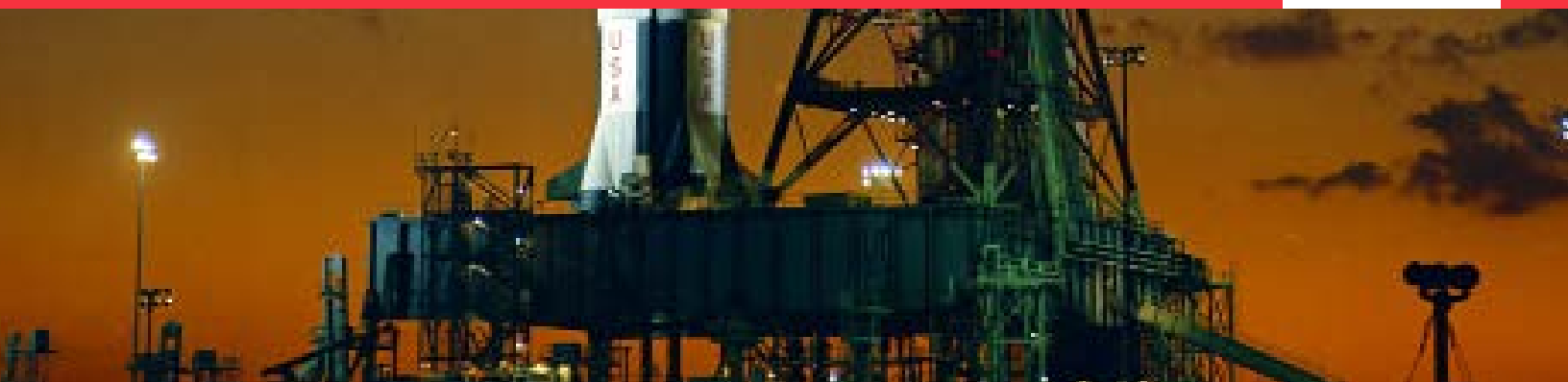




SEDSo BLAST OFF

SEDSo-USA Chapter Guide
www.seds.org/join

SEDSo





INTRODUCTION

This guide is exactly what you'd hope it is: a guide to help you get a SEDS chapter started at your university! This guide paired with our chapter starter meetings will give you the foothold you need to start a successful and sustainable chapter.

WHAT IS SEDS?

SEDS is an independent, student-based 501(c)3 nonprofit organization that promotes the exploration and development of space. SEDS pursues this mission by educating people about the benefits of space, supporting a network of interested students, providing an opportunity for members to develop their leadership skills, and inspiring people through their involvement in space-related projects. SEDS believes in a space-faring civilization and that focusing the enthusiasm of students is the key to humankind's future in space.

WHY START A CHAPTER?

SEDS chapters all over the country are inspiring an entirely new generation of space-nerds to make tomorrow happen through projects, outreach, space parties -- er, networking events -- and other exciting endeavors. Starting a SEDS chapter will open you and your members to an entirely new world of friendships and partnerships. Being part of a SEDS chapter and a national member gets you:

- Discounted registration to SpaceVision, the largest student run space conference in the nation, as well as NewSpace, International Space Development Conference, and other major national conferences.
- Networking opportunities through the SEDS Alumni Network: spanning the entire space industry, from commercial to government, we've got you covered.
- Exclusive invitations to closed space conferences, leadership events, parties, and other awesome secret space happenings.
- Opportunities to participate in national SEDS competitions (with cash prizes) including the University Student Rocketry Competition and Student Business Plan Competition, SEDS scholarships (over \$9000 awarded every year), and industry-famous networking events.
- Free membership upon graduation in the National Space Society, the Society of Satellite Professionals International, and the SEDS-USA Alumni Association
- You'll also have a network thousands strong and with thousands of years of collective experience for support and advice on running space projects, securing sponsorship, hosting events, as well as getting your dream job.

SEDS-USA has over 30 years of experience in starting, organizing, and leading student space ventures and we're excited for you to become a part of that legacy, as well as support you on your way.

FIRST STAGE – BOOSTER IGNITION

STARTING A NEW CHAPTER

So you want to start a chapter? Do you even know what that involves? If your answer was no, PERFECT, that's why we're here to support you! Here are some general guidelines and steps to get you off the ground:

First stage (don't skip stage 3 on page 5 as it is very important!)

