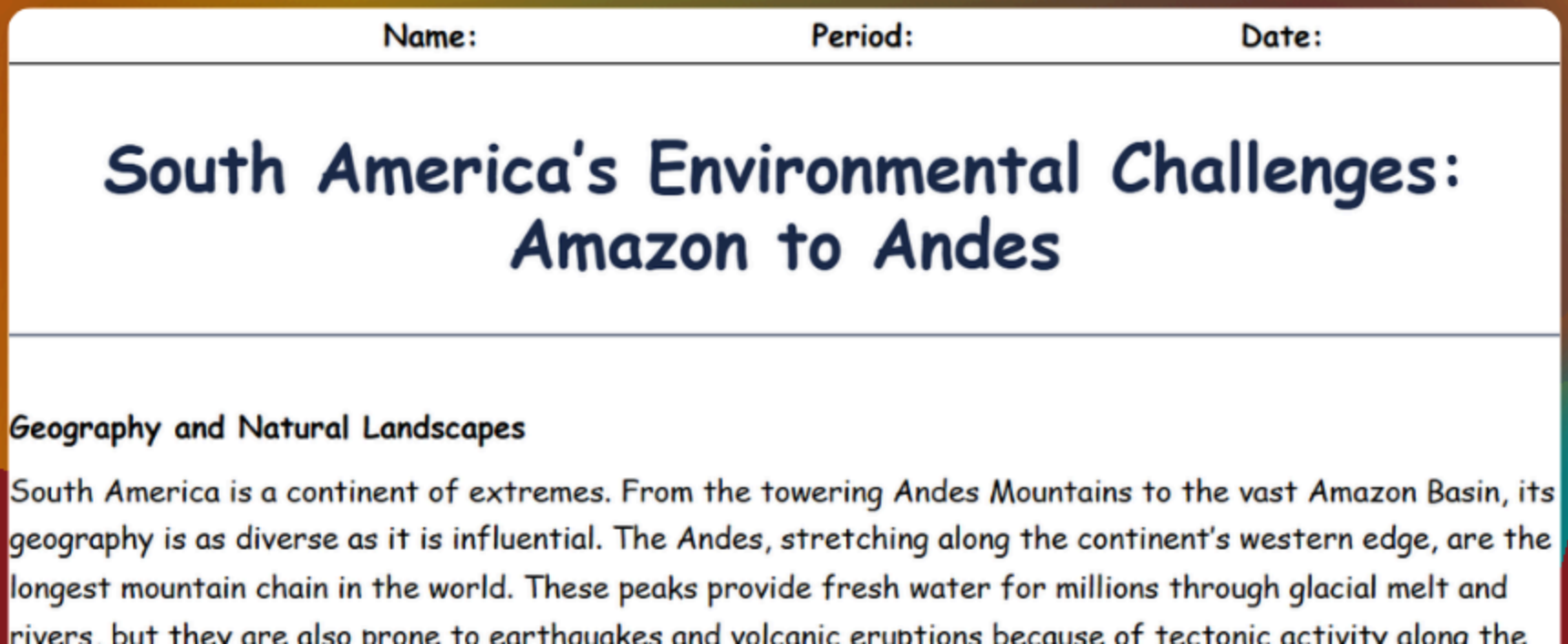
NO PREP

South America's Environmental Challenges

Amazon to Andes

Includes: Student reading, case study, differentiated questions, teacher key



Name: Period: Date:

South America's Environmental Challenges: Amazon to Andes

Geography and Natural Landscapes

South America is a continent of extremes. From the towering Andes Mountains to the vast Amazon Basin, its geography is as diverse as it is influential. The Andes, stretching along the continent's western edge, are the longest mountain chain in the world. These peaks provide fresh water for millions through glacial melt and rivers, but they are also prone to earthquakes and volcanic eruptions because of tectonic activity along the

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Human Impact and Environmental Strains

South America's natural wealth has made it a target for exploitation. The Amazon, for example, faces deforestation at alarming rates due to cattle ranching, soybean farming, and logging. Each year, vast tracts of rainforest are cleared, threatening Indigenous communities and countless species of plants and animals. Deforestation also contributes to climate change, since fewer trees mean less carbon is absorbed from the atmosphere. In the Andes, mining for copper, silver, gold, and lithium has boosted economies in countries like Peru, Bolivia, and Chile. However, this extraction often contaminates rivers with toxic chemicals such as mercury and cyanide. The tension between resource development and environmental protection remains one of

the region's greatest challenges. Urban growth adds further stress. Cities like São Paulo, Rio de Janeiro, and Bogotá face air pollution, water shortages, and sprawling informal settlements. These pressures reveal the delicate balance between economic growth and sustainability.

