







## Fast Start Orientation


### The STEM Initiative: BSA's Newest Program



**Science**  
**Technology**  
**Engineering**  
**Mathematics**





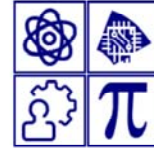
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- Welcome to Silicon Valley Monterey Bay Council's Fast Start Orientation to BSA's new STEM Initiative.
- In the Summer of 2012, BSA rolled out a new program of awards for Cub Scouts, Boy Scouts, and Venturers.
- STEM stands for Science, Technology, Engineering, and Mathematics. The STEM Initiative focuses on these four areas.
- This orientation describes the broad strokes of this program – it's long on the big picture, short on the details.
- To begin, most folks ask, "Why STEM?"
- These fields of study might not seem to fit with our traditional image of Scouting activities, but many of the earliest merit badges were in STEM fields.
- Chemistry, Aviation, Machinery, and Surveying are just a few of the original 57 merit badges in this category, so the study of STEM fields is not really new to Scouting.
- Through its STEM Initiative, BSA hopes to spotlight its historical connection to these fields and bring a new set of fun activities to its youth programs.

## Purpose of the STEM Initiative

- Enhance interest in the STEM fields
- Bring a Scouting focus to STEM
- Increase the value of Scouting





## Overall Structure


- Optional awards in each program
- Two tiers of awards
  - ~ Nova (fun STEM activities)
  - ~ Supernova (high achievement)



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- The STEM Initiative serves several purposes, but in the end, the main goal is to make it “cool” and rewarding for **any** of our youth members to engage in STEM activities.
- This goal was the driving force behind the structure of the program.
- The program is structured to have something in it for **every** kid.
- Within each of the three traditional Scouting programs there are two tiers of awards.
- Nova is an entry level award that involves fun STEM activities.
- Supernova is a higher level award that involves significant independent effort and STEM achievement.

 <h1 style="text-align: center;">Nova Awards</h1> 		
Cub Scouts	Boy Scouts	Venturers
<b>S:</b> Science Everywhere	<b>S:</b> Shoot!	<b>S:</b> Launch!
<b>T:</b> Tech Talk	<b>T:</b> Start Your Engines	<b>T:</b> Power Up
<b>E:</b> Swing!	<b>E:</b> Whoosh!	<b>E:</b> Hang On!
<b>M:</b> 1, 2, 3, Go!	<b>M:</b> Designed to Crunch	<b>M:</b> Numbers Don't Lie
(More in development)	(More in development)	(More in development)
<i>Each includes a STEM Belt Loop or Pin</i>	<i>Each includes a STEM Merit Badge</i>	<i>Each includes a STEM Exploration</i>

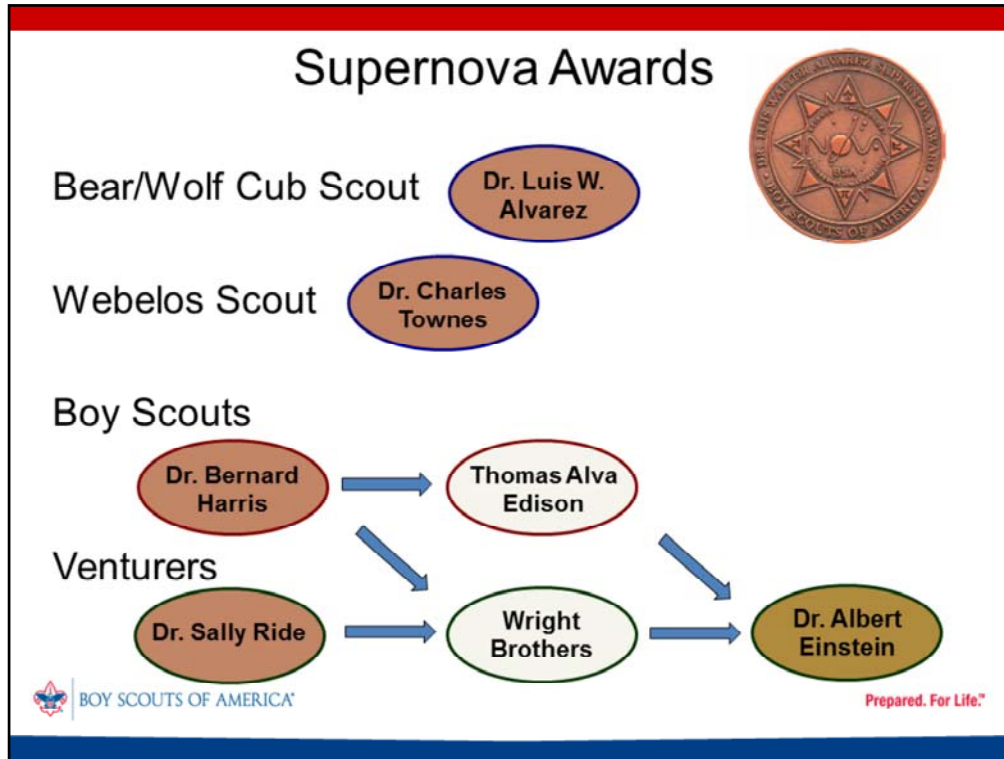
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- In each of the three traditional programs, there are 4 parallel NOVA awards, one for each STEM area, with more coming in the future.
- Each youth can earn all of the Nova awards in his or her program, if desired, in any order.
- The first Nova award earned by a youth is recognized with a Nova patch.
- Each subsequent Nova award is recognized by a triangular **pi** pin that attaches to the patch.
- The requirements for these awards are detailed in the *Nova Awards Guidebooks*, available in local Scout shops and on ScoutStuff.org
- The NOVA award activities are designed to be fun and build on existing STEM-related elements of BSA's traditional programs.

