

# Introduction to STEM for Cub and Boy Scouts



# NOVA Counselor & Supernova Mentor Training

*Greater St Louis Area Council  
University of Scouting*

**28 Jan 2017**

**Ward Walker**

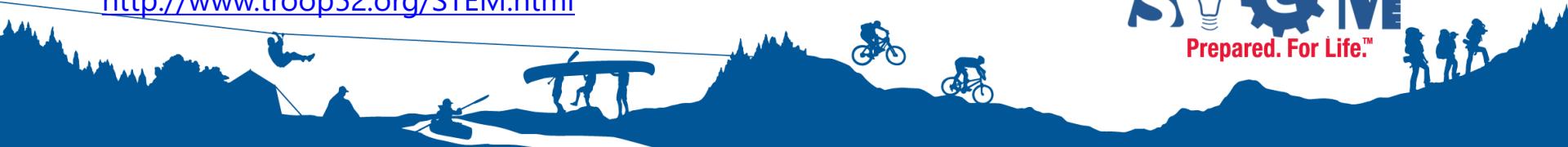
Troop/Crew 52 (SC)

ScoutMaster

Nova Counselor & Supernova Mentor

LCC STEM Committee Mbr

<http://www.troop52.org/STEM.html>

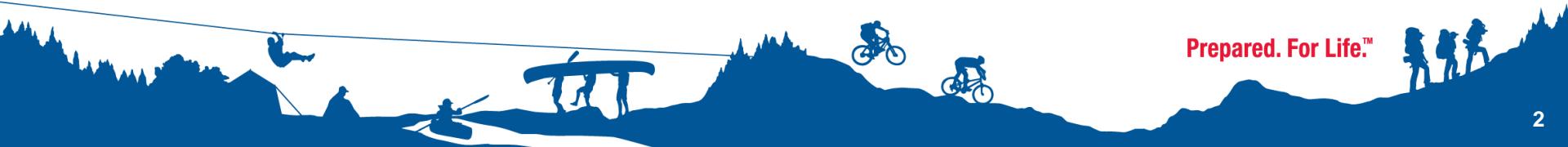




# Learning Objectives



- **Introductions**
- **The Aims & Methods of Scouting**
- **Overview of the BSA Nova Program**
  - Role of Adults
- **The Nova counselor / mentor role**
  - Duties, responsibilities and requirements
- **Methods of counseling and coaching**
- **Guide a Scout through the process**



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# The Scouting Rubric

## The Aims of Scouting

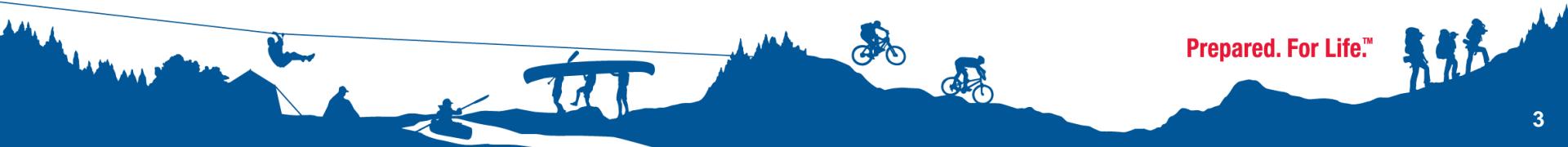
- Character Development
- Citizenship
- Personal Fitness

## The Methods of Scouting

- Ideals of Scouting (Oath, Law, Motto, etc.)
- Patrol (Den, Crew) Method
- Outdoor Program

- Advancement
- Association with Adults
- Personal Growth
- Leadership Development
- Uniform

Nova  
Program



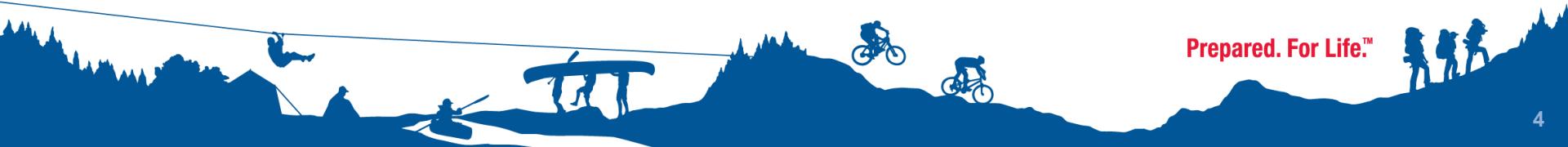
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# The STEM Problem



- Our country is falling behind in **Science, Technology, Engineering and Mathematics (STEM)**
  - Only 43 percent of U.S. high school graduates in 2010 were ready for college work in math and 29 percent were ready in science.
- **STEM education is an economic imperative**
  - Experts say that technological innovation accounted for almost half of U.S. economic growth over the past 50 years, and almost all of the 30 fastest-growing occupations in the next decade will require at least some background in STEM.
- **STEM literacy has a profound and growing impact on our day-to-day lives**
  - The National Science Foundation “estimates that 80% of the jobs created in the next decade will require some form of math and science skills.”



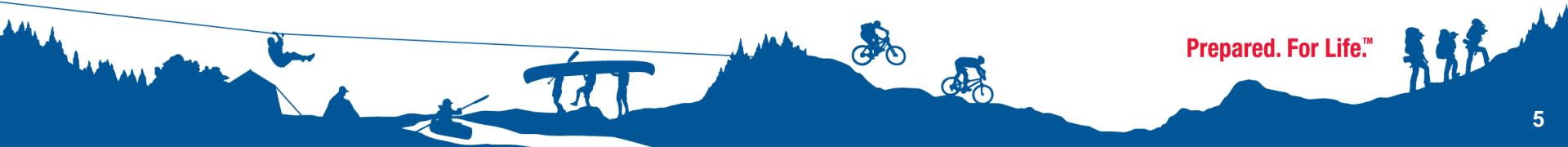


# The BSA Response



+ STEM =

**science \* technology  
engineering \* math**



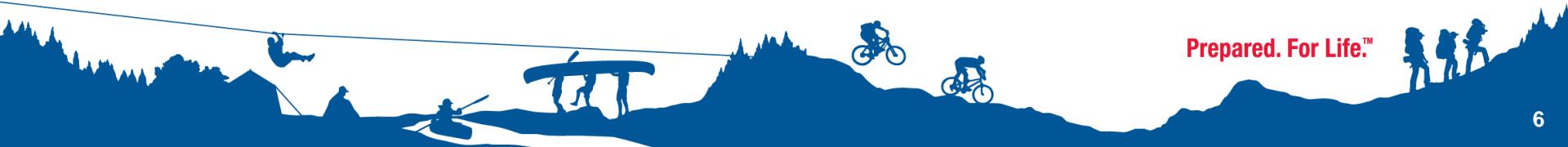
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# The BSA Response



- The BSA has partnered with ExxonMobil to increase STEM awareness in youth and offer them the opportunities to “Be Prepared for Life”
- BSA created the Nova and Supernova Awards Programs
  - Youth Program, Adult Roles, Leader Support, and Awards
  - Field tested, refined, and improved in two trials (2 years)
  - Development of manuals
  - National Roll-Out in mid-July 2012





