



SPHERO WHITEPAPER SPRING 2020

GUIDE TO STEM FUNDING

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Introduction

At a time when STEM enthusiasm is skyrocketing, school budgets are, unfortunately, tightening. As a result, some educators and librarians have had to keep new STEM programs and resources on their wish lists for longer than they'd like.

When it comes to incorporating STEAM into the classroom, support can come from a surprising number of sources -- and sometimes, all you have to do is ask. That's why we've compiled a list of resources to help drive innovative tech adoption.

Here at Sphero, we're often approached by districts, libraries, and after-school programs that want to add our programmable robots and STEAM-based educational tools to their programs, but need funding. This guide is designed to walk you through STEM-related funding resources. We'll cover online tools that list funding sources, discuss best practices for applying for grants, and advice from Sphero customers who successfully fundraised and now have STEM programs in place for their students.



GUIDE TO GRANTS

Schools or districts can receive grants from Federal, state, or local governments. Some must be applied for and are awarded on a competitive basis, while others are awarded based solely on need and do not require an application.

Here is a breakdown of the types of educational grants available:

FEDERAL GRANTS

There are two types of Federal grants: formula grants and discretionary grants. Formula grants are awarded based on a formula; any entity that qualifies under that formula is eligible to receive the grant.

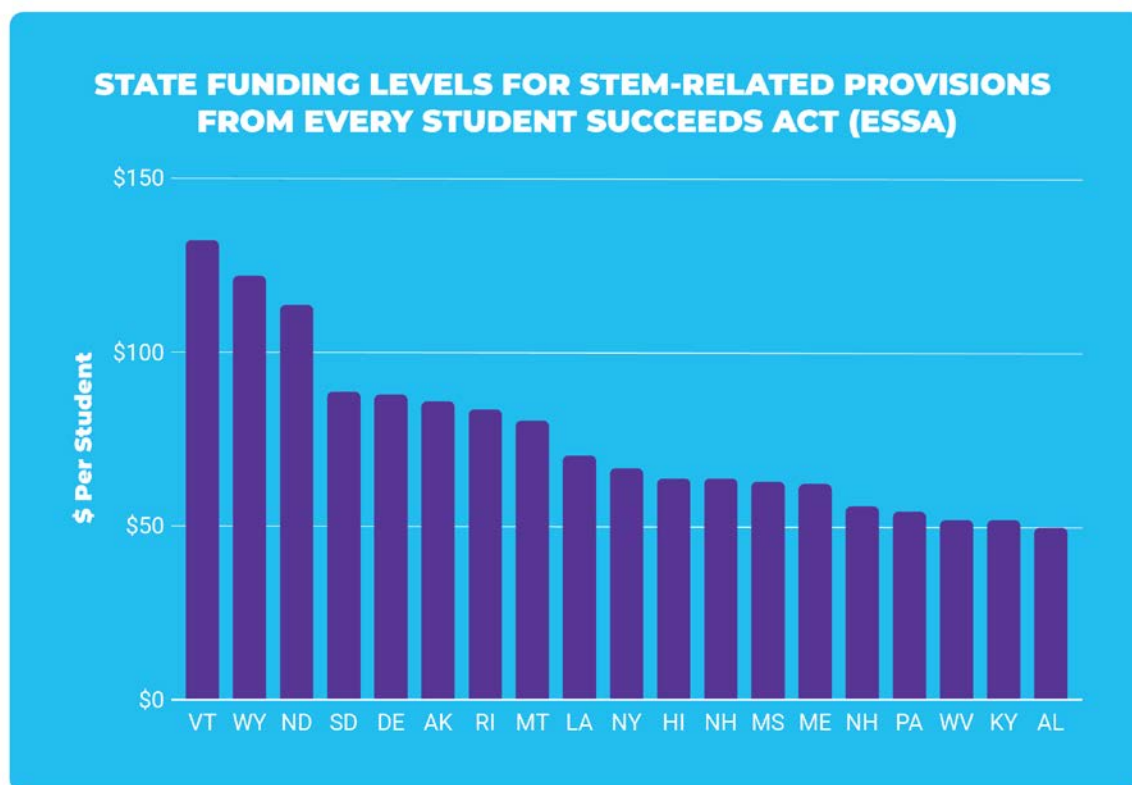
FORMULA GRANTS INCLUDE:

