

DEFORESTATION & HABITAT DESTRUCTION MYSTERY

Gamify your students' learning with this interactive and engaging Mystery Activity.

NO PREP

SCROLL
to take a look inside!

DETECTIVE FILE ON HOW HUMANS
IMPACT THE ENVIRONMENT

Deforestation and Habitat Destruction Mystery

Part 1 – Mission Briefing & Case Overview

Name: _____ Date: _____

Case File #774 – The Deforestation Mystery

Forests are some of the most important ecosystems on Earth. They provide homes for animals, produce oxygen, store carbon, protect soil, and help regulate climate. Millions of species depend on forests for survival.

However, scientists are seeing large areas of forest disappearing. Animals are losing their habitats, rivers are becoming muddy, flooding is increasing, and ecosystems are collapsing.

In some regions:

- Trees are being cut down at alarming rates
- Wildlife populations are shrinking
- Soil is washing away
- Communities are being affected

No single cause has been identified. What is clear is that **habitat destruction is happening quickly and on a large scale.**

You are a science detective assigned to investigate this environmental mystery.

Your Mission

- Identify what is causing deforestation
- Explain how habitat destruction spreads through ecosystems
- Describe the impact on animals, people, and the environment
- Propose solutions to reduce deforestation

The future of these ecosystems may depend on your investigation.

Part 2 – Background: What Is Deforestation & Habitat Destruction?

Read the background information provided by your teacher. Then answer:

1. What is deforestation and habitat destruction?
2. How is a destroyed habitat different from a healthy habitat?
3. Why do scientists find deforestation difficult to control and reverse?

Teach With
Fergy

★ A complete student case file with guided worksheets for every step of the investigation.

★ 10 detailed evidence cards based on real Deforestation and Habitat Destruction Mystery.

research and real-world examples that include images, graphs, and text.

★ A full teacher answer key with sample responses and support for grading.

What You Get

NO-PREP. JUST PRINT TO GO!

Full investigation breakdown



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Part 2 – Background: What Is Deforestation?

Read the background information provided

1. What is deforestation and habitat destruction?
2. How is a destroyed habitat different from a healthy one?
3. Why do scientists find deforestation a problem?

Part 3 – Evidence Log

As you examine each evidence card, record key information below.

Evidence Card #	Key Understanding
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Repeat this structure for each Evidence Card and place the key information in the table.

Evidence Card # _____

1. Summarize the evidence in your own words:
2. What does this evidence suggest about deforestation and habitat loss?
☐ Where it comes from
☐ How it spreads
☐ Its impact on living things
☐ All of the above
Explain your choice:
3. What question does this evidence raise for you?

Part 4 – Suspect List: What Is Causing the Problem?

Below are possible "suspects" in this case. Rank them from 1 (most responsible) to 5 (least responsible).

Suspect	Rank	Why You Ranked It This Way
Logging companies		
Farming & Agriculture		
Urban development		
Mining operations		
Road construction		

Evidence Card 8 – Mining Site Aerial Photo

An aerial photograph shows large open mining pits carved into land that was once forested. Entire sections of forest have been removed to access minerals beneath the surface.

Detective Notes Prompt:

Why would mining remove entire forests?

Evidence Card 9 – Indigenous Land Map

A map shows traditional Indigenous lands overlapping with areas that have recently been cleared of forest. This suggests that deforestation may disrupt communities that depend on forests for culture, food, and livelihoods.

Detective Notes Prompt:

Who might be affected by deforestation?

Interpretation of Data

10 Evidence Cards to Determine Culprit

HOW THIS ACTIVITY HELPS YOU

- Saves prep time with a fully structured, print-and-go investigations.
- Drives high engagement while still meeting academic goals as students are interested in what they're doing.
- Builds deep understanding with **real-world relevance** as they analyze real evidence, make connections, and using CER to explain human impact.

10-PART INVESTIGATION

Students:

1. Step into the role of a Science Detective.
2. Examine real scientific evidence from around the world.
3. Track the hidden pathways of Deforestation and Habitat Destruction.
4. Interrogate suspects (urban development, mining, etc.) and identify the main culprits.
5. Build a scientific case using Claim-Evidence-Reasoning.
6. Propose real solutions that matter.

