

Penn Manor Education Foundation Spring 2015 Venture Grants (full list)

15-1 *Gifted Support STEM Lab*

Hambright Elementary & Manor Middle schools, grades K-8

LEGO Mindstorm and Engino Mechanical kits will be purchased, along with other hands-on remotely powered gear to teach science, technology and math concepts at a multi-station lab that will be utilized by two neighboring schools. The materials will be used by about 40 students supported with GIEPs per year.

15-2 *Marching Unit Flugelhorn Project*

Penn Manor High School, grades 9-12

Four flugelhorns will be purchased to enable students to participate in a flugelhorn section of the high school marching unit. The section will be incorporated into the 2015 and future years' shows, expanding opportunities for participation. About 60 students are expected to benefit from the grant.

15-3 *Science Department Sensors*

Penn Manor High School, 9-12

The grant will fund temperature probes, pH and light sensors, microphones, sound level meters and dissolved oxygen probes to be used in chemistry, biology, physics and forensics classes. Students will gain experience with real-world lab data using college-level equipment and school district-issued laptops. Up to 900 students each year will use the sensors.

15-4 *Eco-Column Exploration Project*

Marticville Middle School, 6th grade

The grant will fund materials to build an eco-column system to help students explore, understand and examine the function of biochemical cycles in nature, sustainability, food chains within an ecosystem, the interaction of biotic and abiotic factors in an ecosystem and how ecosystems can exist in a delicate balance. About 170 students will participate each year.

15-5 *Sit Disc Student Chairs*

Central Manor Elementary School, grades K-6

The grant will be used to purchase 20 inflatable sit discs, which are placed on chairs for therapeutic use by students. The discs enable students in need of kinesthetic response to move while remaining seated, improving their focus and reducing disruptions. About 40 students will use the sit discs.

15-6 *AP Exam Financial Assistance*

Penn Manor High School, grades 10-12

The grant will be used to offset registration fees for advanced-placement tests for economically disadvantaged students who might otherwise not take the exams. Students will be identified based on consultations with social workers, counselors and teachers. Full or half funding will be provided for up to 10 students.

15-7 Vernier Science Lab Equipment

Penn Manor High School, grades 9-12

The grant will fund the purchase of a variety of sensors and probes to be used in hands-on lab activities in biology, environmental science, forensics, physics and Principles of Science classes. About 800 students will utilize the devices.

15-8 Science Manipulative Kit

Penn Manor High School, grades 9-12

The grant will be used to purchase manipulative kits designed to teach life science units on mitosis and meiosis; cell growth and cell reproduction; the structure of a carbohydrate, lipid, protein and nucleic acid; and other topics. The materials will be shared among staff and used by up to 1,400 students per year.

15-9 Robotics in the Classroom

Manor and Marticville Middle Schools, grade 7

The grant will be used to purchase six EV3 robots for use by students, who will learn to program and manipulate the devices while learning about the light, temperature, density and speed sensors that affect their movements. The robots also will enable students to participate in regional STEM competitions. About 350 students will utilize the robots.

15-10 Student Enrichment Experience Seminars

Penn Manor School District Gifted Program, 4-12

The grant will fund enrichment seminars offered by Lancaster-Lebanon Intermediate Unit 13 that provide opportunities for students to develop leadership, creativity, problem-solving, critical thinking, student collaboration and career exploration skills. Up to 56 students will participate.

15-11 Making the Cut for STEM

Penn Manor High School, 11-12

The grant will pay for 10 durable lab mats, dissection pans and other materials for use during the dissection of sheep brains and eyes in psychology labs. The equipment will enable dissections to become a permanent part of the curriculum. About 100 students per year will utilize the equipment.

15-12 Raised Flower Bed Project

Penn Manor High School Agricultural Education Department, 9-12

The grant will fund materials for students to construct a raised flower bed for growing cut flower varieties for floriculture classes to use in flower arranging. Students will participate in the entire growing process, including seed germination, transplanting, irrigation, daily maintenance, soil conservation and harvesting. About 30 students per year will benefit.

15-13 Seed Identification Project

Penn Manor High School Agricultural Education Department, 9-12

The grant will fund crop and weed seed samples, grain sieves and a grain moisture tester for students to use in identifying and evaluating seeds. Students will gain an increased understanding of agronomic principles. About 50 students per year will use the materials.

15-14 *Orchestra Percussion Project*

Penn Manor High School Music/Orchestra Department, 9-12

The grant will pay for cymbals to bolster the music department's percussion instruments, enabling more students to perform a wider range of music. The cymbals will be used by the full orchestra, string orchestra, concert band and percussion ensemble. Up to 200 students will be impacted by the grant.

15-15 *Leo DiSanto, Artist in Residence*

Penn Manor Music Department, 9-12; Twilight Program

The grant will bring DiSanto, a Penn Manor graduate and singer-songwriter, to conduct workshops, discuss his journey as a professional musician and perform before students in music classes and the Twilight Program. Other students will attend a concert by DiSanto. Up to 250 students will participate.

15-16 *Teaching Growing Up in Social Studies*

Penn Manor High School, grade 9

The grant will pay for copies of Growing Up, an autobiography by Russell Baker, to be incorporated into the United States History curriculum for freshmen. Topics in the book cover all of the major events taught in the course. Students will learn history while improving their ability to read and analyze nonfiction texts. About 60 students will participate in the first year.

15-17 *Augmented Reality Sandbox*

Penn Manor High School Science Department, 9-12

The grant will pay for an augmented reality sandbox, a real-time topographic map projected onto sand enclosed in an open box. The sandbox allows users to create topographic models by shaping sand, which is augmented in real time by a color-coded topographic map and simulated water. About 300 students will use the sandbox.