- Plan out what your ideal space meeting would be. Does it involve inspirational videos to get everyone excited? Do you want to dive headlong into a project to get people communicating? Maybe lightning talks to hear ideas of what your members would like to see out of the organization and get everyone included? Plan it though so that everyone knows a bit about to expect when joining, which brings us to step two..
- Find a meeting space and an advisor for your chapter. This can seem intimidating, but honestly, people at educational institutions are usually absolutely happy to help you get to where you need. Ask lots of questions, but be sure to listen to their answers and not let your unbridled enthusiasm (it's cool, we understand) get in the way of GSD'ing (<http://www.urbandictionary.com/define.php?term=GSD>). After you have a meeting time and place, and an advisor to help answer questions and guide you when necessary, you can...
- Start finding other enthusiastic space-people that can geek out right alongside you at the meetings! Reach out to everyone! Space isn't limited to scientists and engineers, and being the leader of a SEDS Chapter in no way means you need to be a STEM major either! Chapters all over the country consist of business majors, scientists, aspiring artists, engineers, nurses, and much more! Reach out to these people online or at University events, preferably with some type of flyer or other swag (SEDS isn't the easiest acronym to digest in a 30 second talk) and let them know about your meeting time and mission!
- At this point, you'll definitely want to recruit some help to run the club, so elections can be held and officers can be nominated at the first meeting or before. See the list of duties on the next page.
- You'll want to register your chapter as an official student organization at your university as well. Again, this is where the advisor comes in and you'll probably be able to get a bit of funding for outreach, projects, travel, and marketing materials!
- Then comes the day! Your first meeting! Just remember to breathe, it can be an incredibly exciting if anxiety ridden time, but let yourself be excited and go out and inspire people! You wanna keep 'em coming, so hooking them from the start is important. Remember what first inspired you about space and how you feel every time you explore your favorite subject. Honesty and passion is contagious, don't be afraid to use yours.

STAGE TWO – MAIN ENGINE START [NEXT PAGE]

FORMING AN OFFICER TEAM

The Officer Team typically runs the local chapter and organizes activities. The following is an example of a typical Officer Team. Feel free to modify this example to fit your own chapter, or throw it out and start from scratch (horizontal management structures are totally in right now)!

| | |
|---------------------------------|--|
| President | Responsible for the day to day running of the club, presiding over meetings, and representing the club at events and to outside organizations. Serves as the primary point of contact for the club and settles disputes among the board. |
| Vice President | Responsible for organizing club trips and events. Also ensures club projects are running smoothly. |
| Treasurer | Handles all financial transactions, records, and fundraisers for the club. |
| Secretary | Responsible for keeping meeting minutes, developing SEDS related media such as fliers and brochures, and providing the webmaster with content for the website. |
| National Chapter Representative | Responsible for representing this chapter of SEDS at the National Council of Chapters and reporting back to the chapter about national level events and opportunities. Often this position falls upon the president or vice president. |

OTHER CHAPTER LEADERSHIP

In addition to an officer team, it is useful for chapters to have project leaders in charge of specific tasks or activities. These are all optional, but can help a chapter organize more events and activities.

| | |
|----------------------|---|
| Webmaster | Responsible for maintaining and developing the club website, as well as maintaining club technological assets such as computers, projectors, etc. |
| Outreach Coordinator | Responsible for organizing outreach activities in the community. Works to engage local schools and the community in space activism. |
| Project Manager | Acts as the point of contact for individual space or engineering projects hosted by the chapter (e.g. rocketry, high altitude balloon). Works to organize this project and solicit funding. |
| Events Manager | Works with the executive board to find speakers (from industry, academia, or general space enthusiasts) and to plan out chapter events (Yuri's Night, World Space Week, etc.) |

STAGE THREE - ORBIT

REGISTERING WITH SEDS-USA

Registering your chapter with SEDS-USA makes your chapter eligible for the national awards and recognition available at SpaceVision. Also, it helps keep SEDS-USA in business so that we can better serve you. Your SEDS-USA affiliation will give you an automatic advantage in working with commercial and government organizations in the space industry since they're familiar with SEDS-USA. It's also easy:

- Register at <http://seds.org/join/> and pay \$50 annual fee - that's it.

Once this is completed, your chapter will be voted into SEDS-USA through a Council of Chapters vote and you'll have full membership status! This will allow you to be eligible for chapter grants, the Chapter of the Year Award, the University Student Rocketry Competition, the Bob Richards Peace Through Space Scholarship (\$2000+), the Peter Diamandis BOLD Scholarship (\$2000+), and much more! We give out over \$9000 in prizes and scholarships to eligible chapters and members every year!