★★★★★ The added images and graphs enhanced the activity. My students were engaged and motivated during the case study, and it was an effective introduction to the topics. - Mystery Resource Buyer

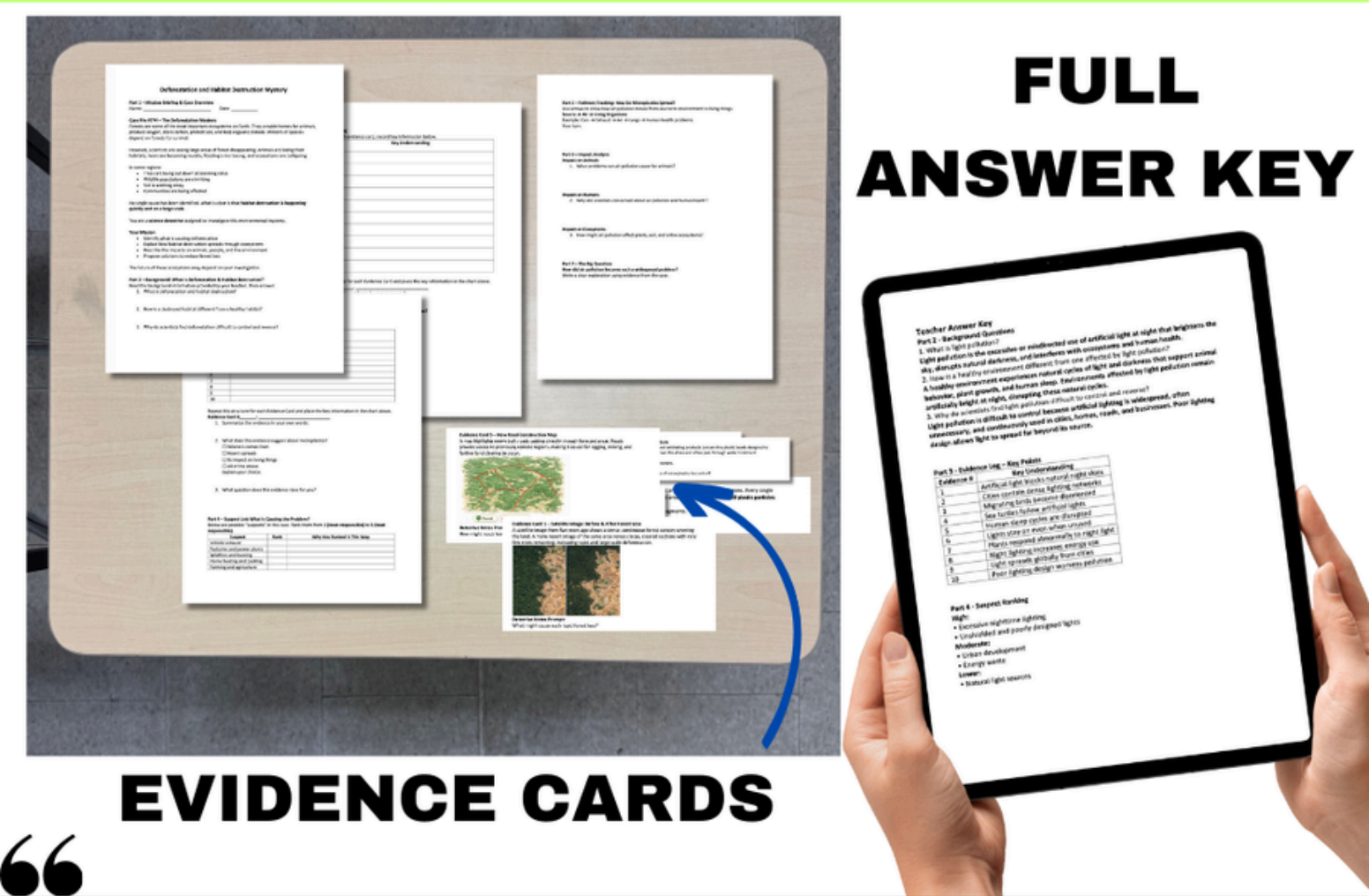
HOW THIS MYSTERY WILL HELP YOU



- Prep-FREE and fully editable Mystery Investigation - just print/upload and assign with no materials.
- **Evidence Cards** can be printed with and without images or projected on board.
- Engages every learner through hands-on, high-interest mystery investigations that boost motivation and participation.
- **Builds essential skills** such as graph interpretation, problem-solving, teamwork, creativity, and communication.

What Will Your Students Learn?

