones work in terms of mechanical, electrical, and aerodynamical aspects. Learn the definition of these terms...
5. What do drones do? Find out how drones are used for Archeology, Conservation, Delivery, Farming/Forestry, Geoscience, and Search & Rescue.
6. Do TWO of the following:
 - A. Assemble a drone from a kit or from scratch and use it for part B.
 - B. Fly a drone in a prescribed plan approved by your counselor Demonstrate takeoff, landing, roll, pitch, yaw, and flying in a circle. (Requires passing the FAA TRUST test to fly).
 - C. Visit with someone who works with drones in their career. During your visit, talk to them about concepts covered for this Nova.
7. Discuss with your counselor what you have learned about drones.

Rifle Shooting

In order to have enough shooting time to complete the badge:

- Scouts must attend the safety briefing Friday evening following the camp welcome at 8:30 pm in the dining hall.
- Please complete the following pre-course requirements prior to STEM Adventure Weekend.

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.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 **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 have enough shooting time to complete the badge:

- Scouts must attend the safety briefing Friday evening following the camp welcome at 8:30 pm in the dining hall.
- Please complete the following pre-course requirements prior to STEM Adventure Weekend.

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.