FINISHING UP

Everyone at SEDS-USA and your fellow chapters would like to thank you for taking this step to further inspire those around you to take an interest and make change happen for the betterment of humanity. We commend you and look forward to meeting you at SpaceVision and other conferences and national events. You will find all sorts of ideas and inspiration for fundraising, more information about our projects, and hopefully anything else you might need in the following appendices. If you don't, feel free to contact any of us at any time! We don't bite, and because of the amazing support that this organization provides, we're still as excited as we were on our first day.

Thank you again, ad astra per aspera! **Through hardships, to the stars!**

READ ON FOR MORE AWESOME TIPS TO GET YOUR CHAPTER GOING!

PROJECT IDEAS

So what do we actually do during SEDS meetings? Here's a list of past SEDS activities at the local level.

ROCKETRY

HIGH POWER

Build high power rocketry from scratch and compete in national rocketry competitions. Have your members earn their level I, II, and III certifications to become certified rocket scientist! For more info and launch sites, check out:

Tripoli Rocket Association: <http://www.tripoli.org/>

SEDS University Student Rocketry Competition: seds.org/rocketry

Intercollegiate Rocket Engineering Contest: <http://goo.gl/MhBBov>

LOW POWER

Low power or model rocketry is an easy, fun, and relatively inexpensive way to get more people interested in rocketry and space.

For more info: <http://goo.gl/T6Qesz>

For kits: <http://goo.gl/Uihdf0>

EXPERIMENTAL

You can mix your own rocket motors or launch a scientific payload on your rocket. For some inspiration, check out these past rocketry projects by SEDS teams:

Rocket Launched UAV: <http://yaleaerospace.com/rocket-uav/>

3-D printed rocket engine: <http://seds.ucsd.edu/tri-d.html>

HIGH ALTITUDE WEATHER BALLOONS

Send your ideas and experiments up to 100,000 feet! This is a fun project to get involved in and can get you some breath-taking images from up above. Whether you're looking to do a science mission, test out a satellite communication system, or just get some cool video, a high altitude balloon project is an awesome thing to get involved in.

Resources:

<http://www.balloonchallenge.org/>

<http://www.arhab.org/>



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Above:

1. UB SEDS Students with astronaut Peggy Whitson at the 2012 SpaceVision Conference.

2. Yale Rocket-Launched UAV project.

Below:

UB SEDS high altitude balloon launch.



BUILD A CUBESAT

Many SEDS chapters choose to build their own Cubesats and launch them into space. Funding for CubeSats can come from crowdsourcing (e.g. Kickstarter project), Space Grant funding, Departmental funding, or the Air Force Research Lab University Nanosatellite Program (\$100,000 awarded to 10 university satellite teams every 2 years).

Chapters have received launch opportunity through NASA's ELANA program in the past:
<http://goo.gl/Gbaa8q>

BUILD A TELESCOPE

Building your own telescope could be a fun and engaging project for new SEDS chapters. There are many online resources for building cheap telescopes from commercial off the shelf parts. Check out these useful links:

<http://goo.gl/k4S0om>
<http://goo.gl/4YT4dV>
<http://goo.gl/0upc6A>

ROVER COMPETITIONS

Many SEDS chapters participate in rover competitions that involve designing and building a planetary rover and then competing against other schools. These projects can be costly, but are fun and provide hands-on engineering experience to members. Some of the most popular competitions:

NASA Robotic Mining Competition - <http://goo.gl/NtP5Pm>
NASA Sample Return Centennial Challenge - <http://wp.wpi.edu/challenge/>
RASC-AL Competition (provides \$10,000 funding if selected) - <http://goo.gl/fboCf9>

SATELLITE TRACKING STATION

Have an interest in Ham radio and want to talk to an astronaut in your space time? Consider building a satellite tracking station at your local university. This can be a joint effort with your school's amateur radio club. Don't have an amateur radio club? Ham radio can be an exciting place to start and it's fairly easy to get your Amateur Radio certification. Ham radio study site: <https://hamstudy.org/>

OTHER

Make up your own space project. Rocket balloons, Rocket planes, 3D printed UAVs, astrophotography, anything you can think of. The possibilities are limitless. Have fun!

OUTREACH IDEAS

MUSEUM EVENTS

Go to a local science museum and set up a space booth for children and parents to stop by. Some ideas include: rocket, balloon, LEGO spacecraft, and paper airplane activities.