FULLY EDITABLE AND READY-TO-GO INVESTIGATION



“★★★★★ This product will make a great addition of Environmental Mystery Mondays for my Environmental Issues Curriculum, with no teacher prep needed. - Mystery Resource Buyer”

- ✓ What deforestation and habitat destruction are, where they occur, and what causes them
- ✓ How habitat loss spreads through ecosystems and affects food webs and biodiversity
- ✓ Why deforestation is harmful to animals, plants, humans, and entire ecosystems
- ✓ How to analyze data and evidence to identify patterns and draw conclusions
- ✓ How to use Claim-Evidence-Reasoning (CER) to support scientific arguments
- ✓ How to trace cause-and-effect relationships in complex environmental systems

Upgrade to the Environmental Science Detective Mystery Bundle

Get all my Environmental Science Mystery Activities plus all additional ones I create in the future.

ENVIRONMENTAL SCIENCE DETECTIVE MYSTERY BUNDLE

MICROPLASTICS MYSTERY DETECTIVE FILE ON PLASTIC POLLUTION & HUMAN IMPACT



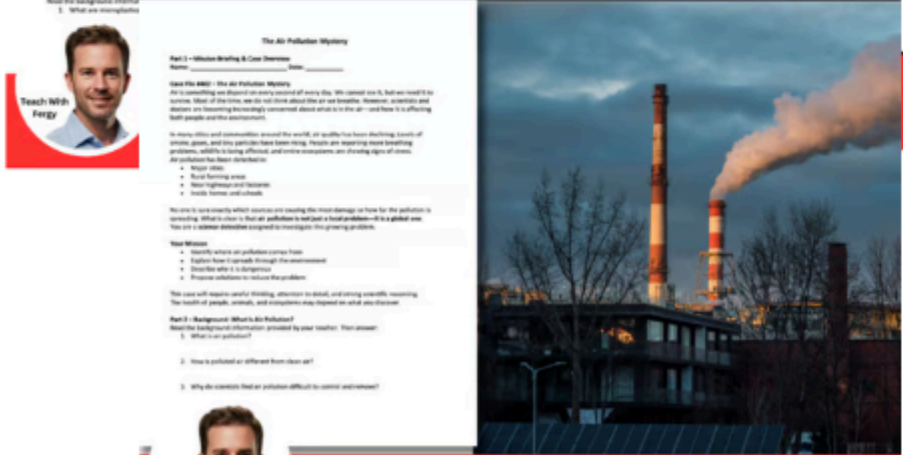
DEFORESTATION & HABITAT DESTRUCTION MYSTERY



THE RESOURCE DEPLETION & MINING MYSTERY



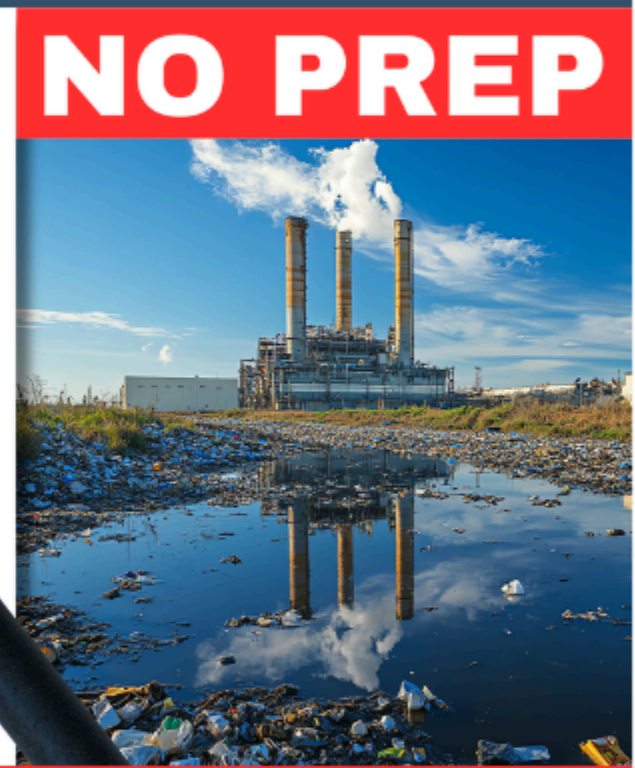
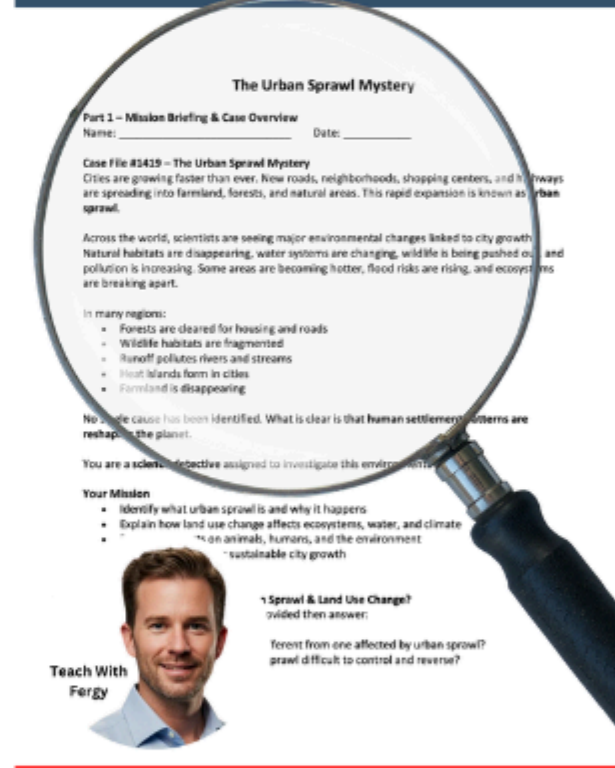
THE AIR POLLUTION MYSTERY DETECTIVE FILE ON AIR POLLUTION & THE ENVIRONMENT



