Pioneer District STEM Merit Badge College

Event Information

Date: January 16, 2027 and February 6, 2027
Time: 8:00am - 4:00pm
Location: Messiah University, 1 University Ave., Mechanicsburg, PA 17055

Registration

Register online via Black Pug at: https://scoutingevent.com/544

Fee: $25 per youth participant, $10 per adult for lunch per session, no adult fee if attending Admission session (January 16 only) **Register by:** January 1, 2027

Merit badge selection is part of individual registration via Black Pug. Each merit badge has a specified class size limit and is first come, first serve.

Description

The purpose of a Merit Badge College (MBC) is to offer Scouts an opportunity to meet with highly qualified professionals to learn and foster the development of lifelong interests. We are pleased to present this exciting event. This is an in-person event where each scout may work toward the completion of up to four (4) merit badges.

Program Schedule

Saturday, January 16, 2027 and Saturday, February 6, 2027

Time	Activity	Location
8:00am-8:30am	Registration + Check In	Jordan Center
8:30am-9:00am	Orientation	Frey Hall
9:00am-10:25am	Session 1	Jordan/Frey/Kline
10:30am-11:55am	Session 2	Jordan/Frey/Kline
12:00pm-12:55pm	Lunch	Lottie Dining Hall
1:00 pm-2:25pm	Session 3	Jordan/Frey/Kline
2:30pm-3:55pm	Session 4	Jordan/Frey/Kline

Scouts may register for a maximum of four (4) merit badges. If registered for less than four merit badges, the scout should arrive 30-45 minutes before the first scheduled merit badge session or may depart following the last scheduled merit badge session. Scouts with any mid-day free sessions are asked to remain in Frey Hall or Jordan Hall.

Arrival & Check-In

Scouts should arrive between 8:00am-8:30am and report to Frey Hall. Classroom locations will be distributed at this time. Each scout should be prepared to present an Application for Merit Badge "blue card", signed by their scoutmaster, to their merit badge counselor at the beginning of the session or have already be linked to the merit badge counselor on ScoutBook.

No pre-event meeting is scheduled.
Additional information will be shared at the scheduled orientation.

Map



1. Parking for Scouting Participants/Families – by 28 Old Main
2. Check in - 18 Jordan Science Center
3. Orientation -12 Frey Hall
4. Classes – 12 & 18 -Jordan & Frey
5. Parking for Staff & MB Counselors – 18 Jordan Science Center
6. Dining Hall – 10 Eisenhower Campus Center

Program Details

Merit Badge Process

Attending the merit badge college does not guarantee advancement or merit badge completion. Each scout should select merit badges in consultation with their scoutmaster. Some merit badges are recommended for older scouts.



Each scout should be prepared to present an Application for Merit Badge "blue card", signed by their scoutmaster, to their merit badge counselor at the beginning of the session. If the unit uses Scoutbook for merit badges, scouts must be connected to the merit badge counselor before the first session.

Each scout should review the merit badge requirements, pre-requisites (listed below) and the merit badge pamphlet in advance. All completed pre-requisites should be turned in to the merit badge counselor at the first session. If a pre-requisite is not submitted on time, the scout may receive a partial completion. A partial completion is acceptable; however, a scout may need to find another merit badge counselor after the merit badge college concludes.

Each merit badge requirement must be earned by each scout. Completion of a worksheet downloaded from the internet does not constitute completion of the requirement. Attendance and active participation in all sessions is the best way to complete merit badge requirements. Absences or poor participation may result in a partial completion. A partial completion is acceptable; however, a scout may need to find another merit badge counselor after the merit badge college concludes.

Merit Badge	Pre-requisites	Merit Badge Counselor
AI (Artificial Intelligence)	1 & 8(a) 1. Key Concepts. Define the following terms and share the meaning of each with your counselor: artificial intelligence (AI), artificial intelligence agents, automation, basic programming, bots, data, databases, digital workers, general AI, machine learning (ML), narrow AI, superintelligent AI, tasks, triggers, workflows, and variables. 8. (a) Identify three career opportunities that would use skills and knowledge in artificial intelligence or automation. Pick one and research the training, education, certification requirements, experience, and expenses associated with entering the field. Research the prospects for employment, starting salary, advancement opportunities, and career goals associated with this career. Discuss what you learned with your counselor and whether you might be interested in this career. "We will be working on building a simple AI project. Come to the first meeting with a brainstorm for a type of AI that you would like to train. Examples: Chatbot, Image classifier, Recommendation list, Automation script" Should bring laptop or tablet to sessions.	Phil Kondas philkondas@gmail.com
Archaeology	3, 4, 5, & 7 3. Describe at least two ways in which archaeologists determine the age of sites, structures, or artifacts. Explain what absolute dating and relative dating are. 4. Learn about a combined total of five archaeological sites located both within and outside the United States. (a) For EACH site you research, point it out on a map and explain how it became known to archaeologists. Describe some of the information about the past that has been found at each site. Explain how the information gained from the study of these sites answers questions that archaeologists are asking and how the information may be important to modern people. Compare the relative ages of the sites you research. (b) Choose ONE of the sites you picked and give a short presentation about your findings to a Cub Scout pack, your Scout troop, your school class, or another group. 5. Do the following: (a) Learn about the federal laws and international conventions that protect archaeological sites. Find out if your state, county, or local government has	Candice Stark cstark53@gmail.com

