

**RESOURCE LIBRARY**  
ACTIVITY : 50 MINS

## Where You Live Can Impact How You Get Sick!

Students learn about the Ebola crisis and discuss the impact of infection on people's and communities' lives through video and readings. Students explore the role of context and how different regions and cultures present unique challenges for response and prevention of disease.

**GRADES**

6 - 8

**SUBJECTS**

*Geography, Human Geography, Social Studies, Civics*

**CONTENTS**

2 Resources, 4 Links, 1 PDF

## OVERVIEW

Students learn about the Ebola crisis and discuss the impact of infection on people's and communities' lives through video and readings. Students explore the role of context and how different regions and cultures present unique challenges for response and prevention of disease.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/where-you-live-can-impact-how-you-get-sick/>

## In collaboration with



## DIRECTIONS

**Menacing Microbes Unit Driving Question:** *How does a community get ready for an outbreak?*

**Controlling the Contagion Lesson Driving Question:** *How can we prevent the spread of disease?*

**1. Watch National Geographic photographer Pete Muller's video to learn about how Ebola impacts a rural community in Sierra Leone.**

- Set the purpose for the video by telling students that they will need to think about the impact of outbreaks on the community when creating their action plans. Suggested statement: *Outbreaks happen differently depending on where you are in the world. In a big dense city, disease may spread differently than it would in a farming community where people live miles away from each other. We are going to watch a video that highlights how the locations of Ebola outbreaks affect the community response to the disease. You will want to consider how the location of an outbreak of your focal disease might impact the things you put in your action plans!*
- Pete Muller, a National Geographic photographer and 2017 Fellow, tells the story of how Ebola has impacted a rural community in Sierra Leone. Have students watch the video Ebola: Photos From the Heart of the Struggle.
- After watching the video, have students discuss the following questions in small groups:
  - *How do you think people in the community perceive the disease?*
  - *What resources are available in this community to respond to the outbreak?*
  - *How might it be different if the Ebola outbreak happened in a big city like New York?*

Suggested follow-up questions to scaffold student thinking might include: *How far away might the nearest hospital be? How clean is the water? Who is preparing food? How educated are people about disease transmission and prevention? How do people communicate with the government to get help?*

- Next, as a whole class, have students brainstorm ideas for how to better educate the community about the Ebola disease and its survivors.
- Record their ideas on chart paper. This chart paper can later be used a resource for students to think about educating the community about their focal diseases.
- Review the concepts of rural and urban and add to the word wall that was started at the beginning of the Menacing Microbes unit.

## 2. Read about National Geographic Explorer Hayat Sindi and what she is doing to overcome challenges with healthcare in rural India.

- Set the purpose for reading by informing students that monitoring health is an effective and important proactive measure to contain and prevent disease. Suggested statement: *Being in a rural place can have big challenges. You are going to read about, Hyat Sindi, a woman who is learning how to overcome some of these challenges. As you read, think about how you might address similar challenges if there was an outbreak of your focal disease in rural India.*
- Distribute the explorer profile on Hayat Sindi to students and discuss how she is working to overcome challenges with bringing affordable health care to rural India.
  - While reading, have students think about if and how their action plan would work in different kinds of communities.
- In pairs, have students read the Explorer Profile of Hayat Sindi.
- After reading, have the pairs of students discuss how the context of rural India might impact the effectiveness of their action plan.

## 3. Jigsaw read to learn about additional cultural complicating factors for vaccination.

- Set the purpose for this part of the activity by telling students that there are many factors that complicate disease containment and prevention. Suggested statement: *Location isn't the only thing that can have an impact on disease containment and prevention. Sometimes, there are cultural factors that can impact disease containment and prevention. You are going to read about some cultural factors that have impacted the effectiveness of vaccine campaigns.*
- Conduct a jigsaw read by setting students up in their project groups and assigning each student a different article to read. Students should read their assigned article and then teach the other members of their group about their complicating factor. The four readings are:
  - Cultural Perspectives on Vaccination, Section Two: Religious Perspectives and Vaccine Objections
  - Taliban Assassins Target Pakistan's Polio Vaccinators
  - Vaccines Do Not Cause Autism
  - The Strange History of Vaccines—And Why People Fear Them

- Have students annotate their text as they read by using the following symbols:
  - Checkmark next to something important.
  - Question mark next to things that you do not understand or have questions about.
  - Star next to something your group can use in your action plan.
- After reading, have students with the same article get into a group to share the areas that they still have questions about. Have students try to clear up any misunderstandings as a group.
- Next, have students take a few minutes to write a three-sentence summary of their article. Then, have students reconvene with their project group to share their article summary and discuss how this information should be considered when implementing their disease outbreak action plan.

#### **4. Debrief discussion about how the response to outbreaks might impact people differently in different parts of the world.**

To wrap up the activity, have students discuss in their project groups questions that challenge them to think about different community structures in the world and their relationship to disease outbreaks:

- Possible questions include: *In what ways might an outbreak of your focal disease in an African tribal community be different from an outbreak in a big city in the United States? From a rural American farming community? In rural India? In a big dense city in Asia, such as Tokyo? In a place where there might be many earthquakes, such as Alaska? In a place where there is war, such as Syria?*
- Ask: *How might the response to the outbreak be different in these areas?*
- Revisit the column of the Action Plan Research worksheet that asks if a policy or practice is realistic. Ask students to consider if there are special geographic or cultural considerations, if there are, have students note them there.

