Empowering Youth to Envision Community Resilience Actions around Natural Hazards
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INTRODUCTION

Communities in Colorado and other western U.S. states are increasingly experiencing major disruptions from environmental hazards, such as fire, flood, drought and extreme heat (Colorado Resiliency Framework, 2015). With this rise in hazardous events, there is a pressing need for communities to become more resilient through better preparation and planning.

In the HEART Force program, we work with teachers and students in rural Colorado communities to learn about community resilience and inspire them to take steps towards community resilience, with students acting as local change agents. This model empowers youth:

• to learn about natural hazards through engaging, place-based lessons
• to envision community resilience through immersive scenario-based role play
• to initiate conversations about hazard preparedness and responses from within communities
• to develop and implement student-led resilience action projects.

COLORADO TEACHER NEEDS ASSESSMENT

The HEART Force team conducted a needs assessment survey with teachers across Colorado during the 2018-2019 school year, sampling from school districts across a variety of settings described by the Colorado Department of Education (CDE): Denver Metro, Urban-Suburban, Outlying City, Outlying Town, and Remote.

Results indicated that the needs expressed by teachers in Colorado match the goals for the HEART Force Environmental Literacy Grant (ELG) project and also helped to identify areas for the team to focus on.

HAZARD EDUCATION AWARENESS & RESILIENCE TASK FORCE

HEART FORCE NATURAL HAZARDS UNIT

HAZARD LESSONS

Each unit on drought, floods, extreme heat, or wildfires includes place-based lessons with historical examples from natural hazard events in Colorado. The lessons are designed based on the following CDE and Next Generation Science Standards (NGSS):

• MS-ESS3-3: Mapping the history of natural hazards in a region and understanding related geological forces.
• HS-ESS3-1: Natural hazards and other geological events have shaped the course of human history at local, regional, and global scales.

SCENARIO-BASED ROLE PLAY GAME

Students use curriculum modules and scenario-based role-playing games to explore the effects of natural hazards on their community. These games draw on the structure of existing hazard games and are specific to the four hazards most common to Colorado: drought, floods, extreme heat and wildfires. Our four games use different styles of play to reflect differences in timing between fast-acting (floods, wildfires) and more gradual (drought, heat waves) hazards.

Each game emphasizes tasks and skills that are appropriate for kids and makes use of their talents and interests (e.g. in communicating, transporting, supporting roles).

RESILIENCE EXPO

Following the role-play game, students develop hazard mitigation strategies for their communities and present them in a Resilience Expo to local stakeholders and community leaders. Through this instructional sequence, participating middle and high school students explore a locally relevant natural hazard scenario and learn about existing mitigation and response plans. Students are also be encouraged to develop their ideas into action with mini-grants that will be awarded to encourage students to implement projects that increase resilience in their community.