	regulations that apply to archaeological or historic sites. (b) Identify a national, international, or local organization that helps to protect archaeological sites. 7. Do ONE of the following and discuss your findings with your counselor: **(a)** Visit a museum to observe how artifacts aid in conveying history. **(b)** Present to your counselor a significant family artifact/heirloom and discuss its history. **(c)** Make a list of the trash your family throws out during one week. Discuss with your counselor what archaeologists might learn about you and your family if they found your trash a thousand years from now.	
Astronomy	SCOUTS - Please bring to class: • Pre requisites, and • With your parent's permissions, an iOS or Android device preloaded with the Celestron SkyPortal app. Scouts must do some requirements on their own. PLEASE READ THE REQUIREMENTS CAREFULLY! The sky must be watched over a fair amount of time. You must be prepared to make observations during the course of an evening (#4c. Big Dipper) and over 4 days (#6b. Moon). Make sure to add LANDSCAPES!! The requirement choices under #8 can also be time consuming. You may visit a planetarium under #8a, stargaze under #8b or use SkyNet under #8f. Please check with your merit badge counselor (Joe Betsko) if you plan to undertake #8c, d or e. If you cannot complete these prior to the end of the Merit Badge College, I will sign a partial Blue Card. If you need more guidance, please contact you merit badge counselor. ASTRONOMY MERIT BADGE PREREQUISITES **Scouts should read the merit badge pamphlet/booklet prior to class** 4(a), 4(c), 6(b), and 8 **4. Do the following (if instruction is done in a planetarium, Scouts must still identify the required stars and constellations outside under the natural night sky):** (a) Identify in the sky 10 constellations, at least four of which are in the zodiac. (You may do this at home after an introduction to Celestron SkyPortal between the first and second session.) (c) Make two sketches of the Big Dipper or Cassiopeia from direct observation. In one sketch, show the Big Dipper's or Cassiopeia's orientation in the early evening sky. Make another sketch, showing its position several hours later. In both sketches, show the North Star and the horizon. Record the date and time each sketch was made. (The Big Dipper moves over the course of the evening and changes direction. Scouts must record the movement correctly, making sure to include the horizon	Joe Betsko jbetsko@me.com

	in their sketch. I will reject drawings with no landscape features and no north star and no time record. It is best to do one drawing and add the Big Dipper at different times.) **6. Do the following:** (b) Sketch the phase and position of the Moon, at the same hour and place, for four nights (or days) within a one-week period by direct observation. Include landmarks on the horizon such as hills, trees, and buildings. Explain the changes you observe. (Scouts should show a slight change in the moon phase, but a significant change in where the moon is relative to the landmarks on the horizon. It is easiest to draw one landscape picture and then add the moon which should be in different positions on the four nights. It is advised to make written notes to support the explanation of the changes you observe. **8. With your counselor's approval and guidance, do ONE of the following:** (a) Visit a planetarium or astronomical observatory. Submit a written report, a scrapbook, OR a video presentation afterward to your counselor that includes the following information: activities occurring there, exhibits and displays you saw, telescopes and other instruments being used, and celestial objects you observed. (b) Plan and participate in an observation session that includes using binoculars or a telescope and includes at least 10 celestial objects beyond those observed in requirement 4. These might be lunar features, Messier objects, additional constellations or planets, or artificial satellites including the International Space Station. List the celestial objects you want to observe and find each in a star chart, guidebook or by using an app. Prepare a log or notebook. Discuss with your counselor what you hope to observe prior to your observation session. Review your log or notebook with your counselor afterward. (c) Plan and host a star party for your Scout troop or other group such as your class at school. Use binoculars or a telescope to show and explain celestial objects to the group. (d) Help an astronomy club in your community hold a star party that is open to the public. (e) Personally take a series of photographs or digital images of the movement of the Moon, a planet, an asteroid, meteor, or a comet. In your visual display, label each image and include the date and time it was taken. Show all positions on a star chart or map. Show your display at school or at a troop meeting. Explain the changes you observed. (f) With your parent or guardian's and counselor's approval, use online observing opportunities such as SkyNet to observe planets, comets, galaxies, and/or the sun. Describe your experience to your counselor.	

