

## TGC Fellow Unit Template

Prepared by:	Shaun Robinson	School/Location:	Takoma Academy/Takoma Park, Maryland
Subject:	Anatomy and Physiology	Grade:	11-12

Time Needed: 4 Weeks

**Unit Summary:** Students will be learning about major diseases that could reach epidemic and pandemic levels if not controlled. Specifically, they will be studying the countries susceptible to these diseases and factors that contribute to epidemic and pandemic threat. A video public service announcement and flyer will be developed around 1 disease in which students communicate to local populations about symptoms, treatment, prevention and other healthcare information. Students will engage in conversation with an expert on disease through Nepris in order to gain knowledge and to come up with ideas and information for their PSAs and flyers.

### STAGE 1: Desired Results

<b>ESTABLISHED GOALS:</b>  <b>G1. Describe 4 diseases that threaten to reach epidemic or pandemic levels.</b> <b>G2. Research and build knowledge about health care systems in other cultures</b> <b>G3. Generate and publish informational writing with appropriate research cited</b> <b>G4. Explain the conditions and causes that could lead to epidemic or pandemic disease levels.</b>	<b>Transfer</b>
	<p><i>Students will be able to independently use their learning to:</i></p> <p>T1. Research and investigate diseases that have ravaged several countries outside of the United States</p> <p>T2. Formulate a method for communicable disease prevention, risk, treatment and awareness effectively</p> <p>T3. Discuss foreign disease prevention capabilities, differentiate between epidemic and pandemic diseases</p>
<b>GLOBAL COMPETENCY:</b>  <b>Investigate the world</b> <b>Effectively communicate ideas</b> <b>Take Action</b>	<b>Meaning</b>
	<p><b>UNDERSTANDINGS</b> <i>Students will understand that:</i></p> <p>U1. Public health capabilities are different in other countries</p> <p>U2. People of different cultures have varying views on health and health practices</p> <p>U3. Diseases are transmitted and spread from</p>
	<b>ESSENTIAL QUESTIONS:</b>
	<p>E1. How do epidemics differ from pandemics?</p> <p>E2. How can public health policies help prevent the spread of disease in a country?</p>

<b>TECHNOLOGY USED:</b>  <b>Computer and Internet</b>	<p>person to person, within and between countries</p>	<p>E3. How are viruses and other diseases spread and contracted from others?</p>
<b>Presentation and video software</b>	<p style="text-align: center;"><b>Acquisition</b></p>	
<b>RESOURCES:</b>  <a href="#"><b>Top 10 Worst Disease Outbreak</b></a>  <a href="#"><b>Introductory Video</b></a> <a href="#"><b>Investigating the World's Deadliest Diseases</b></a>  <a href="#"><b>Online journal articles related to public health and disease</b></a>  <a href="http://www.sciencemag.org/news"><b>Science Magazine</b></a>  <a href="http://www.medscape.org/"><b>Medscape</b></a>  <a href="https://www.sciencenewsforstudents.org/"><b>Science News for Students</b></a>  <a href="https://www.sciencedaily.com/"><b>Science Daily</b></a>  <a href="http://indianapublicmedia.org/amomentofscience/podcasts/"><b>A Moment of Science</b></a>	<p><i>Students will know:</i></p> <p>K1. Public health capabilities of another country outside of the United States.</p> <p>K2. The causes, symptoms and treatment of a disease that has the potential to become pandemic.</p> <p>K3. The difference between epidemic and pandemic.</p>	<p><i>Students will be able to:</i></p> <p>S1. Research and analyze information from various sources.</p> <p>S2. Identify causes of disease</p> <p>S3. Raise awareness of health issues that affect people in other parts of the world.</p> <p>S4. Identify public health policies and practices that help prevent the spread of disease</p>

<p><a href="#">World Health Organization website on Pandemic and Epidemic Disease</a></p> <p><a href="#">University of Minnesota infectious disease website</a></p> <p><a href="#">Nepris</a></p> <p><a href="#">Ebola Warning Poster (example)</a></p> <p><a href="#">Ebola Signs and Symptoms Poster (example)</a></p>		
--	--	--

