

It's Raining, It's Pouring, It's Flooding! In Maricopa County Lesson 4: Hazards

Key Vocabulary

Hazard—Something that can cause harm

Mold—A fungus that forms on wet surfaces

Valley—Low area of land surrounded by mountains

Destructive—Causing a lot of damage

Surging—Rising

Disaster—An event that results in a large amount of loss

Silt—Fine sand, clay, or other material carried by running water and deposited as sediment

Sediment—A matter that settles to the bottom of a river, wash, or stream

Contaminate—To pollute



Outcome

Students will understand the risks and hazards of flooding.

Objectives

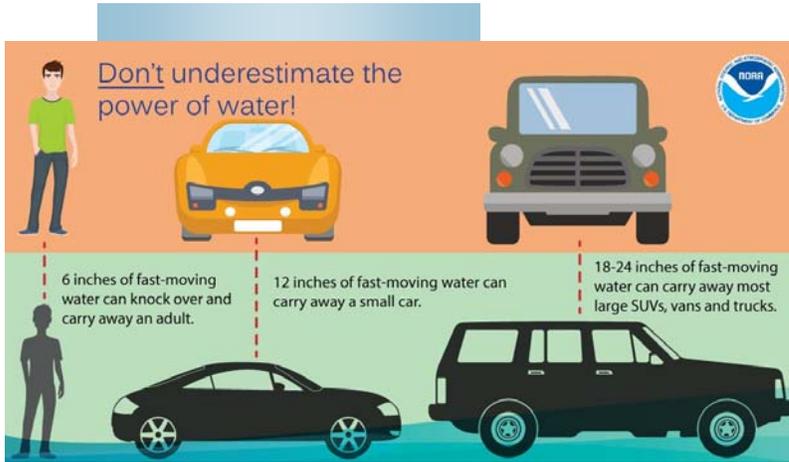
- I will be able to identify 3-5 risks and hazards of flooding.
- I will be able to identify at least two causes of flooding.
- I will create a billboard or newspaper ad warning citizens of the risks and hazards of flooding.

Essential Question

What are risks and hazards of flooding?

Length of Lesson

Two 45- minute periods



Materials

- It's Raining, It's Pouring, It's Flooding! In Maricopa County PowerPoint
- Poster-sized paper
- Markers
- Crayons

Floods are the most common natural disaster in the United States.

Before Teaching

Preview PowerPoint

Choose videos to show

Additional Resources

[Hazards of Monsoon](#)

[Cronkite News](#)

[Weather Nation](#)

Books:

Floods, Dams and Levees by Joanne Mattern

How do Dams Work? By Ryan Nagelhout

Activities

- ◆ Review vocabulary with students, using TPR
- ◆ Review the remainder of the PowerPoint
- ◆ Students work together to brainstorm information for an ad or billboard.
- ◆ Students create an ad (can be a print ad, video, or billboard), using the rubric for guidance.

Extension

As an extension, students can present their ads to other classes.

Differentiation

Students can use pictures, song, dance, or other forms of art to convey their message.



It's Raining, It's Pouring, It's Flooding! In Maricopa County

Lesson 4: Hazards

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- I will be able to identify at least two causes of flooding.
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Essential Question

- What are the risks and hazards of flooding?



Key Vocabulary

- Hazard – Something that can cause harm
- Mold – A fungus that forms on wet surfaces
- Valley – Low area of land surrounded by mountains
- Destructive – Causing a lot of damage
- Surging – Rising
- Disaster – An event that results in a large amount of loss
- Silt – Fine sand, clay, or other material carried by running water and deposited as sediment
- Sediment – A matter that settles to the bottom of a river, wash, or stream
- Contaminate – To pollute



Risks of Flooding

- 90% of all presidentially-declared natural disasters involve flooding
- Do you live in a flood zone?
 - Visit <https://gis.maricopa.gov/floodplainviewer/>
- The Flood Control District of Maricopa County helps reduce flood risk by building structures such as dams, channels, and basins

http://flash.org/peril_inside.php?id=51



Flood Hazards

- Can damage homes and buildings
 - Mold
 - Floors
 - Walls
- People and animals can drown
- Farmland may lose crops
- Floodwaters contain pollutants
 - Can pollute the oceans and rivers