	(You may proceed under either (a), (b) or (f). However, please contact Joe Betsko before undertaking a choice under (c) through (e).)	
Bird Study	1, 8b(1), 8b(2), 11 & 12 1. Explain the need for bird study and why birds are useful indicators of the quality of the environment. Describe how birds are part of the ecosystem. 8b. By using a public library, the internet, or contacting the National Audubon Society, find the name and location of the Christmas Bird Count nearest your home and obtain the results of a recent count. 1. Explain what kinds of information are collected during the annual event. 2. Tell your counselor which species are most common, and explain why these birds are abundant. (Scouts need to record the date they accessed and the location they chose for the Christmas Bird Count report.) 11. Identify a non-native bird (introduced to North America from a foreign country since 1800). Describe how non-native birds may become damaging to the ecosystem. 12. Discuss the importance of the Leave No Trace Seven Principles and the Outdoor Code as they relate to bird study. Explain how you have followed the Leave No Trace Seven Principles and the Outdoor Code while in natural areas during field observation, specimen collection, and identification.	Chris Lontz eaglescout192@gmail.com
Communications	FIRST OF ALL, READ THE BOOK!!! Everything we discuss will be in the book. 1. a-d please complete ONE of these and be prepared to discuss first session. 1. Do ONE of the following: (a) For one day, keep a log in which you describe your communication activities. Keep track of the time and different ways you spend communicating, such as talking person-to-person, listening to teachers, listening to the radio or podcasts, watching television, using social media, reading books and other print media, and using any electronic communication device. Discuss with your counselor what your log reveals about the importance of communication in your life. Think of ways to improve your communication skills. (b) For three days, keep a journal of your listening experiences. Identify one example of each of the following, and discuss with your counselor when you have listened to each: obtain information, be persuaded, appreciate or enjoy something, and understand someone's feelings. (c) In a small-group setting, meet with other Scouts or with friends. Have them share personal stories about significant events in their lives that affected them in some way. Take note of how each Scout	Greg O'Brien gregoryobrien@comcast.net

	participates in the group discussion and how effectively each Scout communicates their story. Report what you have learned to your counselor about the differences you observed in effective communication. (d) List as many ways as you can think of to communicate with others (face-to-face, by telephone, letter, email, text messages, social media, and so on). For each type of communication, discuss with your counselor an instance when that method might not be appropriate or effective. 2. a or b be prepared to present first session. 2. Do ONE of the following: (a) Think of a creative way to describe yourself using, for example, a collage, short story or autobiography, drawing or series of photographs, or a song or skit. Using the aid you created, make a presentation to your counselor about yourself. (b) Choose a concept, product, or service in which you have great confidence. Build a sales plan based on its good points. Try to persuade the counselor to agree with, use, or buy your concept, product, or service. After your sales talk, discuss with your counselor how persuasive you were. 3. Be prepared to present first session. 3. Write a five-minute speech. Give it at a meeting of a group. 4. Either week but needs to be turned in before I will sign. 4. Interview someone you know fairly well, like, or respect because of his or her position, talent, career, or life experiences. Listen actively to learn as much as you can about the person. Then prepare and deliver to your counselor an introduction of the person as though this person were to be a guest speaker, and include reasons why the audience would want to hear this person speak. Show how you would call to invite this person to speak. 5. Please do on your own, needs to be completed before I will sign. 5. Attend a public meeting (city council, school board, debate) approved by your counselor where several points of view are given on a single issue. Practice active listening skills and take careful notes of each point of view. Prepare an objective report that includes all points of view that were expressed, and share this with your counselor. 6. Have your plan ready for the first session, if complete great, if not, please have it ready for second session. 6. With your counselor's approval, develop a plan to teach a skill or inform someone about something. Prepare teaching aids for your plan. Carry out your plan. With your counselor, determine whether the person has learned what you intended.	

