

Objective?

Can you explain how biodiversity impacts the stability of ecosystems?


Biodiversity and Stability

“Destroying rainforest for economic gain is like burning a Renaissance painting to cook a meal.”

-E.O. Wilson

What does he mean?

Do you agree?

An aerial photograph of a dry, eroded landscape. The terrain is light brown and tan, showing significant erosion with deep, winding channels and ridges. In the upper left, there is a rectangular field with distinct parallel furrows, possibly a plowed field. To the right, a small cluster of dark green trees stands on a slight rise. The overall scene depicts a semi-arid or desert environment. A large, semi-transparent red rectangle is overlaid in the center, containing white text.

**Norte Chico:
Modeling
Resistance and
Resilience**

Introduction

- What conditions do you think need to be present for a civilization to develop?
 - Think about things you might have learned in history class
 - Think about what helps all life thrive
- Once you have a few ideas write them on the board

Introduction

- Based on the conditions we came up with as a class, what biomes would be favorable to starting advanced civilizations?
- Once you thought about this question, come up to the board and write a likely location where you think civilization began

Where Did Civilization Begin?

By 4000 BCE civilizations had sprung up in 6 different regions

- Mesopotamia
- Egypt
- India
- China
- Mesoamerica
- Peru

Where Did Civilization Begin?



Norte Chico: Unique Among the 6

- No staple crop at founding
- No evidence of warfare or defense
- Inhospitable conditions
 - Located in 2 rain shadows, one of the driest places on earth
 - Located on a fault
 - Devastating earthquakes
 - Regular volcanic eruptions
 - Extreme weather due to El Nino
 - Catastrophic flooding every 4-7 years
 - Droughts that can last years

Norte Chico: How did they survive ?



Objective Day 2?

Can you explain how biodiversity impacts the stability of ecosystems?

Warm-up Day 2?

Open 12. Norte Chico, answer the first 2 questions in **Part One**

1. What are the *abiotic* components in our ecosystem? What are the *biotic* components?
2. Categorize the disturbances Peru faces as *density-dependent* or *density-independent*.

Why?

“Destroying rainforest for economic gain is like burning a Renaissance painting to cook a meal.”

-E.O. Wilson

- After modeling how our society changed over time, can we find a reason for why we agreed with E.O. Wilson?