

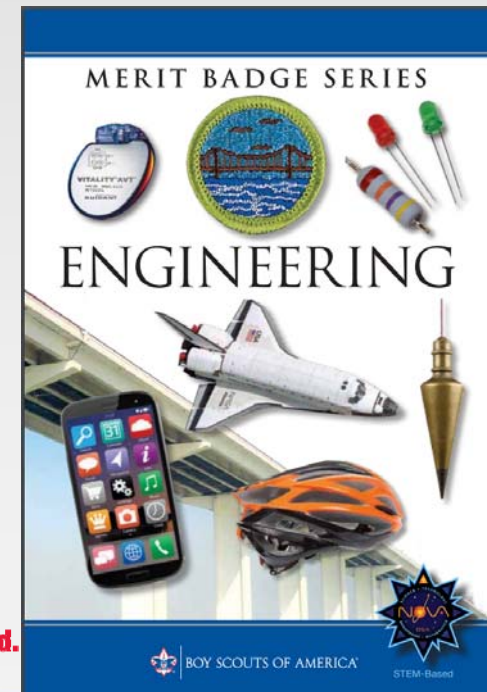
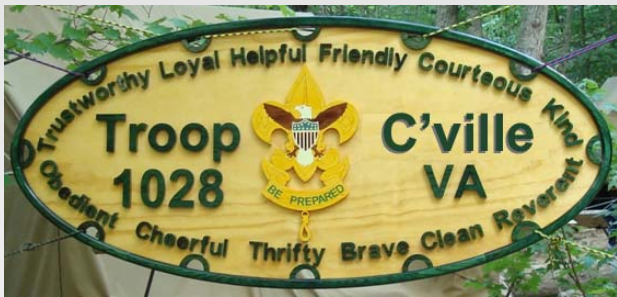


BOY SCOUTS OF AMERICA®  
VIRGINIA HEADWATERS COUNCIL



# Engineering Merit Badge: Rules and Introduction

Eric Cutright, SM Troop 1028/9, June 2020





# Rules and Introduction - Outline



- **Virginia Headwaters Council (VAHC) Zoom rules**
  - Video / microphones rules
  - Chat and Question / Answer rules
  - Mr. Eric's online and Zoom common courtesy guidelines
- **Meet Mr. Eric - your crazy MB Counselor (MBC)**
  - What does he do in real life? Does he have kids?
  - Why is he teaching this class? What is on his arms?
  - Is he *really* as crazy as everyone says? (YES)
- **What do you have to do to complete this Badge?**
- **Rules for pictures and emailing your MBC**





# Virginia Headwaters Council (VAHC) Zoom Rules



- **Scout video and microphone usage is blocked**
  - Per Youth Protection guidelines for your protection
- **Ask any questions via Q/A board, raise hand, or chat**
  - Please don't bomb or spam these tools, this is your only allowed online interaction with your MBC
  - Mr. Eric has helpers monitoring these, but I probably won't notice them right away – be patient
  - Be respectful – see my courtesy guidelines on next slide
- **Disciplinary action**
  - I have several panelists helping me monitor activity today
  - One warning, and you will be ejected from class if you persist
  - Panelists may have to interrupt us today, which is NO FUN

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# Mr. Eric's Zoom Common Courtesy Guidelines

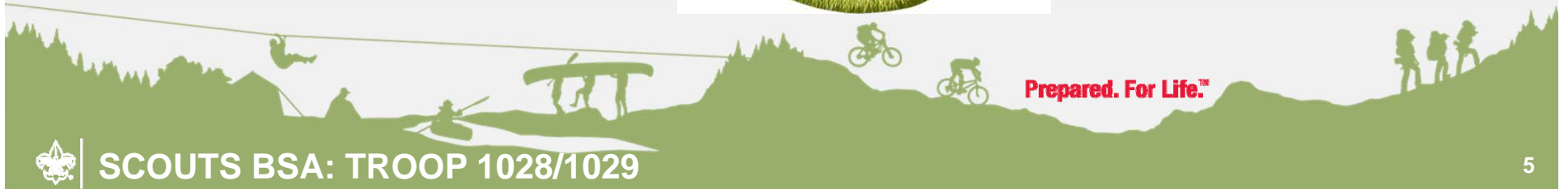


- **Remember a few key points of the Scout Law to guide you before you interact online**
  - Be Kind – NO this is boring, when do we get to the fun stuff, etc.
  - Be Courteous – remember, I'm teaching this class to help YOU
  - Be Clean – no inappropriate language
  - Would you be OK with your parents seeing what you typed?
- **A Scout is Helpful needs some explanation:**
  - Scouts can monitor chat and Q/A, but let your MBC or the class panelists answer any questions
  - I probably won't notice questions right away – be patient
- **Get parental permission before going to websites that I reference in this class**