Biodiversity and Global Significance

South America is home to some of the richest biodiversity on Earth. The Amazon alone contains more than 400 billion trees and countless species, many still undiscovered. The Galápagos Islands, part of Ecuador, inspired Charles Darwin's theory of natural selection, and today they remain a living laboratory for evolution. From jaguars to giant river otters, from Andean condors to Amazonian pink dolphins, the continent's wildlife is extraordinary. But this biodiversity is fragile. Habitat loss, illegal hunting, pollution, and climate change threaten species survival. Governments and organizations are working to preserve ecosystems through protected areas and conservation efforts. Brazil, for instance, has created large reserves, though enforcement remains a challenge. The survival of South America's ecosystems matters not just regionally but globally, as their health influences weather patterns, biodiversity, and carbon cycles worldwide.

Conclusion: The Future of South America's Environment

South America is a continent of immense beauty and natural wealth, but also one facing pressing environmental challenges. Its mountains, forests, rivers, and deserts shape both the lives of its people and the global climate system. From deforestation in the Amazon to pollution in megacities, human actions increasingly threaten its ecosystems. Yet solutions are also emerging, from Indigenous resistance to conservation initiatives and sustainable development projects. Understanding South America's environmental geography helps us see not only the struggles of one continent but also the interconnected fate of the world's environment.

Key Information: Table: South America at a Glance

Feature	Location	Importance
Andes Mountains	Western South America	World's longest mountain chain, mineral wealth

Feature	Location	Importance
Amazon Rainforest	Brazil & 8 nations	Vital carbon sink, biodiversity hotspot
Pampas	Argentina & Uruguay	Fertile plains for ranching and crops
Atacama Desert	Chile	One of the driest places on Earth
Galápagos Islands	Ecuador	Unique biodiversity, inspired Darwin

Case Study Excerpt: Deforestation in the Amazon

The Amazon Rainforest, often called the "lungs of the Earth," is perhaps South America's most important natural resource. Stretching across nine countries, with the largest portion in Brazil, the Amazon regulates rainfall across the Americas and influences global weather systems. It plays a major role in absorbing carbon dioxide and regulating rainfall, and it is home to millions of species and hundreds of Indigenous groups who depend on it for survival. However, human activity is putting this ecosystem at risk. Vast areas are cleared annually for cattle ranching, soybean production, and logging. Fires—sometimes intentionally set—destroy habitats and release massive amounts of carbon dioxide into the atmosphere. Illegal mining camps pollute rivers with mercury, harming fish and the people who depend on them. Roads built to open new land for development further fragment the rainforest, making it harder for species to survive. Indigenous communities are often displaced as their ancestral lands are taken for commercial use. Many have resisted, forming alliances with environmental activists and using modern tools like GPS mapping to defend their territories. Despite these efforts, political and economic pressures continue to drive deforestation. Scientists warn that if too much of the Amazon is destroyed, it could reach a "tipping point" where large areas transform into savanna, dramatically reducing biodiversity and disrupting rainfall across the continent. The future of the Amazon depends on choices made today. Governments, global organizations, and local communities all have a role to play in balancing development with conservation. The case of the Amazon shows how one region's environmental health can affect the entire planet.

1. Why is the Amazon referred to as the "lungs of the Earth"?

2. How does deforestation in the Amazon create global consequences?

_____

_____

Multiple Choice

1. Which natural feature is often called the "lungs of the Earth"?

    a) Atacama Desert

    b) Amazon Rainforest

    c) Andes Mountains

    d) Pampas

2. What industry has led to major water contamination in the Andes?

    a) Mining

    b) Fishing

    c) Farming

    d) Tourism

3. Which South American region is famous for fertile plains and cattle ranching?

    a) Galápagos Islands

    b) Pampas

    c) Andes

    d) Atacama Desert

Matching

Write the letter of the correct definition on the line next to each term.

Term	Definition
1. ___ Andes Mountains	A) Vital rainforest under threat
2. ___ Pampas	B) World's driest desert
3. ___ Amazon Rainforest	C) Inspired Darwin's theory of evolution
4. ___ Galápagos Islands	D) Fertile plains for ranching and crops
5. ___ Atacama Desert	E) Longest mountain range in the world

Fill-in-the-Blank

1. The _____ Islands are famous for their biodiversity and influence on Charles Darwin.

2. Much of the Amazon rainforest is located in the country of _____.

3. Illegal mining camps in the Amazon pollute rivers with _____, harming fish and the people who depend on them.

Short Answer

Answer each question in 2-4 complete sentences.

1. How do South America's diverse climates and landforms shape its economies?

_____

_____

_____

2. Why does the Amazon play such an important role in global climate regulation?

3. What challenges does urban growth create for South America's cities?