

Global Issue Overview



INFECTIOUS DISEASE: IMPACT AND PREVENTION

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Rationale

Health and disease are global issues: they affect individuals, local communities, and nations. They transcend borders, both because the spread of disease reaches beyond nation-state lines and because the health of communities far away has a tangible impact on economics, politics, and culture. Exploration of the spread of infectious diseases and the individual and organizational efforts to prevent air-borne and water-borne diseases can be undertaken at all grade levels and across all content areas. The literature, scientific research, mathematical analysis, and political/economic/historical/cultural/religious questions regarding health and technology are rich and varied, allowing opportunities for students to think deeply.

Rationale

Description

Performance
Assessment Ideas

Grade Level
Examples

Elementary School

Performance
Assessment Ideas

Grade Level
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Middle School Math

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Grade Level
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High School

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Description

In an increasingly interconnected world, the issues of global health and infectious disease have a real impact on us all. Malaria, easily preventable by Western standards, sickens millions—and kills more than half a million children—each year. Because health is both personal and interpersonal, decisions about medicine, health care, and well-being exist at the intersection of cultural, religious, political, and economic influences. The most frequent cause of death in developing nations are infectious diseases, such as malaria and tuberculosis, which are virtually nonexistent in developed nations. Millions of children under five die from preventable infectious diseases.

ENDURING UNDERSTANDINGS

- Individuals can affect the landscape of infectious disease.
- Modern life and technology, as well as traditional practices and beliefs, have a significant and complex impact on the spread of disease and the practice of medicine within the local, national, and global context.
- Education counteracts the spread of infectious diseases in both developing and developed countries.
- Disease and economics are inextricably linked locally, nationally, and globally.

ESSENTIAL QUESTIONS

- What can one person do to prevent the spread of disease?
- Is health a human right?
- How can education impact the issue of global health and infectious diseases both locally and globally?
- What are the economic, social, and moral costs of the global burden of disease?
- How do we resolve cultural, social, and religious tensions regarding the best approach to addressing the spread of disease?

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Performance Assessment Ideas

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Elementary School Science

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ASSIGNMENT	PERFORMANCE OUTCOMES
<p>Position Paper: “Can the healthy and wealthy afford to ignore the health and well-being of the poor and sick?” (Asia Society Website: Globalization Bites: http://asiasociety.org/education/students/global-topics/pandemics-globalization-bites)</p>	<p>GL.5.INV.2 GL.5.INV.4 GL.5.COMM.1</p>
<p>Speech: You are a speech-writer for the president of the United Nations. You have to write a speech at the next world summit in which you answer the question: “Should the Declaration of Human Rights be changed to include health as a human right?”</p>	<p>GL.5.INV.2 GL.5.INV.4 GL.5.COMM.4</p>
<p>Solution-Planning. In <i>Mountains Beyond Mountains</i>, Tracy Kidder observes, “A doctor who knew nothing about local beliefs might end up at war with Voodoo priests, but a doctor-anthropologist who understood those beliefs could find ways to make Voodoo Houngans his allies” (p. 83). Create a plan for the implementation of a disease prevention solution in a region of the globe that considers and accommodates the cultural and religious beliefs and traditions of the region for implementation.</p>	<p>GL.5.PERS.4 GL.5.COMM.1 GL.5.ACT.3</p>

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ASSIGNMENT	PERFORMANCE OUTCOMES
<p>Position Paper: After reviewing the following stories about the “2009 Swine Flu Epidemic,” write an opinion piece (such as a letter to an editor) to a news organization regarding the amount of coverage the organization gave to this infectious disease. Was its focus on Swine Flu justified? Be sure to support your case using rates, ratios, proportions, and data representations such as tables or graphs.</p>	<p>GL.8.INV.3 GL.8.INV.4 GL.8.COMM.2</p>
<p>Campaign: Create a school- or community-wide media campaign to raise awareness about the global need for clean water access using mathematical comparisons (such as rates, ratios, and proportions) to water use and access in the United States</p>	<p>GL.8.INV.1 GL.8.PERS.2 GL.8.ACT.2</p>
<p>Solution-Planning: Design a healthcare system costing no more than \$500 million that keeps the largest possible number of people healthy.</p>	<p>GL.8.INV.2 GL.8.INV.3 GL.8.INV.4</p>

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ASSIGNMENT	PERFORMANCE OUTCOMES
<p>Infographic: Create a picture graph that helps communicate to people that hand-washing can help diminish the spread of disease.</p>	<p>GL.10.INV.3 GL.10.PERS.4 GL.10.COMM.2</p>
<p>Engineer a Solution: Apply what you know about the spread of infectious diseases by air or water to the design of a possible solution to this issue in a specific community or location.</p>	<p>GL.10.INV.1 GL.10.ACT.2 GL.10.ACT.3</p>
<p>Children's Book: You have just been awarded a children's book contract by <i>National Geographic Science for Kids</i>. They want you to write a children's book for first graders on something related to infectious diseases. Will your book be fiction or non-fiction? What story do you want to tell about infectious diseases?</p>	<p>GL.10.INV.2 GL.10.INV.4 GL.10.PERS.2</p>

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