# Nova / Supernova Programs



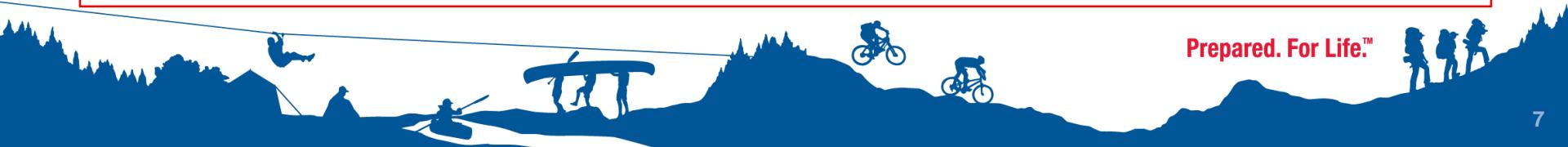
## • Nova Program

- Based on accomplishment of existing program activities (belt loops, merit badges, venturing activity areas)
- Extends and enhances existing program activities
- Adult counselors familiar with STEM topics guide explorations and provide advancement quality control

## • Supernova Program

- Significant accomplishment extending program activities
- Learn some fundamentals of the topic areas
- Do Original STEM investigations and projects
- Adult mentors who are accomplished STEM practitioners guide explorations and provide advancement quality control

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# STEM in Scouting



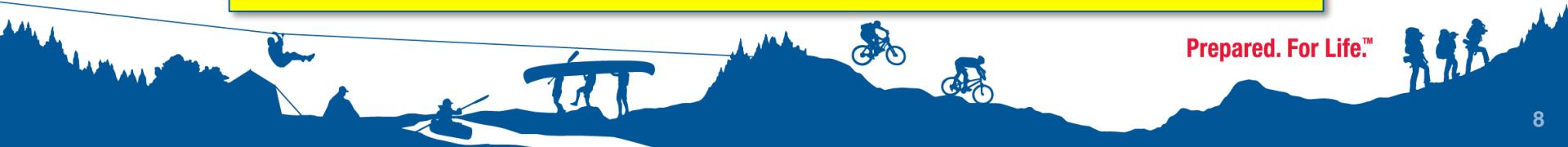
- **Scouting has always included Science Technology Engineering and Mathematics (STEM) topics**
  - But the content is often hidden in other activities



- **Scouting focuses on outdoor program**
  - Not every youth wants to be a Dan Beard or Daniel Boone. Some want to be a Neil Armstrong, Bill Gates, or Albert Einstein.

**The Nova / Supernova Programs highlight the STEM content in the existing program and add new activities and awards.**

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# What Are Nova Awards?

**Wrong Patch!**



**Wrong Patch!**



	Science	Technology	Engineering	Mathematics
Cub Scouts, Webelos	Science Everywhere	Tech Talk	Swing!	1-2-3 Go!
Boy Scouts, Varsity	Shoot!	Start Your Engines	Whoosh!	Designed to Crunch
Venturing	Launch!	Power Up	Hang On!	Numbers Don't Lie

Nova Award patches are color coded by program: Blue for Cub Scouts, Red for Boy Scouts, Green for Venture Crew [coming soon]. Nova patches and pins are available from your local Scout Shop; check with the unit advancement chair. The first award is the patch; the next three awards are pins that affix to the E / S / W points.

**...and MORE on the Way!**

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# Supernova Awards



**Dr. Sally Ride**  
Bronze medal



**Wright Brothers**  
Silver medal  
(Must be a registered Venturer)



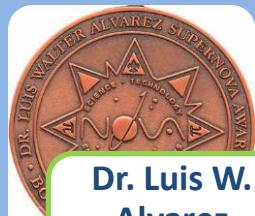
**Dr. Albert Einstein**  
Gold medal  
(Must be a registered Venturer)



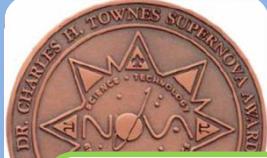
**Dr. Bernard Harris**  
Bronze medal



**Thomas Alva Edison**  
Silver medal



**Dr. Luis W. Alvarez**  
Wolf/Bear Cub Scout  
Bronze medal



**Dr. Charles H. Townes**  
Webelos Scout  
Bronze medal

## Venturing



## Boy Scouts

## Cub Scouts



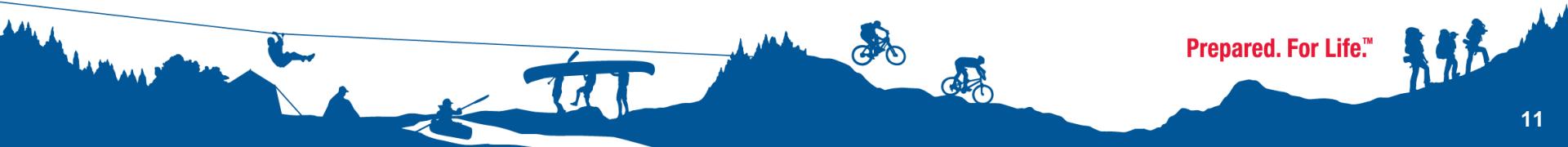


# Nova / Supernova Format



- Familiarization
- Exploration
- Relevance

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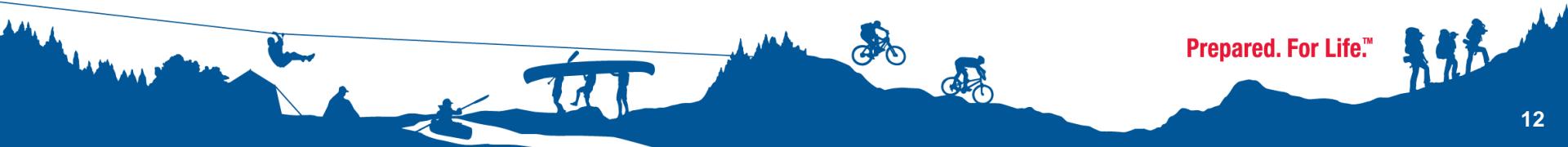




# BSA STEM Adult Roles



- **Unit Cyber Chip Facilitator**
- **Unit STEM Coordinator**
- **Nova Counselor**
- **Supernova Mentor**
- **STEM Nova Program member/chair**
  - District, Council and National levels
- **STEM Camp staff**
  - Summer camp, camporees, Jamboree, etc
- **Supporter / promoter / financial sponsor**



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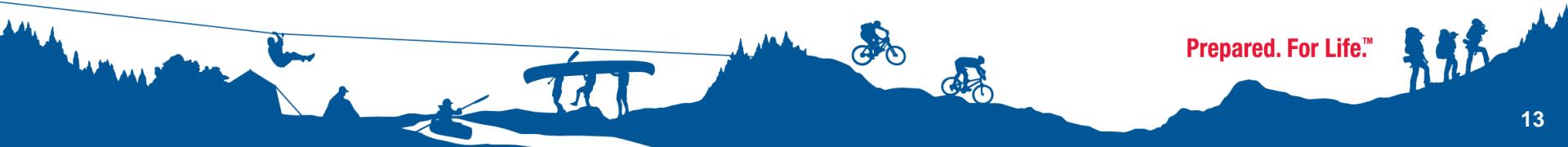
# Unit Cyber Chip Facilitator



- A current Cyber Chip is required for some Boy Scout Rank Advancement, and on any Merit Badge / etc that will require use of the Internet
- It is helpful for a unit adult to organize & document annual Cyber Chip training
  - Whenever possible, have the Scouts conduct the training
- Be prepared with cards & patches!
  - Cyber Chip doesn't use BSA standard coloring: Boy Scouts are Green here, not Red!



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# Cyber CHIP

## LEVEL II CYBER CHIP CARD

THIS IS TO CERTIFY THAT THE BEARER

Has read the Internet safety rules at

[www.scouting.org/cyberchip](http://www.scouting.org/cyberchip).

He knows how to be responsible online and what to do if he discovers unsafe Internet practices. He accepts this responsibility and is hereby

granted Cyber Rights.