THE INVASIVE SPECIES MYSTERY



DETECTIVE FILE ON HOW HUMANS IMPACT THE ENVIRONMENT



DETECTIVE FILES ON HOW HUMANS IMPACT THE ENVIRONMENT

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Part 1 & 2

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Read the background information provided by your teacher. Then answer:

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2. How is a destroyed habitat different from a healthy habitat?
3. Why do scientists find deforestation difficult to control and reverse?

Part 1 – Mission Briefing & Case Overview

Students are introduced to the problem and take on the role of science detectives. They learn their mission and begin the investigation with a real-world hook.

Part 2 – Background: What is Deforestation and Habitat Destruction?

Students read a short background passage and answer guiding questions to build foundational understanding before analyzing evidence.

Part 3 & 4

Part 3 – Evidence Log

As you examine each evidence card, record key information below.

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Part 4 – Suspect List: What Is Causing the Problem?

Below are possible “suspects” in this case. Rank them from 1 (most responsible) to 5 (least responsible).

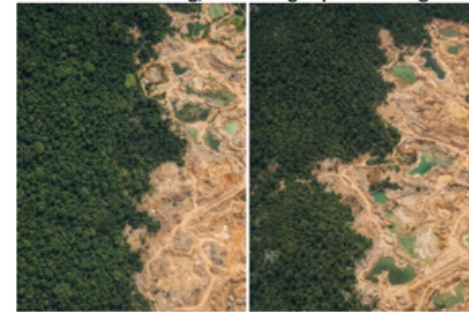
Suspect	Rank	Why You Ranked It This Way
Logging companies		
Farming & agriculture		
Urban development		
Mining operations		
Road construction		

Part 3 – Evidence Log

Students begin examining the evidence cards and record key information, observations, and insights in their evidence log.

Evidence Card 1 – Satellite Image: Before & After Forest Loss

A satellite image from five years ago shows a dense, continuous forest canopy covering the land. A more recent image of the same area reveals large, cleared sections with very few trees remaining, indicating rapid and large-scale deforestation.



Detective Notes Prompt:
What might cause such rapid forest loss?

Evidence Card 5 – New Road Construction Map

A map highlights newly built roads cutting directly through forested areas. Roads provide access to previously remote regions, making it easier for logging, mining, and further land clearing to occur.



Detective Notes Prompt:
How might roads lead to mo

Evidence Card 7 – Flooding in Nearby Village

A nearby village experienced severe flooding after heavy rainfall. The loss of surrounding forests reduced the land’s ability to absorb water, allowing rain to flow rapidly into rivers and communities.



Detective Notes Prompt:
How do forests help control flooding?

Part 4 – Evidence Analysis

Students summarize each piece of evidence, identify what it reveals about deforestation and habitat destruction, and generate questions, building critical thinking and reasoning skills.

EVIDENCE CARDS

➤ All Evidence Cards come in two versions - *With images and graphs and Without* and can be printed or projected as needed.

