



Dr. Bernard Harris



Boy Scout Supernova Award Workbook

This workbook can help you but you still need to read the Boy Scout Nova Awards Guidebook.

The work space provided for each requirement should be used by the Scout to make notes for discussing the item with his counselor, not for providing the full and complete answers. Each Scout must do each requirement.

No one may add or subtract from the official requirements found in the Boy Scout Nova Awards Guidebook (Pub. 34033 – SKU 614936).

The requirements were issued in 2012 • This workbook was updated in February 2015.

Scout's Name: _____ Unit: _____

Counselor's Name: _____ Counselor's Phone No.: _____

<http://www.USScouts.Org> • <http://www.MeritBadge.Org>

Please submit errors, omissions, comments or suggestions about this **workbook** to: Workbooks@USScouts.Org

Send comments or suggestions for changes to the **requirements** for the **Nova Award** to: Program.Content@Scouting.Org

First-Level Supernova Award for Boy Scouts

1. Complete any three of the Boy Scout Nova awards. (Note: These may be done at any time after becoming a Boy Scout.)

Shout!

Whoosh!

Start Your Engines!

Designed to Crunch

2. Earn the Scholarship merit badge.

3. Earn four of the Supernova approved merit badges from the above (*following*) list. (Note: These may be earned at any time after becoming a Boy Scout.)

Animal Science

Energy

Nuclear Science

Archaeology

Engineering

Oceanography

Architecture

Environmental Science

Plant Science

Astronomy

Farm Mechanics

Pulp and Paper

Automotive Maintenance

Fish and Wildlife Management

Radio

Aviation

Forestry

Reptile and Amphibian Study

Bird Study

Gardening

Robotics

Chemistry

Geocaching

Scuba Diving

Composite Materials

Geology

Soil and Water Conservation

Computers

Insect Study

Space Exploration

Dentistry

Inventing

Surveying

Drafting

Mammal Study

Veterinary Medicine

Electricity

Medicine

Weather

Electronics

Nature

Welding

4. Complete TWO Supernova activity topics. one each in two different STEM areas.

Science

Technology

Engineering

Mathematics

A Supernova activity topic is a two-part, hands-on, high-level activity related to one of the STEM fields. Part 1 involves research, preparation, set up, coordination, and/or organization. Part 2 involves analysis and reflection, culminating in the creation of a report in any one of the available format options. See the "Supernova Activity Topics" chapter

- 5. Participate in a local, state, or national science fair or mathematics competition OR in any equally challenging STEM-oriented competition or workshop approved by your mentor. An example of this would be an X-Prize type competition.

Competition:

- 6. Do ONE of the following

- A. With your parent's permission and your mentor's approval, spend at least one day "shadowing" a local scientist or engineer and report on your experience and what you learned about STEM careers to your mentor.

Date: Person Shadowed:

- B. Learn about a career that is heavily involved with STEM. Make a presentation to your mentor about what you learned.

- 7. Working with your mentor, organize and present a Nova award or other STEM-related program to a Cub Scout den or pack meeting. Be sure to receive approval from the appropriate unit leader and agree on a time and place for the presentation. If a Cub Scout den or pack is not available, your presentation may be given to another youth group, such as your troop or at your place of worship..
- 8. Review the scientific method (you may know this as the scientific process) and note how scientists establish hypotheses, theories, and laws. Compare how the establishment of "facts" or "rules" using the scientific method differs from the establishment of "facts" or "rules" in other environments, such as legal, cultural, religious, military, mathematical, or social environments. Then do the following:
 - A. Choose a modern scientific subject with at least two competing theories on the subject and learn as much as possible about each theory,
 - B. Analyze the competing theories, decide which one is most convincing to you, and explain why to your mentor.
 - C. Make a presentation to your mentor that describes the controversy, the competing theories, and your conclusions about how the scientific method can or cannot contribute to the resolution of the controversy.
- 10. Submit Supernova award application to the district or council Nova or advancement committee for approval.

See the "Supernova Activity Topics" chapter (in the Boy Scout Nova Awards Guidebook (Publication No. 34003 - SKU 614936) for more information about activity topics

Important excerpts from the [‘Guide To Advancement’](#), No. 33088:

Effective January 1, 2012, the ‘Guide to Advancement’ (which replaced the publication ‘Advancement Committee Policies and Procedures’) is now the official Boy Scouts of America source on advancement policies and procedures.

- [Inside front cover, and 5.0.1.4] — **Unauthorized Changes to Advancement Program**
No council, committee, district, unit, or individual has the authority to add to, or subtract from, advancement requirements. (There are limited exceptions relating only to youth members with disabilities. For details see section 10, “Advancement for Members With Special Needs”.)
- [Inside front cover, and 7.0.1.1] — The [‘Guide to Safe Scouting’](#) Applies
Policies and procedures outlined in the ‘Guide to Safe Scouting’, No. 34416, apply to all BSA activities, including those related to advancement and Eagle Scout service projects. [Note: Always reference the online version, which is updated quarterly.]
- [7.0.3.1] — **The Buddy System and Certifying Completion**
Youth members must not meet one-on-one with adults. Sessions with counselors must take place where others can view the interaction, or the Scout must have a buddy: a friend, parent, guardian, brother, sister, or other relative —or better yet, another Scout working on the same badge— along with him attending the session. When the Scout meets with the counselor, he should bring any required projects. If these cannot be transported, he should present evidence, such as photographs or adult certification. His unit leader, for example, might state that a satisfactory bridge or tower has been built for the Pioneering merit badge, or that meals were prepared for Cooking. If there are questions that requirements were met, a counselor may confirm with adults involved. Once satisfied, the counselor signs the blue card using the date upon which the Scout completed the requirements, or in the case of partials, initials the individual requirements passed.
- [7.0.3.2] — **Group Instruction**
It is acceptable—and sometimes desirable—for merit badges to be taught in group settings. This often occurs at camp and merit badge midways or similar events. Interactive group discussions can support learning. The method can also be attractive to “guest experts” assisting registered and approved counselors. Slide shows, skits, demonstrations, panels, and various other techniques can also be employed, but as any teacher can attest, not everyone will learn all the material.

There must be attention to each individual’s projects and his fulfillment of *all* requirements. We must know that every Scout —actually and *personally*— completed them. If, for example, a requirement uses words like “show,” “demonstrate,” or “discuss,” then every Scout must do that. It is unacceptable to award badges on the basis of sitting in classrooms *watching* demonstrations, or remaining silent during discussions. Because of the importance of individual attention in the merit badge plan, group instruction should be limited to those scenarios where the benefits are compelling.