	7. a-I will accept a copy of an email please cc me on it. b-Please email me your thoughts and ideas c- bring with you to either session. 7. Do ONE of the following: (a) Write to the editor of a magazine or your local newspaper to express your opinion or share information on any subject you choose. Send your message by fax, email, or regular mail. (b) Create a webpage or blog of special interest to you (for instance, your troop or crew, a hobby, or a sport). Include at least three articles or entries and one photograph or illustration, and one link to some other webpage or blog that would be helpful to someone who visits the webpage or blog you have created. **Note:** It is not necessary to post your webpage or blog to the internet, but if you decide to do so, you must first share it with your parent or guardian and counselor and get their permission. (c) Use desktop publishing to produce a newsletter, brochure, flyer, or other printed material for your troop or crew, class at school, or other group. Include at least one article and one photograph or illustration. 8. Have a leader in the troop either sign a note or email me OR bring pictures and the script. Either will suffice. 8. Plan a troop or crew court of honor, campfire program, or an interfaith worship service. Have the patrol leaders' council approve it, then write the script and prepare the program. Serve as master of ceremonies. 9. This will be a group discussion, with Active participation to get credit. 9. Find out about three career opportunities in communication. Pick one and find out the education, training, and experience required for this profession. Discuss this with your counselor, and explain why this profession might interest you. BE PREPARED!	
Cybersecurity	"Read the Pamphlet" 1a, 4e, 8 & 9 1. Safety. Do the following: (a) View the Personal Safety Awareness "Digital Safety" video (with your parent or guardian's permission). 4. Cyber Threats, Vulnerabilities, and Attacks. Do the following and discuss each with your counselor: (e) Current Events. Do ONE of the following: (1) Read an article or a news report about a recent cybersecurity incident, such as a data breach or malware infection. Explain how the incident happened (to the best of your ability based on the information available) and what the consequences are or might be to the victim.	Phil Kondas philkondas@gmail.com

	(2) With your parent or guardian's permission, watch a movie or read a book in which cybersecurity plays a significant role. Discuss how cybersecurity topics were depicted and how realistic you think it was. 8. Cybersecurity Activities. Do ONE of the following: **(a)** Learn about a cybersecurity competition, camp, or other activity you could participate in (either now or in the future). Share what you learned with your counselor, including the type of activity, time commitment, and age of participants. **(b)** Participate in a cybersecurity competition with members of your troop, school, or some other group approved by your counselor. Either design your own competition or use an existing platform. **(c)** Give a presentation to your patrol, troop, or another group approved by your counselor, on a cybersecurity topic of your choice. Your presentation must include at least one demonstration and/or hands-on activity. 9. Careers. Do ONE of the following: (a) Identify three career opportunities that would use skills and knowledge in cybersecurity. Pick one and research the training, education, certification requirements, experience, and expenses associated with entering the field. Research the prospects for employment, starting salary, advancement opportunities and career goals associated with this career. Discuss what you learned with your counselor and whether you might be interested in this career. **(b)** Visit a business or organization that does work in cybersecurity. Find out about different work roles, what they do, and how they acquired their knowledge through college degrees or certifications. Share what you learned with your counselor. Should bring laptop or tablet to sessions.	
Digital Technology	1, 6a-h (Choose 3), & 9 (Choose 1) 1. View the Personal Safety Awareness "Digital Safety" video (with your parent or guardian's permission). 6. Do THREE of the following. For each project you complete, copy the files to a backup device and share the finished projects with your counselor. **(a)** Using a spreadsheet or database program, develop a food budget for a patrol weekend campout OR create a troop roster that includes the name, rank, patrol, and telephone number of each Scout. Show your counselor that you can sort the roster by each of the following categories: rank, patrol, and alphabetically by name. **(b)** Using a word processor, write a draft letter inviting the parents or guardians of your troop's Scouts to a troop event.	Matthew Lyon mlyon0005@gmail.com

	(c) Using a graphics program, design and draw a campsite plan for your troop OR create a flyer for an upcoming troop event, incorporating text and some type of visual such as a photograph or an illustration. **(d)** Using a presentation software program, develop a report about a topic approved by your counselor. For your presentation, create at least five slides, with each one incorporating text and some type of visual such as a photograph or an illustration. **(e)** Using a digital device, take a picture of a troop activity. Send or transfer this image to a device where it can be shared with your counselor. **(f)** Make a digital recording of your voice, transfer the file to a different device, and have your counselor play back the recording. **(g)** Create a blog and use it as an online journal of your Scouting activities, including group discussions and meetings, campouts, and other events. Include at least five entries and two photographs or illustrations. Share your blog with your counselor. You need not post the blog to the internet; however, if you choose to go live with your blog, you must first share it with your parent or guardian AND counselor AND get their approval. **(h)** Create a webpage for your troop, patrol, school, or place of worship. Include at least three articles and two photographs or illustrations. Include at least one link to a website of interest to your audience. You need not post the page to the internet; however, if you decide to do so, you must first share the webpage with your parent or guardian AND counselor AND get their approval. 9. Do ONE of the following: **(a)** Explore careers related to the Digital Technology merit badge. Research one career to learn about the training and education needed, costs, job prospects, salary, job duties, and career advancement. Your research methods may include—with your parent or guardian's permission—an internet or library search, an interview with a professional in the field, or a visit to a location where people in this career work. Discuss with your counselor both your findings and what about this profession might make it an interesting career. **(b)** Explore how you could use knowledge and skills from the Digital Technology merit badge to pursue a hobby or interest. Research any training needed, expenses, and organizations that promote or support it. Discuss with your counselor what short-term and long-term goals you might have if you pursued this.	
Electricity	Watch the following video links Electrical Hazards and Emergency Situations (video) 5 Steps To Put Out an Electrical Fire (video) Lightning Safety: How To Protect Yourself, What To Avoid (video) AC and DC Current Explained (video) Reading a Digital Electric Meter & Calculate Usage and Cost (video)	James Knovich jameskno719@gmail.com