BOY SCOUTS OF AMERICA®

CUBMASTER



### INTERNET SAFETY PLEDGE

- 1 I will tell my trusted adult if anything makes me feel sad, scared, confused, or uncomfortable.
- 2 I will ask my trusted adult before posting photos or sharing information like my name, address, current location, or phone number.
- 3 I won't meet face-to-face with anyone I meet in the digital world.
- 4 I will respect the online property of others.
- 5 I will always use good "netiquette" and not be rude or mean online.

SCOUT'S SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_

RECHARGE \_\_\_\_\_

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THIS IS TO CERTIFY THAT THE BEARER

Has read the Internet safety rules at

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He knows how to be responsible online and what to do if he discovers unsafe Internet practices. He accepts this responsibility and is hereby

granted Cyber Rights.



BOY SCOUTS OF AMERICA®

UNIT LEADER



### INTERNET SAFETY PLEDGE

- 1 I will think before I post.
- 2 I will respect other people online.
- 3 I will respect digital media ownership.
- 4 I won't meet face-to-face with anyone I meet in the digital world unless I have my parent's permission.
- 5 I will protect myself online.

SCOUT'S SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_

RECHARGE \_\_\_\_\_

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**E** Explain

**D** Demonstrate

**G** Guide

**E** Enable

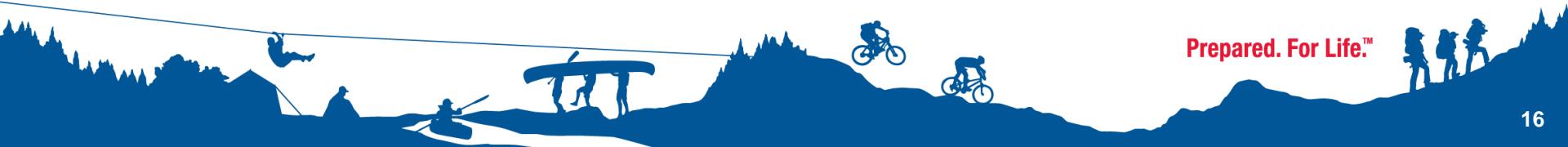
Grades 4 – 5 (“First Year” Scouts)	Grades 6 – 8 (“Middle School” Scouts)	Grades 9 – 12 (“High School” Scouts)
1. Read, commit to, and sign the Level I Internet Safety Pledge. (BSA Cyber Chip blue card)	1. Read and sign the Level II Internet Safety Pledge from NetSmartz. (BSA Cyber Chip green card)	1. Read and sign the Level II Internet Safety Pledge. (BSA Cyber Chip green card)
	2. Write and sign a personalized contract with your parent or guardian that outlines rules for using the computer and mobile devices, including what you can download, what you can post, and consequences for inappropriate use.	2. Write and sign a personalized contract with your parent or guardian that outlines rules for using the computer and mobile devices, including what you can download, what you can post, and consequences for inappropriate use.
		3. Discuss with your parents the benefits and potential dangers teenagers might experience when using social media. Give examples of each.
2. Watch the video “The Password Rap” and another video of your choosing. <a href="http://NetSmartz.org/scouting">NetSmartz.org/scouting</a> )	3. Watch the video “Friend or Fake,” along with two additional videos of your choosing, to see how friends can help each other to stay safe online. <a href="http://www.netsmartz.org/scouting">www.netsmartz.org/scouting</a> )	4. Watch three “Real-Life Story” videos to learn the impact on teens. <a href="http://www.netsmartz.org/scouting">www.netsmartz.org/scouting</a> )
3. As an individual or with your den, use the Teachable Recipes to demonstrate Internet safety rules to your den leader, den, or pack. <a href="http://NetSmartz.org/scouting">NetSmartz.org/scouting</a> )  <b>*** REQUIRES PREP / SUPPLIES ***</b>	4. As an individual or with your patrol, use the EDGE method and mini lessons to teach Internet safety rules, behavior, and “netiquette” to your troop or another patrol. You are encouraged to use any additional material and information you have researched. Each member of the patrol must have a role and present part of the lesson. <a href="http://www.netsmartz.org/scouting">www.netsmartz.org/scouting</a> )	5. As an individual or patrol, use the EDGE method and the Student Project Kit to teach Internet safety rules, behavior, and “netiquette” to your troop or another patrol. You are encouraged to use any additional material and information you have researched. Each member of the patrol must have a role and present part of the lesson. <a href="http://www.netsmartz.org/scouting">www.netsmartz.org/scouting</a> )
4. Discuss with your unit leader the acceptable standards and practices for using allowed electronic devices, such as phones and games, at your meetings and other Scouting events.	5. Discuss with your unit leader the acceptable standards and practices for using allowed electronic devices, such as phones and games, at your meetings and other Scouting events.	6. Discuss with your unit leader the acceptable standards and practices for using allowed electronic devices such as phones and games at your meetings and other Scouting events.



# Unit STEM Coordinator



- **Unit Contact person for all things STEM related**
- **Trained at a STEM Counselor / Mentor course ☺**
  - Does not need to be a STEM Supernova Mentor
- **Promote the program to scouts and parents**
- **Help scouts with ideas on how they can earn the Nova and Supernova awards**
- **Work with leaders to add fun STEM activities to meetings and outings**
- **Work with the advancement chairperson to ensure Nova Awards are recorded and presented**



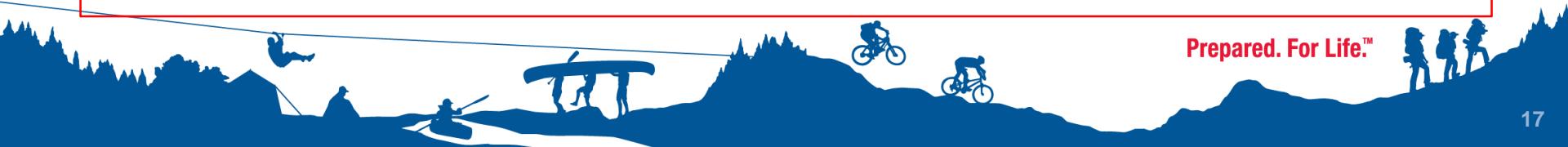
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# What is a Counselor / Mentor?



- **Nova Counselors**
  - Adults with little to some knowledge in STEM topics
    - Need not be professionals or experts
    - Willing to research and study to be ready to guide participants
  - Guide youth participants in research and experiences
  - Maintain quality and safety in Program
- **Supernova Mentors**
  - Adults with expertise in STEM topics
    - Professional-level engineers, scientists, educators and hobbyists who use STEM skills often
  - Guide youth in significant accomplishments in STEM topics
  - Maintain quality and safety



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# Who Can Be a Nova Counselor?



- **Have you ever played baseball, golf, football, bowling, archery, etc.?**
  - You understand motion of objects
- **Have you ever cooked, built things, worked in the garden, ran a race, did construction, etc.?**
  - You know how to measure things and make calculations
- **Have you ever gone fishing, dug a hole, rode a bike, hit a baseball, fixed a car or bike, etc.?**
  - You understand simple machines
- **Have you ever walked, drove a car, sailed a boat, or enjoyed AC?**
  - You understand energy production and use
- **Have you ever read a book or researched on the internet?**
  - You understand how to prepare to help the participants

**Anyone who understands the material and can guide learning can be a Nova Counselor**

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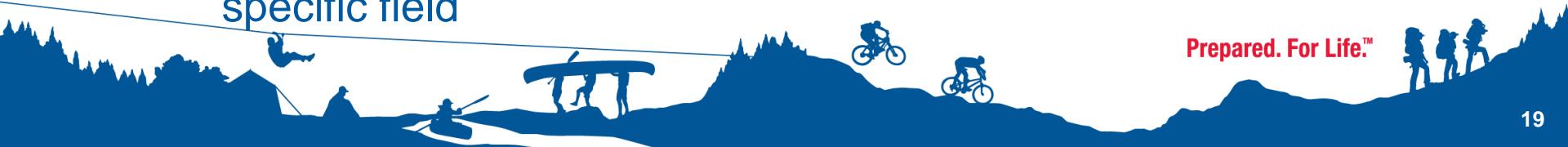




