



PTO GIFTS PROGRAM

Requests for PTO Funding 2016-17

Any teacher, parent, or student who has a request for funds from the PTO must fill out this form. Please answer these questions as thoroughly as possible, providing supporting detail and information. When completed, please return to the administration at either school by **Friday, October 21, 2016**.

1. Define your request:

I would like to purchase a collection of littleBits for Sunset Ridge School's Makerspace. LittleBits are the Legos of circuits. They will allow our students to build amazing things and bring those things to life. In combination with the low-cost and low-tech materials we have in this space including cardboard, paper, and fabric, students will be able to build anything! I encourage you to visit littleBits' website (<http://littlebits.cc>) to get a feel for how they can be used for many purposes and in many subjects. I envision students coming in on their own to experiment with the blocks and teachers working littleBits into their curriculum by either borrowing them or bringing classes to the Makerspace to use them.

2. Amount requested:

\$4,749.05 for the littleBits Pro Library

3. Can this project be funded in stages? If yes, what timetable is involved? If no, please explain your due date for funds.

No, this project cannot be funded in stages because it is one kit. We would purchase the set as soon as funding becomes available. Students can begin using the littleBits as soon as we add them to the Makerspace and we will use this year to develop curriculum for the littleBits to be used in classrooms starting next year.

4. Has this request been reviewed by the school administration? What was their response as to its merit and priority?

Yes, the director of technology has reviewed this request and agrees that this would be an excellent addition to the Makerspace to advance our mission. We have a starter set and students have enjoyed building with this kit already, but the starter set is very limiting and only one student can use it at a time.

5. Number of Students that will be impacted or benefit from your request:

All students at Sunset Ridge School will have an opportunity to use the LittleBits. We can also loan littleBits to MFS, impacting the whole district.

- 6. Is this a one-time request or do you envision needing additional PTO funds in the future or long range? If you will require additional PTO funds, please explain why this cannot be added into your annual budget.**

The purchase of the LittleBits is a one-time request. We have already requested that the Makerspace budget be increased until we have acquired the tools necessary for the vision, but this request is beyond the current budget's means.

- 7. What is the intended goal of your request? Would it have any other uses or applications? Is this a start up program or is it enhancing an existing program? Use additional paper if needed.**

The purchase of littleBits will help enhance our Makerspace which is in it's infancy as a program and a space. Our goal for the Makerspace is to teach students entrepreneurship, the design process, and how to solve problems innovatively. We envision doing this by providing students with the space, tools, and guidance to make anything happen. Most of the materials purchased for the Makerspace are vetted to allow for multiple purposes. For instance, Legos can be used to build just about anything structural. But by also purchasing Lego Mindstorms, we can now turn those Legos into robots that can teach students about coding and robotics.

LittleBits are the same way. Not only will they show students how circuits work, they will allow them to bring anything to life. Some of the potential uses would be creating simple machines, musical instruments, drawing robots, and motion activated alarms. They could even be used in conjunction with the Lego Mindstorms to create the ultimate robot! One project that I am especially excited for is designing and creating a lamp with a light switch. Students would create their own design for a lamp, then use the littleBits to provide the electrical parts to make their lamp work. Imagine a student designing a lamp that drives itself around the room while flashing with different colors and playing music that the student wrote. Here is the website of a school in Florida and some of the projects that they have come up with: <https://goo.gl/mA1bY2>

The greatest asset for littleBits is the endless possibilities for student inventions, however, students also need somewhere to start when generating ideas and learning the tools. I have been impressed with littleBits library of projects that they have developed as a company and the community of people who publish their own inventions on the site. Students who would like to use the littleBits, but do not know where to begin, can go to these resources and start making right away.

- 8. What are the long-range benefits of your request?**

This one-time purchase will last for many years. While we may need to replace some bits over time, they are well made. Also, because there is no additional software or programming language needed, even as technology changes, these can stand alone as a tool for teaching circuits.

- 9. If you are requesting a capital asset/investment, please provide a minimum of two options/pricing quotes on the item and attach to this form. Please identify your first choice and why.**

- 10. Have you exhausted all other funding options before coming to the PTO Gifts Program?**

Yes, we have already exhausted the Makerspace budget for the year.