



## The Community Resilience Expo: Making Students' Learning Visible

### Setting the Stage

The Community Resilience Expo is a culminating event for the HEART Force curriculum, where students will share what they've learned about real-world resilience strategies. The Expo event is meant to be an opportunity for students to share their learning with an authentic audience and participate in the community level conversation about resilience. If the community isn't talking about resilience currently, the Expo can be an opportunity for students to start the conversation.

### Expo Sub-Unit Overview

The HEART Force Expo curriculum is built towards one question: "How can we help make our community stronger if we experience a [*wildfire, drought, or flood*]?" During this sub-unit, students can choose to develop a new strategy or project, or communicate existing ideas that have been developed in local resilience planning efforts.

Depending on the amount of instructional time available, there are several options to create a sequence of lessons that works best for your classroom. The [HEART Force Unit Overview](#) gives a roadmap of lessons available and provides several example instructional calendars for different time frames.

The culminating event for the HEART Force Curriculum is the Community Resilience Expo. The Community Expo can be done several different ways; please choose an option that works best for you and your students.

Additionally, the HEART Force Team at CIRES Education & Outreach is available to assist you in making community connections, thinking about logistics, and helping however we can. Modest funding for each school Expo is available from HEART Force; please contact the CIRES E & O team if you would like to request funding for your expo ([ciresoutreach@colorado.edu](mailto:ciresoutreach@colorado.edu)).

There are two instructional pathways you can choose from for the Expo sub-unit. You can either communicate existing plans (about 1 week of instructional time) or have students design their own resilience strategies (about 2-3 weeks of instructional time). The following sections provide guidance for planning the Expo sub-unit:

- [Communicate Existing Plans Instructional Sequence](#)
- [Design a Resilient Future Instructional Sequence](#)
- [Contacting Community Experts](#) (including a sample email for contacting experts)
- [Student Presentation Guidelines](#)

Planning the Community Resilience Expo:

- [Community Resilience Expo Format Options](#)
- [Community Resilience Expo Activity Options](#)
- [Community Resilience Expo Logistics](#)





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Sub-Unit Overview	
<b>Grade Level</b>	Middle/High School
<b>Instructional Time</b>	1-4 weeks ( <i>total time needed</i> )
<b>Standards Alignment</b>	NGSS: <a href="#">MS-ESS3-2</a> , <a href="#">HS-ESS3-1</a> CDE: <a href="#">MS3.ESS.GLE9</a> , <a href="#">HS3.ESS.GLE9</a>
<b>Anchoring Phenomenon</b>	<ul style="list-style-type: none"><li>• Effective community planning can increase the ability of a community to be resilient and respond to and recover from hazards more efficiently.</li></ul>
<b>Driving Question</b>	<ul style="list-style-type: none"><li>• What strategies can we use to make our community stronger if we experience a wildfire, a drought, or a flood?</li></ul>
<b>Learning Goals</b>	<ul style="list-style-type: none"><li>• Students will develop ideas based on their knowledge of hazards, their community, and resilience in order to increase resilience in their community.</li><li>• Students will present their ideas to engage in dialogue with community members about resilience.</li></ul>
<b>Instructional Strategies</b>	<ul style="list-style-type: none"><li>• Project Based Learning is a strategy used for the entire Expo curriculum, in which students learn by working for an extended period of time to answer a driving question that pertains to a locally-relevant issue. <a href="#">PBL Works</a> (formerly the Buck Institute) is a go-to resource for learning more about Project Based Learning.</li><li>• Design Thinking or the Design Process is a structured framework used to identify challenges, gather information, generate potential solutions, refine ideas, and test solutions. The framework has its roots in entrepreneurial and engineering professions. For more resources, check out <a href="#">Design Thinking for Educators</a>, <a href="#">Stanford's d.school K12 Lab network</a>, and <a href="#">John Spencer's Launch Cycle</a> resources. In the Expo curriculum, teachers can choose to use the design process in a design challenge, or choose an alternate pathway and have students communicate existing resilience plans.</li></ul>





## Communicate Existing Plans Instructional Sequence

In this instructional sequence, students will learn more about their community’s plans for hazard mitigation, emergency preparedness, and/or resilience. Students will then choose a specific topic to focus on, learn more about existing plans through individual research, and develop a product to communicate the plan to their peers and/or their community.

We encourage you to invite local experts into the classroom to be guest speakers or to be interviewed. See the [Contacting Community Experts](#) section below for guidance on finding and bringing experts into your classroom.

