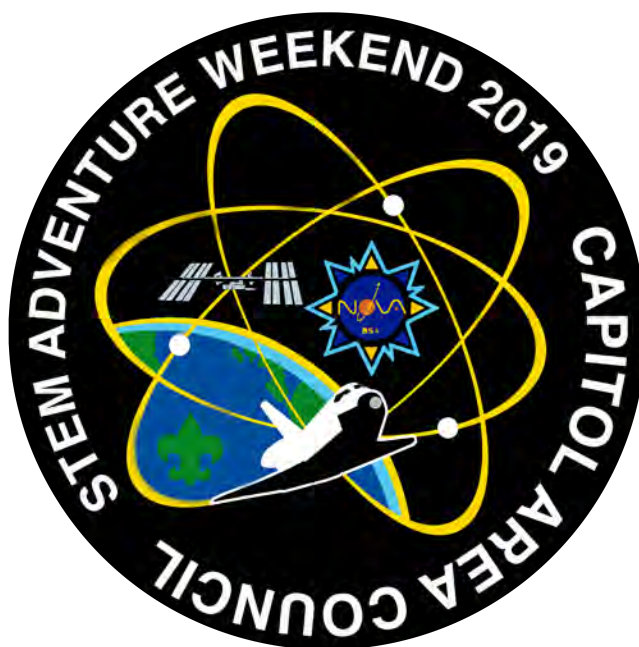


Participant Guide to STEM ADVENTURE WEEKEND

**Lost Pines Scout Reservation
Capitol Area Council
September 20-22, 2019**



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

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WELCOME TO STEM ADVENTURE WEEKEND 2019

STEM Adventure Weekend is hosted by the volunteer STEM Nova Committee of the Capitol Area Council. 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. Plan to have fun and work hard.

"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>

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>



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 on a first-come, first-served basis at check-in Friday evening. 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 the camp.

Registration

All youth and adult participants may register at this link:

<https://bsacac.doubleknot.com/event/stem-adventure-weekend/2553279>

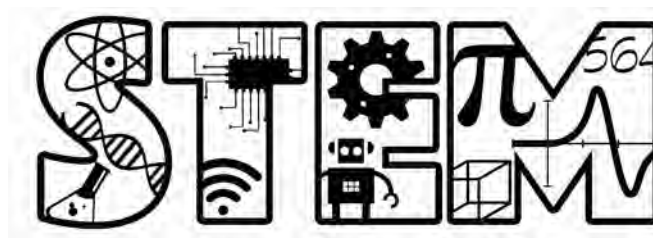
Fees for 2019 are \$70/youth and \$40/adult.

A \$10 early bird discount will be applied through September 2.

Youth fees include all meals, classes, supplies, and an event patch. Adult fees include all meals and information/training classes. Extra patches will be available for purchase while supplies last.

Scouts and units from other councils are welcome to participate in the Capitol Area Council STEM Adventure Weekend.

Scouts do not need to be First Class to attend, but it is imperative that all attendees be attentive and engaged in the interactive environment that is created by the merit badge counselors. It is essential that the Scouts themselves are capable of performing all requirements without parental assistance. It is highly recommended that Environmental Science participants be at least First Class and 13 years old.



Youth Protection

Units are encouraged to sign up as a group, **including two or more registered adult leaders**. Per 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 group of Scouts wish to attend, they need to arrange adult supervision in advance to maintain a minimum of two-deep leadership throughout camp.

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

STEM Gear

New and vintage shirts, mugs, patches, and other items will be available for purchase at check-in or later in the administration building (A Building).

Pre-order your STEM Nova t-shirts during online registration for \$15. The design is shown below. The shirts will be Light Blue this year (not black as pictured below).



Classes

Youth may select up to four class periods: Saturday Morning, Saturday Afternoon, Saturday Evening, and Sunday Morning.

Some classes have Part 1 (some offered twice) and Part 2 because the merit badge requires more than one class period to complete. Scouts should sign up for both parts during the weekend.

For those participants new to STEM Adventure Weekend or wishing to have a more relaxing evening, sign up for the STEM Movie on Saturday evening. This will count towards the Nova awards. After the movie, join the Star Party with the astronomy classes at DOK's Tower.