# Who Can Be a Supernova Mentor?



- **Accomplished and knowledgeable in STEM**
  - Engineers, Scientists, Accountants, Software Engineers, HAM Radio experts, Educators, Contracts Experts, Doctors, Meteorologists
- **Able to guide youth participants to significant accomplishments in STEM topics**
  - Provide guidance and experiences, but not overt teaching
  - Support explorations of STEM ideas and projects in depth
  - May take many months to accomplish Supernova activities
- **Do NOT need to have a specific STEM background**
  - Supernova activities involve science applicable to all STEM fields
  - Possibly at the Einstein Supernova level – may need an expert in a specific field



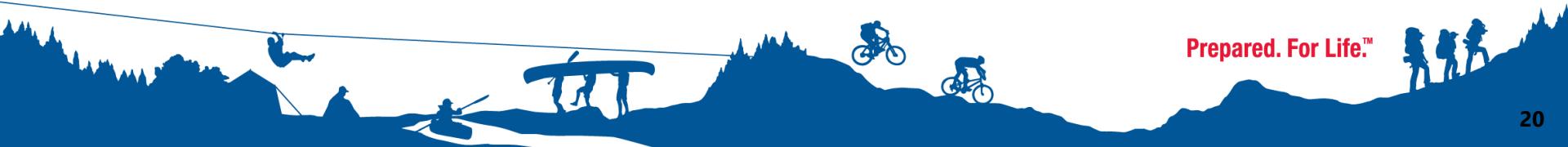
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# Counselor / Mentor Role in Nova Activities



- **Be a teacher and coach**
  - Help participant develop questions, interests, research ideas and answers
  - Guide participant in project setup and execution
    - Safety and resource management
    - Data collection and analysis
    - Reporting results and extracting meaning of results
- **Inspire discussion of project activity and help them understand conclusions**
- **Encourage completion of activities**
  - Verify requirements for awards are met
  - Ensure consistency across all participants over time
- **Verify safety and youth protection**





# Counselor / Mentor Requirements



Nova Counselors	Supernova Mentors
Must be age 21 or older <b>(registered under the Nova Awards counselor position code 58.</b> This is a non-unit position and requires no fee)	Must be age 21 or older and <b>registered under the Nova Awards counselor position code 52.</b> This is a non-unit position and requires no fee
Youth Protection Trained	Youth Protection Trained
Training would be helpful	Nova Counselor/Mentor Trained
Can be a parent or scout leader	<b>NOT</b> the parent or Unit Leader of your participant (unless leading more than your own child)
Able to guide participant activities	Able to guide participant activities over many months
Knowledgeable in STEM topics (is able to research topics)	Expert in STEM topics and guiding students
	Approved by the Council Nova Committee (Supernova Mentor Application)



# How to Counsel – You Can Do It !



## 1. Get the Nova Award handbook and review it.

Check out the section in the back for the Nova Counselors and Supernova Mentors that explains some of the concepts.

## 2. When a Scout selects you as his or her Counselor/Mentor, arrange for the first meeting (public place).

Follow Youth Protection guidelines.

## 3. At the first meeting or prior, determine which Nova/Supernova Award the Scout has selected (which Supernova activities) and discuss the scouts plan to complete the award. Verify the Scout has permission of the unit leader to work on this award.

- It is helpful to have a “card”/worksheet to mark completed requirements. Review the requirements with the Scout. Work out a schedule for working on the award. Decide when the next meeting will be.



# Nova Sign-off cards



## Nova Award Application

This is to certify that (name) \_\_\_\_\_

in (circle) Pack/Troop/Crew # \_\_\_\_\_ has completed the above-named Nova achievement. A Nova Counselor has initialed and dated each requirement as completed.

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_ 7 \_\_\_\_\_

I certify that all requirements have been completed properly.

Counselor Name/Date \_\_\_\_\_

Counselor Signature \_\_\_\_\_

Unit leader should present this card and an advancement report to the local Scout Shop to purchase awards.

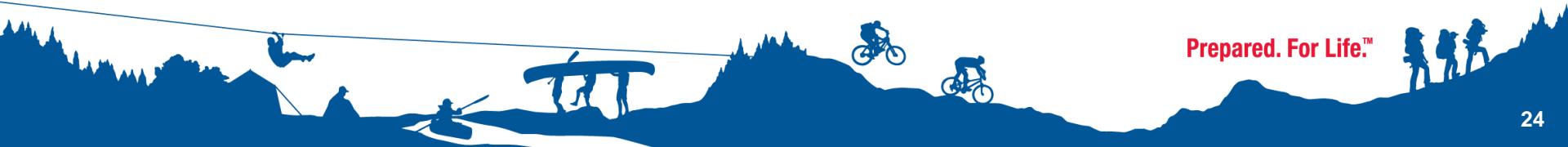
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# How to Counsel – You Can Do It !



4. At the next meeting, work with the Scout on the different activities. Help them be successful. Help them get the big picture and see the key ideas. Keep it interesting and have fun.
5. At the meetings, when the Scout is ready, ensure they have met the requirements as stated. No more and no less. If working with a group of Scouts, each Scout must accomplish the requirements.
6. When all of the requirements are met, note completion on the “card”, worksheet, or handbook.
  - The Counselor must sign the card to prove completion (?). Note partial completions if necessary, and encourage them to try again.
  - The Mentor will sign a Supernova Award application form.



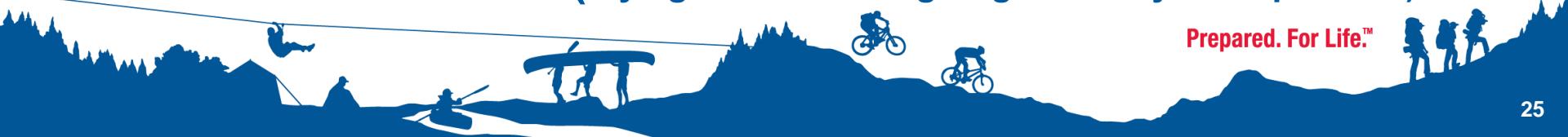
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# Best Practices (1)



- Every unit should have a Nova STEM Coordinator
- Trained Leader - Nova Counselor / Supernova training; EDGE
- Know the activities (Nova activity kits? / Supernova activities)
- Safety first!
  - Ensure that proper safety equipment and procedures are used. Maintain discipline. Avoid damage or injury. Ensure that people are paying attention.
- Be Flexible
- When the Scout develops questions...
  - Questions you don't know the answer to are an opportunity to look up together. Make a note of common questions so you can look them up ahead of time.
- Show them, then let them do it
- Be success oriented (Try again if it didn't go right or they need practice)



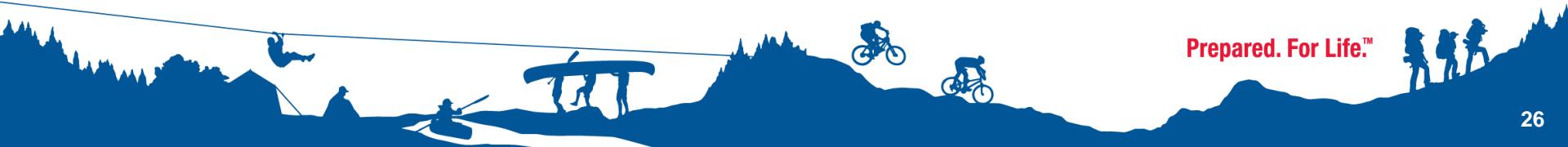
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# Best Practices (2)