➤ Students analyze each Evidence Card and record the following in their **Evidence Log**

1. Summarize the evidence in their own words.
2. Determine what this evidence suggests
 - ☐ What causes it
 - ☐ Pathway
 - ☐ Its impact on living things
3. Explain what question(s) this evidence raises for them?

Evidence Cards

Evidence Card 1 – Satellite Image: Before & After Forest Loss

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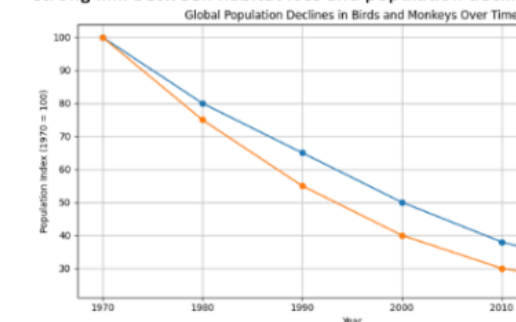


Detective Notes Prompt:

What might cause such rapid forest loss?

Evidence Card 2 – Animal Population Decline Graph

A graph shows steep declines in bird and monkey populations over a short period of time. These species rely on forest habitats for food, shelter, and breeding, suggesting a strong link between habitat loss and population decline.



Detective Notes Prompt:

How might forest loss affect animals?

Images
&
Graphs

Evidence Cards – No Images

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Evidence Card 2 – Animal Population Decline Graph

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Detective Notes Prompt:

How might forest loss affect animals?

Evidence Card 3 – Logging Permit Records

Documents show thousands of trees approved for removal.

Detective Notes Prompt:

Why would trees be removed on this scale?

Evidence Card 4 – Land Photo

A photograph shows a forest once stood.

Detective Notes Prompt:

How does farming affect habitats?

Evidence Card 5 – New Road Construction Map

A map shows newly built roads cutting directly through forested areas. Roads provide access to previously remote regions, making it easier for logging, mining, and land clearing to occur.

Detective Notes Prompt:

How might roads lead to more forest destruction?

No
Images

Part 5-7

Part 5 – Pathway Tracking: How Does Habitat Destruction Spread?

Use arrows to show how deforestation leads to other environmental problems.

Forest loss → Soil erosion → Water pollution → Habitat loss → Species decline

Example: Farm → Fertilizer → River → Fish → Birds → Ecosystem damage

Your turn:

Part 6 – Impact Analysis

Impact on Animals

1. How does habitat destruction affect wildlife?

Impact on Humans

2. How might deforestation affect people and communities?

Impact on Ecosystems

3. How does forest loss change entire ecosystems?

Part 7 – The Big Question

How did deforestation and habitat destruction become such widespread problems?

Write a clear explanation using evidence from the case.

Part 5 – Suspect List

Students rank possible sources of deforestation and habitat destruction, defend their choices, and determine which human activities are most responsible for the problem.

Part 6 – Pathway Tracking

Students trace how deforestation and habitat destruction leads to other environmental problems.

Part 7 – Impact Analysis

Students analyze how deforestation and habitat destruction affects animals, humans, and ecosystems, using evidence from the case to support their answers.

Part 8-10

Part 8 – The Big Question

Students synthesize all their learning to explain the main cause of deforestation in this case.

Part 9 – Claim-Evidence-Reasoning (CER)

Students write a structured scientific argument, making a claim, supporting it with evidence, and explaining their reasoning.

Part 10 – Reflection and Solutions

Students propose realistic actions at the personal, school, and government levels, moving from awareness to problem-solving.

Part 8 – Claim-Evidence-Reasoning (CER)

Claim

What is the main cause of deforestation in this case?

Evidence

List two pieces of evidence from the case that support your claim.

- 1.
- 2.

Reasoning

Explain how your evidence supports your claim.

Part 9 – Solutions & Action Plan

Personal Actions (Things individuals can do)

- 1.
- 2.

Community / School Actions

- 1.
- 2.

Government or Industry Actions

- 1.
- 2.

Part 10 – Reflection

1. One thing that surprised me in this case was:

2. One change I would make after learning this information is:

Full Teacher Answer Key

Teacher Answer Key

Background Questions

- What is deforestation and habitat destruction?
The large-scale removal of trees and destruction of natural habitats.
- How is a destroyed habitat different from a healthy one?
Destroyed habitats lack shelter, food, and protection for organisms.
- Why is deforestation hard to control?
It is driven by many industries and economic needs.