	For any of the requirements below that involve live electrical circuits, do them under the supervision of your parents. Requirement 2. Do an electrical inspection of your house with the electrical inspection sheet found at the web address below. https://filestore.scouting.org/filestore/Merit_Badge_ReqandRes/Requirement%20Resources/Electricity/Electrical%20Safety%20Checklist.docx.pdf?_gl=1*1vmhl8e*_gcl_aw*R0NMLjE3ODEzOTQzMzQuRUFJYUlRb2JDaE1JOFpmX2dMT0ZsUU1WQjQzQ0NCMW1YQU5URUFBWUFTQUFFZ0txd3ZEX0J3RQ..*_gcl_au*MTkyNzM5NjE5Mi4xNzg0NTc2OTIz*_ga*MTQxOTkwODI5Ni4xNzUxNTY0OTUx*_ga_20G0JHESG4*czE3ODY0OTg3MTAkbzE3OCRnMSR0MTc4NjQ5ODcxNiRqNTQkbDAkaDA. For any items that may be broken, do not perform the repairs yourself. Let your parents know they should be taken care of. For the items that mention correct sizing, please discuss with your parents to determine what is correct. Most consumer products list the Voltage, amperage, or wattage in fine print somewhere the item. Requirement 9a. Take a picture of the dials or display of the kilowatt hours displayed on your house electrical meter. Calculate how many Kilowatt hours of electricity you have used since your last bill. Bring a printed copy of your meter picture and electric bill to class.	
Electronics	Watch the following video links: Computer Safety Procedures (video) Schematics (video) How to Read a Schematic (video) Electronic Components Guide (video) 10 Common Electronic Components (video) Using Solder | Soldering Basics | Soldering for Beginners (video) How to Desolder (video) Applying Heat to your Parts (video) What Are Printed Circuit Boards (PCBs)? (video) Purchase the kit below read the instructions but **do not** assemble the kit. Supplies: 1. Safety glasses or lab goggles with side shields 2. Purchase one of the kits below read the instructions but do not assemble the kit. Soldering Kit: Available from several sources: Amazon, ebay, Jameco, electronics express Elenco model AK100 Elenco Practice soldering kit, includes a 25 watt soldering Iron and a pair of cutting pliers. about $30 If you already have a 25 watt soldering iron and a pair of small electronic cutting pliers you can purchase Elenco Model SP-1A kit for about $15	James Knovich jameskno719@gmail.com
Emergency Preparedness	2, 3, 7, 8B, 8C, 9,10 2. Planning for Family Emergencies. Do the following: (a) At a family meeting, discuss the situations on the chart you created for requirement 1(b) and make emergency plans for sheltering-in-place and	Sam Messinger 875tigertiger@gmail.com

	for evacuation of your home. Discuss your family meeting and plans with your counselor. (b) Develop and practice a plan of escape for your family in case of fire in your home. Draw a floor plan with escape routes and a map with a safe meeting place. Discuss your family's home escape plan with your counselor. (c) Using a checklist in the *Emergency Preparedness* merit badge pamphlet or one approved by your counselor, prepare or inspect a family disaster kit for sheltering-in-place and for evacuation of your home. Review the needs and uses of the items in a kit with your counselor. 3. Preventing Accidents and Emergencies. Do ONE of the following: **(a)** Using a home safety checklist included in the *Emergency Preparedness* merit badge pamphlet or one approved by your counselor, inspect a home (or a similar building near where you live or at a camp) for safety hazards with the help of an adult. Present your completed checklist to and discuss your findings with your counselor. **(b)** Develop emergency prevention plans for five family activities outside the home, as approved by your counselor. (Examples are taking a picnic to a park, seeing a movie, attending a worship service, an outing at a beach, traveling to visit a relative, or attending a ball game or concert.) Each plan should include an analysis of possible hazards, proposals to prevent, protect from, mitigate, respond to, and recover from emergencies, and the reasons for the actions that you propose. 7. National Incident Management System (NIMS) and Incident Command System (ICS). Do the following: (a) Describe the National Incident Management System (NIMS) and the local Incident Command System (ICS). (b) Find out how your community and its leaders work to manage and to train for disasters. Discuss this information with your counselor. (c) Discuss how a Scout troop can help in an emergency situation using ICS. 8. Emergency Service. Do the following: (b) Prepare a written plan for mobilizing your troop when needed to do emergency service. If your troop already has a mobilization plan, present the plan to your counselor and tell your part in making the plan work. (c) Using a checklist in the *Emergency Preparedness* merit badge pamphlet or one approved by your counselor, prepare or inspect a personal emergency service pack for a mobilization call. Explain the needs and uses of the contents to your counselor. 9. First Aid Merit Badge. Earn the First Aid merit badge. 10. Careers. Do ONE of the following:	

