

# Career Challenge! – Math at Work

## Scenario 1: Downpour!

Thunderstorms can have winds that are over 50 miles per hour. Your area averages 6 thunderstorms each year. Mobile homes and temporary shelters are at a high risk for damage in these storms. Your city is expecting 7 inches of rain in the next 24 hours. This is considered a 100-year rainfall event. Flash floods are the most dangerous kind of floods. They move fast and are very destructive. Flash floods happen when water rapidly fills normally dry creeks or river beds. Flooding can occur anywhere throughout the city. Your team will need to provide to the Mayor's office your preparation plan. Use the form below for this event.



Team \_\_\_\_\_

What warnings or precautions need to be made to the public before the event?

What steps need to be taken by your team after the event?

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## Scenario 2: Blizzard!

Severe winter storms can produce 6 inches or more snow or damaging ice. They occur about five times a year in Illinois. These storms can cause more damage than other forms of severe weather. The most snowfall Illinois has ever received in a 24-hour period was 36 inches on Feb. 28, 1900. In a 2-day storm of 1967, 23 inches left 50,000 cars and 800 buses stranded on local streets. The airports were closed as 10-foot snow drifts piled on the runways. Hundreds of students had to camp out at school because the buses couldn't get them home. You are expecting over 25 inches of snow in the next 2 days. Your team needs to provide a preparation plan for the Mayor. Use the form below.



Team \_\_\_\_\_

What warnings or precautions need to be made to the public before the event?

What steps need to be taken by your team after the event?

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### Scenario 3: Tornado!

Illinois has an average of 64 tornadoes each year. These cause damage, death, and injuries. A tornado is a violent rotating column of air extending from a thunderstorm to the ground. The damage from a tornado is a result of the high wind speeds and wind-blown debris. Illinois experienced one of the worst tornadoes in U.S. history. The infamous Tri-State tornado occurred on March 18, 1925, passing through southern Missouri, Illinois, and Indiana, leaving 695 dead and 2000 injured. Your area is anticipated to have an outbreak of tornadoes in the next 24 hours. Your team will need to provide to the Mayor's office your preparation plan. Use the reporting form below for this event.



Team \_\_\_\_\_

What warnings or precautions need to be made to the public before the event?

What steps need to be taken by your team after the event?