

Strand: 8.4	Standard: 8.4.5	Episode 4	Big Idea: There are patterns in the occurrences of natural hazards and these patterns can be used to predict future catastrophic events.
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Title: Using Technology to Mitigate the Effects of Natural Hazards	Time: 30 minutes	CCCs: <u>Structure and Function</u>	Practices: Construct Explanations and Define Solutions
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Episode Snapshot

In this episode, students will conduct the final stage of their research. Now that they have explored the causes of the hazard and the signs that the hazard event is about to occur, they will **define possible solutions** for the hazard that use technology to reduce loss of life and damage to property. Students will explore the various technologies we use to mitigate the effects of natural hazards such as modifying the structure and function of human constructions to withstand or resist the hazard.

Gather

Students will conduct the third and final step of their research. They have discovered the causes of their hazard and signs that it is about to occur. In this step they will research different technologies that humans use to protect communities from this hazard. Students will record their findings in their research notebooks. In this case, technology does not only refer to electronics. See [this document](#) for examples of technology; it can include anything from satellite images and warning sirens to designs for levees and adaptations in the structures and functions of buildings. They will consider the pros and cons of these technologies. Are they effective? Are they expensive?

Reason

After researching the various methods people have used to protect people and their property from their hazard, students will **design a solution** using these technologies that will effectively protect their city from this hazard.

Communicate

After all students have researched technology used to mitigate the effects of their hazard, they meet with their city one more time and share their findings. They will present to their group their recommendations of technologies that will help protect the city from the hazard they researched. Students summarize the findings of the other city planners in their notebook. It is not necessary to discuss the findings as a class at this time because in the final episode, students will be presenting to the entire class their final recommendations for technology to invest in for their city.

Assessment: The assessment for this episode is the completed table summarizing the technologies used to mitigate the disastrous consequences of specific hazards.	Materials, resources, handouts, etc: Natural Hazards Research Notebook Internet access or other research materials about natural hazards
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