Lessons to include in this sequence are:

- [Colorado Resiliency Framework Story Map Lesson](#) (50 minutes)
- [Exploring Local Hazard Mitigation Plans Lesson](#) (50 minutes)

### Finding Local Plans

In order to be eligible for pre- and post-disaster grants from the Federal Emergency Management Agency (FEMA), each county must undergo a hazard mitigation planning process every five years. The purpose of the planning process is to reduce the impact of natural hazards to people, property and infrastructure. Each Hazard Mitigation Plan must include several elements, including a summary of the planning process, a risk assessment, and hazard mitigation strategies. Find your county’s hazard mitigation plan at:

<https://www.colorado.gov/pacific/mars/approved-plans>. Use the [Exploring Local Hazard Mitigation Plans Lesson](#) to introduce students to the Hazard Mitigation Plan.

Additionally, your county may have an Emergency Preparedness plan or a Resilience Plan. Visit your County or City Planning Department website to find out. You can adapt the [Exploring Local Hazard Mitigation Plans Lesson](#) graphic organizer for additional plans.

### Choosing a Topic

Encourage students to choose a particular topic to focus on communicating in their presentation. Each Hazard Mitigation Plan should outline Goals and Objectives for Hazard Mitigation. Student can choose an objective from this list to research and present, or choose one of the sectors from the Colorado Resiliency Framework to focus on (see the Colorado Resiliency Framework Lesson).





## Design a Resilient Future Instructional Sequence

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In this instructional sequence, students will use design thinking to develop resilience strategies for their own community. Design Thinking, or the Design Process is a process used by engineers, entrepreneurs, and change makers around the world to solve problems. The Design Process can be utilized on a rapid scale and completed in a few hours or can be stretched out to last a few weeks in the classroom.

We encourage you to invite local experts into the classroom to be guest speakers, to be interviewed, and/or to give students feedback on their ideas. See the [Contacting Community Experts](#) section below for guidance on finding experts and bringing them into your classroom.

Lessons to include in this sequence are:

- [Design a Resilient Future Design Challenge](#) (66-235 minutes)
- [Colorado Resiliency Framework Story Map Lesson](#) (50 minutes)
- [Exploring Local Hazard Mitigation Plans Lesson](#) (50 minutes)

The Design a Resilient Future Teacher Guide gives thorough instructions on how to facilitate a Design Challenge in your classroom. As you run the challenge, make sure to take advantage of the additional resources linked in the Teacher Guide, and be flexible to meet students' needs as they take ownership of their learning.

## Contacting Community Experts

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The primary goal of the Expo is to provide an opportunity for students to engage with authentic community conversation about resilience. We suggest reaching out to community experts as soon as possible in the HEART Force unit planning process (up to two months in advance). Experts you could reach out to include:

- County planning and development office staff
- County planning commission members
- City/town planning department staff
- City/town or county office of emergency management staff
- Public lands (USFS, BLM, etc.) staff
- City/town community experts on resilience or sustainability

The sample email on page 3 that provides a template to begin the conversation.

If there are resilience planning efforts currently underway in your community, and you have a community expert who is willing to work with your classroom, ask the community expert how your students can participate in the conversation. For example, you could invite the community





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expert into your classroom to kick off the Expo sub-unit by explaining resilience efforts currently underway, and leave students with several key issues or questions that need to be addressed. Next, the expert(s) could review students' ideas and give them feedback, and attend their final presentations. Or, the expert could invite students to present their ideas at a city council meeting, a county commissioner meeting, or a planned community engagement event.

If you are unable to find a community expert that wants to engage with your classroom, several alternatives are provided in the Expo curriculum for students to work and research independently.

### Example Community Expert Email

Dear [expert],

My name is \_\_\_\_\_, and I teach \_\_\_<sup>th</sup> grade science at \_\_\_\_\_ School. In [month], we are planning to study [wildfire, drought, or flooding] and how we can build our community resilience to this hazard. As part of the unit, students will be learning more about the hazard, participating in a role-play scenario game, and demonstrating and extending their learning with a community Expo.

The idea of the community Expo is to engage students in conversation with the community about resilience in the face of [wildfire, drought, or flooding]. Students will be developing ideas to present to the community on how we can help our community prepare for and bounce back after a hazard event.

