



Preparing for Floods

PLEASE NOTE:

Students must complete the “Initiation” section of the **Monster Guard** app before they begin this activity, in order to gain access to the Flood training mission.



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Opening

Inform students that they are going to learn about floods and how to stay safe if there is a flood in their area. Ask students to raise their hands if they know what a flood is. Then ask them if they have ever seen a flood (even on TV). Assess for prior knowledge by asking students to share what they know about floods (e.g. what did you see on TV, what is a flood?). Explain that most floods happen when heavy rain or melting ice and snow causes rivers and streams to overflow, spilling water onto normally dry land.

Monster Guard

Tell students that they will be learning more about floods with a cool app called **Monster Guard**. Explain that **Monster Guard** was created by the American Red Cross as a way for students to have fun learning, practicing, and sharing how to stay safe during different types of emergencies.

Adapt your teaching instructions to the various methods of playing **Monster Guard** – whether you are using a smart board to play as a class or having students play in small groups or individually using mobile devices.

Before they begin playing, remind students that they need to watch the videos before and after the training mission for information that will help them complete the classroom activities.

Pass out the activity sheet, read the introduction together, and have students go through the Flood training mission with Greta. Remind them to write their score in the space provided on the activity sheet. As a class, have students suggest ways they think they could raise their scores the next time.

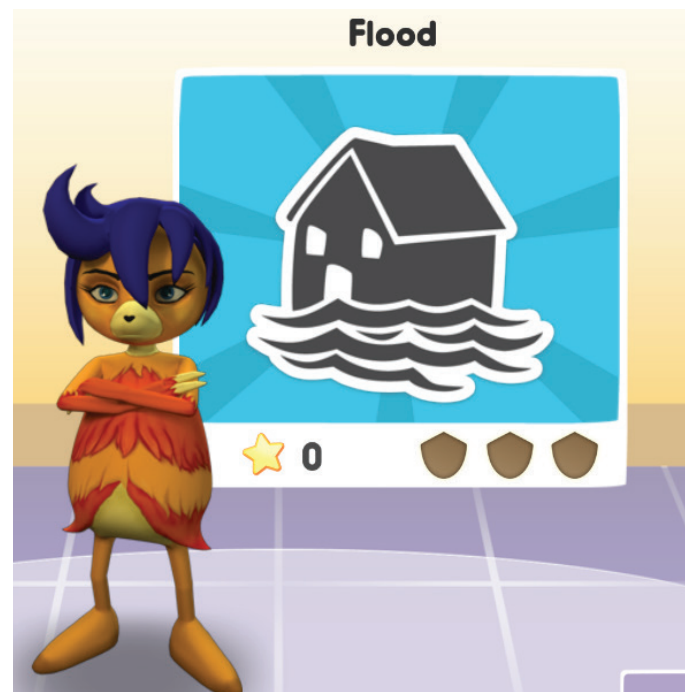
Grades 1-3

PART 1. Have students work individually to complete Part 1 of the activity. Remind them that they can replay the **Monster Guard** Flood training mission if they need help. Review the answers in a class discussion.

Answers: (1) Flash floods happen quickly; (2) When a flood happens, get to higher ground.

PART 2. Begin Part 2 of the activity by asking students why they would or would not like to live near a river. Point out that farmers often live near rivers for irrigation purposes, and that many people enjoy the sights and sounds of rivers. But sometimes rivers can become dangerous very quickly. Read the introduction to Part 1 and review the facts about the fictional town of Riverton. Talk about the topographic floodplain map and how different degrees of flooding would impact different parts of the community. Then have students work individually to answer the questions. As a class, discuss how people in Riverton could prepare for flooding.

Answers: (1) 37 inches; (2) 88 feet; (3) Yes; (4) No.



Continued on next page

Grades 4-6

PART 1. Have students work individually to complete Part 1 of the activity. Remind them that they can replay the **Monster Guard** Flood training mission if they need help. Review the answers in a class discussion.

Answers: (1) Evacuate and get to higher ground; (2) Turn around, don't drown; (3) You could be swept off your feet.

PART 2. Begin Part 2 of the activity by asking students why they would or would not like to live near a river. Point out that farmers often live near rivers for irrigation purposes, and that many people enjoy the sights and sounds of rivers. But sometimes rivers can become dangerous very quickly. Read the introduction to Part 1 and review the facts about the fictional town of Riverton. Talk about the topographic floodplain map and how different degrees of flooding would impact different parts of the community. Then have students work individually to answer the questions. As a class, discuss whether moving away from the river or building flood protection would be the better long-term solution for this community.

Answers: (1) 37 inches; (2) 88 feet; (3) Yes; (4) No.

PART 3. Read Part 3 of the activity with the class, then have students review the information about climate impacts on coastal areas at <https://archive.epa.gov/climatechange/kids/impacts/effects/coastal.html>. Have students work individually or in small groups to make notes for a class discussion on what coastal communities should do to protect people from the risks of rising sea levels.



Teachers:

Please provide feedback on this activity using our online feedback form at www.ymiclassroom.com/mgfeedback-flood.



Preparing for Floods

Grades 1-3
Reproducible Master

Hi! I'm Greta. Floods can happen any time of year, anywhere in the U.S. Want to learn more? Download **Monster Guard**. It's a free app from the American Red Cross that teaches kids how to be prepared for emergencies. Choose "Flood" on the main menu. Then join me on a training mission to learn how to head for higher ground when a flood is on the way. **Note:** You must have completed the **Monster Guard** Initiation section before you can access the Flood training mission.

