

---

Issue Date: January 17, 2024

## 2023 STEAM Challenge Grant Awards

The Vermont Agency of Education (AOE) launched the STEAM Challenge Grant in 2022 to support the development of a coherent system of STEAM education, and to provide structures to develop and sustain STEAM programs that are aligned with state adopted standards, including those standards that may be currently under-addressed (e.g., arts, engineering, computer science, etc.). A second round of STEAM Challenge grants were offered to schools in October 2023. Six schools were awarded up to \$15,000 each to organize secondary student-educator teams within their school community to address a problem. Once a team identifies a problem to solve, they are challenged to utilize a STEAM approach to come up with a solution. Each team must specifically demonstrate that they applied and integrated the knowledge, skills, and practices of science, technology, engineering, arts, and mathematics and provide a plan for how they will present their solution to the public.

A total of \$84,577 was awarded to six SU/SDs. The six schools receiving grants are: Enosburg Falls Middle School, Main Street Middle School in Montpelier, Mill River Union School, Mt. Anthony Union Middle School, Sutton School, and Vergennes Union Middle School. Below are brief descriptions of each of the STEAM Challenge projects to be addressed at each school.

### **Enosburg Falls Middle and High School - \$11,132**

Grant funds will be used to address the problem of a lack of awareness about environmental issues within their community and a need for businesses to clearly promote eco-conscious choices. The student-educator team, in collaboration with the Enosburg Business Association, plan to develop and create "Environmental Pledges" with local businesses to foster awareness and sustainable actions. Additionally, the team will build and sustain awareness through the creation and distribution of an environmental newsletter to provide valuable insights and resources. The project also serves as an opportunity for students to gain practical experience in business, entrepreneurship, and accounting, further enriching their education.

### **Main Street Middle School Montpelier - \$13,445**

Main Street Middle School will address a reinvention problem in which the student-educator team will build off previous STEAM-related work to conduct a Maker Faire for elementary students. The team will plan and produce an event aimed at promoting STEAM-integrated instruction to challenge students to create interactive exhibits. The project's goals include hosting a Maker Faire, involving every 7th-grade student in exhibit design, collecting a digital record, and creating a sustainable playbook for future events.



### **Mill River Union School - \$15,000**

Students at Mill River Union School are employing an integrated STEAM approach to address opportunity gaps in community outreach and school promotion. Recognizing that the emphasis on sports in external messaging does not fully represent the diverse student experience, the student-teacher team aims to provide a more comprehensive view through real-world experiences in problem-solving, modeling, survey design, data analysis, product design, and basic entrepreneurship. The students plan to collaborate with the AP Stats class to receive feedback on questioning techniques, community sampling, and survey design, enhancing the depth and effectiveness of their project.

### **Mount Anthony Union Middle School - \$15,000**

Mount Anthony Union Middle School will address a decision-making challenge regarding how to optimize the school hoop house into a source of food during the school year and what laser cutter/tech tools and training can help students design signage and share results. Twelve students and four teachers in the Garden & Cooking Club will lead this school-wide initiative to choose mechanical systems to improve the hoop house and improve signage/use of the gardens. The project will engage at least 300 7th and 8th grade students in STEAM with the new season-extension system and in utilizing tech integration/creativity tools and training for student mapping, sign-making, and in communicating their findings and recipes.

### **Sutton School - \$15,000**

The Sutton School will address an improvement and reinvention problem focused on maple sugaring in the Northeast Kingdom. The student-educator team will research how a school sugarhouse would increase student engagement and provide experiential learning opportunities for all students. Students will apply their learning within the STEAM content areas as they learn the science behind maple sugaring, visit local sugaring operations, design prototypes and long-term plans for a working sugarhouse at Sutton School. Students will present their proposal to school stakeholders and work closely with the Kingdom East School District's facilities manager to assess the school campus, design models, conduct budget analysis, and coordinate school-wide events.

### **Vergennes Union Middle School - \$15,000**

Vergennes Union Middle School aims to engage 55 8th-grade students in a decision-making problem focused on a product innovation design challenge concentrated on Vermont's maple industry. Tasked with creating an innovative maple-based product, students will navigate decision-making factors such as consumer interest, efficiency, scalability, sustainability, and cost-effectiveness. The project will foster entrepreneurial skills and emphasize the importance of aligning the new product with local values and traditions in the cultural community context of Vermont's maple industry. The goal is to empower students to design a marketable maple product that reflects the region's unique identity and contributes to the growing niche markets within the state's maple industry.