Innovative Programs: This state-administered Federal formula grant program is designed to support local school reform; funds can be used for instructional and education materials, technology, and school improvement.

Application due dates: Between April and August for several different grants.

Enhancing Education through Technology State Program: Designed to improve student achievement through the use of technology, the “Ed-Tech Program” also has the goal of improving tech literacy among students by eighth grade.

Application due date: Varies depending on your home state.



21st Century Community Learning Centers: Also known as 21st CCLC, this is the only Federal funding source dedicated to afterschool programs. Funds are distributed to each state based on its Title 1 funding award to low-income students, and funds can be used toward academic enrichment materials and activities, including those for STEM programs.

Application due dates: Varies depending on your home state.

Innovative Technology Experiences for Students and Teachers: This is one of several grants awarded by the National Science Foundation, a Federal agency, and it is designed to expose students to STEM careers and provide them with technology-rich experiences.

Application due date: Second Wednesday in August, annually

DISCRETIONARY GRANTS INCLUDE:

Gaining Early Awareness and Readiness for Undergraduate Programs: GEAR UP is a six-year, competitive grant designed to help prepare low-income students for college and careers.

Application due date: July 2019

A well-thought out plan that aligns with standards and regulatory objectives is more likely to get buy-in.



CORPORATE GRANTS

Companies of all sizes are dedicating funds each year to STEM education through their foundations. The award amounts vary widely, from hundreds of dollars to hundreds of thousands of dollars. Here are just a few focused on science, technology, engineering, and math in K-12 schools.

Toshiba America Foundation: Toshiba's foundation is designed specifically to help teachers fund project-based learning in math and science. Its grants are available to both public and private schools, and it welcomes applications from teachers in all grades K-12.

Application due dates: For grades 2-5: October 1

For grades 6-12: May 1 and November 1 for grants more than \$5,000; for grants \$5,000 or less, applications are accepted throughout the calendar year on a rolling basis.



Westinghouse Charitable Giving Program: Education with a focus on STEM is one of Westinghouse’s three strategic grant-giving areas (the others are environmental sustainability and community safety and vitality). Westinghouse’s education grants aim to improve STEM literacy among students and teachers from K-12 and through college, and the general public. Applicants must be within 50 miles of a Westinghouse site or customer site.

Application due dates: Applications accepted on a rolling basis

Facebook CodeFWD Program: Facebook created CodeFWD to expand access and participation in computer programming to underrepresented students in computer science, including Black, Latino/Hispanic, Native American, and female audiences. CodeFWD is a free online program by Facebook for educators and organizations working with 4th through 8th graders in the U.S.. After successfully completing the program, you may be eligible to receive additional classroom resources designed to take your students’ coding skills to the next level.

Application due dates: Applications accepted on a rolling basis



ORGANIZATIONAL GRANTS

Various educator organizations use membership dues and other contributions to offer both scholarships and grants to educators, schools, and districts. Each award varies in terms of its focus and restrictions, but many are available for those seeking STEM-related funding. Here are a few.

The NEA Foundation: Through its membership dues and the contributions of corporate sponsors and other foundations, the NEA (National Education Association) Foundation has provided more than \$7.1 million to fund 4,500 grants to public school educators. The foundation also supports innovation projects in schools that are designed to prepare students for college, careers, and adult life. To support STEM learning, the NEA works to bring high-quality, project-based, STEM instruction to high-need districts.