More Hazards

- Gas and electricity outages
- Power lines down
 - Could lead to fires



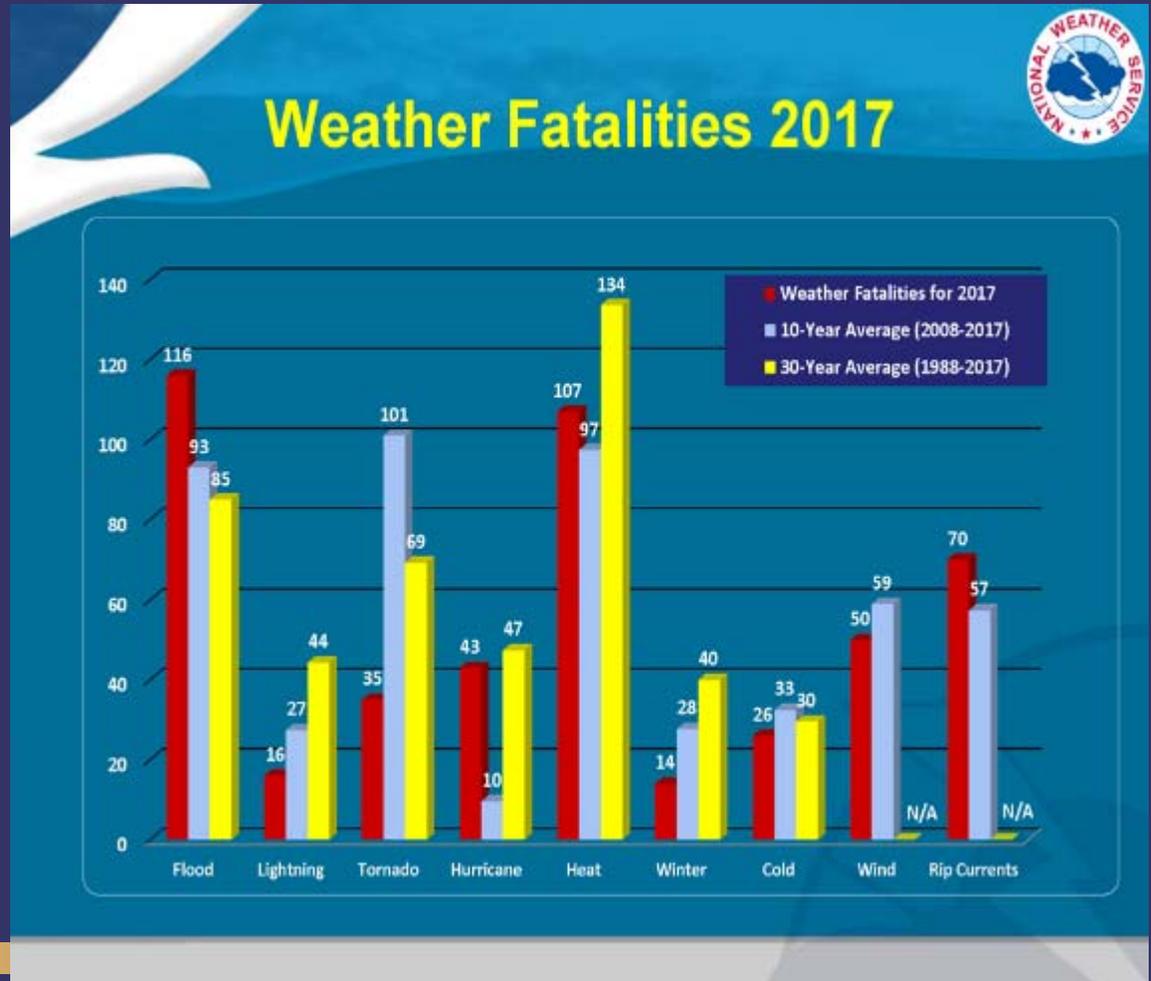
Flood Destruction Videos

- Watch the two videos with your group.
- <https://www.youtube.com/watch?v=2E4xBLOxCgk>
- <https://www.youtube.com/watch?v=mKqGofwvmjs>
- Answer the questions on the reflection sheet.