- **Ask the Scout questions (To help them discover the key points)**
  - What did you do? Ask leading questions if necessary. “Compare and contrast …”, “What if …”, “Why did …”. Ask them how the key idea is used, influences other things, or affects them. Help them see the connections.
- **Adapt to attention span**
- **Develop Junior Scientists**
  - Let more experienced Scouts lead Nova activities. You should supervise and ensure that the activities are complete and the key ideas have been discovered.
- **Age Appropriate Expectations**
  - Remember the level of the Nova award and how much exposure to the topics the Scout may have. Don’t expect more/less than they can do & what the award requires.
- **Stay current. (New Nova Awards released occasionally / changes).**



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# Nova Reports

- **Report style for Nova and Supernova activities is up to the scout**
  - Oral
  - Written
  - Poster
  - Virtual poster
  - Video production
  - Any format of scouts own design with mentor's advance approval
- **Objective to communicate what was learned and how**



**Experiment Title:**

**Question:**

**Research:**

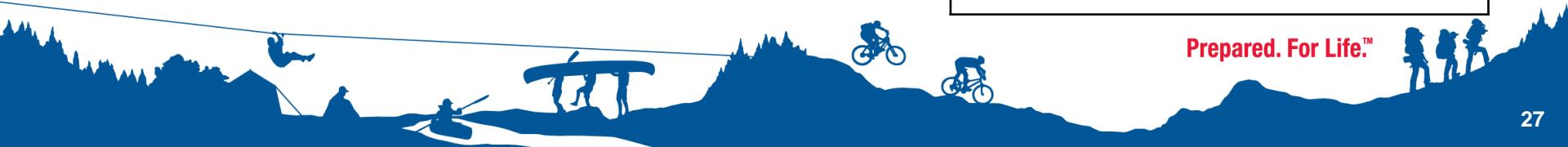
**Hypothesis:**

**Procedure:**

**Data:**

**Results:**

**Conclusions/New Experiments:**



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# Characteristics and Needs of Scouts



Program	Age and Experience	Group Structure	Learning Styles
Cub Scouts, Webelos	<ul style="list-style-type: none"><li>Boys</li><li>8 – 10 years old</li><li>Grade 2 – 4</li><li>Little math or science contact</li></ul>	<ul style="list-style-type: none"><li>Generally in Dens of 4 – 8 Scouts</li><li>adult leader</li></ul>	<ul style="list-style-type: none"><li>See and do</li><li>Tactile and visual</li><li>Structured Learning</li><li>Open to everything – no preconceived notions</li></ul>
Boy Scouts	<ul style="list-style-type: none"><li>Boys</li><li>11 – 18 years old</li><li>Grade 5 – 12</li><li>Some math and science education</li></ul>	<ul style="list-style-type: none"><li>Small groups of 2 to 8, with a buddy</li><li>Youth leader</li></ul>	<ul style="list-style-type: none"><li>See and do</li><li>Tactile and visual</li><li>Use EDGE teaching method</li><li>Eager to explore new worlds</li><li>Science may be seen as “too hard”</li></ul>
Varsity Scouts, Venturers	<ul style="list-style-type: none"><li>Young Men and /or Women</li><li>14 – 20 years old</li><li>Grades 8+</li></ul>	<ul style="list-style-type: none"><li>Groups of 2 or more (with a buddy)</li><li>Youth leader</li></ul>	<ul style="list-style-type: none"><li>See and do</li><li>Reflection, research, brainstorm</li><li>Self directed – Counselor is a team leader</li><li>Emulate adult as role model</li><li>Science and Math may be seen as “un-cool”</li></ul>

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# Tailor Your Teaching Method



## Coaching

Cub Scouts, Webelos,  
younger Boy Scouts

- Share knowledge
- Lead experiences
- Provide advice
- Teach Scout

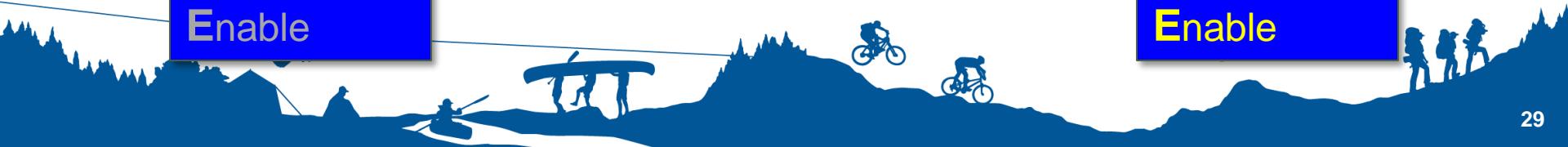
Explain  
Demonstrate  
Guide  
Enable

## Mentoring

Older Boy Scouts,  
Varsity, Venturers

- Share extensive experience
- Support explorations
- Guide activities
- Listen, guide thinking and analysis
- Help Scout learn on own

Explain  
Demonstrate  
Guide  
Enable

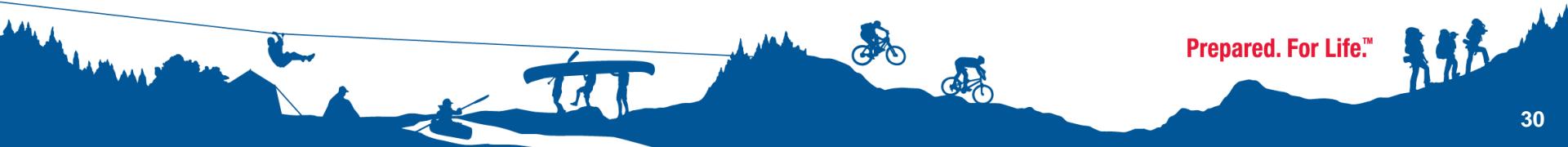




# Expectations and Outcomes



- Age-Appropriate Learning
- Interest
- Confidence
- Fun

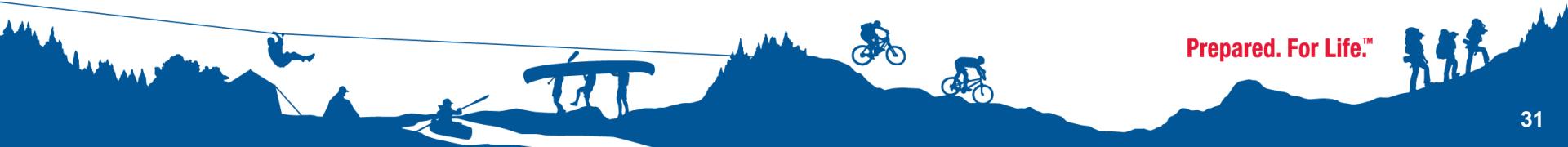




# Risk Mitigation



Situation	Risk	Mitigation
Scouts research topics on the Internet	<ul style="list-style-type: none"><li>Contact with inappropriate content</li><li>Susceptible to Cyber Bullying</li></ul>	 cyberCHIP Prepared. For Life.™
Scouts in contact with adults not known to them	<ul style="list-style-type: none"><li>Inappropriate contact</li><li>Allegations of inappropriate contact</li></ul>	<ul style="list-style-type: none"><li>Youth Protection training and policies</li><li>Youth follow Buddy System</li></ul>
Different levels of education or understanding of material	<ul style="list-style-type: none"><li>Missed program opportunities</li><li>Disrespect from/to peers</li><li>Bullying</li></ul>	<ul style="list-style-type: none"><li>Adjust teaching techniques to abilities and preparation level of Scouts</li><li>Maintain group discipline</li><li>“No Cheap Shots” policy</li></ul>
STEM activities contain hazards	<ul style="list-style-type: none"><li>Injury</li><li>Property damage</li></ul>	<ul style="list-style-type: none"><li>Use safety gear and practices</li><li>Maintain control of activities</li></ul>