Application due dates: February 1, June 1, October 15

Foundation for Technology and Engineering Educators (FTEE): This foundation of the International Technology and Engineering Educators Association (ITEEA) seeks to support programs that will “make our children technologically literate; transfer industrial and corporate research into our schools; produce models of excellence in technology and engineering teaching; create public awareness regarding the nature of technology and engineering education; and help technology and engineering teachers maintain a competitive edge in technology.”

Application due date: December 1



LOCAL GRANTS AND PARTNERSHIPS

Local businesses, individuals, and organizations offer funds for various education projects, equipment, and programs -- and sometimes it takes some detective work to find them.

Ilene Harris, former director of development at the Flint Public Library in Michigan, suggests contacting local banks to find out whether organizations or families have set up trusts to donate to schools or libraries. Harris did this and learned of two family trusts, both of which ended up donating to the library.

When Harris and other officials at the Flint Public Library decided they wanted to add littleBits kits to provide young visitors with STEM experiences, Harris picked up the phone and called the local electrical union.



"I sent them information on littleBits, and they were interested," Harris says. "They donated the funds because they're interested in having local teens learn more about how electrical circuits work. We've invited them to participate when we have a littleBits program at the library, so they can talk about the electrical trade."

If you're looking specifically for STEM-related funding opportunities, check out Stemfinity. This comprehensive site includes a search-by-state tool that allows you to quickly find grants in your area. The site also provides free grant-writing advice and tips.

CROWDFUNDING

Through platforms such as DonorsChoose.org and ClassWish, teachers and administrators are taking their fundraising efforts to the masses, explaining what they need and why they need it, and finding that small amounts from a large number of people go a long way.

The rules of each crowdfunding site are different -- some charge no fees but require that teachers make purchases with their newly earned funds only from their partner vendors. So, for example, if you raised funds for school supplies at the Adopt-A-Classroom site, you would buy those supplies from the site's partner, Office Depot. Other sites charge a percentage -- typically between 2.5 and 5 percent -- of the funds raised.



Crowdfunding veterans recommend that you offer incentives for donating, such as small prizes like mugs, pencils, or even just a personal “thank you” video from the class. Nathan Schmitt raised more than \$18,000 on Kickstarter for HackSchool, a Denver school program that provides direct access to cutting-edge technology to students in several surrounding high schools. The HackSchool’s donation incentives included gifts made by students with their newly funded laser cutter and 3D printer.

Schmitt, who is HackSchool’s director, believes the video he made about the school and featured on their Kickstarter page helped their fundraising efforts tremendously.



“THE STORY YOU TELL IS OF PARAMOUNT IMPORTANCE. PEOPLE INVEST IN TWO THINGS: PEOPLE AND STORIES. A GREAT STORY IN THE FORM OF A PITCH GOES, “HERE’S THE PROBLEM IN SOCIETY. HERE’S WHY WE’RE THE ONES TO FIX IT. HERE’S WHAT WE’VE DONE, AND HERE’S WHERE WE’RE GOING NEXT.”

Nathan Schmitt

Former Director of HackSchool in Denver Colorado

Below are a few education-focused crowdfunding sites worth checking out:

DonorsChoose: A favorite among schools and districts (and Stephen Colbert, who donated \$800,000 to fulfill every South Carolina request on the site), DonorsChoose makes it easy to crowdfund for things like school trips and classroom supplies. Unlike other sites, DonorsChoose does not charge teachers commission when they use the site, though they must shop at the site’s vendor partners when using their funds.

ClassWish: Another favorite, ClassWish allows donors to contribute to any type of school, public, private or parochial, unlike some (DonorsChoose, for example) that only allow public schools to participate. ClassWish does charge a processing fee of 2.9 percent, plus 30 cents per transaction, and you must buy from the site’s vendor partners.