Weather Fatalities 2017

- The number one cause of weather related fatalities in the United States in 2017 was flooding



What is the number one way people die in floods?

Trying to drive across a flooded road



<https://www.foxnews.com/a/several-people--killed-and-missing-in-arizona-flash-floods/32465201.html>



Attempting to drive through a flooded area is a bad idea!

- 80% of the people who die in floods get caught in their cars, trying to cross roads that are CLOSED.
- 12 inches of water is enough to carry away a car

<http://wkdg.com/3-facts-on-why-driving-through-flood-waters-is-a-bad-idea/>

<https://weather.com/safety/floods/news/flash-flooding-vehicle-danger-20140717>

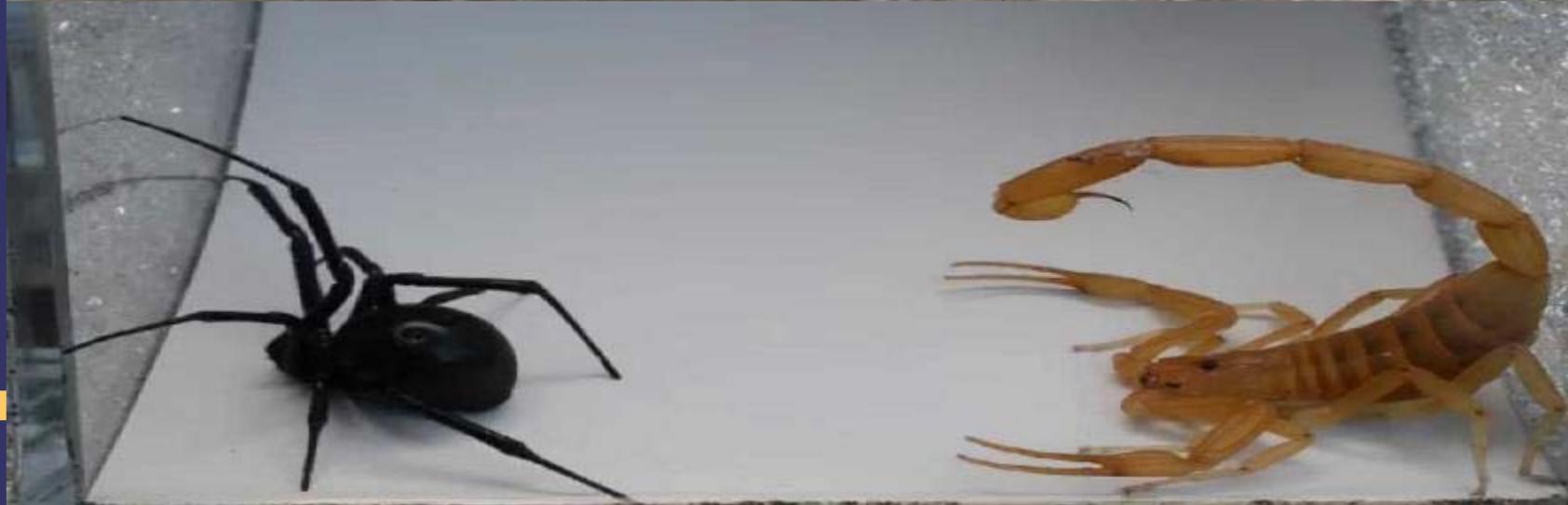
12/27/2019



Other Hazards



Other Hazards



Displaced Pets



Downed Power Lines

- Downed power lines can hurt or kill you, even if they do not spark, hum or “dance”
- Stay away from anything touching the line, such as a tree, fence, vehicle, etc.
- Don't touch someone being shocked by a downed power line – you could be hurt or killed
- Be alert for lines that may be hard to see in flood water
- Immediately call 9-1-1 to report the downed power line



Exposure

- Flood water contains illness causing bacteria and chemicals
- Flood water can come into contact with farms, factories, stores, and garages
 - With your table, talk about what types of contaminants may be in the flood water



Oh no – No Utilities

- With your partner, list as many issues that could arise when the power goes out at your house during a storm
 - No lights = tripping
 - Dehydration if not enough water to drink
 - Heat stroke – the A/C can go out and get very hot inside your home
 - Hypothermia – if it's cold out, no heat and everything is wet
 - Fire from candles that are left burning
 - Medical machines not working
 - Medication not able to stay refrigerated
 - Food going bad could lead to food poisoning



Crime on the Rise

- Have you ever heard the term looting?
- Sometimes people will take advantage after a natural disaster
 - Store windows may be broken
 - People will break in and take stuff
- How will this affect the overall economy and culture of the area?



