**Human Disease Project**

 

 www.ncbi.nlm.nih.gov

 Zaire ebola virus picture taken 10/31/76 by Dr. F.A. Murphy

**Overview**

Society has recently experienced several communicable disease scares: Avian Flu, MRSA, drug-resistant tuberculosis, and the list goes on. It seems a rare year when a new disease doesn’t emerge on the world stage. Working in teams, students will research the background and impact of a specific communicable disease on human society and prepare a presentation.

**Focus Questions**:

* What causes people to get ill? How can illness be prevented, how is it spread, and what can be done to treat it?
* What major pandemics have occurred in the past? What events or circumstances contributed to these outbreaks? What could have been done differently in response to these pandemics?
* How does an individual reduce his/her risk of contracting an infectious disease?
* What are the social/emotional impacts of the disease?

**Specifics for the parts of the project:**

**Disease List**

Measles

Mumps or Rubella

MRSA

Polio

Varicella Zoster

Smallpox

Yellow Fever

Dengue

Marburg

Rabies

Cholera

Lyme Disease

Anthrax

Tuberculosis

AIDS/HIV

Hepatitis B and C

Ebola

Influenza

Meningitis

West Nile Virus

Bubonic Plague

**Research: (Individual)**

The research will be kept, presented, and evaluated using digital notes in the online program Evernote, which can be found at evernote.com. It is a free application that can be used on any computer, iPad, or smartphone. The research notes will need to be organized digitally using this format and saved on the internet cloud. The theme is to go beyond Wikipedia! Cite your sources for all research. (50 points)

1. Identification
	1. What does the name mean? Who named/discovered it?
	2. What causes the disease?
	3. Has the disease changed over time? Mutations?
	4. Can you identify any phylogenies?
	5. Do any other organisms carry it or suffer from it?
2. Demographics
	1. Is it associated with any particular region of the world? Why?
	2. How many people has it affected?
	3. Is everyone equally vulnerable, or does it target particular categories of people? Why?
3. Impact
	1. How has the disease impacted the course of history? Give an example.
	2. How is the disease currently affecting society?

-----------------------------------------------------------------------Benchmark #1

1. Presentation and Manifestation
	1. Is it chronic or acute?
	2. How easy is it to catch?
	3. What are the symptoms?
	4. How is it diagnosed?
	5. How does the pathogen interact with your body to cause the symptoms?
2. Prevention and Cure
	1. Is there a cure or vaccine in mainstream medicine?
	2. What drugs/treatments are available?
	3. Is there any promise for a cure in current research on stem cells?
	4. What are the alternative treatments to mainstream (i.e., allopathic or “Western”) medicine?
3. Additional Research
	1. Create and research two of your own research questions.

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**APA Annotated Bibliography: (Individual)**

Students will create an annotated bibliography that includes a minimum of 3 scientific sources, 2 social studies sources (use the SIRS and EBSCO databases), and one other source. (Note: Of these sources you may only have 2 Web sites). Be sure to cite sources of pictures or other images! The theme is to go beyond Wikipedia! 25 points

**Antibiotic Resistance Lab: (Individual)**

Students will investigate different antibiotics and how effective they are against common pathogens such as e.coli and b.subtilis. 25 points

**Disease Project Web Portal (Group)**

As a group, you will create an online presence that will serve as a portal for all of your group work and some selected individual pieces. The portal may be created using a variety of online tools and/or websites: Google docs, prezi, weebly, personal brain, a blogging website, glogster, acrobat.com, or another internet savvy tool. You must link or embed all of your group products to this website, such as the online presentation, the PSA (youtube), personal narrative, and a group choice. 50 Points

**Online Presentation: (Group)**

As a group, create an online presentation to teach and inform others about this disease. It must include information from your research and supplemental materials (examples: photos, pictures, diagrams, excerpts of pamphlets from organizations addressing the disease/disorder, etc.). Your APA bibliography should be at the end. 75 points

**YouTube Informational Video (Group) Optional Assignment/Extra Credit**

A public service announcement (PSA) is a public relations tool used to publicize a variety of causes, such as a health- or safety-related message from a nonprofit organization. Your group will make a video PSA to post on YouTube that raises awareness about an aspect of a disease. Consider: what it is, why it matters and how one can make a difference or take action. Up to 20 points.

**Presentation/Discussion/Debrief: (Individual)**

As a group, you will present your findings to community members, parents, and students. In addition, as an audience member you will develop questions about the other diseases and will actively participate in a public discussion. You will reflect on the scientific, interpersonal, social, and economic aspects of the disease and on the overall Essential Moral Questions. Time will be given to allocate points among group members. 50 Points

**Benchmarks and Timelines – When is all of this due?**

**What When and Where Points**

**APA Annotated Bibliography: (Individual) 25**

**Research: (Individual) Benchmark #1 25**

**Research: (Individual) Benchmark #2 25**

**Antibiotic Resistance Lab: (Individual) 25**

**YouTube Informational Video (Group) 75**

**Disease Project Web Portal (Group) 50**

**Online Presentation: (Group) 75**

**Presentation/Discussion/Debrief: (Individual) 50**