



STEM Nova

Troop 509 Path 1
November 16, 2020



Outline – STEM Nova in BSA Scouts

- **What is STEM?**
- **Why STEM?**
- **Nova and Supernova Awards?**
- **509 Councilors and Mentors**
- **509 – First Nova Module**
- **First 509 Nova Module Content**



What is STEM?

STEM/Nova

♣ Science

♣ Technology

♣ Engineering

♣ Mathematics



Why STEM?

STEM/Nova

- ♣ We live in a time of great opportunity.
- ♣ We must position ourselves at the cutting edge of scientific discovery and technological innovation.
- ♣ Our country is falling behind in STEM.
- ♣ Many STEM professionals and educators believe the United States should do more to encourage students to enter STEM-related fields.
- ♣ You are the next generation of critical thinkers and innovators.



Councilors and Mentors

Troop 509

509 Nova Counselors

♣ John McArthur - johnnyfisma@gmail.com

509 Supernova Mentors

♣ Andrew Shapiro – aashapiro@aol.com



Nova Modules



Science:

**Shoot!
Let It Grow!
Splash!
Mendel's
Minions**



Technology:

**Start Your
Engines!
Hello World**



Engineering:

**Whoosh!
Up and Away
Next Big
Thing**



Math:

**Designed to
Crunch**

SCOUT ME IN



Start Your Engines Nova Module Content

Fill out Start Your Engines Worksheet

1. Read or watch a documentary for 3 hours (examples)

60 Minutes Pure Aviation - <https://www.youtube.com/watch?v=ad4xf2CwaV0>

China's Megaprojects: Transportation - https://www.youtube.com/watch?v=IYJ4-fTDy_E

A History of Flight - <https://www.youtube.com/watch?v=ty1jxXPJW0Q>

California High Speed Trains - https://www.youtube.com/watch?v=h2K_loK_qk4

2. Complete a related merit badge

Automotive Maintenance

Aviation

Canoeing

Cycling

Drafting

Electricity

Energy

Farm Mechanics

Kayaking

Motorboating

Nuclear Science

Programming

Railroading

Small-Boat Sailing

Space Exploration

Truck Transportation



Start Your Engines Nova Module Content

3. Do the following:

Discuss energy sources of the merit badges

Make a list of energy sources

Discuss energy alternatives

4. Design and build a working model vehicle

Make drawings

Include a power source (solar, wind, battery)

Test your model

Discuss with your counselor

5. Discuss with a councilor how technology affects your everyday life



Questions?

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