

## Founding Fund Teacher/Classroom Grants – Application Examples

### Example 1:

I am club advisor for SES Coder Kids and Bobcat Coders, two clubs that strive to teach computer programming to students and jumpstart an interest in a new hobby or potential career path. As far as I'm aware, these two clubs are the first of their kind in Hampshire County. The field of computer science is a growing industry, with growth in the field being over two times the national average. Not only that, but projected job openings by 2020 are expected to be over a million, while current growth indicates that there will be less than half that number of graduates to fill those positions. Our students in Hampshire County deserve a chance to discover if they want to be part of that growing number. Computer programming teaches them to become technology creators instead of just technology consumers. Using curriculum from Code.org and Scratch from MIT, students complete courses to learn the basics of programming.

In addition to curriculum on the computer, it is necessary to have a variety of "unplugged" activities to aid in learning computer programming. Currently, we have a few board games geared to computer program to meet the needs of students K-8. However, the addition of a basic programming bot called Bee-Bot would greatly enhance the learning for members of both clubs. Bee-Bot is a bee-shaped robot that allows students to program a set of directions into the bot and then activate the program they have created. Students can run the bot along a special mat that guides bee-bot. In addition, there is a problem-solving curriculum that can accompany bee-bot that will allow students to complete challenges and tasks. The curriculum is geared to K-5<sup>th</sup> grade. The tasks range from easy to difficult. For students in the 6<sup>th</sup>-8<sup>th</sup> grade club, they would study the curriculum, and use it to design challenges for the younger students to complete. This allows them to test their ability to create a set of coding directions from scratch. For both groups, the problem-solving skills they learn with Bee-Bot will translate to their work on the computer, and enhance their ability to problem solve broken code when they encounter it. The addition of Bee-Bot to our unplugged activities will provide yet another way to translate skills to the computer.

Budget:

[1 Learning Station bundle \(Bee-Bot + card mat\)](#) – 139.95

[1 Problem Solving with Bee-Bot curriculum](#) - \$100

Shipping Charges - \$15

Total: 254.95

(The 4.95 extra will be covered by club members)

### Example 2:

I am currently the Art teacher for the entire campus of the West Virginia Schools for the Deaf and Blind. The reason I am applying for this grant is because my students have really wanted to do more specific art projects that are more focused on oil pastel drawings, canvas painting and sculpture. Unfortunately, I do not have the appropriate materials, such as the canvas, canvas paper and clay.

My younger students have been eager to do a collaborative painting project for some time. Every year we host an open house Art Show of the students' work and this Spring I would love to display a collaborative canvas painting done by my students. The collaborative painting would consist of 18 4"x4" canvases that when finished will appear as one large painting. The theme idea for this particular project would reflect Deaf Culture, in which after the Art Show, my students could proudly display it in our school.

My Middle and High School students every year have an independent project where they choose the medium. I have asked them recently what materials they would like to use this year and the majority of my students said they would like to have canvas and canvas paper. Last year, due to a lack of supplies we were unable to do a lot of painting and I would really like to provide this experience for my students' this year. Their independent projects are meant to be a more in-depth kind of project and I believe that painting on canvas would broaden my students' expectations of their own talent.

Every semester my students want to work with clay, make sculptures and draw with oil pastels. For some reason, these three mediums seem to be their most favorite. This year, we would like to make pinch pots, coil pots and miniature sculptures to showcase in our Art Show. However, last year we used all of our clay supply and desperately need to replenish that for this year. We have also been working on American Sign Language drawings of animal signs, using oil pastels. The students have really enjoyed working on these and displaying them for others to see. However, we are in need of more oil pastel crayons to continue working on our projects.