AMATEUR RADIO ON THE ISS

Go to a local elementary/middle/high school and talk amateur radio in space. Organize an amateur radio event to talk to astronauts on the ISS via ham radio. Supplies needed: radio equipment: <http://goo.gl/NTZLCR>

EVENT IDEAS

YURI'S NIGHT

Yuri's Night is an international space celebration in honor of Yuri Gagarin, the first man in space, as well as the first space shuttle launch. This event takes place on April 12th each year. Space enthusiasts all around the world gather to celebrate human spaceflight. Many SEDS chapters hold banquets, outreach events, parties at a local bar, and other space celebrations on this day. For more info and tips for organizing a Yuri's Night event: <http://yurisnight.net/#/starter> For more information you can also watch this SEDS SpaceTalk with the Executive Director of Yuri's Night, Ryan Kobrick: <http://goo.gl/SF7vis>



SPACE MOVIE NIGHT

Get your chapter together for a fun evening of gimbal lock and space invaders. This is a great way for chapter member to bond and de-stress after a long week of classes and satellite building. Here are some movie ideas: http://en.wikipedia.org/wiki/List_of_films_about_outer_space

ASTRONOMY

Fun for all majors. Get out a telescope and look at the stars.

KERBAL SPACE PROGRAM NIGHT

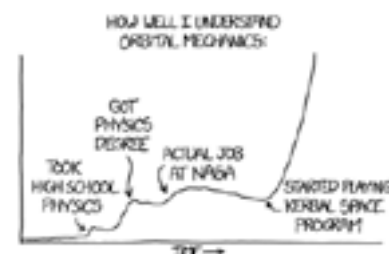
Multiple stages of fun. With minimal effort, you can experience Rapid Unplanned Disassembly in no time!

FIELD TRIPS

Organize your chapter to go on a day trip to your local planetarium, science museum, or observatories. Check out the launch schedules and plan a trip to see a rocket launch (if you're close to Wallops Flight Facility in Virginia, Vandenberg Air Force Base in California, or Kennedy Space Center in Florida). Have any cool aerospace companies in your area? Take a tour and make some industry connections. Some of the connections you make with industry could serve as mentors for your projects in the future.

SPEAKERS/GUEST LECTURES

Ask someone to come give a talk at your meeting! Local professors, teachers, aerospace professionals, space agency officials, astronauts, SEDS members and alumni, space mission scientists, all are fair game and always super excited to come out and talk to super excited students.



ADVERTISING

When starting a new chapter, we suggest promoting to gain members and support from your local community by:

- Putting up posters around your school (bulletin boards, dining halls, student centers)
- Distributing fliers throughout classrooms
- Announcements in school newsletter or department mailing lists
- Social media announcements (Facebook, Twitter)

LOGO

For your advertising, your chapter can adapt the SEDS-USA logo with your school's initials or design your own logo. For assistance in designing a chapter variant of the SEDS-USA logo, contact:

SEDS-USA Creative Manager, Danny Pagano: danny.pagano@seds.org

FUNDING

Here are some fundraising ideas that previous chapters have used to get on their feet:

- **Space Grant funding:** About half of chapters in the US receive money from their state's Space Grant Consortium towards funding SEDS technical projects and space conference attendees. Getting funding from your local Space Grant typically involve writing a proposal, but it has high returns. Find your state's Space Grant website and contact info here: http://www.nasa.gov/offices/education/programs/national/spacegrant/home/Space_Grant_Consortium_Websites.html#.U_54XvldUTo
- **SEDS merchandise sale** – sell SEDS t-shirts, shot glasses, bumper stickers, pens, lapel pins, etc.
- **Benefit Nights:** Arrange with local restaurants to get a percentage of proceeds from customers turning in a 'SEDS Percentage Night' flyer when they pay. The more friends SEDS can get to turn out to the event, the larger the returns.
- **Departmental or Student Government funding:** Most chapters receive some sort of funding from their home department or school. This might take the form of a university club stipend, department head directly sponsoring you, or something else. Try writing up a proposal and submitting it to your department head or school student association, or just emailing a department chair to get their thoughts on involvement!
- **Pie a professor:** University of Arizona SEDS has had success with "Pie a Professor" fundraisers. Various professors around campus volunteered to be 'pied' if students donated enough money. Jars were put in academic offices across campus for students to donate towards the professor they would like to see pied.
- **Swag lottery:** Usually chapters can get items of value donated by corporations, which are then raffled off to the community. Some items SEDS chapters have raffled off in the past: Galileoscope telescopes, computer programs, zero gravity flights, etc. Most companies actually are willing to donate swag items, you just have to ask.
- **Dues:** Some chapters charge their members dues. This doesn't bring in a ton of money, but can get the initial funding necessary to start a small project or host an event. 3



Above:
Example Chapter Logos

Below:
SEDS-ASU designed custom shirts to raise money for their chapter.

