

## Details

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# Environmental Risk Assessment

## Introduction

This activity is 2 of 4 in a series that exposes students to the concepts of and work done by the HERMYs Project (Historical Ecology and Risk Management: Youth Sustainability):

1. A Narrative Pantomime
2. Environmental Risk Assessment
3. Risk Hazard Identification
4. Local and Traditional Knowledge & Risk

*“Historical accounts of remote Alaska can only offer documentation of events that have taken place in the last 150 years or so. Ancient cultures, on the other hand, have documented thousands of years through oral history and storytelling. Although there is some added fiction to make the stories more fun, this local and traditional knowledge (LTK) allows us to examine REAL events from the perspective of ancient cultures.” – Hollis Yenna*

## Objective

Students will learn to assess the **risk hazards** of a given geographic location due to past and current threats.

## Procedure

1. (10 minutes) Begin by discussing the terms risk hazard, risk assessment, and risk management.
  - **Risk hazard:** any biological, chemical, mechanical, environmental or physical agent that is reasonably likely to cause harm or damage to humans, other organisms, or the environment in the absence of its control.  
*What is a risk hazard where you live?*
  - **Risk assessment:** a systematic process of evaluating

## Materials

- Worksheet provided
- Computers (for research)

the potential risks that may be involved in a projected activity or undertaking.  
*Are floods, earthquakes, tornadoes, etc. a risk?*

- **Risk management:** the forecasting and evaluation of financial risks together with the identification of procedures to avoid or minimize their impact.  
*What would you do at your house if a tornado was going to touch down?*

2. Have students draw a piece of paper from a hat – each piece of paper will have a geographic location written on it (the ‘paper’ with locations is included in this lesson).
3. (25 minutes) Students will research the location’s geographic features, potential risk hazards, and disaster history.
4. (10 minutes) Once each student is finished, have them locate another student in class with the same location. Students should compare the information from their location and make sure the information matches.
5. (15 minutes) Once ALL students finish, have each pair come to front of the classroom and describe their location, the risk hazards, and past disasters that have occurred.
  - *it might help for the teacher to look up each location on GoogleMaps, then project the image onto the board for all students to see the geographic features.*

### **Extension**

Not applicable

### **Assessment**

Not applicable

### **Author / Credits**

This lesson was developed by PolarTREC teacher Hollis Yenna <yennahjh@gmail.com>.

### **Standards**

None, not applicable

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

## Risk Hazard Assessment

City: \_\_\_\_\_

Country: \_\_\_\_\_

Local geographic features: *Check all that apply*

mountains     volcano     river     ocean     lake     wild forest  
 plains (open land)     valley     glaciers     desert     agriculture     other

Have any BIG DISASTERS occurred in this location?

yes     no

If Yes, what were they and when?

1. \_\_\_\_\_ year: \_\_\_\_\_
2. \_\_\_\_\_ year: \_\_\_\_\_
3. \_\_\_\_\_ year: \_\_\_\_\_
4. \_\_\_\_\_ year: \_\_\_\_\_
5. \_\_\_\_\_ year: \_\_\_\_\_

What are the potential **Risk Hazards?** Check all that apply

tornado     hurricane     ice shove     storm surge     flood  
 drought     tsunami     earthquake     wild fire     tundra fire  
 Blizzard     volcanic eruption     dust storm     landslide     other

\*\*\* If **other**, what is the risk hazard? \_\_\_\_\_

# **RISK HAZARD Locations (Print then cut and distribute one to each student or pair)**

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The Island of Luzon in the Philippines  
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Los Angeles, California, U.S.A.  
-----

Kobe, Japan  
-----

Lake Mille Lacs, Minnesota, U.S.A.  
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Homer, Alaska  
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Colorado Springs, Colorado  
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Keelung City, Taiwan  
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Houghton, Michigan  
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Phoenix, Arizona  
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