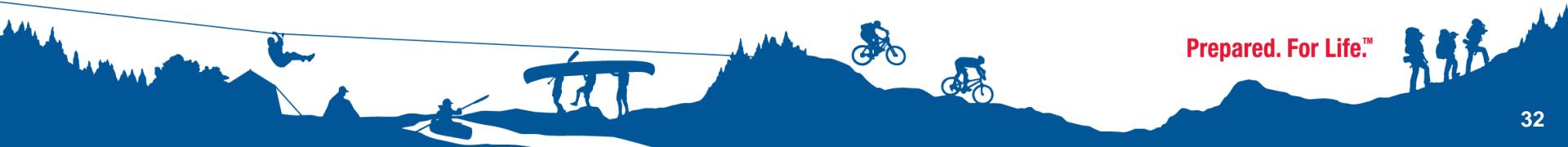
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# Completion of Award



- **Congratulate scout**
- **Inform unit leader**
- **Fill out paperwork**
  - BSA Advancement Report (No. 34403) as documentation for the Nova Award
    - Take advancement report to scout store to purchase
  - Supernova Award Application
    - Will need signatures – scout, mentor, unit leader, District advancement director, Council executive
    - Can take signed application to scout store to purchase medal
- **Celebrate awards with an appropriate ceremony**





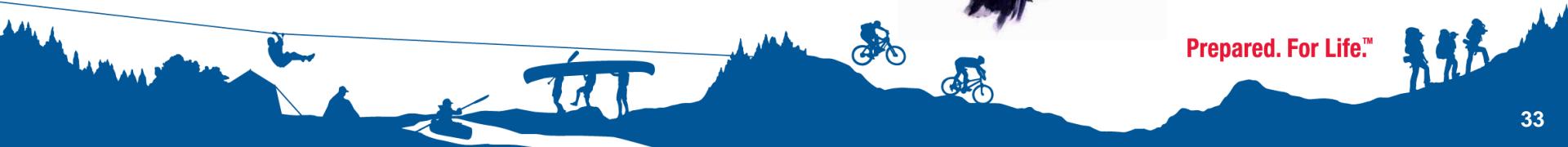
# Will You Be a Counselor or Mentor?



- **The Youth of Today and the America of Tomorrow need your support**
- **What's Next**
  - You have now completed Nova Counselor/Mentor Training
  - Complete the Counselor/Mentor registration process
    - Get Registered with BSA
    - Take Youth Protection training on-line
- **Share your STEM expertise**



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# Application Process



## Nova Counselor

1. BSA Adult application (code 58 for Nova Counselor)
2. Youth protection training certificate
3. Nova/Supernova training certificate

Submit copy of these 3 items to your Council/District STEM committee or Advancement chair

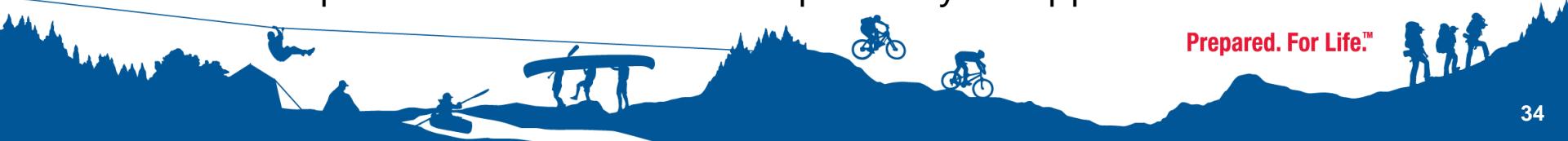
## BOTH Nova Counselor & Supernova Mentor

- TWO BSA Adult applications (use appropriate codes)
- Expect 4 weeks for Council to process your applications

## Supernova Mentor

1. BSA Adult application (code 52 for Supernova Mentor)
2. Youth protection training certificate
3. Nova/Supernova Mentor training certificate
4. SN Mentor application

Submit copy of these 4 items to your Council/District STEM committee or Advancement chair



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## ADULT APPLICATION

524-501

This form is read by machine. Please print the numbers and letters as shown: 1 2 3 4 5 6 7 8 9 0 A B C D E F G H I

The information obtained in this form is for the internal use of the BSA only.

Pack     Troop     Team     Crew     Ship    Unit No.

Council/district position

OR

District name

EXPIRE DATE  /  / TERM  MONTHS  New leader  Former leader If applicant has an unexpired membership certificate, registration may be accomplished at no charge by transferring the registration. Mark and attach a copy of the certificate.TRANSFER FROM:  COUNCIL NO. TYPE OF UNIT UNIT NO. 

Please print one letter in each space—press hard; you are making three copies.

First name (No initials or nicknames)

Middle name

Last name

Suffix Country  Mailing address US    City  State  Zip codeHome phone  -  -  Business phone  -  -  Ext.  X  Cell phone  -  - 

Date of birth (mm/dd/yyyy)

Ethnic background:

<input type="radio"/> Black/African American	<input type="radio"/> Native American	<input type="radio"/> Alaska Native	<input type="radio"/> Asian	Driver's license No.	State <input type="text"/>
<input type="radio"/> Caucasian/White	<input type="radio"/> Hispanic/Latino	<input type="radio"/> Pacific Islander	<input type="radio"/> Other		

Gender  M  F Social Security No. (required)  -  - Occupation Employer Country  Business address  City  State  Zip codePosition Code  Scouting position (description)  Are you an Eagle Scout?  Yes  No Date earned (mm/dd/yyyy)  /  / E-mail address  
(Select one)Work Home Boys' Life  
subscription 

I understand that:

a. The information that I have provided may be verified, by contacting persons or organizations named in this application, or by contacting any person or organization that may have informed me of my application. I hereby release the council, Boy Scouts of America, and the Boy Scouts of America, Inc., from all liability for any damage or expense resulting from such verification.

b. In signing this application, I am aware that the information I have given on this form is true and correct. I am aware of and agree to follow the BSA's Youth Protection policies and will complete Youth Protection training within 30 days of registering.

APPROVALS FOR UNIT SCOUTERS: We are unaware of anything contrary to the information stated in this application.

This application has been reviewed according to BSA procedures, and this applicant meets the leadership qualifications of the BSA.

52 Supernova Mentor  
58 Nova Counselor

Signature of unit committee chairman  Date Signature of chartered organization head or representative  Date (ACCEPTED) Signature of Scout executive or designee  Date APPROVAL FOR COUNCIL AND DISTRICT SCOUTERS  
We are unaware of anything contrary to the information stated in this application. This application has been reviewed according to BSA procedures, and this applicant meets the leadership qualifications of the BSA.Signature of Scout executive or designee  Date Signature of applicant Date \$  \$  \$  Date 

4001



BOY SCOUTS OF AMERICA

## SUPERNova AWARDS MENTOR INFORMATION

Name \_\_\_\_\_ Age \_\_\_\_\_

Business phone (\_\_\_\_\_) \_\_\_\_\_ Home phone (\_\_\_\_\_) \_\_\_\_\_

Mobile phone (\_\_\_\_\_) \_\_\_\_\_ Email \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip code \_\_\_\_\_

**To qualify as a Supernova awards mentor, you must**

- Be at least 21 years old.
- Be proficient in the Supernova topics by vocation, avocation, or special training.
- Be able to work with Scout-age youth.
- Be registered with the Boy Scouts of America.
- Be current with BSA Youth Protection training.

**As a Supernova awards mentor, I agree to**

- Follow the requirements of the Supernova award, making no deletions or additions, ensuring that the award standards are fair and uniform for all youth.
- Have a Scout or Venturer with a buddy or a second adult over age 18 present at all instructional sessions.
- Renew my registration annually if I plan to continue as a Supernova awards mentor.
- Follow all protocols outlined in BSA Youth Protection training.

