

# Wright Brothers Supernova Workbook - Option 2

For those who earned the Dr. Bernard Harris Supernova Award as a registered Boy Scout

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Venturers's name

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Address

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Telephone No.

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E-mail (optional)

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Unit No.

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District

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Local council

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Unit leader's name

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Address

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Telephone No.

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Mentor's name

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Address

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Telephone No.

**Requirement 1**

Earn the Dr. Bernard Harris Supernova Award while a registered Boy Scout.

Date Completed: \_\_\_\_\_

**Requirement 2**

Complete ONE additional Venturer Nova Award for a total of four. (Note these may be done at any time after becoming a Venturer.) The Venturer Nova Award completed should be different from the three Boy Scout Nova Awards previously completed.

<b>Boy Scout or Venturer Nova Award</b> ( <i>circle</i> )	<b>Date Completed</b> ( <i>please list all four dates</i> )
Shoot! <i>or</i> Launch!	
Start Your Engines <i>or</i> Power Up	
Whoosh! <i>or</i> Hang On!	
Designed to Crunch <i>or</i> Numbers Don't Lie	

**Requirement 3**

Using the guidelines found in the *Venturing STEM Explorations* chapter of the Venturer Nova Awards Guidebook, complete STEM explorations for four of the topics listed below. The four topics must be different from those completed while working on the Dr. Bernard Harris Supernova Award, for a total of eight different topics. (Note these may be earned at any time after becoming a Venturer.) Additional merit badges earned while a Boy Scout may *not* be used in lieu of the STEM Explorations required for this award. *Please list dates for all eight topics.*

<b>Merit Badge <i>or</i> Exploration Topic</b>	<b>Date Earned</b>	<b>Merit Badge <i>or</i> Exploration Topic</b>	<b>Date Earned</b>
Animal Science		Geocaching	
Archaeology		Geology	
Architecture		Insect Study	
Astronomy		Inventing	
Automotive Maintenance		Mammal Study	
Aviation		Medicine	
Bird Study		Nature	
Chemistry		Nuclear Science	
Composite Materials		Oceanography	
Computers		Plant Science	
Dentistry		Pulp and Paper	
Drafting		Radio	
Electricity		Reptile and Amphibian Study	
Electronics		Robotics	
Energy		Scuba Diving	
Engineering		Soil and Water Conservation	
Environmental Science		Space Exploration	
Farm Mechanics		Surveying	
Fish and Wildlife Management		Veterinary Medicine	
Forestry		Weather	
Gardening		Welding	

**Requirement 4**

Complete TWO additional Supernova Activity Topics, one each in the two STEM areas NOT completed for the Dr. Bernard Harris Supernova Award. (Note, the intent is that upon completion of the Wright Brothers Supernova Award, the Venturer will have completed one Supernova Activity Topic in each of the four STEM areas.) *Please list dates for all four Supernova Activity Topics.*

<b>STEM Areas</b>	<b>Supernova Activity Topics</b>	<b>Date Completed</b>
Science	Environmental Science: New Things from Old	
	Movie “Science”: Misconception, Misunderstanding, and Mistakes	
	Household Chemistry: Diet Coke and Mentos Explosions	
Technology	Energy Technology	
	Communication Technology	
	Entertainment Technology	
Engineering	Deconstruct and Analyze: Mechanical Designs	
	Build and Test: High Performance Paper Gliders	
	Design and Redesign: Egg Drop Contest	
Mathematics	From Simulations to Real Life: Modeling Bungee Jumping	
	Linking the Past to the Future: Modeling Old Faithful’s Next Eruption	
	A Paradox of Counting: Voting Methods and Fair Decisions	

**Requirement 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. (Note, the intent is that upon completion of the Wright Brothers Supernova Award, the Venturer will have participated in two such events.)

*STEM Competition or Workshop Description (nature of event, topics, date)*

*Approvals for STEM Competition or Workshop:*

I participated in the above described STEM Competition/Workshop.

Applicant’s Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Mentor’s Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Requirement 6**

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 permission from the appropriate unit leader. If a Cub Scout den or pack is not available, your presentation may be given to another youth group. (Note, the intent is that upon completion of the Wright Brothers Supernova Award, the Venturer will have completed two such presentations.)

*Event Description (event name, date, time frame, audience, activity summary)*

*Approvals for Event Plans:*

I have completed the plans for the above event and they have been approved by the appropriate individuals.

Applicant’s Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Pack Representative’s Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Mentor’s Signature: \_\_\_\_\_ Date: \_\_\_\_\_

*Approvals for Completed Event:*

This event was carried out by myself and respectfully submitted.

Applicant’s Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Pack Representative’s Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Mentor’s Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Requirement 7**

Research a scientific, technical, engineering, or mathematical breakthrough or invention of the past 100 years that has affected our society in a meaningful way and present your hypothesis on how it might further affect our society during your lifetime. Present either a 30-minute oral report or a 1500-word written report to your mentor.

*Approvals for Research Activity:*

I completed the research activity and

- made a 30-minute oral presentation to my Mentor.
- presented a 1500-word written report to my Mentor

Applicant’s Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Mentor’s Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Requirement 8**

Submit a Supernova award application to the district or council Nova or advancement committee for approval. See <http://www.scouting.org/filestore/STEM/pdf/SupernovaApplication.pdf>.