Table 1: Class options by instruction period			
Saturday Morning	Saturday Afternoon	Saturday Evening	Sunday Morning
Electronics	Astronomy Part 1	Astronomy Part 2	Automotive Maintenance
Engineering Part 1	Engineering Part 1	Automotive Maintenance	Chess
Environmental Science Part 1	Environmental Science Part 2	Chess	Drafting
Geocaching	Geocaching	Electronics	Electronics
NOVA Start Your Engines	NOVA Mendel's Minions	NOVA Let it Grow/Splash	Engineering Part 2
Nuclear Science	NOVA Start Your Engines	NOVA Shoot	Model Design & Building
Programming Part 1	Nuclear Science	Signs, Signals, and Codes	NOVA Whoosh
Robotics Part 1	Programming Part 2	STEM Movie	Signs, Signals, and Codes
Space Exploration Part 1	Robotics Part 2	Supernova Kickstarter	Space Exploration Part 2
Welding	Space Exploration Part 1	-	Welding

Table 2: Class options with length and requirements completed		
Class Options	Length	Requirements completed at camp
Astronomy	8 hours (2 parts)	Not completed at camp. Pre-requisites or homework* and Saturday Star Party
Automotive Maintenance	4 hours	Completed at camp
Chess	4 hours	Completed at camp
Drafting	4 hours	Completed at camp
Electronics	4 hours	Completed at camp
Engineering	8 hours (2 parts)	Completed at camp
Environmental Science	8 hours (2 parts)	Recommended 1 st Class & 13 years old. Completed at camp
Geocaching	4 hours	Completed at camp
Model Design and Building	4 hours	Completed at camp
NOVA Let it Grow/Splash	4 hours	Not completed at camp. Pre-requisites or homework*
NOVA Mendel'sMinions	4 hours	Not completed at camp. Pre-requisites or homework*
NOVA Shoot	4 hours	Not completed at camp. Pre-requisites or homework* and Saturday Star Party
NOVA Whoosh	4 hours	Not completed at camp. Pre-requisites or homework*
Programming	8 hours (2 parts)	Completed at camp
Robotics	8 hours (2 parts)	Completed at camp
Signs, Signals, and Codes	4 hours	Completed at camp
Space Exploration	8 hours (2 parts)	Completed at camp
Welding	4 hours	Completed at camp
<i>STEM Movie</i>	<i>4 hours</i>	<i>This class will count towards Nova requirements.</i>
<i>Supernova Kickstarter</i>	<i>4 hours</i>	<i>Not completed at camp. This class is an introduction to Supernova.</i>

*Pre-requisites will be checked at camp. For completing requirements after camp (homework), some counselors have agreed to work with scouts after camp. Please see Appendix B for a list of requirements that will need to be completed outside of the merit badge class. Contact the Primary Staff Contact for more information.

All instructors are registered merit badge counselors and professionals or serious hobbyists in the field they are teaching.

Camp Schedule

Friday, September 20		
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 21		
6:00 am	Wake Up	
6:30 - 8:00 am	Check-in Open	Admin Building
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 - 9:45 pm	Evening Class Session	
6:30-9:30 pm	STEM Movie	Dining Hall
9:00-10:30 pm	Star Party	DOK's Tower
10:45 pm	Lights Out	
Sunday, September 22		
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	Check Out & Depart Camp	Admin Building

The schedule may change due to weather or other needs. Any changes to the schedule will be provided at the event. Please contact the Primary Event Contacts if you have questions about specific events.

Adult Participation

All adults attending camp may be asked to help with camp activities. 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.

We encourage adults to enjoy the youth classes and offer to help the designated class counselors. 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.

Adults are very welcome to volunteer and enjoy all meals, the Star Party, movie, and other activities.

An adult training class on the STEM/NOVA program will be offered on Saturday from 1-4:45 pm in the dining hall. Nova counselors and Supernova mentors will be able to get their trained cards. Sign up at the registration link.

Camp Rules

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.

All the BSA regulations that apply to your unit's regular campouts apply to STEM Adventure Weekend as well (medical 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>

Uniform

While wearing the field uniform is always appropriate, it is not required for STEM Adventure Weekend. If desired, you may wish to wear it for daily flags, Sunday service, and travelling to and from camp. STEM t-shirts (activity uniform) are available for pre-order and at camp while supplies last for \$15. Any Scout-appropriate clothing is acceptable. This includes wearing close-toed shoes and appropriate garments for all persons at all times, including to/from the shower facilities.