	(a) Interview an emergency services coordinator or a civil servant about their work in disaster management. Learn about how they chose this career and about their duties. Discuss what you learned with your counselor and whether you might be interested in this career. **(b)** Identify three career opportunities that would use skills and knowledge in emergency services. Pick one and research the training, education, certification requirements, experience, and expenses associated with entering the field. Research the prospects for employment, starting salary, advancement opportunities, and career goals associated with this career. Discuss what you learned with your counselor and whether you might be interested in this career. **(c)** Identify how you might use the skills and knowledge in the field of emergency preparedness to pursue a personal hobby and/or healthy lifestyle. Research the additional training required, expenses, and affiliation with organizations that would help you maximize the enjoyment and benefit you might gain from it. Discuss what you learned with your counselor and share what short-term and long-term goals you might have if you pursued this.	
Engineering	No Pre-Requisites.	Steven Davidheiser sdavidheiser@gmail.com
Environmental Science	4A (bring a copy of their water quality report to the first session, if available), 6A OR 6B (Scoutmaster-approval of presentation required to complete), and 7A. 4. Water Pollution. Do ONE of the following and discuss with your counselor: (a) Identify where your community sources water, how it is treated, and disposed. Obtain and review a water quality report from your area. 6. Rare, Threatened, or Endangered Species. Do ONE of the following and discuss with your counselor: **(a)** Do research on one endangered species found in your state. Learn about its natural habitat, why it is endangered, what is being done to preserve it, and how many individual species are left in the wild. Prepare a 100-word report about the species and include a drawing or photo. Present your report to your patrol or troop. **(b)** Do research on one species that was endangered or threatened but that has now recovered. Learn about how the species recovered, and what its new status is. Prepare a 100-word report on the species and include a drawing or photo. Present your report to your patrol or troop. 7. Pollution Prevention, Resource Recovery, and Conservation. Do ONE of the following and discuss with your counselor: (a) Determine five ways to conserve resources or use resources more efficiently in your home, school, or camp. Practice at least two of these methods for at least one week.	Chris Lontz eaglescout192@gmail.com

First Aid	2, 14 & 15 (Due by the February 6) 2. Preparing for First Aid Emergencies. Do the following: (a) Obtain a copy of the Scout Annual Health and Medical Record and discuss the importance of the form including information on immunizations, allergies, medications, health history, and medical examinations to providing first aid at Scouting events. (b) Using checklists provided in the *First Aid* merit badge pamphlet or ones approved by your counselor, do the following: (1) Assemble a personal first-aid kit for hiking and backpacking. Demonstrate the proper use of each item in your first-aid kit to your counselor. (2) With your counselor, inspect a unit, home, vehicle, or camp first-aid kit and discuss your findings. 14. With guidance from your counselor, develop a plan to teach a first-aid skill or topic using the EDGE method. Discuss your skill, topic, and plan with your counselor, and then teach your skill or topic to your family or to one or more Scouts. 15. Do ONE of the following: (a) Visit an emergency medical station house or training center in person. From the medical first responders that you meet during your visit, learn about how they serve their community and about their careers. Discuss with your counselor what you learned during your tour and interviews. (b) Interview an emergency medical services professional about their work. Learn about how they chose this career and about their duties. Discuss what you learned with your counselor and whether you might be interested in this career. (c) Identify three career opportunities that would use skills and knowledge in emergency medical services. Pick one and research the training, education, certification requirements, experience, and expenses associated with entering the field. Research the prospects for employment, starting salary, advancement opportunities, and career goals associated with this career. Discuss what you learned with your counselor and whether you might be interested in this career. (d) Identify how you might use the skills and knowledge in the field of emergency medical services to pursue a personal hobby and/or healthy lifestyle. Research the additional training required, expenses, and affiliation with organizations that would help you maximize the enjoyment and benefit you might gain from it. Discuss what you learned with your counselor and share what short-term and long-term goals you might have if you pursued this.	Robin Cartwright w3kat@outlook.com
Geology	2 & 4 2. Pick three resources that can be extracted or mined from Earth for commercial use. Discuss	Chris Brixius brixius@epix.net