	<b>Vocation</b> Is this subject in line with your job, business, or profession? If yes, give brief information on the reverse side.	<b>Avocation</b> Do you follow this subject as a hobby, having more than a "working knowledge" of the requirements? If yes, give brief information on the reverse side or in an attachment.	<b>Special training</b> If not, do you have any special training or other qualifications for this subject? If yes, give brief information on the reverse side or in an attachment.
<b>List Supernova topics you are qualified and willing to mentor here.</b>	1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____		

Attach additional sheets if necessary.

**CHECK ONE:** I wish to work only with \_\_\_\_\_ Unit No. \_\_\_\_\_This is a (check one)  Pack  Troop  Crew I wish to work with units in the following programs: Pack  Troop  Crew

Signature \_\_\_\_\_ Date \_\_\_\_\_

Note: The BSA Adult Registration Application must be attached.

Council approval by \_\_\_\_\_ Date \_\_\_\_\_

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# To find a Counselor / Mentor



- Check with your District or Council Advancement chair to find names of approved Counselors and Mentors
  - Council specific; may have a listing on their website

Screenshot of the St. Louis Area Council website (<http://stlbsa.org/achievement/advancement/merit-badge-counselors/>) showing the Merit Badge Counselors page.

The page features a large banner image of a Scout water skiing. The navigation bar includes links for ABOUT, PROGRAMS, ACTIVITIES/EVENTS, ACHIEVEMENT, TRAINING, DISTRICTS, JOIN, and GIVE.

**MERIT BADGE COUNSELORS**

Scouts wanting to earn a merit badge can use the Merit Badge Counselors list below to find a counselor who can help. A new interactive list is coming soon.

If you experience any issues with the Merit Badge Counselors list, contact Rhonda Schwartz at 314-256-3130 or [rhonda.schwartz@scouting.org](mailto:rhonda.schwartz@scouting.org).

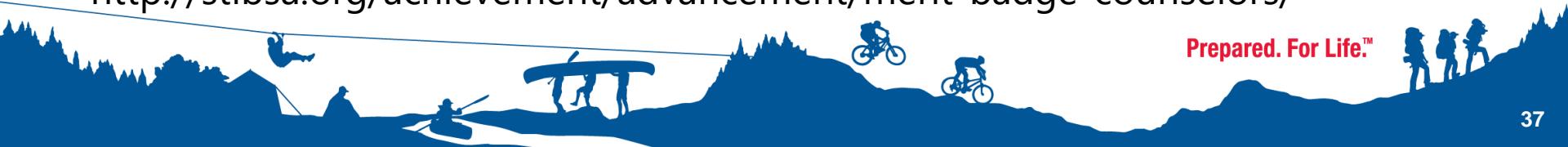
**Merit Badge Counselor Directory**

Interested in becoming a merit badge counselor? Simply fill out the [Merit Badge Counselor Application](#) and return it to your district advancement chairman.

Zink	Mike	Dardene Prairie	MO	63368 Boone Trails	314.740.0861	636.379.0409	mike_zink@rcn.com	Supernova Mentor
Jackson, Sr.	Ursula	Ursula	MO	63368 Boone Trails	314.577.39422	636.379.0409	ursula.jackson@charter.net	Supernova Mentor
Brown	Justin	Marion	IL	62959 Egyptian	314.942.0451	314.422.6338	jastin74@yahoo.com	Supernova Mentor
VanVooren	Michael	Baldwin	MO	63021 New Horizons	314.422.4058	314.422.4058	jcarine98@charter.net	Supernova Mentor
Gearhart	Matthew	Arnold	MO	63010 River Trails	636.282.9804	636.322.8111	tunmy@scglobal.net	Supernova Mentor
Scriven	John	St. Peters	MO	63376 Boone Trails	636.795.9251	636.795.9251	jscriven98@yahoo.com	Supernova Mentor
Rix	Justin	Marion	IL	62959 Egyptian	636.942.1151	314.421.6339	justin74@yahoo.com	Supernova Mentor
Scriven	John	St. Peters	MO	63376 Boone Trails	636.795.9251	636.795.9251	jscriven98@yahoo.com	Supernova Mentor
Byington	Ronald	O'Fallon	MO	63368 Boone Trails	314.409.0746	314.445.5564	mbelshous@qwest.net	Supernova Mentor
Emberton	Patrick	O'Fallon	MO	63368 Boone Trails	636.614.9165	636.614.9165	patrickemberton@gmail.com	Supernova Mentor
Gear	Jeffrey	Saint Charles	MO	63304 Boone Trails	314.517.6956	314.517.6956	gearar@ad.com	Supernova Mentor
Gurfen	Kevin	O Fallon	MO	63368 Boone Trails	636.240.2230	636.240.2230	geerim@centurylink.net	Supernova Mentor
Sessler	Christopher	Westerville	MO	63376 Boone Trails	314.409.4766	314.411.4386	chris.sessler@charter.net	Supernova Mentor
Venegasi	Mike	Saint Peters	MO	63376 Boone Trails	636.293.4418	636.293.4418	mike.venegasi@charter.net	Supernova Mentor
Kessey	Christopher	O Fallon	MO	63366 Boone Trails	618.534.8457	314.471.6339	chessey@qmail.net	Supernova Mentor
Calvert	Wesley	Carverville	IL	62918 Egyptian	636.942.1151	314.421.6339	justin74@yahoo.com	Supernova Mentor
Rix	Justin	Marion	IL	62959 Egyptian	314.409.2286	314.445.5564	tdgbastis@qwest.net	Supernova Mentor
Givens	Patrick	Saint Louis	MO	63119 Gravos Trail	631.409.3280	631.475.2695	tgivens@qwest.net	Supernova Mentor
Strange	James	Fenton	MO	63010 River Trails	636.379.0409	636.379.0409	strangej2012@gmail.com	Supernova Mentor
Stevens	Stephen	Saint Louis	MO	63109 Gravos Trail	314.420.1229	314.432.1564	steve2012@gmail.com	Supernova Mentor
Frost	Tony	Saint Louis	MO	63129 Gravos Trail	314.846.2300	314.501.8291	frost5@ameritech.net	Supernova Mentor
Beatty	James W	DuQuoin	IL	62832 Kaskaska	618.559.4074	618.559.4074	bbeatty76@hotmail.com	Supernova Mentor
Beatty	Tori	DuQuoin	MO	62832 Kaskaska	618.559.4074	618.559.4074	bbeatty76@hotmail.com	Supernova Mentor
Colletti	Ron	Wildwood	MO	63040 New Horizons	636.737.6678	636.737.6678	colletti1@att.net	Supernova Mentor
Conner	Teresa	Wildwood	MO	63040 New Horizons	314.579.3892	314.579.3892	teresa.conner@charter.net	Supernova Mentor
Codreyn	Elizabeth	Baldwin	MO	63011 New Horizons	314.650.0292	314.650.0292	codreyn@rmt.edu	Supernova Mentor
Fisher	Cheryl	Chesterfield	MO	63020 New Horizons	314.502.0442	314.502.0442	clfisherfamily@yahoo.com	Supernova Mentor
Garland	Jerry	Baldwin	MO	63021 New Horizons	314.651.0042	618.239.3265	jerry.mora2001@yahoo.com	Supernova Mentor
Grupe	Robert	Chesterfield	MO	63017 New Horizons	314.278.7901	314.278.7901	robert@grupe.com	Supernova Mentor
Habermann	David	Kirkwood	MO	63106 New Horizons	314.311.7897	314.311.7897	dhabermann123@gmail.com	Supernova Mentor
Ulberman	Debbie	Fenton	MO	63026 New Horizons	314.608.0291	314.608.0291	debbie.ulberman123@gmail.com	Supernova Mentor
Samuels	Edward	Baldwin	MO	63021 New Horizons	314.330.3163	314.391.1601	e.samuels@qcbglobal.net	Supernova Mentor
Schultz	Adrienne	Chesterfield	MO	63017 New Horizons	636.699.0286	636.699.0286	amschultz@live.com	Supernova Mentor
Taylor	Retha	North Star	MO	63031 North Star	314.731.0007	314.780.5486	rmbtaylor@qcbglobal.net	Supernova Mentor
Morris	Terry	Saint Louis	MO	63135 North Star	385.768.0553	385.768.0553	tmorris@qcbglobal.net	Supernova Mentor
Robinson	Michelle	Fenton	MO	63010 North Star	314.711.2553	314.541.0656	michelle.robinson@att.net	Supernova Mentor
Howland	Valerie	Union	MO	63084 Osage	636.584.0935	636.584.0935	valls93@hotmail.com	Supernova Mentor
Deiss	Charles	Arnold	MO	63010 River Trails	314.267.1180	314.267.1180	colesis@msn.com	Supernova Mentor
Deiss	Charles	Arnold	MO	63010 River Trails	314.267.1180	314.267.1180	colesis@msn.com	Supernova Mentor
Thomas	John	Saint Louis	MO	63146 New Horizons	314.503.0441	314.466.5298	twolf1969@aol.com	Supernova Mentor
Babes	Laura	Kirkwood	MO	63135 New Horizons	314.311.7897	314.311.7897	babes123@gmail.com	Supernova Mentor
Lehmann	Justin	Saint Charles	MO	63033 Boone Trails	314.405.0728	314.770.0660	jaimek2004@gmail.com	Supernova Mentor
Pionke	Jeremy	O'Fallon	MO	63366 Boone Trails	512.740.7952	512.740.7952	jaione@email.com	Supernova Mentor
Spiegel	Christopher	O'Fallon	MO	63368 Boone Trails	636.300.1724	636.300.1724	mickeylogist@att.net	Supernova Mentor
Mattingly	Jacqueline	Saint Louis	MO	63116 Thunderbird	314.345.0272	314.694.4878	jacqueline.mattinlay@att.net	Supernova Mentor
	Jason	Saint Louis	MO	63130 Thunderbird	314.494.3325	314.494.3325	jason.flw@yahoo.com	Supernova Mentor
O'Tooley	Michelle	Saint Louis	MO	63130 Thunderbird	314.494.3325	314.494.3325	spooner123@gmail.com	Supernova Mentor
Matson	Frank	Saint Louis	MO	63801 Cherokee	573.521.6519	573.521.6519	spooner123@gmail.com	Supernova Mentor
Bullerdick	Douglas	Valley Park	MO	63088 New Horizons	314.550.0373	314.550.0373	deborahchriss@earthsink.net	Supernova Mentor
Haas	Michael	Barnhart	MO	63012 New Horizons	314.805.2245	314.805.2245	mhaas15@email.com	Supernova Mentor
Williams	Mark	Chesterfield	MO	63017 New Horizons	636.532.5659	636.532.5659	msot@scglobal.net	Supernova Mentor

