



## Dr. Bernard Harris Supernova Award Requirements

1. Complete any three of the Scouts BSA Nova awards. (Note: These may be done at any time after becoming a Scouts BSA member.)
2. Earn the Scholarship merit badge.
3. Earn four of the Supernova approved merit badges from the list below. (Note: These may be earned at any time after becoming a member of Scouts BSA.) Use merit badges that were not previously used for Nova awards.

Animal Science	Environmental Science	Oceanography
Archaeology	Farm Mechanics	Plant Science
Architecture	Fish and Wildlife Management	Programming
Astronomy	Forestry	Pulp and Paper
Automotive Maintenance	Game Design	Radio
Aviation	Gardening	Reptile and Amphibian Study
Bird Study	Geocaching	Robotics
Chemistry	Geology	Scuba Diving
Composite Materials	Health Care Professions	Signs, Signals, and Codes
Dentistry	Insect Study	Soil and Water Conservation
Digital Technology	Inventing	Space Exploration
Drafting	Mammal Study	Surveying
Electricity	Medicine	Sustainability
Electronics	Mining in Society	Veterinary Medicine
Energy	Nature	Weather
Engineering	Nuclear Science	Welding

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

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.
  - 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.
9. Submit your Supernova Award application to the district or council Nova or advancement committee for approval.