## Stage 2 - Evidence

Assessment	Evaluation Criteria (Learning target or Student Will Be Able To)
<p>Assessments <b>FOR</b> Learning:</p> <ol style="list-style-type: none"> <li>1. Vocabulary Quiz on Edmodo</li> <li>2. Summary of student-researched scholarly article on pandemics and disease (Uploaded to Edmodo)</li> <li>3. Completion of “Pandemic and epidemic-prone disease” course on WHO site.</li> <li>4. Earning 3000 or more points on the CDCs game “Solve the Outbreak.”</li> </ol>	<ol style="list-style-type: none"> <li>1. Develop a knowledge of terminology related to diseases, epidemics and pandemics.</li> <li>2. Identify and describe at least 1 disease threatening the lives of populations outside of the United States.</li> <li>3. Identify ways that health officials recognize and respond to potential spreading of disease.</li> <li>4. Develop thorough online research skills</li> </ol>
<p>Assessments <b>OF</b> Learning:</p> <ol style="list-style-type: none"> <li>1. <b>Public Service Announcement</b> video</li> </ol>	<ol style="list-style-type: none"> <li>1. All group member participation</li> </ol>

<p>about 1 pandemic/epidemic disease detailing the causes, symptoms, health risks, treatment options and prevention methods</p> <p>2. Flyer or Poster with visuals describing the disease, symptoms, preventive practices and who to contact if person or someone they know is suspected of having the illness.</p>	<ol style="list-style-type: none"> <li>2. Causes, symptoms, health risks, treatment options and prevention methods identified and communicated</li> <li>3. Video organized and creative</li> </ol>
---	--

### Stage 3 - Learning Plan

Week 1: Students will learn about 5 major diseases (causes, symptoms, health risks and treatment) that affect large populations of people worldwide and that have the potential to become pandemic.

Week 2: Students will research the disease control agencies in countries where the 5 major diseases are being battled.

Week 3. Students will learn about the World Health Organization (WHO) and its many campaigns to fight diseases around the world.

Week 4: Students will choose 1 potentially pandemic disease and create a public service announcement video and informational flyer directed at the population affected by the disease.

## Pandemic Lesson Plan 1

Lesson Title: Pandemic Diseases      Subject: Biology      Prepared by: Shaun Robinson

Materials Needed:  
Computer, Cell Phone, Google Draw or Microsoft Word  
Global Competency:  
Investigate the World

<u>Where</u> is the lesson going? (Learning Target or SWBAT)	SWBAT identify and describe 5 major diseases (causes, symptoms, health risks and treatment) that affect large populations of people worldwide and that have the potential to become pandemic.
---	---

<u>Hook:</u> Watch the “10 Worst Disease Outbreak” video, discuss the topic and complete a 3-2-1 chart	<u>Tailored Differentiation:</u>
--	----------------------------------

<u>Equip:</u> Handout with sections for answering questions.	<ol style="list-style-type: none"><li>1. Provide students with a list of vocabulary words related to epidemic disease as provided by WHO</li><li>2. Provide students with posters and handout examples from the CDC on epidemic diseases</li></ol>
--	--

Students will work in pairs. They will choose 5 of the diseases that were mentioned in the video and answers the questions collectively.  <ol style="list-style-type: none"><li>1. What is the name of the disease?</li><li>2. How did the disease originate?</li><li>3. What country/countries are currently being affected by the disease?</li><li>4. How is the disease transmitted from person to person?</li><li>5. What are the symptoms?</li><li>6. What are the health risks if a person contracts the disease?</li></ol>	
---	--

7. What are the treatment options?	
<b><u>Rethink and revise:</u></b>	
Pair groups discuss reasons why these particular diseases have been eradicated or not as prevalent in the United States.	
<b><u>Evaluate:</u></b>	
Pair groups will present their findings to the class in a round table discussion format. Their peers will evaluate them with a 7 point rubric that lists the questions above and grade the pair groups on whether the questions were answered effectively.	
<b><u>Notes:</u></b>	<b><u>Organization:</u></b>