

Going Viral

How Do We Build Resilience for Extraordinary Events?

Why are we doing this?

Communities constantly face unexpected emergencies such as floods, wildfires, blizzards, and chemical spills. Each event yields learning opportunities and resulting lessons that can strengthen communities for the next event. By identifying, responding to, and recovering from these events, communities build the capacity and capabilities to withstand extraordinary, catastrophic events.

What are our project learning goals and major deliverables?

Learners will develop a plan to prevent **or** respond to natural disasters, unintentional man-made disasters, epidemics, and other environmental disasters for their extreme environment from Plan X.

Learners will:

- Research their assigned disaster and develop a plan to protect their community.
 - Learners must consider all models within their Extreme Environments.
 - Learners should be prepared to receive and implement feedback from professionals throughout the project.
- Create an informational campaign that includes informational brochures, public service announcements, and other communication tools to encourage the community to implement their solution.
- Collaborate to create a community kit to thrive in case of emergencies related to the disasters.
- Develop a formal presentation to present the final plan.

How will we present our findings?

Learners will showcase their Plan X models and how they plan to protect their communities from disaster. Learners will present their findings and recommendations in a formal presentation at a Disaster Preparedness Conference. In addition to friends and family, we will invite guests who work in public health, health care, disaster relief, emergency management, government officials, and other professionals. You will want to appeal to these professionals in addition to the general public.

What are we going to learn about in this project?

Learners will prepare for the **2025 Plano Academy High School Preparedness Summit** where they will showcase and share their research findings, best practice training models, tools, and/or other resources that advance the field and serve the community.

- Learners will evaluate the potential long-term of an engineering solution on their society and environment.
- Learners will develop technical documents to visually communicate their engineering solutions.
- Learners will design and create a professional presentation to communicate their engineering solution.
- Learners will research laws developed for OSHA, EPA, FEMA, and other regulatory agencies to determine how they apply to their innovative solution and problem statement.

- Learners will explore natural disasters, unintentional man-made disasters, epidemics, and other environmental disasters that may impact a community and what can be done to prevent and respond to these issues.
- Learners will mathematically analyze the effects, likelihood, spread of disasters/emergencies using exponential and logarithmic equations.
- Learners will research the conflicts of the colonial era or the late 1920s - 30s and how those historical events have shaped current events.
- Learners will create a physical artistic portfolio of expressive artworks inspired by catastrophic events, in different media and with different meanings.
- Learners will research and craft a well-reasoned argument around an ethical topic and present solutions through an essay/presentation.
- Learners will assess what the government's responsibility is to people in times of crisis and decide what is the government's best course of action to respond to said crisis.
- Learners will investigate the feasibility of their Going Viral solution.
- Learners will investigate how molecules and their unique physical properties can better and destroy the health of the community.

Are there any restrictions?

Learners will be restricted to the guidelines of the 2025 Plano Academy High School Preparedness Summit:

- The proposed solution must focus on the prevention of **or** the response to the issue, **not both**.
- Presentations must be 15 minutes for a team of 2 or 20 minutes for a group of 3 with time for an extra 5-minute Q&A.
- Learners will be limited to focusing on unintentional disasters specific to their environment provided by the facilitators.