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Please submit errors, omissions, comments or suggestions about this **workbook** to: [**Workbooks@USScouts.Org**](mailto:Workbooks@usscouts.org?subject=Merit%20Badge%20Workbooks)

Send comments or suggestions for changes to the **requirements** for the **Nova Award** to: [**Program.Content@Scouting.Org**](mailto:program.content@scouting.org@scouting.org)

**First-Level Supernova Award for Scouts BSA**

Here are the merit badges approved for use in earning the Scouts BSA Supernova awards:

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

⬜ 1. Complete any three of the Scouts BSA Nova awards. (Note: These may be done at any time after becoming a Scouts BSA member.)

⬜ Shoot! ⬜ Whoosh! ⬜ Start Your Engines! ⬜ Designed to Crunch ⬜ Splash!

⬜ Let It Grow ⬜ Hello World ⬜ Mendel’s Minions! ⬜ Up and Away ⬜ Nex Big Thing

⬜ 2. Earn the Scholarship merit badge.

⬜ 3. Earn four of the Supernova approved merit badges from the above list. (Note: These may be earned at any time after becoming a member of Scouts BSA.)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ⬜ |  | ⬜ |  | ⬜ |  | ⬜ |  |

⬜ 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 (in the Boy Scout Nova Awards Guidebook - Publication No. 34033) for more information about activity topics |

⬜ 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 he 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(s): |  |
| 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.

⬜ 9. Submit an application to the district or council Nova or advancement committee for approval.

**When working on Nova and Supernova awards, Scouts and Scouters should be aware of some vital information in the current edition of the *Guide to Advancement* (BSA publication 33088).Important excerpts from that publication can be downloaded from** [**http://usscouts.org/advance/docs/GTA-Excerpts-nova.pdf**](http://usscouts.org/advance/docs/GTA-Excerpts-nova.pdf)**.**

**You can download a complete copy of the *Guide to Advancement* .from** [**http://www.scouting.org/filestore/pdf/33088.pdf**](http://www.scouting.org/filestore/pdf/33088.pdf)**.**