

AP ENVIRONMENTAL SCIENCE (APE-S) SUMMER READING PACKET

COURSE: AP Environmental Science

ASSIGNMENT: Summer Reading & Guided Analysis

REQUIRED TEXT: "Everything Is Tuberculosis: The History and Persistence of
Our Deadliest Infection" by John Green (Published 2024)

1. OVERVIEW & APES CURRICULUM CONNECTION

Welcome to AP Environmental Science! APES is a multidisciplinary science that combines biology, chemistry, geology, and sociology to analyze environmental problems and solutions.

A critical component of this course is Unit 8: Land and Water Use / Human Health, specifically focusing on infectious diseases, environmental justice, and human population dynamics. John Green's "Everything Is Tuberculosis" serves as a case study for how environmental conditions, evolutionary pressure, and systemic Inequalities drive the world's deadliest infectious health crises.

2. ASSIGNMENT REQUIREMENTS (Due: First Day of Class)

You must complete both components of this assignment. Hand-written or typed submissions are accepted.

PART A: Guided Environmental Analysis Questions (60% of Grade)

Answer the following questions using thorough, multi-sentence responses. Use specific evidence, data, and case studies from the book to support your claims.

1. Environmental Vectors: Describe the biological characteristics of Mycobacterium tuberculosis. What specific micro-environmental factors (e.g., housing density, ventilation, indoor air quality) accelerate its transmission?
2. Anthropogenic Selection: Detail the biological mechanism behind the rise of Multi-Drug-Resistant TB (MDR-TB). How does incomplete or inconsistent human medical treatment mirrors the environmental problem of pesticide resistance in monoculture farming?
3. The Environmental Justice Disconnect: Green states that "the cure is where the disease is not." Analyze how geographic and economic factors create an environmental injustice where a curable disease flourishes in certain biomes/nations but is eradicated in others.
4. Resource Scarcity & Infrastructure: Using Sierra Leone as a case study from the text, explain how historical resource exploitation, weak public health infrastructure, and poverty compound ecological vulnerability to disease.

PART B: Environmental Justice Reflection Essay (40% of Grade)

Write a 500-word argumentative essay answering the following prompt:

"How do structural economic inequality, corporate drug patent laws, and lack of environmental infrastructure acts as physical barriers to human health? Use evidence from the text to argue why tuberculosis must be treated as an environmental and political crisis, rather than just a medical one."

3. ACADEMIC INTEGRITY

All work must be entirely your own. Plagiarism, including the use of generative AI to draft responses will result in a zero for the summer assignment and a referral to administration. Expect a reading comprehension quiz on Week 1.

Grading Rubric

Criteria [[1](#),
[2](#), [3](#), [4](#)]

	Highly Proficient (AP Level)	Developing	Incomplete
Scientific Accuracy	<i>Accurately explains TB transmission, immune interaction, and resistance mechanics using rigorous APES vocabulary.</i>	<i>Mentions scientific concepts but uses vague language or misses the evolutionary mechanism.</i>	<i>Major scientific errors regarding the pathogen or transmission.</i>
Systemic Synthesis	<i>Fluidly connects human health to broader environmental justice, poverty, and political infrastructure.</i>	<i>Treats TB purely as a personal medical issue without linking it back to global environments.</i>	<i>Fails to recognize the systemic or economic nature of the disease.</i>
Textual Evidence	<i>Quotes or directly references specific passages, case studies (Sierra Leone), and historical contexts from Green's work.</i>	<i>Relies on generalized knowledge of TB rather than specific details from the book.</i>	<i>Shows little to no evidence of actually reading the book.</i>