Writing Grants for the STEM Classroom

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Are you looking for additional resources to bring your lessons to life and engage your students? Writing a grant might be the answer.

TP Note: Besides Title 1 (5-10% for PD), Title 2a (100% PD), Title 5 (Innovative Programs) or state and district PD budgets, the following might be an opportunity to be reimbursed for Teaching Point Professional Development Instructional and Mentoring Support.

With the tight budgets school districts face today, many teachers are turning to grants to supplement the resources in their classrooms and enhance their students' learning opportunities. Grants can enable teachers to invest in special projects, purchase equipment, and engage students in motivation-based activities.

Remember that the secret to student motivation is resources. With grants, teachers have access to more resources, especially in less affluent school districts. The more engaged students are, the more likely they are to enjoy learning, demonstrate an interest in classroom activities, and have better academic achievement. For example, if students have math anxiety, a grant targeted toward reducing this problem can help them. One solution might be to write a grant that will enable students to engage in problem-based math activities using manipulatives.

There are many grants available, especially for K-12 teachers in science, technology, engineering, and mathematics (STEM). STEM grants are especially important in fostering greater participation in the classroom among low-income and minority students. Companies are struggling to employ a diverse population in STEM fields. One of the main reasons students of color and girls don't pursue careers in STEM fields is because they don't do well in math and don't take rigorous math courses in high school. Yet, if students are engaged in math in the early elementary years, then they are more likely to enroll in higher math course offerings as high school students and pursue STEM careers. Using grants to fund special projects can make math more interesting for students and increase their math skills, which is why many STEM companies award grants for this purpose. These special projects might include after-school tutoring, Saturday math literacy camps, and science academies.

Do's and don'ts of the application process

To learn more about the grant-funding process and what reviewers look for, you may want to apply to serve as a volunteer reviewer on community-based initiatives. Many community organizations look for volunteers to review grants. This is one of the best techniques to help a novice grant writer learn about the process. As a grant reviewer, you will know exactly what grant panelists are looking for, and you will be able to use that knowledge to your advantage when you craft your own proposal.

The next step is finding grants to apply for. Research available grants in your content area and compile a list. Create your own grant calendar, marking submission deadlines for grants that interest you. Many grants are available for teachers to choose from; however, you must decide which grants best fit the needs of your classroom. It's best to apply for multiple grants, because it can increase your funding opportunities and enable you to serve more students. When you've decided what to apply for, follow these tips to improve your chances of success:

Show Me the Money

Check these sites to find some grant money for your STEM classroom.

www.grantsalert.com
Source for general education grants
www.grantwrangler.com
Lists of grant funding, contests, and professional development opportunities
www.stemgrants.com
Grants for STEM projects
www.nsf.gov/funding
Federal grants for major STEM initiatives; best for a district-wide initiative

1. Start small. A mini-grant is a great place for a novice grant writer to start. Mini-grants typically range from $100 to $1,000. Federal and private donor grants are typically above $1,000.

2. Create a budget. The budget is an important piece of a grant proposal. Your budget must make the connection between your objectives and activities. For example, if you write a grant to engage students with unmet potential in mathematics through technology, one cost you can include is the purchase of a Promethean board or i-clickers. An appropriate activity would be to have students demonstrate the use of algebraic equations with a Promethean-based project, using these devices. Be sure to include this in your proposal so that the reviewers can see how your budget supports your activities.

3. Set clear and attainable objectives that are measurable. Setting a goal that 100% of students will increase their learning is not a clear objective. However, you might aim to have 100% of students increase their achievement in mathematics; this is a clear objective that can be measured by looking at test data before and after students take part in the grant's activities.

4. Support your problem with statistics and data that reinforce your argument. The reviewers want to know how the grant will help address the existing need. Don't make them guess. A quality proposal includes a needs section that shows how the grant will meet the need; most classroom grants require that a need be evident. You justify the need for grant funding by providing relevant data and statistics. For example, research shows that students who attend schools with high free lunch rates tend to be ill-prepared to take higher level math courses. The problem is identified as poverty, and free and reduced lunch rates are the data you need to provide to show the poverty. In another example, if you wrote a grant for an ACT Boot Camp for low-income students with an interest in STEM fields,

then ACT test data and free and reduced lunch data would justify the need for the proposed project. You will need to gather and store this type of school data (school lunch data, school report card, and school survey data) so that you have it handy when you write your grants. You can find statistics like this at the National Center for Educational Statistics.

5. Include an evaluation plan in the proposal. The reviewer will want to know how you plan to evaluate your proposal's success. Most evaluation plans consist of gathering quantitative data from surveys and questionnaires and qualitative data from focus groups, interviews, and observations.

6. Follow directions precisely. For example, if the grant requires a specific font, then use that font. Don't use another font or size.

7. Review your work. Have someone edit your final draft prior to submitting it.

8. Keep copies for yourself. Keeping copies will enable you to immediately begin working on your project once you receive approval for funding. Many times, applicants forget the details of their project, especially when they're submitting multiple grants.

9. If your proposal is not funded, you can request the reviewers' comments. Take the time to read the comments thoroughly. Understand what the reviewers were looking for and what errors you made. Learn from your mistakes so you can get an accepted proposal next time.

10. If your proposal is funded, be sure that you document all of your program activities. This is important because documentation is critical in the grant process. The funder wants to ensure that the project was adequately carried out as specified in the narrative. Take photos of project activities, issue surveys, evaluate your project, and publish your story with the local media. This will showcase the project and get publicity for the funder.

The following are some mistakes to avoid while writing grants:

1. Don't include salaries in the budget when applying for classroom grants. Most reviewers prefer to involve volunteers in carrying out K-12 grants. If salaries are included, then keep it to a minimum. For example, if you are writing a $3,000 proposal for students to engage in science literacy camps, then most of your budget should be targeted toward paying for activities to implement the project rather than funding a teacher's salary. However, most federal grants do allow for salaries for their projects because of the amount of the grant.

2. Don't ask for an extension on the deadline. Usually, the answer is no. Plan ahead to meet your deadline!

3. Don't wait until the last minute to submit a proposal. Successful proposals require a well-developed concept for implementation.

4. Don't write a proposal that you are unable to carry out. For example, make certain that you have discussed and received approval from appropriate stakeholders. Don't write a grant for a science camp at your school without the approval of your principal and district. Besides, most grants require approval from the principal, so you will want to include her while you're writing the grant to make sure you have her support.

Writing a successful grant can give your classroom the additional resources you need to improve your students' engagement and academic achievement. Follow these tips, and you'll be on your way to becoming a successful grant writer.

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