Mathematics Extension Scenario 1:

The small UAVs you flew can only carry a few ounces of weight. However, a UAV called the eHang 184 that is being tested by a Chinese company can carry 100 kilograms (about 220 pounds). Assume you can use a larger UAV like the eHang 184 for your rescue operations. The eHang 184 has a cruising speed of about 35 mph (60 km/hr) and can fly for about 25 minutes on a fully charged battery.

Disasterville is about 6 miles (10 km) from the UAV takeoff spot.

Based on your experience flying UAVs/Drones, predict:

- How long a UAV flight to Disasterville and back will take.
- How many UAV flights are needed to deliver a 3-day supply of water to all of the people in Disasterville

Do you think the UAV can complete the flight to and from Disaterville on a single battery charge when it is fully loaded with water? What do you know about how long UAV batteries last when the UAV is carrying some extra weight?

Include a sketch of a map of your UAV's path to and from Disasterville in your storyboard.

Mathematics Extension Scenarios 2-3:

The small UAVs you flew can only carry a few ounces of weight. However, a UAV called the eHang 184 that is being tested by a Chinese company can carry 100 kilograms (about 220 pounds). Assume you can use a larger UAV like the eHang 184 for your rescue operations. The eHang 184 has a cruising speed of about 35 mph (60 km/hr) and can fly for about 25 minutes on a fully charged battery.

Disasterville is about 6 miles (10 km) from the UAV takeoff spot.

Based on your experience flying UAVs/Drones, predict how long a UAV flight to Disasterville and back will take.

Do you think the UAV can complete the flight to and from Disaterville on a single battery charge when it is carrying an injured person on the way back? What do you know about how long UAV batteries last when the UAV is carrying some extra weight?

Include a sketch of a map of your UAV's path to and from Disasterville in your storyboard.