My Flood Safety Score: _____



Part 1

Do you remember your flood safety training? Show what you learned by unscrambling these sentences. Write the words in the right order on the blank lines.

Floods happen flash quickly.

Flood ground higher happens a when to get.



Preparing for Floods

Grades 1-3
Reproducible Master

Part 2

Floods happen along streams and rivers when heavy rain, melting snow and ice, or a dam break causes the water to overflow onto land that is normally dry.

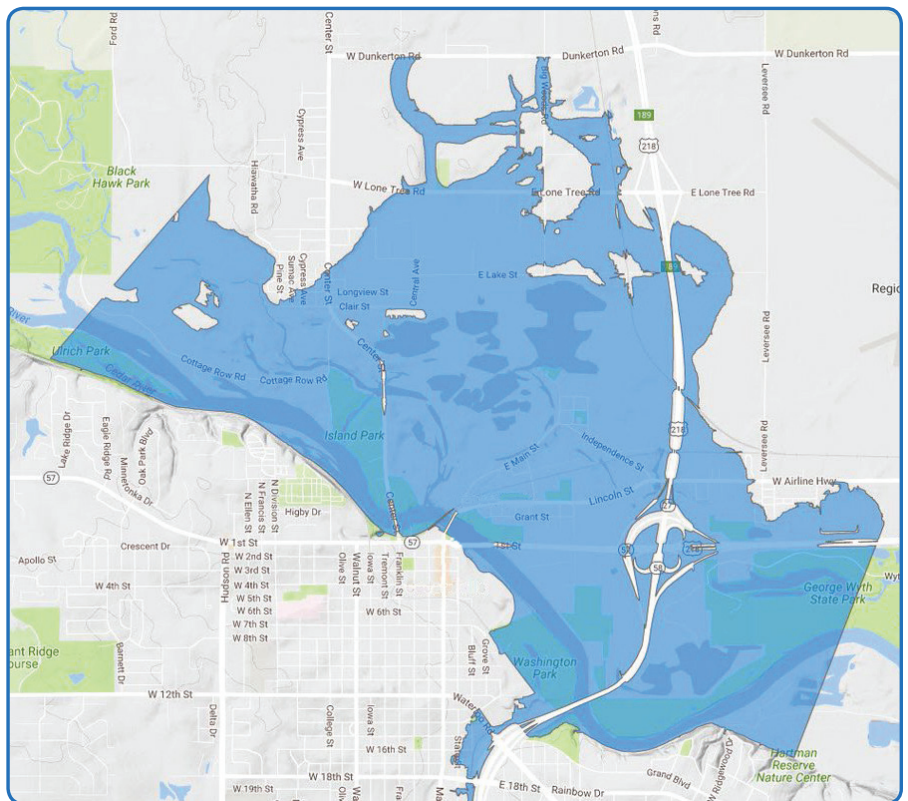
There are two types of floods—*flash floods* and *normal floods*. *Flash floods* are caused by heavy rain. They happen very quickly and end quickly as well. *Normal floods* are caused by longer periods of rain. They can also happen if a lake overflows, or a dam fails. Normal floods can last days, weeks, or even longer.

In some places, flooding happens almost every year. Look at this map of flooding in an imaginary town called Riverton. Use the map and the information about Riverton to answer the questions.



Riverton Information

- Average yearly rainfall: 37 inches
- Flood level of river: 88 feet
- Average flooding: Once or twice per year to between 88-90 feet.
- Any flood of over 90 feet will cover the area in blue, which includes 400 homes.
- Flooding above 90 feet happens about once every 20 years.



1. How many inches of rainfall does Riverton get each year, on average? _____ inches
2. How high will the river be when it begins to flood? _____ feet
3. Are homes near Black Hawk Park safe when the river rises over 90 feet? __ Yes __ No
4. Are homes near George Wyth State Park safe when the river rises over 90 feet? __ Yes __ No
5. What are some things people living in Riverton should do to be prepared for flooding?

Preparing for Floods

Grades 4-6
Reproducible Master

Hi! I'm Greta. Floods can happen any time of year, anywhere in the U.S. Want to learn more? Download **Monster Guard**. It's a free app from the American Red Cross that teaches kids how to be prepared for emergencies. Choose "Flood" on the main menu. Then join me on a training mission to learn how to head for higher ground when a flood is on the way. **Note:** You must have completed the **Monster Guard** Initiation section before you can access the Flood training mission.

My Flood Safety Score: _____



Part 1

Do you remember your flood safety training? Show what you learned by answering these questions

1. When there is a Flood Warning, what should you do if you live in an area where there has been flooding in the past?

2. What should you do if the road ahead is covered by flood water?

3. What could happen if you tried to walk through flood water that is only six inches deep?



Preparing for Floods

Grades 4-6
Reproducible Master

Part 2

Floods happen along streams and rivers when heavy rain, melting snow and ice, or a dam break causes the water to overflow onto land that is normally dry. In some riverside communities, flooding happens almost every year. Look at this map of flooding in a community called Riverton. Use the map and the information about Riverton to answer the questions.

Riverton Information

- Average yearly rainfall: 37 inches
- Flood level of river: 88 feet
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Part 3

Since 1901, sea levels around the world have risen by 8 inches. Scientists predict that sea levels will continue to rise, flooding and changing coastlines in the future. This is partially due to climate change.

Visit <https://archive.epa.gov/climatechange/kids/impacts/effects/coastal.html> to learn more about how climate change may impact coastal communities. Then use the back of this sheet to make notes for a class discussion on what coastal communities should do to protect people from this danger.

Replay the
Monster Guard Flood
training mission.
See if you can
score higher!



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