

Name: _____

Date: _____

**Viewing Guide:
Guns, Germs, and Steel: Episode 3**

Directions: Before viewing the film, read each question below so you know what information and ideas you should be looking for as you watch Episode 3. Record your answers to each question by providing as many facts, details, and examples as possible to answer each question. Be prepared to discuss your answers with the class. You will use some of the information collected to create a class project.

1. According to Jared Diamond, what is the one factor that allowed Europeans to develop the forces necessary to conquer vast portions of the world?

Answer: Geography-having the most productive crops and animals allowed Europeans to develop guns, germs, and steel, and ultimately, to conquer the world.

2. Why were the Europeans who settled the South African cape so successful? Describe two reasons.

Answer: The temperature and the climate in the South African cape is nearly the same as what the Europeans had at home. Because the Cape and Europe have a similar latitude (distance from the equator), they can grow the same types of crops and raise the same types of livestock in Africa as they did back home in Europe.

3. How did disease allow the Europeans to conquer the native populations in the Americas and in the African cape?

Answer: Europeans introduced germs that these populations had never before been exposed to, particularly smallpox. Because Europeans had been exposed to the disease over the course of centuries, their bodies had built up a natural resistance (antibodies) to these diseases. When the people of the Americas and the South African cape came into contact with these germs, they were killed in massive numbers, making settlement of these lands much easier for the Europeans.

4. While the Europeans who were attempting to overtake/settle the tropical areas of the African continent were responsible for introducing killer germs to the native populations, they also suffered from the effects of the germs native to this part of the world. Describe how these germs worked against the European settlers.

Answer: The Europeans were experiencing a reversal of the pattern they were used to. Rather than introducing germs to the people they hoped to conquer, they were being infected by the germs that were indigenous to Africa and losing their livestock and their own lives as a result.

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5. How did the native Africans protect themselves from the germs that caused diseases such as Smallpox and Malaria? Give specific examples cited in the film.

Answer: The native Africans had developed immunity to Smallpox through repeated exposure over thousands of years and vaccinations they had developed that could provide immunity for life. In addition, the Africans also knew how to avoid diseases like Malaria by preventing infection. This was done by choosing to live in high, dry areas where the mosquitoes responsible for spreading the disease do not typically live. Because the Africans lived in small communities spread out over relatively large areas, they could minimize the transmission of diseases such as Malaria when outbreaks occurred. Because European settlers did not understand the causes of Malaria, they concentrated their settlements near rivers and water sources where they faced the greatest exposure to Malaria. Because they all lived in close proximity, epidemics were frequent and deadly to the settlers.

6. How has the colonization of Africa created countries riddled with disease? Give specific examples from the film.

Answer: Because European colonists in the late 1800's forced the native Africans out of their small villages and into cities and large, crowded communities to mine and ferry the continent's natural resources, they took the successful economic and social systems away from these people. By putting so many people together in areas where diseases like Malaria are easily spread, the native populations have lost the immunity they once had to these diseases. This is caused, in part, by the strains of the disease mutating, causing drugs to be less effective. As a result, there are high numbers of people infected with and dying from diseases like Malaria. In addition, new diseases, such as HIV/AIDS are now also spread more easily because of so many people living in densely populated areas.

7. What is the number one public health problem in Zambia, and who are the people primarily affected by this?

Answer: Malaria. It is the number one killer of African children under the age of 5.

8. How has disease contributed to the poverty in many African countries such as Zambia?

Answer: It has decreased life expectancy dramatically. The average lifespan in Zambia is only 35 years. Because the disease affects so many children so frequently, many mothers who would normally be working and contributing to the society are instead sitting in hospitals nursing sick children.

9. According to statistics from the film, how has Malaria affected the net growth in Africa over the last 50 years?

Answer: Malaria has caused 1% NEGATIVE growth in Africa EACH YEAR for the past 50 years. This has caused them to become poverty stricken.

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10. Describe how other tropical countries such as Malaysia and Singapore have developed rich economies despite having many of the same geographical and health problems faced by African nations.

Answer: By understanding their environment and realizing the burdens that their geography and certain germs could cause, these governments planned and executed measures to eliminate diseases like Malaria. As a result, they were able to develop rich economies and capitalize on the positive aspects of their geography.

11. Now that you have read “The Story of Smallpox and Other Eurasian Germs”, describe what you have learned about Smallpox including the causes, symptoms, means for spreading the disease, and how immunity to the disease can be developed.

Answer: Smallpox is a viral infection that usually enters the body through the nose or throat. From here the virus travels to the lungs, where it multiplies and spreads to the lymphatic system. Within a few days, large blisters begin to appear all over the victim’s skin. Starting with the hands and the face, and then spreading to cover the rest of the body, each blister is packed full of smallpox DNA. If punctured, these blisters become highly infectious, projecting fresh smallpox particles into the air and onto surrounding surfaces – like someone else’s skin!

The total incubation period lasts around 12 days, by which point the patient will either die or survive – but throughout that period, he may have passed the disease to an enormous number of people. The disease requires close human contact to replicate and survive.

For thousands of years, the people of Eurasia lived in close proximity to the largest variety of domesticated mammals in the world – eating, drinking, and breathing in the germs these animals bore. Over time, animal infections crossed species, evolving into new strains which became deadly to man. Diseases like smallpox, influenza and measles were in fact the deadly inheritance of the Eurasian farming tradition – the product of thousands of years spent farming cattle, pigs, horses, goats and sheep.

These epidemic Eurasian diseases flourished in dense communities and tend to explode in sudden, overwhelming epidemics of infection and death. Transmitted via coughing, sneezing and touching, they wreaked devastation throughout Eurasian history – and in the era before antibiotics, thousands would die.

With each epidemic eruption, some people would always survive, acquiring antibodies and immunities which they could pass on to the next generation. Over time, the population of Europe gained increasing levels of such immunity, and the devastating impact of traditional infections decreased.

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12. After reading “The Story of Malaria and Other Deadly Tropical Germs”, what are some of the effective, simple, relatively inexpensive ways to prevent the spread of diseases such as Malaria? In your opinion, why are these options not being used more widely by African nations? Explain.

Answer: The use of new drugs and inexpensive vaccinations can be a great form of prevention and treatment. In addition, education programs can be used to teach people about how to minimize/prevent exposure and transmission of the disease. Finally, simple measures, such as the use of insecticides and insecticide-treated bed nets, can have a dramatic effect on the spread of disease.

Opinions about why these forms of prevention are not being used more frequently will vary from student to student.