Adopt-A-Classroom: The success stories on this site’s homepage are inspiring, and donors are not forgotten once they’ve contributed; they receive updates on how their money was used. A nice touch. The site charges no fees but does require that all purchases be made with its approved list of vendors.

PledgeCents: Commonly referred to as the ‘GoFundMe for teachers,’ PledgeCents has over 1,300 schools in 51 states on their platform. Since their inception, over \$600,000 has been raised, impacting 300,000 students nationwide. Once all the funds are raised, PledgeCents will send the check directly to your school/organization. They do charge fees, but educators who use their service get to keep whatever funds they raise, regardless of whether it meets their final goal.



SEARCHING FOR GRANTS ONLINE

Interested in researching grants but you're unsure where to begin looking? Several websites make it easy to find the grants you are eligible for.

Grants.gov: This behemoth site is dense but comprehensive, listing the grants given by every federal agency. It also has a robust help center for newbies to the grant application process.

GrantWatch: Every type of grant—federal, state, city, local, and foundational—can be found here, and you can easily search by grant category and state.

The Foundation Center: This well-known site has been in existence since 1956 and bills itself as “the leading source of information about philanthropy worldwide.” Beyond its massive grants database, it offers helpful tools and tutorials for grant applicants.



SAMPLE LANGUAGE FOR GRANTS

Lisa Lista is a pro when it comes to grant writing. As the instructional coach at Woodscrest Jr. High in Chino Valley School District, she relies on grants to help level-up the district's current STEAM initiatives. She gave us some sample language that educators can emulate for any STEM/STEAM grants -- **just fill in the blanks:**

"My Big Idea is to purchase littleBits to enhance student learning by incorporating engineering with science and math. My school district is in the early stages of including STEM into curriculum and I would like to give my students an exciting learning experience to become engineers while exploring math and science. littleBits impacts student learning by encouraging them to use collaboration to problem solve, creativity to design their project, and learn [subject matter]."

"To accomplish this, I would purchase [specific product name]. This would supplement the [existing tools/initiatives] I currently have for my [number of students] students and enable students to work collaboratively."

When it came to discussing standards alignment, here is an example of what she used for littleBits:

"Standards alignment includes NGSS 3-5-ETS1-2 Engineering Design: Generate and compare multiple possible solutions to a problem based situation on how well each is likely to meet the criteria and constraints of the problem, SEP 2: Develop and Use Models, and 5.MD.C.3a Geometry: Recognize volume as an attribute of solid figures and understand concepts of volume measurements. My students are going to construct 3D figures using nets to create buildings. They can choose which 3D figures to use and will determine the volume of their figures. As engineers, the students will use littleBits to design features to include in their building such as a doorbell, an automatic door, a sliding window, etc. Finally, they will compare the various nets used for their buildings and the configurations of the Bits used to have electrical parts in the buildings."

Using this framework should enable you to apply for a multitude of grants.

TIPS & TRICKS

SUCCESSFULLY APPLYING FOR GRANTS

Finding grants you're eligible for, as well as completing the applications, does require an investment of your time and energy – but it will be well worth it! Perhaps the best way to approach the assignment is as if you're approaching one of your students' persuasive writing assignments in ELA class:

1. Write a vision statement: How will these funds help you accomplish what you're setting out to do?
2. Do research: Back up your need with statistics and evidence to support your case.
3. Make sure you're being realistic about both what you're asking for and what you state you'll accomplish if you win the grant.
4. Set a firm deadline for yourself to complete each application, otherwise you could spend many weeks writing and rewriting and revising.
5. Understand that even if you win the grant, you may not see the funds for many months, so plan accordingly.



Elizabeth Kendall, who has spent her career in fundraising and nonprofit development and hosts grant-writing workshops for K-12 educators, says the process requires a lot of time, thought, and patience.

“Just like the lotto, you have to be in it to win it,” Kendall says. “And you get better with each grant that you write, so don’t get discouraged if you get denied. Just keep trying.”

Happy grant-hunting!