	with your counselor how each product is discovered and processed. 4. Do ONE of the following options: **Option A—Surface and Sedimentary Processes.** Do ALL of the following: (1) Conduct an experiment approved by your counselor that demonstrates how sediments settle from suspension in water. Explain to your counselor what the exercise shows and why it is important. (2) Using topographical maps provided by your counselor, plot the stream gradients (different elevations divided by distance) for four different stream types (straight, meandering, dendritic, trellis). Explain which ones flow fastest and why, and which ones will carry larger grains of sediment and why. (3) On a stream diagram, show areas where you will find the following features: cut bank, fill bank, point bar, medial channel bars, and lake delta. Describe the relative sediment grain size found in each feature. (4) Conduct an experiment approved by your counselor that shows how some sedimentary material carried by water may be too small for you to see without a magnifier. (5) Visit a nearby stream. Find clues that show the direction of water flow, even if the water is missing. Record your observations in a notebook, and sketch those clues you observe. Discuss your observations with your counselor. **Option B—Energy Resources.** Do ALL of the following: (1) List the top five Earth resources used to generate electricity in the United States. (2) Discuss source rock, trap, and reservoir rock—the three components necessary for the occurrence of oil and gas underground. (3) Explain how each of the following items is used in subsurface exploration to locate oil or gas: reflection seismic, electric well logs, stratigraphic correlation, offshore platform, geologic map, subsurface structure map, subsurface isopach map, and core samples and cutting samples. (4) Using at least 20 data points provided by your counselor, create a subsurface structure map and use it to explain how subsurface geology maps are used to find oil, gas, or coal resources. (5) Do ONE of the following: (a) Make a display or presentation showing how oil and gas or coal is found, extracted, and processed. You may use maps, books, articles from periodicals, and research found on the internet (with your parent or guardian's permission). Share the display with your counselor or a small group (such as your class at school) in a five-minute presentation. (b) With your parent or guardian's and counselor's permission and assistance, arrange for a visit to an operating drilling rig. While there, talk with a geologist and ask to see what the geologist does	

	onsite. Ask to see cutting samples taken at the site. **Option C—Mineral Resources.** Do ALL of the following: (1) Define rock. Discuss the three classes of rocks including their origin and characteristics. (2) Define mineral. Discuss the origin of minerals and their chemical composition and identification properties, including hardness, specific gravity, color, streak, cleavage, luster, and crystal form. (3) Do ONE of the following: (a) Collect 10 different rocks or minerals. Record in a notebook where you obtained (found, bought, traded) each one. Label each specimen, identify its class and origin, determine its chemical composition, and list its physical properties. Share your collection with your counselor. (b) With your counselor's assistance, identify 15 different rocks and minerals. List the name of each specimen, tell whether it is a rock or mineral, and give the name of its class (if it is a rock) or list its identifying physical properties (if it is a mineral). (4) List three of the most common road-building materials used in your area. Explain how each material is produced and how each is used in road building. (5) Do ONE of the following: (a) With your parent or guardian's and counselor's approval, visit an active mining site, quarry, or sand and gravel pit. Tell your counselor what you learned about the resources extracted from this location and how these resources are used by society. (b) With your counselor, choose two examples of rocks and two examples of minerals. Discuss the mining of these materials and describe how each is used by society. (c) With your parent or guardian's and counselor's approval, visit the office of a civil engineer and learn how geology is used in construction. Discuss what you learned with your counselor. **Option D—Earth History.** Do ALL of the following: (1) Create a chart showing suggested geological eras and periods. Determine which period the rocks in your region might have been formed. (2) Explain the theory of plate tectonics. Make a chart explaining, or discuss with your counselor, how the processes of plate tectonics work. Discuss how plate tectonics determines the distribution of most of the Earth's volcanoes, earthquakes, and mountain belts. (3) Explain to your counselor the processes of burial and fossilization, and discuss the concept of extinction. (4) Explain to your counselor how fossils provide information about ancient life, environment, climate, and geography. Discuss the following terms and explain how animals from each habitat obtain food: benthonic, pelagic, littoral, lacustrine, open marine, brackish, fluvial, eolian, and protected reef.	
Inventing	No Pre-Requisites.	Carrie Miller cms2@smsd.us