Arrival

Camp check-in is Friday 6-10 pm or Saturday 6:30-8:00 am. Participants should park in the main parking lot and check in at Lindsay Lodge. 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. 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.

Check-in

Each person (youth and adult) must report to Lindsay Lodge for check-in upon arrival at camp. At check in, turn in medical forms (each person must turn in his/her form individually to the medic), sign up for a campsite, get a nametag, pickup pre-ordered shirts, and obtain a copy of your final class schedule. Adults will need to provide proof of Youth Protection Training completion. Additional items for sale will be available. Event patches will be handed out at check-out.

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

Medical

Please bring a COPY of your 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

Food

All meals will be in the Dining Hall. Please bring a reusable mug and/or water bottle. 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 three meals Saturday, breakfast Sunday, plus snacks on Friday and Saturday nights. As always, leaders are welcome to come early, stay late, serve loud and help in the kitchen.

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 must have extra food at camp, please leave it stored safely in your vehicle.

FOR ANY DIETARY ALLERGIES, RESTRICTIONS, OR QUESTIONS, please notify the Primary Staff Contact as soon as possible. There is a refrigerator and a microwave at the medical center at Lindsay Lodge for scouts and adults who need to bring their own food. Please check in with the medical personnel there upon arrival.

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.

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 Electronic 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 is not appropriate. There are plenty of activities at STEM Adventure Weekend and acres of 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

Newer bathhouses at Lost Pines have single-stall restroom and shower facilities. Follow attire, footwear, and youth protection training policies at all times.

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

Check-out is in the Admin Building. One adult must check out to pick up your class reports, event patches, and medical forms. Any unclaimed medical forms will be destroyed.

Lost & Found

Check the Admin Building or the front of the dining hall for lost items.

Electronic Completion Report

Blue cards will not be provided or signed at STEM Adventure Weekend. Each Scout will receive an Electronic Completion Report generated by the Doubleknot registration system.

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 completed. A printed copy of the report will be provided at checkout. The electronic completion report should be turned in to the Advancement Chair of your unit for proper recording of your achievements during the STEM Adventure Weekend.

Instructions on how to access these reports is:

1. Log into DoubleKnot
(<https://bsacac.doubleknot.com/Rosters/logon.aspx?>)
2. Click on My Account (top right corner below Capitol Area Council logo).
3. Click on the Registrations tab
4. Here you will see all your registrations. On the bar with NOVA/STEM Adventure Weekend 2019, you can click on Reports under the Action column.
5. Click on the Class/Activity Completion Award link
6. Click on print and select print as a pdf. Now you can save the file and email it to the Scoutmaster, Advancement Chair and/or anyone who needs it for a record.

Any Nova tracking cards obtained during camp may be utilized for tracking progress toward that award. The Electronic Completion Report does not yet track all of those requirements. The Nova tracking card is not an official BSA form, so if you encounter issues with official recording at your unit, please contact the Primary Staff Contact.

Additional

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.

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

Capitol Area Council contact information:

Primary Staff Contact: Jessica Snider, Director of STEM, Conservation and Sustainability office: 512-617-8651, cell: 512-632-9395 jessica.snider@scouting.org
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Main reception desk 512-617-8611

Rick Denison, Director of Support Service
office: 512-617-8627, cell: 512-944-7751
rick.denison@scouting.org

Jon Yates, Scout Executive
office: 512-617-8613, cell: 512-496-3289
jon.yates@scouting.org

Appendix A – Map of Lost Pines



- Bathhouses are shown as black circled numbers.
- The "Red" trail goes to the Field Sports area. It begins near the log cabin in Living History and proceeds east to the Archery, Rifle, and Shotgun shooting areas.
- The "Yellow" trail goes to Nat-E-Con. It begins at the road behind the Trading Post and proceeds east to Nat-E-Con.
- The "White" trail is used to go from the Waterfront to Nat-E-Con.
- The "Blue" trail goes to the old waterfront. It begins just west of the dining hall and proceeds west to the old waterfront.

Appendix B – 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?

- 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>		

NOVA classes

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.