I have a few questions for you:

- 1) Would you be willing to serve as a community expert for our class? Depending on your availability and time, that could mean coming in to speak once to my students, or coming in several times to give feedback and to attend their final presentation. If you don't have the capacity to help, can you suggest someone who does?
- 2) Are there any opportunities for students to participate in the local conversation about community resilience? For example, do you know of a planned outreach event or a city council or county commissioner meeting where students could share their ideas of how to increase the resilience in our community?
- 3) Do you have ideas for local challenges that students could work on for their final project on community resilience? For example, our community has a large population that live in the wildland urban interface [or floodplain]; how can we help those people be better prepared for wildfire [or flood] and be able to quickly find resources they need to bounce back if their home is damaged in a wildfire [or flood]?





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Thank you very much for considering this opportunity to engage our youth in efforts to build community resilience. If you have any questions, or would like to chat more about collaborating, you can reach me at ###-###-####.

Sincerely,

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## Student Presentation Guidelines

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Students have several options to present their ideas at the Expo. Give students options for their final product that fit best with the chosen format of your Community Resilience Expo. Use the questions below to guide their presentation:

- What is the mitigation goal or objective?
- What steps are being taken to reach the objective? Who is responsible for leading the effort?
- Why is this objective important?
- What challenges might planners encounter in reaching this objective?
- How can community members help?

### Suggested guidelines for presentation formats:

- Oral presentation: Give a 3 to 5 minute presentation. Use visual aids (e.g., slideshow) as needed, and make sure that all members of your group contribute equally to the presentation.
- Poster: Create a poster using a tri-fold board, or an academic poster (32" x 46", ~\$10 printing cost at a blueprint printing store) to illustrate your ideas. Prepare a short presentation (2 to 5 minutes) to explain your idea using the visuals on your poster.
- Video: Create a 3 to 5 minute video to pitch your idea. Use engaging visuals, interviews, and/or skits to convince your audience to adopt your idea.
- Website: Create a website to show and tell people why your idea should be adopted in the community. Use engaging visuals, and create a resource for community members to learn more about resilience in their community.
- Local media: Write a Letter to the Editor to pitch your idea to the public, and explain why building community resilience is important.





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- Podcast: Create a podcast or radio spot to highlight the importance of your idea. Include interviews with local experts, if possible.
- Oral history: Collect oral history from residents who have been in your community a long time and who have experienced some sort of hazard. Develop a podcast or a short pamphlet to highlight their personal stories and create a resource for community members to learn how to respond to hazard in the future.

## Community Resilience Expo Format Options

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- Community event at a public venue (school, library, community center)
- Presentation at a local city council, county commissioner, or planning committee meeting (reach out to local planners and government officials before you begin the unit to learn about local efforts and to see if there are any planned events or projects that students could participate in and/or present at)
- Presentation at a school board meeting
- School event during lunch or assembly time. Invite local experts and community members to participate.
- Write a newspaper article or see if students can be interviewed by a local radio station. *Note: This option may not be ideal as it doesn't provide an avenue for feedback for students, but it could be a great opportunity for students to share their ideas community-wide.*

## Community Resilience Expo Activity Options

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- Student presentations (posters, presentations, video presentation)
- Presentation by local expert (a local community planner, a representative from the U.S. Forest Service, a faculty member from a local university, etc.)
- HEART Force game: Students could facilitate a round of the HEART Force game for their classmates and/or community members
- Community discussion: Students could facilitate a community discussion about resilience. For example, ask attendees to create a list of community resources/skills available in case of an emergency (e.g., the fire department has five sets of ham radios, Bob has a chainsaw, Rick has a four-wheeler, Gina has a generator, etc.). Or consider using the [World Café format](#) to facilitate the discussion.
- Career fair: Invite local professionals who may think about resilience in their daily job to come talk to students about what their job is like.

## Community Resilience Expo Logistics

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These materials were developed by CIRES Education & Outreach at CU Boulder.  
<https://cires.colorado.edu/outreach/projects/HEARTForce>







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## Teacher Guide Middle/High School Community Resilience Expo Overview

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- Who would you like to invite (e.g., students, other teachers, administration, parents, younger students (consider inviting local elementary students to the Expo), community members, local government officials, local experts)?
- How will you get the word out about the event? Will you send invitations? Will you post an event listing in the local newspaper?
- Where will the event be held?
- What time of day will the event be?
- Do you have any sort of budget available for the event? Could you ask your administration for funding? (*Note: Limited funding for Expos is available from the CIRES Education and Outreach team. To learn more, email [ciresoutreach@colorado.edu](mailto:ciresoutreach@colorado.edu).*)
- Will you have food or snacks at the event? What would you like attendees to take away from the event? What is one thing you'd like them to remember?



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