## **Tip**

Step 2: If you have a local article or resource that emphasizes something unique about your context (e.g., perceptions of vaccines, factors influencing a local outbreak), include this in the jigsaw for a close real-world connection.

# Modification

Step 2: If students are working in groups of three, they should prioritize reading the [Cultural Perspectives](#) section, the [Taliban article](#), and the CDC site [Vaccines Do Not Cause Autism](#). If your project groups have five to six students, there are additional sections of the Cultural Perspectives article that can be included in the jigsaw.

## Informal Assessment

Collect the Action Plan Research worksheet to assess students' understanding of content, reactive and proactive response measures, and the application to their disease. The Action Plan Research worksheet is integral to the students' ability to complete the action plan in the next lesson. If you are unable to return the organizer to them at the beginning of the next lesson, consider collecting this after they complete the action plan.

If you would like an additional assessment, collect students' three-sentence summaries from step three to check for understanding of content.

## OBJECTIVES

## Subjects & Disciplines

### Geography

- [Human Geography](#)

### Social Studies

- Civics

## Learning Objectives

Students will:

- Describe the ways that geographic and cultural context can impact disease containment and prevention.
- Evaluate how geographic and cultural context can impact disease containment and treatment.

## Teaching Approach

- Project-based learning

# Teaching Methods

- Cooperative learning
- Discussions
- Jigsaw
- Multimedia instruction
- Reading
- Visual instruction

# Skills Summary

This activity targets the following skills:

- 21st Century Student Outcomes
  - Information, Media, and Technology Skills
    - Information Literacy
- 21st Century Themes
  - Civic Literacy
  - Global Awareness
  - Health Literacy
- Geographic Skills
  - Acquiring Geographic Information

# National Standards, Principles, and Practices

## ENERGY LITERACY ESSENTIAL PRINCIPLES AND FUNDAMENTAL CONCEPTS

- D2.Civ.10.6-8:

Explain the relevance of personal interests and perspectives, civic virtues, and democratic principles when people address issues and problems in government and civil society.

# COMMON CORE STATE STANDARDS FOR ENGLISH LANGUAGE ARTS & LITERACY

- **CCSS.ELA-LITERACY.RH.6-8.7:**

Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

- **CCSS.ELA-LITERACY.SL.9-10.1:**

Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9-10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

- **Reading Standards for Literacy in History/Social Studies 6-12:**

Key Ideas and Details, RH.6-8.2

## THE COLLEGE, CAREER & CIVIC LIFE (C3) FRAMEWORK FOR SOCIAL STUDIES STATE STANDARDS

- **D2.Civ.13.6-8:**

Analyze the purposes, implementation, and consequences of public policies in multiple settings.

- **D2.Geo.4.6-8:**

Explain how cultural patterns and economic decisions influence environments and the daily lives of people in both nearby and distant places.

### Preparation

### What You'll Need

### REQUIRED TECHNOLOGY

- Internet Access: Required
- Tech Setup: 1 computer per classroom, 1 computer per pair, Projector

### PHYSICAL SPACE

- Classroom

### GROUPING

- Large-group instruction

- Large-group learning
- Small-group work

## BACKGROUND & VOCABULARY

### Background Information

There are many complicating factors that should inform a community response plan to an outbreak of infectious disease. These include population density, climate, and cultural factors. When a community is difficult to reach, it may be useful to include plans for air life support or at-home treatment until help arrives. There may be a need for access to clean water to prevent dehydration and keep conditions sanitary.

Some communities may need education about transmission of particular diseases, which would be useful to include in a response and prevention plan. When developing an action plan, unique aspects of a community that can impact the mobilization of the plan should be included for the plan to be effective.

### Prior Knowledge

### Recommended Prior Activities

- [Analyzing BioBlitz Data](#)
- [Getting Sick: How Diseases Spread](#)
- [Investigating Infectious Diseases](#)
- [Mapping the Spread of Disease in a Community](#)
- [Proactive Policies and Practices for Disease Control and Prevention](#)
- [Reactive Policies and Practices for Disease Control](#)

### Vocabulary

Term	Part of Speech	Definition
climate	noun	all weather conditions for a given location over a period of time.



Term	Part of Speech	Definition
<b>containment</b>	<i>noun</i>	act or policy of limiting the spread of an idea or influence.
<b>disease</b>	<i>noun</i>	harmful condition of a body part or organ.
<b>outbreak</b>	<i>noun</i>	sudden occurrence or rapid increase.
<b>population density</b>	<i>noun</i>	the number of people living in a set area, such as a square mile.
<b>rural</b>	<i>adjective</i>	having to do with country life, or areas with few residents.
<b>urban</b>	<i>adjective</i>	having to do with city life.
<b>vaccine</b>	<i>noun</i>	preparation of a weakened or killed pathogen, or of a portion of the pathogen's structure that upon administration stimulates antibody production against the pathogen but is incapable of causing severe infection itself.



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