# Meet your crazy Merit Badge Counselor !



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# Meet Mr. Eric - Your Crazy Merit Badge Counselor – 1/4



- **I've been a Scout Leader for 15 years**
  - For the past 4 years, I've been SM for boy's Troop 1028 in Charlottesville, VA (56 Scouts)
  - In July, I'm switching to be SM of girl's Troop 1029 (15 Scouts)
  - Before being SM, I was an ASM and before that, a Cub Scout leader in the mighty Pack 77 in Charlottesville, VA
  - I've been a Scouts BSA MBC for around 10 years, I teach 56 !!
  - I had a terrible Troop as a youth Scout, and didn't get very far ☹️
- **I have four sons**
  - Alec (21), Luke (18), Marc (16), Kyle (14)
  - I have 1.99 Eagle Scouts – Alec and soon Marc (sooo close)
  - I was their Den leader for all 5 ranks in Cub Scouting (lots of PWD cars!)

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# Meet Mr. Eric - Your Crazy Merit Badge Counselor – 2/4



- **Mr. Eric's job #2 (Scouts is #1, duh!) – Electrical Engineer**
  - B.S., M.S., and Ph.D. in Electrical Engineering from UVA
  - I'm a safety engineer and safety assessor for advanced computer control systems used on subways and railroads
    - I make sure all the control software and hardware is reliable and safe before it goes into revenue service carrying passengers
    - If nothing bad happened to you on your last train or subway ride, you may have me to thank
    - I'm in a VERY specialized job – there are only about 20 engineers like me in the U.S.
    - I've worked on systems all over the world, but NYCT is my favorite!
    - You'll find out more about my job in session #4 on Thursday





# Meet Mr. Eric - Your Crazy Merit Badge Counselor – 3/4



- **Mr. Eric's job #3 – Fantasy book series author**
  - Cartouche Chronicles series for middle schoolers / young adults
  - Best described as a mix of Indiana Jones, Harry Potter, Stranger Things, and the Goonies – see [www.cartouchechronicles.com](http://www.cartouchechronicles.com)
  - CC1 is out on Amazon, CC2 being published in August, CC3 in 2021
  - I have two “magical” Egyptian hieroglyphic arm tattoos that I designed myself from the books



Left: LOST  
(the bad guys)



Right: ASIM  
(the good guys)







# Meet Mr. Eric - Your Crazy Merit Badge Counselor – 4/4



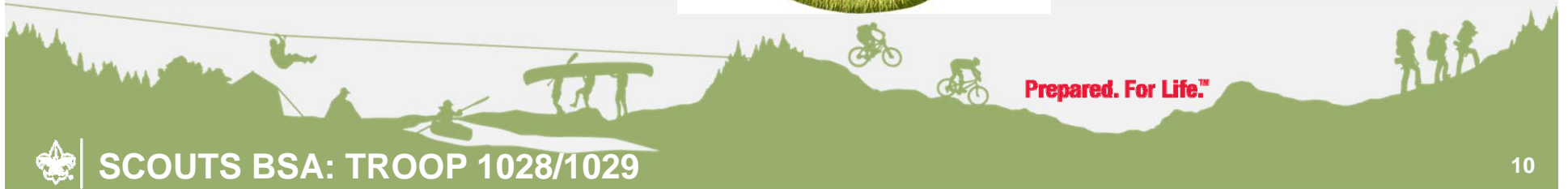
- I'm a registered MBC for 56 Merit Badges, here are my top ten very most favorites (it was very hard to choose!)
  1. Archaeology – I teach this at Moose and various MBUs
  2. Engineering – thanks for joining me!
  3. Model Design and Building - neckerchief slides are fun!
  4. Woodwork – I make furniture, our gateway sign, cool Scout stuff
  5. Home Repairs – I built my own basement and workshop
  6. Kayaking – my favorite water sport – have 3 kayaks & a SUP
  7. Railroading (I taught it at the National Jambo 2013!)
  8. Reptile and Amphibian Study – Lenny the leopard gecko rules!
  9. Wilderness Survival – most of my Scouts usually survive!
  10. Reading & Scholarship (tied) – I blame it on my books!

