The Homeless Project
Presenter:

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The Homeless Project was a school-wide collaborative initiative in grades K-8.

This innovative project consisted of app development using ArcGIS and Collector.

Students also developed product prototypes through maker stations to create real world solutions for those in need.
Students developed and tested The Homeless Mission Operators App, version 1.0.

This app helps mission operators manage food, clothing, and housing resources for those in need.

A food network was created to provide food donations to those in need that live under bridges and in safe havens.

Students plan to make app updates and launch version 2.0 in the spring of 2018.
The food network created is tracked within the Homeless Mission Operators App.

Weekly food donations are collected by mission operators.
Students used geospatial technology to develop and test feature layers that could be updated in the field by tracking GPS coordinates.

These layers allow mission operators to add data or locations according to homeless needs.
Students collected data online to find homeless shelters in the northeastern Ohio area, specifically Cleveland and Akron.
Students collected data online to find soup kitchens and food pantries so that those in need could find a hot meal.
Homeless mission operators provided data locations of homeless in need around Cleveland and Akron for students to create a GIS layer. Homeless operators can also add data to this layer.
Homeless mission operators requested that the app also include quick notes that can be used for those in need, emergency contact information, driver routes, GPS, and review of historical data.

The Food Resource Tracker, Mission Routes, and Needed Items layers are all feature layers that can be updated with new point location information.

The AAA layer provides contact information so that homeless mission operators can pass on to those in need where to receive AAA service.
Facilities were assigned for the homeless in need by using homeless shelter best facilities analysis and walking distance.

Students found shelters and food pantry similar locations to help those in need.
Students analyzed patterns to calculate density and found hot spots to find areas with the most need.
Product Development

- Students conducted material testing to see which materials should be used to develop products for those in need during maker station prototyping.
In Phase I, students were prototyping solutions for portable housing, food storage, sleeping gear, and clothing by using wooden sticks, material, and cardboard!
Phase II Prototyping

- In Phase II, students created "life blankets" and pillows using the materials from materials testing.
Students completed product testing outdoors in 30 degree weather and concluded that "life blankets" consistently held a temperature of 60 to 70 degrees!
The Homeless Mission Operators App and “life” blankets were distributed to the homeless mission operators to help those in need.
The Homeless Mission Operators App has been launched and is being used in the field. Life blankets and pillows were also distributed to the homeless that live under bridges and in safe havens.
Make a difference