Examples of Innovative Projects Funded by SPARK

McAuliffe Elementary School's Blooming with Science, Math, and Reading Program

For this project, McAuliffe Elementary School invited renowned author and illustrator, Henry Cole, to visit the school to read and discuss two of his books on our environment and the important role everyone, including students, can play in protecting and preserving it. The grant also funded a variety of other activities to ensure that Mr. Cole's visit had a lasting impact on students and their environmental education. The school library purchased additional books related to the environment, including fiction and non-fiction titles.

A joint committee made up of the school librarian and the science committee worked together to purchase plants for the children to grow. Portable greenhouses were purchased and helped students give their plants the proper amount of sunlight needed to grow successfully. Students made observations about how the plants grew over time and used their observations to make connections in math and science that were appropriate for their grade level.

Next, older students created either a bird feeder or bird house in their art class while younger students painted a flowerpot. Students then took their projects home to enjoy.

Students learned about important pollinators, the impact of habitat loss on butterflies, and what we can do to help save the monarch butterfly from becoming an endangered species. Because milkweed is an important source of nectar for monarchs, students planted it in the school garden and were given milkweed seeds to take home to plant in their yards.

This grant will have a lasting impact on McAuliffe students for years to come. The books and other equipment purchased through the grant will be used by students each year to continue this important project to encourage them to be good stewards of the environment and to understand how they can make a difference in their own community.

Coles Elementary School: Two Projects Designed to Help Others

Coles Elementary School wrote a grant to help a teacher of the visually impaired who worked at schools around the county. The teacher wanted more hands-on learning materials for her students, so Coles staff wrote a grant to purchase a 3D printer to print objects related to several children's books the visually-impaired students would be reading to help them experience the stories in a more meaningful way by feeling some of the characters and objects in the stories. Students can touch objects such as the bat, bird, and nest from Stellaluna or the different foods eaten by The Very Hungry Caterpillar as the teacher reads each story.

The teachers of PWCS visually-impaired students are thrilled with their new resources. The books and 3D printed objects were given to the Division's administrator coordinator for Visual Impairment including Blindness. The teachers she supervises check the books and objects out from her office to use in their classrooms regularly.

Coles received another grant from SPARK that allowed their students to use a 3D printer to help children around the globe. E-NABLE (http://enablingthefuture.org/) is an organization that allows individuals to use their 3D printers to create free, 3D printed hands and arms for disabled individuals in need of an upper limb assistive device. Students have made several hands through the school's Tech Club and not only learned about 3D printing but also how their hands can change the lives of those who receive them.

Battlefield High School's Writer-in-Residence Program

Battlefield wrote a grant focused on helping struggling readers and writers. The Writer-in-Residence program was designed to give at-risk high school students authentic writing experiences with guidance from a professional author. In this program, students published a book of poetry and prose using self-editing and student driven publication processes through Lulu, an online publication company. Working with staff, Sarah Glenn Marsh, author of three young adult books, met with students on four different dates to assist in the editing and publication process of the book. This rich experience increased literacy skills for Battlefield's at-risk student population, helping to close the achievement gap. Students participated in a four-month intensive writing workshop and created an anthology of the participants' work that was published through Lulu. Each of the students received a complimentary copy of the anthology, and one copy was sent to each of the high schools in PWCS. After the book was published, the school held a book tour and book signing ceremony for parents and students.

Fitzgerald Elementary School's Project Drone

Fitzgerald Elementary School wrote a grant to bring a robust drone program to their school. Through Project Drone, 100% of students utilize a land or flying drone at different points during the school day. The drones are integrated into instruction in the content areas, used as extension opportunities, and used during all aspects of education. The drones have increased student engagement and motivation to explore technology at a deeper level. Through professional presentations from community members and local businesses, students are exposed to real-life applications, which has also improved their career readiness. This innovative approach to learning has had a positive effect on our students' problem-solving abilities, metacognition, and critical-thinking skills. Because staff incorporate drones into all aspects of their school program, they have seen a 60% increase in the number of students who want to participate in programs such as Robotics. As a result of using drones during instruction, teacher knowledge about current technology, coding opportunities, and innovative teaching practices have also increased.