

## HyperStream and VREP

### 2015-2016 Scale-Up Program

**Overview:** HyperStream (created by the Technology Association of Iowa) and VREP foster real-world learning for 5th-12th graders through hands-on technology projects, competitions, showcases and engaging presentations through after-school clubs or integrated into curriculum.

**Grade Levels:** 5-12

#### Program Summary

Since 2008, the program brings technology education to Iowa students by providing a comprehensive STEM educational experience. Combined, the program is in nearly 200 Iowa schools and other organizations. You can choose to work with HyperStream only, VREP only, or both programs.

- **HyperStream:** Students may create their own technology projects that solve real-world issues for their school or community, as well as participate in several project tracks, leading to spring competitions in robotics, game design/programming, cyber defense, multimedia, and app development. Students have the opportunity to be mentored by technology professionals from their local communities or virtually.
- **VREP:** Students have the opportunity to work with virtual reality, leading to a Spring Showcase while advised by their educators.

#### Project Description/Objectives

- To raise awareness for technology careers across all industries and STEM careers in general;
- To provide students with the tools and resources to create technologies solving real-world challenges;
- To provide a program that aligns with 21st century skills, including problem-solving, innovation, teamwork, collaboration, initiative, leadership, adaptability, and effective communications;
- And, to see an increase in students going into post-secondary programs of technology, computer science, computer engineering, and engineering, whether at the community college or college level.

#### What does the project provide?

**\*\*\*Please note where differences may apply depending on the program option of HyperStream or VREP.**

- **\*\*\***Project learning modules, curriculum, and kits for HyperStream tracks (app development, game design/programming, robotics, multimedia, cyber defense) **OR** program criteria and resource materials for VREP schools (virtual reality);
- Program and curriculum training for educators, including an educator stipend for time and travel (\$170);
- **\*\*\***Project mentoring/coaching by technology mentors for HyperStream Clubs. Note that VREP is designed for the students to be self-directed in these projects as advised by their educator;
- Field trip opportunities and potential internships and scholarships for students;
- Travel stipend (\$250 per club) to attend HyperStream competition, VREP Showcase, or tech-related events;
- **\*\*\***HyperStream competition in Ames in late April for students in grades 9-12 or spring virtual competition for students in grades 5-8. VREP Showcase is in April for students in grades 5-12;
- Virtual MentorPlace serves as a portal with archived presentations on specialized tech skills, technology by industry, and emerging technologies;
- **\*\*\***And, marketing materials for applicants, including t-shirts, magnets, posters, and brochures to promote the program to students and parents.

#### What is required by the applicant in order to implement this program?

**\*\*\* Please note where differences may apply depending on the program option of HyperStream or VREP.**

- **\*\*\***HyperStream is offered free applicants. For VREP, applicants must provide and purchase their own special virtual reality equipment, **which costs approximately \$4,500.**
- Applicants must provide an environment with access to computers for project implementation, as well as utilize the software provided.
- Minimum of one educator to serve as a liaison and Educator champion that will provide timely communications with program staff relative to plans, registrations, surveys, etc.
- Applicants are responsible for recruiting students into the program and attending mandatory educator training.
- **\*\*\***Educator champion is responsible for attending HyperStream Club meetings/classes to facilitate student rapport and communications. For VREP, students are monitored by an educator champion on their independent projects.
- Educator champion(s) coordinate students' attendance in the program and management of communications.
- Educator champion(s) ensure mandatory completion by students of surveys provided by program staff and the STEM Council. Applicants will also be required to complete a program survey.
- Educator champion(s)/chaperones attend student competitions/showcases and coordinate travel plans and expenses beyond \$250 travel stipend provided.
- **\*\*\*** HyperStream applicants must register high school-level students for the two-day competition in late April in Ames; and middle school-level students for virtual competition. VREP applicants must participate in regional and state showcases.
- **\*\*\***For HyperStream, applicants will be responsible to work in partnership with the HyperStream staff in seeking and/or solidifying technology mentors from their local community.
- **\*\*\***Program runs from September to May. HyperStream meetings are held at least twice a month or weekly. VREP students work independently.

**Website:** [www.hyperstream.org](http://www.hyperstream.org) AND [www.vrep.org](http://www.vrep.org)

**Program Video:** **HyperStream:** <http://tinyurl.com/ltqqfgy> AND **VREP:** <http://tinyurl.com/kgv7y6p>