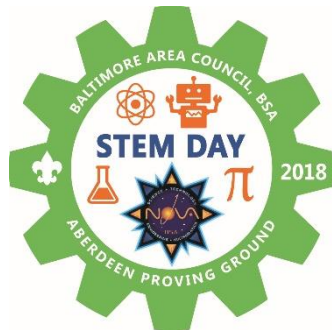


2019
9th Annual STEM in Scouting Day

Down and Dirty
(Tracks 3 - 5)



September 28, 2019

OVERVIEW

This document is for those Scouts registered for the Down and Dirty Nova (Tracks 2 – 4). The Down and Dirty Nova focuses on Earth Science and how it affects our lives each day. The Program will consist of three rank dependent Adventures in the morning and an afternoon activity for all Scouts. The Nova Program and some of the adventures may have prerequisites (**HOMEWORK**), so please read this document carefully. Counselors will go over prerequisites at the event, so please make sure your Scout completes them.

Down and Dirty		
Wolf	Track 3	Grow Something
Bear	Track 4	Super Science
Webelos	Track 5	Adventures in Science

Down and Dirty Prerequisites

Please have your Scout complete the following requirements prior to the event.

Choose A or B or C:

- A. Watch an episode or episodes (about one-hour total) of a show about Earth, the weather, geology, volcanoes, or oceanography. Make a list of at least two questions or ideas from what you have watched.
Some examples include—but are not limited to—shows found on PBS ("NOVA"), Discovery Channel, Science Channel, National Geographic Channel, TED Talks (online videos), and the History Channel. You may choose to watch a live performance or movie at a planetarium or science museum instead of watching a media production. You may watch online productions with your counselor's approval and under your parent's supervision.

- B. Read (about one-hour total) about Earth, the weather, geology, volcanoes, or oceanography. Make a list of at least two questions or ideas from what you have read.
Books on many topics may be found at your local library. Examples of magazines include but are not limited to Odyssey, KIDS DISCOVER, National Geographic Kids, Highlights, and OWL or owlkids.com.

- C. Do a combination of reading and watching (about one-hour total) about Earth, the weather, geology, volcanoes, or oceanography. Make a list of at least two questions or ideas from what you read and watched.

Grow Something (Wolves)

Grow Something will be fun hands-on work with dirt and seeds and plants. Scouts will need to take home their grass seed plants to observe for 2 – 4 weeks.

*Please bring: 2L clear soda bottle with lid or large pickle jar, etc. with lid to make a terrarium.
Wear/Bring: Rain boots/water-proof boots/shoes or bring extra shoes & socks in case get wet with observations.*

Super Science (Bears)

There are no special prerequisites for this adventure. Enjoy!

Please bring clean, dry soda cans for experiment.

Adventures in Science (Webelos)

Adventures in Science involves some fun experiments some of which involve some household chemicals so safety will be important. Safety eye covering will be provided but if the Scout has a pair of their own please bring them along. Vinyl safety gloves will be provided no latex gloves will be used.

PREREQUISITES:

Participating Scouts are required prior to the STEM adventure to write two paragraphs on one famous scientist - **Ben Franklin** – and be ready to discuss his **Kite Experiments**. Write down your notes. Be ready to discuss your den leader or the other members of your den what the scientist is famous for and why his or her work is important. Hand to Scout Adventure lead at the beginning of the Adventure.

You will also be visiting with a scientist who is your lead in this Adventure. Please bring **3 questions** to ask about what they do, their process, their likes/dislikes about their field, etc.

Optional: Bring a 2-liter bottle (empty/clean) either plain or decorated like a rocket (fins, extra weight, etc.)

Here are some links to help in your famous scientist research:

<https://gineersnow.com/engineering/electronics/famous-scientists-inventors-shaped-electronics-engineering>

<http://famouschemists.org/>

<https://www.famousscintists.org/wernher-von-braun/>

Be prepared to submit the research to the Adventure leaders the day of the Adventure.