## Sample Nova Activities



- Here are some sample activities in the Nova awards across the different programs:
  - Youth begin with STEM-related entertainment, such as reading books or magazines, or watching media productions or live performances.
  - They follow this by earning STEM-related belt loops and pins, activity badges, or merit badges.
  - Finally, they take part in hands-on activities, like building model cars or working with secret codes, and go on field trips, such as to an observatory or an aquarium.



- The Supernova award, which is recognized with a medal on a neck ribbon, is in the second tier of awards.
- These awards are for highly dedicated youth.
- They involve challenging activities with significant independent effort.
- Each program has a different number of these awards available.
- For Boy Scouts and Venturers, the Supernova awards are structured in progressive levels.
- A Boy Scout can become a Venturer and use lower level Supernovas earned as a Boy Scout to meet the prerequisites for the next higher award in Venturing.
- Please note that Boy Scouts cannot earn the Dr. Albert Einstein Supernova.
  - They MUST become Venturers in order to earn that award.

## Sample Supernova Activities



- The Supernova award activities also build on STEM-related belt loops, pins, and badges.
- These awards include extensive independent work, such as library research, science fair projects or other STEM competitions, shadowing STEM professionals, and conducting hands-on experimental activities.
- For example, the Diet Coke and Mentos explosion shown can be carried out, studied, and reported on to meet a requirement for a Boy Scout or Venturer Supernova award.

## Counselor & Mentor Qualifications

- Nova Counselor: STEM familiarity, comfort
- Supernova Mentor: STEM experience required  
(no-fee registration + YPT required in most cases)





## Adult Leader Support


- National Web Site: [scouting.org/stem](http://scouting.org/stem)
- Council Web Site: [svmbc.org/stem/](http://svmbc.org/stem/)
- Resource Web Site: [bsastemresources.com](http://bsastemresources.com)
- Nova Guidebooks:





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- All youth are supported in their pursuit of these awards with adult guidance.
- Those who guide the Nova awards are called Nova Counselors and they provide age-appropriate help to those youth pursuing a Nova award.
- Those who guide the Supernova awards are called Supernova Mentors, to reflect that their role will be much longer and require greater depth of knowledge in a STEM field.
- In most cases, these leadership roles require a no-fee registration plus Youth Protection Training.
- The only exception, is for a parent who wishes to serve has a Nova Counselor for his or her own child, and ONLY his or her own child.
- For adult leader support, there are web and print resources available.
- The resource website is local to Silicon Valley Monterey Bay Council and is unofficial and very minimalist, having just been established in January 2013, but will grow over time to include many youth STEM activities, information on local STEM destinations, and links to additional resources.
- The SVMBC website contains information on local training and has a link to the national website, which lists all the award requirements.
- The print Nova Guidebooks contain helpful suggestions and examples and also list all the award requirements.


 **Local STEM Resources**   
(Silicon Valley Monterey Bay Council)


 Local STEM Destinations


 Award Checklists/Workbooks

 Supernova Mentor Roster

 Nova Counselor Roster

 Orientations and Trainings

 STEM Events for Youth

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- Finally, the Silicon Valley Monterey Bay Area Council STEM Committee is developing local resources to help its adult leaders learn about and implement this new program.
- Some of these are more fully developed than others.
- Progress on most will be evident via our council STEM web page or communication from your districts.



## Would You Like to Learn More?



STEM Resources, with Activity Ideas,  
Local Destinations, and Links:

[bsastemresources.com](http://bsastemresources.com)

SVMB Council STEM Information:

[svmbc.org/stem/](http://svmbc.org/stem/)

**THANK YOU**



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- If you would like more information about our local STEM program, there are two main sources, both of which are still in development, but will expand as time goes on.
- If you would like ideas for how to bring STEM activities and outings to your unit, visit the local, unofficial website.
- If you would like information about council-sponsored STEM events, including trainings for adults and events for youth, visit our council's STEM page.
- Silicon Valley Monterey Bay Council is looking forward to spreading this great new program to as many units as possible.
- Thank you for taking time to learn about the STEM Initiative and for all you do for Scouting and the development of our youth.

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