<http://stlbsa.org/achievement/advancement/merit-badge-counselors/>

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# Resources for Counselors / Mentors



- **STEM in Scouting website:** <http://www.scouting.org/stem.aspx>
- **GSLAC STEM website:** <http://stlbsa.org/activities/other-activities/stem/>
  - STEM Program Preview 2016-2017
- **Facebook**
  - Nova Award, BSA
  - Scouting and STEM - Greater St. Louis Area
- **Additional resources**
  - Ward's Boy Scout Nova Teaching Guide: <http://www.troop52.org/STEM.html>
  - STEM websites – Nova Booklets are packed with URLs!
  - Articles in Scouting and Boys Life Magazine
  - *Brian's Blog*
- **Cub Cast on “CS and STEM”:**  
<http://www.scouting.org/Scoutcast/Cubcast/2014.aspx> May and  
<http://www.scouting.org/Scoutcast/Cubcast/2015.aspx> July
- **Scout Cast on “BS and STEM”:**  
<http://www.scouting.org/scoutcast/scoutcast/2015.aspx> March
- **STEM Scouts:** <https://stemscouts.org/>



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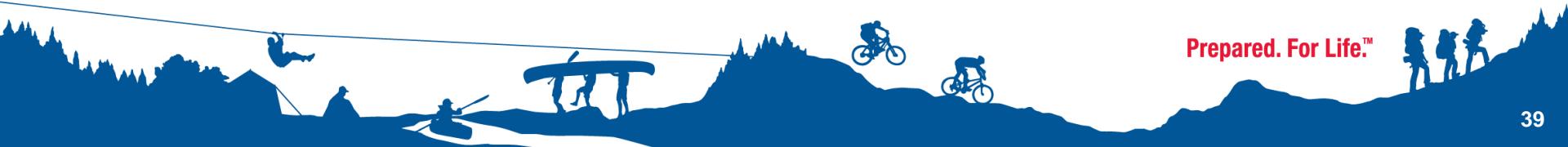
# GSLAC Points of Contact



- **GSLAC STEM Committee**

- Thomas P. Kroenung | STEM Program Director
  - Dan Robinson | Venturing/Exploring STEM subcommittee
  - Lisa Balbes | Boy Scout STEM subcommittee
  - Stephen Masaki | Cub Scout STEM subcommittee
  - Ron Colletti | STEM Training subcommittee
- District STEM Chairman

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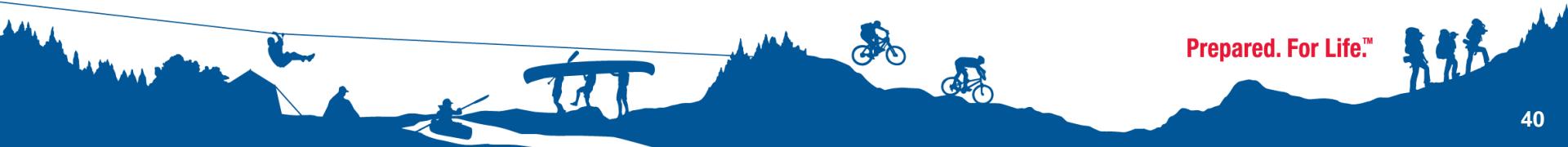


# Summary



- **Various roles for adults in the Nova program**
- **Counselors / Mentors must register for the position**
- **Use the methods of counseling & mentoring**
  - Some knowledge / experts in STEM topics
  - Lead scouts toward improved awareness of STEM topics
  - Tailor teaching techniques to ages and abilities of Scouts
  - Support BSA requirements and guidelines
- **Use the Nova and Supernova process to help Scouts earn awards**

***Don't forget to pick up your "trained" counselor & mentor cards***



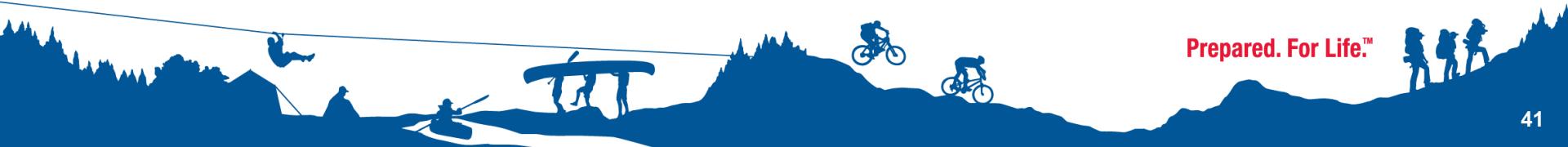
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# Questions, Comments, Feedback...



- **What new topics would your scouts like to experience in the Nova program?**



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