Communication

- Phone lines may be down
- May not be able to charge cell phone
- Texting uses less power than a call
- How will you let your family know where you are? Take 30 seconds to tell your partner other ways to communicate? Be sure to know a couple of different phone numbers.



Worst Case Scenario

- You've just learned about several hazards that can happen after a flood. Let's see how much you remember or if you can think of any more.
- Each team will have 2 minutes to write down as many hazards as they can
- When time is called, each team will have a chance to share an answer that hasn't already been said
- If your answer is on the board, your team receives 1 point
- Be sure to cross off answers once another team says it, because if you repeat an answer, you will lose a point



Your Task

- Create a billboard or newspaper ad warning others of the risk of flooding
- Use the rubric when creating your ad



Something that can
cause harm

A fungus that forms on
wet surfaces

Low area of land
surrounded by
mountains

Causing a lot of
damage

Rising

3rd – 5th Grade
Lesson 4

An event that results in a
large amount of loss

Fine sand, clay or other
material carried by
running water and
deposited as sediment

A matter that settles to
the bottom of a river,
wash, or stream

Low area of land
surrounded by
mountains

- Valley

A fungus that forms on
wet surfaces

- Mold

Something that can
cause harm

Hazard

Causing a lot of
damage

- Destructive

A matter that settles to
the bottom of a river,
wash, or stream

- Sediment

Fine sand, clay or other
material carried by
running water and
deposited as sediment

- Silt

An event that results in a
large amount of loss

- Disaster



It's Raining, It's Pouring, It's Flooding! in Maricopa County
 Lesson 4 - Billboard or Newspaper Ad Rubric

Risks and Hazards			
	Excellent (3 Points)	Satisfactory (2 Points)	Needs Improvement (1 Point)
<i>Content</i>	<ul style="list-style-type: none"> Student creates an original, accurate, and interesting product that adequately addresses the issues of flooding. 	<ul style="list-style-type: none"> Student creates an accurate product but it does not adequately address the issue. 	<ul style="list-style-type: none"> The ad is not accurate.
<i>Graphics</i>	<ul style="list-style-type: none"> The graphics used on the poster reflect an exceptional degree of student creativity in the creation or display. All graphics are related to the topic and make it easier to understand. 	<ul style="list-style-type: none"> The graphics are made by the student but based on the ideas of others. Some graphics are related to the topic. 	<ul style="list-style-type: none"> There are no graphics made by the student. Graphics are not related to the topic.
<i>Attractiveness</i>	<ul style="list-style-type: none"> The poster is exceptionally attractive in terms of design, layout, and neatness. 	<ul style="list-style-type: none"> The poster is mostly attractive but may be a little messy. 	<ul style="list-style-type: none"> The poster is messy, poorly designed, or does not include color.
<i>Grammar</i>	<ul style="list-style-type: none"> There are no grammatical errors on the ad. 	<ul style="list-style-type: none"> There are minimal grammatical errors on the ad. 	<ul style="list-style-type: none"> There are several grammatical errors that impede the message of the ad.
<i>Visual</i>	<ul style="list-style-type: none"> The ad is easy to understand 	<ul style="list-style-type: none"> Most of the ad is easy to understand, but some is difficult to read. 	<ul style="list-style-type: none"> The content on the ad is too small to see.



It's Raining, It's Pouring, It's Flooding! in Maricopa County

Lesson 4 - Billboard or Newspaper Ad Rubric

Score:	Feedback:
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DRAFT

To pollute

3rd - 5th Grade
Lesson 4



To pollute
- Contaminate

