

RESOURCE LIBRARY | ACTIVITY : 50 MINS

# Reactive Policies and Practices for Disease Control

Students read an article to learn about different disease containment methods such as food recall, quarantine, medical treatment, closing public spaces, and NPIs. After, students create action plans for a response to an outbreak of a disease using a graphic organizer. Students evaluate the different reactive policies to determine which could work as a response to the outbreak of a specific disease.

## GRADES

6, 7, 8

## SUBJECTS

*Biology, Health, Social Studies, Civics*

## CONTENTS

1 Link, 1 Resource, 1 PDF

## OVERVIEW

Students read an article to learn about different disease containment methods such as food recall, quarantine, medical treatment, closing public spaces, and NPIs. After, students create action plans for a response to an outbreak of a disease using a graphic organizer. Students evaluate the different reactive policies to determine which could work as a response to the outbreak of a specific disease.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/reactive-policies-and-practices-disease-control/>

## 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 a video from the CDC to learn about the different people and actions involved in an outbreak response.**

Have students watch this video from the CDC, Behind the Headline. As students watch the video, have them answer the following questions:

- *Who is involved?* (Suggested response: federal, state, and local partners; doctors, epidemiologists, statisticians, nurses, communicators, biologists, virologists, mosquito experts, and administrative staff)
- *What do they do?* (Suggested response: watch and analyze data, inform the community, look for patterns, safety training, respond to emergency calls, go to the outbreak site, lab testing)
- *What skills do they need?* (Suggested response: mapping, communication, analysis, reporting)
- *What else do you notice?*

As a class, discuss student responses to these questions.

**2. Read to learn about different reactive policies and practices in response to an outbreak.**

- Set the purpose of the reading by connecting the reading with their action plan. An example introduction to the reading could be: *In the action plan you will create for your selected disease, you will need to include certain policies and procedures to stop the spread of disease once an outbreak has been identified. Today, you are going to read about some common policies and procedures that communities use to do this.*
- Have students begin to read the article, Preventing and Containing Outbreaks.
  - With a partner from their project group, have students read through the section of the article, "Non-Pharmaceutical Interventions."

- After reading this section, ask your students: *Will this work for your disease? Is this a realistic plan? Who is involved?*
- Allow students to discuss in their project groups and orally respond to each question.
- Once students have had a chance to discuss and share their ideas, distribute the Action Plan Research worksheet for students to begin filling in the row for NPIs.
- With their same reading partners, students read the next section of the article, “Quarantine.”
- Introduce the term reactive, and add to the word wall started at the beginning of the unit. Tell students that reactive measures occur after the outbreak has started, and are intended to minimize the existing illness.
- With their same reading partners, students read the remainder of the article, continuing to stop, discuss, and add to their Action Plan Research worksheet after each section.

By the end of this activity, students will have reactive measures listed on their Action Plan Research worksheet. They will add additional proactive measures in subsequent activities.

## Tip

Step 2: Build a word wall with key vocabulary from the activity.

## Modification

Step 2: If you would like to disaggregate the NPIs, you can separate them into Personal NPIs, Community NPIs, and Environmental NPIs.

## Tip

Step 2: Model filling in the table with polio or another disease that students are not using as their focal disease.

## Modification

Step 2: There are blank rows in the table for you or your students to add additional policies and practices that might work for their focal diseases. If students have extra time, they can do this as independent research.

## Informal Assessment

Have students complete and submit an exit ticket that identifies one reactive policy or practice that will work for their disease. Have students submit the following details on the reactive policy or practice they have chosen:

1. *What is the name of the response?*
2. *Who oversees this response?*
3. *What happens during the response?*
4. *When is this response used?*

An example of a completed exit ticket:

1. Isolation in hospital.
2. Doctors, nurses, clinicians, health care providers.
3. Isolation of infected person per case. Appropriate use of Personal Protective Equipment by those who come into contact with the infected person.
4. As soon as the person is diagnosed.

## OBJECTIVES

# Subjects & Disciplines

### **Biology**

- Health

### **Social Studies**

- Civics

# Learning Objectives

Students will:

- Explain the different roles that individuals, organizations, and the government have in enacting reactive policies for a response to disease outbreaks.
- Evaluate which reactive measures are appropriate to implement for a disease outbreak.

# Teaching Approach

- Project-based learning

# Teaching Methods

- Discussions
- Modeling
- Reading
- Visual instruction

## Skills Summary

This activity targets the following skills:

- 21st Century Student Outcomes
  - Information, Media, and Technology Skills
    - Information Literacy

## National Standards, Principles, and Practices

### COMMON CORE STATE STANDARDS FOR ENGLISH LANGUAGE ARTS & LITERACY

- 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.12.6-8:

Assess specific rules and laws (both actual and proposed) as means of addressing public problems.&nbsp;

- D2.Civ.13.6-8:

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

- D2.Civ.2.6-8:

Explain specific roles played by citizens (such as voters, jurors, taxpayers, members of the armed forces, petitioners, protesters, and office-holders).

- **D2.Civ.6.6-8:**

Describe the roles of political, civil, and economic organization in shaping people's lives.

## **Preparation**

### **What You'll Need**

#### **REQUIRED TECHNOLOGY**

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

#### **PHYSICAL SPACE**

- Classroom

#### **GROUPING**

- Large-group instruction
- Small-group work

#### **RESOURCES PROVIDED: UNDEFINED**

- CDC: Behind the Headline

#### **RESOURCES PROVIDED: HANDOUTS & WORKSHEETS**

- Action Plan Research

#### **RESOURCES PROVIDED: ARTICLES & PROFILES**

- Preventing and Containing Outbreaks

## BACKGROUND & VOCABULARY

# Background Information

Outbreaks of infectious microbial disease can and do happen in communities across the globe. When this happens, teams of people mobilize in response to the notification of the outbreak. Efforts to contain the outbreak are considered reactive measures. When something is reactive, it is acting in response to a situation, rather than creating or preventing it. Many emergency responses are reactive in contexts outside of disease control. Examples include when police respond to an emergency call or when firefighters are called to a fire. Pertaining to outbreaks of disease, once a disease has been identified, it is important to take measures to stop further spread of the disease.

## Prior Knowledge

### []

## Recommended Prior Activities

- [Analyzing BioBlitz Data](#)
- [Getting Sick: How Diseases Spread](#)
- [Mapping the Spread of Disease in a Community](#)

## Vocabulary

Term	Part of Speech	Definition
Centers for Disease Control and Prevention (CDC)	<i>noun</i>	agency, part of the Department of Health and Human Services, whose mission is "to create the expertise, information, and tools that people and communities need to protect their health through health promotion, prevention of disease, injury and disability, and preparedness for new health threats."
contain	<i>verb</i>	to keep under control, hold, or prevent escape.
diagnose	<i>verb</i>	to identify a disease or problem.
medical treatment	<i>noun</i>	care given to a patient for an illness or injury, relating to the science or practice of medicine.
non-pharmaceutical interventions	<i>noun</i>	actions, apart from getting vaccinated and taking medicine, that people and communities can take to help prevent or limit the spread of illnesses.
outbreak	<i>noun</i>	sudden occurrence or rapid increase.
policy	<i>noun</i>	set of actions or rules.

<b>Term</b>	<b>Part of Speech</b>	<b>Definition</b>
<b>recall</b>	<i>noun</i>	manufacturer's request that all the purchasers of a certain product return a product that may be defective or contaminated.



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