		Millstine@gmail.com
Law	Session 1: We will cover requirements 1, 2, 3, 5, 8, 10 and 11 in class. Prerequisites: 3, 10 and 11. 3. Tell what civil law is; tell what criminal law is. Tell the main differences between them. Give examples of each. 10. Tell where people can go to obtain the help of a lawyer if they are unable to pay for one. Tell what you can do if you can afford a lawyer but do not know of any in your area. 11. Discuss with your counselor the importance in our society of TWO of the following areas of the law or process: (a) Administrative (b) Alternative Dispute Resolution (c) Bankruptcy (d) Biotechnology (e) Environmental (f) Family (g) Immigration (h) Information Technology (i) Intellectual Property (Copyright, Patents, and Trademarks) (j) International (k) Privacy Session 2: We will cover requirements 4, 6, 7 and 9 in class. Prerequisites: 4 and 9. 4. Ask five people (not more than one from your immediate family) about the role of law enforcement officers in our society. Discuss their answers with them. Report your findings to your counselor. 9. Make a list of 15 jobs that deal with some aspects of law or legal processes. Tell which you prefer. Why?	Joe Betsko jbetsko@me.com
Oceanography	1, 2, 4, 5 and recommend 8b2 1. Name four branches of oceanography. Describe at least five reasons why it is important for people to learn about the oceans. 2. Explain the following terms: salinity, temperature, and density. Describe how these important properties of seawater are measured by an oceanographer. Discuss the circulation and currents of the ocean. Describe the effects of the oceans on weather and climate. 4. Draw a cross-section of underwater topography. Name and put on your drawing the following: seamount, guyot, rift valley, canyon, trench, and oceanic ridge. Compare the depths in the oceans with the heights of mountains on land. Show what is meant by:	Candice Stark cstark53@gmail.com

	(a) Continental shelf (b) Continental slope (c) Abyssal plain 5. List the main salts, gases, and nutrients in seawater. Describe some important properties of water. Tell how the animals and plants of the ocean affect the chemical composition of seawater. Explain how differences in evaporation and precipitation affect the salt content of the oceans. 8. Do ONE of the following: **(a)** Write a 500-word report on a book about oceanography approved by your counselor. **(b)** Visit one of the following and write a 500-word report about your visit. (1) Oceanographic research ship (2) Oceanographic institute, marine laboratory, or **(c)** Explain to your troop, in a five-minute prepared speech, "Why Oceanography Is Important" or describe "Career Opportunities in Oceanography." (Before making your speech, show your speech outline to your counselor for approval.)	
Weather	No Pre-Requisites.	Robyn Russotto rrussotto87@gmail.com

Communications with Merit Badge Counselors:

Each scout should get in touch with their merit badge counselor between the two sessions with any questions. Reminder, all communications with merit badge counselors should comply with The Guide to Safe Scouting and Barriers to Abuse. **Scouts must include a parent/guardian on all communications with merit badge counselors.**

If all merit badge requirements are not completed, the scout may need to find another merit badge counselor after the merit badge college concludes.

Cell phones should be silenced throughout the event and only used with the permission of the merit badge counselor or in an emergency.

Scout Equipment:

- Pencil or pen.
- Notebook or paper.
- A merit badge pamphlet for each merit badge is recommended. Merit badge pamphlets are available online at https://www.scouting.org/skills/merit-badges/digital-resource-guides/
- List of the current merit badge requirements, we will be using the merit badge requirements as written for 2026.

Uniform: The official BSA field uniform is appropriate. Uniform serves as a security measure and as your “meal ticket” in the dining hall.

Volunteer Opportunities

This event would not be possible without a group of dedicated volunteers. If you are interested in volunteering to assist with this event, please contact the event chair.

All volunteers should report for registration at 8:00am.

Meals

Meals are included in the registration fee for this event. If a scout wishes to pack a lunch, please refrain from bringing fast food.

Volunteer event staff will be provided with lunch in the dining hall.

Cancellation

This event is “rain or shine” and will only be canceled in the event of unsafe conditions as a result of severe weather. Cancellation and refunds will follow the New Birth of Freedom Council Year-Round Camping Policies. Notifications related to cancelations will be made via email.

Pioneer District

This event is organized by the Pioneer District of the New Birth of Freedom Council. The Pioneer District serves Scouts within the Camp Hill, Carlisle, South Middleton, Mechanicsburg, Cumberland Valley, East Pennsboro, West Shore and Northern York County School Districts.



Sal Franqui, District Director
sal.franqui@scouting.org
717-333-4846

Justin Eberly, District Chair
justin.eberly@gmail.com
717-448-3183

G.K. Cunningham, District Commissioner
gkc-nbofbsa@outlook.com
717-737-2231

Point of Contact

Jennifer Vogel
ldstrek@comcast.net
570-881-5585

Sign Up for the Pioneer District Newsletter!

Stay updated with news and information from the Pioneer District, New Birth of Freedom Council, delivered straight to your inbox.

lhttps://newbirthoffreedom.org/districts/pioneer/