

Nevada STEMList of Recommended STEM Programs

September 2023

Project ReCharge



Program Overview

Envirolution was established in 2007 to create a sustainable future through education. We inspire and empower the next generation of leaders and workers who will drive a sustainable economy. Project ReCharge, our flagship program partners with teachers and local companies to develop and deliver a hands-on, project-based STEAM curriculum and the materials required to teach. Our 26 lessons follow the 5E Learning Model and meet Next Generation Science, Common Core Math, and 21st Century Competencies. This program has empowered students to tackle real-world challenges through integrative projects and proposals impacting their school or community that Envirolution funds directly. From 2014 to 2022, students saved 10,418 mWH, worth over \$1.3 million, preventing 4,508 metric tons of CO2 emissions.

Target Population Grades or Ages

4-12

A Unique or Special Focus of the Program

Students see a clear connection between STEM knowledge in the classroom and their future careers while gaining real-world experience in the sustainable balance between the environment and the economy.

Impact on Participants

On average, for the last five years surveyed, student STEAM content knowledge increased by 29% due to our program, with a median result of 33%. We commit to creating inclusive pathways to STEAM careers. In 2023 48% of our students identify as girls, nonbinary, or genderqueer, and 43% belong to a minority group across 22 rural and first-nations districts.

Specific Skills

During hands-on projects that focus on alternative energy sources, energy efficiency, and transportation, students get to experience the entire engineering life cycle. By connecting classroom concepts around math, physics, economics, and writing, they gain meaningful discovery experiences within individual lessons. Additionally, they learn how to create and present major fundable sustainability proposals that aim to save energy or increase the sustainability of their homes, schools, and public spaces.

Resources Provided to Facilitators/Users

Summer professional learning workshops and year-round professional learning opportunities are provided to help teachers integrate Project ReCharge into their lesson plans. Materials kits including wires, batteries, motors, cutouts, and other consumables are provided to the teacher and fully refreshed each summer.

Website

<https://envirolution.org/>

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