All of my students are bright individuals, each one of them is an Artist in their own right. It is my desire to provide my students with all of the endless possibilities that Art has to offer. My goal is to broaden my students' expectations of their own abilities. I believe that providing opportunities through canvas, oil pastel, clay and sculpture that my students will expand their own thinking and do great things. As I tell my students, "Art is the last form of magic that really does exist." A few of my students will soon graduate and I want them to remember not only how Art has influenced them but how they have influenced Art. My ultimate goal is to promote learning through visual and experimental work and to enhance my students' recognition of who they are. I know they can do amazing things; I have seen it and I want to encourage them to continue to make the kind of Art they love. That is my purpose.

Art Supplies Needed (Michael's Craft Store Prices):

- 4"x4" Canvas Pack (9) \$19.99 each, needed 2 packs. Total: \$39.98
- Canvas Paper (10 sheets per pack) \$7.99 each, needed 5 packs. Total: \$39.95
- 8"x10" Canvas (10 pack) \$19.99 each, needed 3 packs. Total: \$59.97
- Crayola Air Dry Clay (tub) \$12.99 each, needed 5 tubs. Total: \$64.95
- Oil Pastel (25 count pack, assorted colors) \$5.99 each, needed 5 packs. Total: \$29.95

Total Cost: \$234.80

### **Example 3:**

This project would provide learning materials for a self-contained, special education class that includes students with emotional disabilities, mild intellectual disabilities, and Autism. There are currently 10 students enrolled (9 boys, 1 girl), and could have up to 12 at any point in the school year. In addition to consistently receiving individualized, hands-on learning opportunities throughout the week, the class participates in a weekly Makerspace session, every Friday afternoon. This time is set aside for design challenges, which engage the students in the practices of problem-solving, communication, creative thinking, and building related to science, technology, engineering, art, and math (STEAM) standards and skills.

So far this year, our students have built boats that had to meet certain specifications with a limited set of supplies and multiple Lego structures meeting given criteria. We are always seeking found materials and new design experiments appropriate for our students' ages and abilities. These sessions are often challenging, but exciting for our students, and they look forward to them each week. The design tasks

require our students to engage in problem-solving in ways that allow them to use their strengths to build on their needs. They also put our students in situations that require them to practice effective communication to solve problems, which is another challenge for many of our students and aligns with goals on their Individualized Education Programs (IEPs).

Through funds provided by this grant, we would be able to purchase equipment (electronics and maker kits) and resources related to the Makerspace movement and coding (computer programming) that would provide us with more varied and engaging opportunities for our students. The first three items (Arduino, Squishy Circuits, and Joylabz Makey Makey) listed below would allow us to write computer programs and use the hardware to create a variety of items like lamps, motorized writing utensils, musical instruments, and remote controls. With the Rolobox Wheel Kit and Box Rivets, we can turn cardboard boxes into robots or motorized tools. The Cardboard Box Book will serve as a resource for using the wheel kit and box rivets.

Because the tools and items are all reusable, we will be able to use again and again over time in our classroom and share throughout our school. We will be able to provide other classroom teachers with tips on using them in the classroom, once we have more experience in using the tools. We would also like to give some of our students the opportunity to train other students in the school on using the tools. This would create experiences allowing our students to build on their own individualized goals in written and oral communication skills and social/emotional behavior.

**Budget Summary - With the requested funds, we plan to purchase the following (all available on Amazon.com, see wish-list):**

**Tools: Hardware and Software:**

- 1) The Official Arduino Beginners Kit Bundle for Kids: Includes Sylvia's Super Awesome Project Book, Super-Simple Arduino (Volume 2) - Written and illustrated by a kid, for kids of all ages And SPEED-KITS Arduino PIN-OUT Chart, \$109.99
- 2) Squishy Circuits Kit, \$25.00
- 3) Joylabz Makey Makey: An Invention for Everyone Science Kit, \$49.95
- 4) Rolobox Reusable Wheel Kit for Boxes, \$10.60
- 5) Mr. McGroovy's Box Rivets, \$19.95
- 6) The Cardboard Box Book by Roger Priddy, \$8.99