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**OK Mr. Eric, but how  
do I actually earn  
this MB?**



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# Earning this Merit Badge with Mr. Eric – 1/6



- **Everything I will cover is online at [www.troop1028.org](http://www.troop1028.org)**
  - Navigate from our home page or go directly there:  
[www.troop1028.org/engineering-merit-badge.html](http://www.troop1028.org/engineering-merit-badge.html)
- **Most of the class is presentation based**
  - Each requirement is marked for easy reference as we go
- **You HAVE to fill out the complete workbook for all requirements and email it to me (CC your parents!)**
  - Filling it out electronically in pdf is easiest – free Adobe Acrobat
  - During class, just listen and have fun, don't fill out the workbook
  - Read the requirements carefully – for some you get to pick different combinations





# Earning this Merit Badge with Mr. Eric – 2/6



- Use the space provided in the workbook as a guide for how much you should write

1. Select a manufactured item in your home (such as a toy or an appliance) and, under adult supervision and with the approval of your counselor, investigate how and why it works as it does.


- If you don't write enough, I will ask you to redo it!
  - And writing in a giant font size just to fill the box is not OK 😊
- Fill it out electronically in pdf in one file, I really don't want to get an individual scan/picture of every page 😞





# Earning this Merit Badge with Mr. Eric – 3/6



- **You must attend all online sessions**
  - If you need to miss one, email me (CC your parents!)
- **There will be homework assignments for you to complete outside of class**
  - For these, I will have suggestions, but you can pick something else with my approval first
  - You can't use something you have not done recently (i.e. from before your SM gave you approval to take this class)
  - If you want to negotiate, email me to discuss (CC your parents!)
  - **Bottom line: Keep me in the loop if you want me to sign you off on this badge**





## Earning this Merit Badge with Mr. Eric – 4/6



- You will have some projects to do at home which you must document for me with pictures
- Here are the rules for pictures:
  - I love pictures with Scouts in them, but you cannot wear name badges or hold signs that show your complete name, address, email or anything else that can be used to identify you – first names only please (first letter of last name is OK too if you want)
  - I may show your pictures as “do it this way” examples during our online sessions, I will never use them as “don’t do it this way”





## Earning this Merit Badge with Mr. Eric – 5/6



- You will have to email me your completed workbook and any project photos
- My email is: [ericcutright@comcast.net](mailto:ericcutright@comcast.net)
- Per YPT rules, you must copy at least one parent on all emails to me
  - Once I get an email from you, I will respond with a copy to your parent(s)
  - If you don't get a quick reply from me, you probably forgot to copy a parent so I can't respond – double check what you sent





## Earning this Merit Badge with Mr. Eric – 6/6



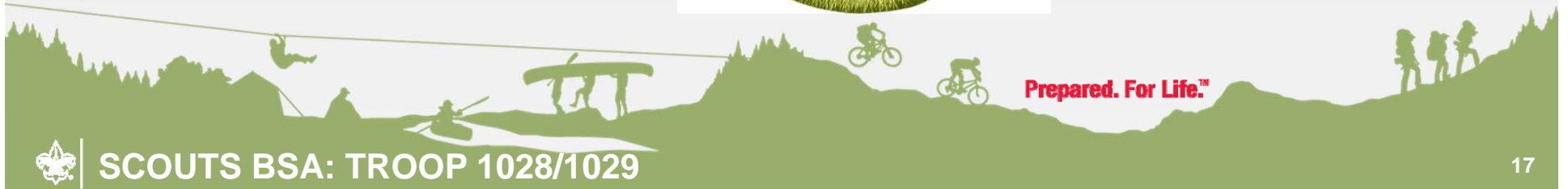
- This is a NO BLUE CARD online class, when you complete the MB, you get credit 1 of 2 ways
  - If Scoutbook cooperates, I will connect with your Scoutbook account and sign you off as finished, OR
  - I will send you (and a parent) an email stating that you have completed the MB which you can then give to your SM / AC
- **But dude, what if I don't finish this week?**
  - You have until age 18 to finish - I'm happy to help you, but...
  - If you don't finish, let me sign you off on whatever you completed SOON so that YOU and I have a record of what you finished
  - You can then finish with me OR any other Engineering MBC







**Enough of the boring stuff, let's get started already!**



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