Evidence Log – Key Points

Evidence	Key Understanding
1	Forest loss over time
2	Animal population decline
3	Logging activity
4	Farming expansion
5	Road access
6	Soil erosion
7	Flooding
8	Mining damage
9	Human impact
10	Water pollution

Suspect Ranking (Expected Reasoning)

High responsibility:

- Logging
- Agriculture
- Mining

Moderate:

- Road construction
- Urban development

Pathway Tracking – Sample Answers

Logging → Soil erosion → River pollution → Fish decline
Farming → Forest clearing → Habitat loss → Species decline
Roads → Access → More deforestation

Impact Analysis

Animals:

Loss of homes, food, shelter, extinction risk

Humans:

Flooding, lost resources, displacement

Ecosystems:

Food web collapse, climate effects, soil loss

Big Question – Sample Response

How did deforestation and habitat destruction become such widespread problems?

Deforestation and habitat destruction became widespread because many human activities remove forests for land and resources. Evidence from the case shows that **logging companies are cutting down large numbers of trees (Evidence Card 3), farms are expanding into forest areas (Evidence Card 4), and mining operations are clearing land for resources (Evidence Card 8). Road construction (Evidence Card 5)** also makes it easier for people to access forests, which leads to even more trees being cut down.

As forests are removed, the soil is no longer held in place, causing **erosion and muddy rivers (Evidence Cards 6 and 10)**. This leads to **flooding in nearby communities (Evidence Card 7)** and makes it harder for animals to survive. Because forests are being cleared for many reasons and across many areas, the damage adds up quickly. This is why deforestation and habitat destruction are now widespread environmental problems affecting ecosystems, wildlife, and people.

CER Example

Claim:

Logging and agriculture are the main causes.

Evidence:

Evidence Cards 3 and 4

Reasoning:

They directly remove forests on a large scale.

Solutions – Expected Ideas

Personal:

Use less paper, recycle, support sustainable products

Community:

Tree planting, conservation programs

Government:

Forest protection laws, sustainable land use policies

Background Reading: What Is Deforestation and Habitat Destruction?

Forests and natural habitats are home to millions of plants and animals. They provide food, shelter, clean air, and clean water. We often assume that these environments will always be there, but scientists are increasingly concerned about **deforestation and habitat destruction**—the large-scale removal of trees and natural areas that living things depend on to survive.

Deforestation is the cutting down and clearing of forests. Habitat destruction happens when natural environments are damaged or removed. These problems are caused mainly by human activities. Logging, farming, mining, road building, and urban development all require land, and forests are often cleared to make space. Some forest loss can be seen easily, such as large open areas with no trees, while other habitat destruction happens slowly and is harder to notice. Healthy habitats contain everything organisms need to survive. Destroyed habitats no longer provide food, shelter, or protection, which makes it difficult for plants and animals to live there.

How Is a Destroyed Habitat Different from a Healthy Habitat?

A healthy habitat supports many different species. It has trees, plants, water, and shelter. Animals can find food, build nests, hide from predators, and raise their young. Plants can grow, and ecosystems stay balanced.

A destroyed habitat, on the other hand, has lost many of these features. Trees may be gone, soil may be exposed, and water sources may be damaged. Without trees and plants, animals lose their homes and food sources. Many are forced to move, and some do not survive.

Another key difference is that destroyed habitats are less stable. Without plant roots to hold soil in place, erosion can occur. Flooding can become more common, and rivers can fill with mud. This affects not only wildlife but also nearby communities and ecosystems.

Why Is Deforestation and Habitat Destruction Difficult to Control and Reverse?

Deforestation and habitat destruction are difficult to control because they are driven by **many different causes over time**. People clear forests for wood, food production, housing, and other needs. Even if one cause is reduced, others may continue.

Once a forest is cut down, it takes a very long time to grow back. Some habitats take hundreds of years to recover, and some never return to their original state. This makes habitat loss hard to reverse.

Deforestation is also **constantly happening**. As the human population grows, more land is needed for farms, cities, and industry. This means new areas are cleared every year. Because it happens in many places around the world, controlling deforestation is a major challenge for scientists and governments.

Background Reading

As a special bonus, I want to send you a few resources that you can use in your classroom tomorrow. Completely free and geared towards what you teach!



Just  **and then choose what you teach!**

thanks
**for your interest
in this resource!**



 devon@teachwithfergy.com

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MICROPLASTICS MYSTERY DETECTIVE FILE ON PLASTIC POLLUTION & HUMAN IMPACT



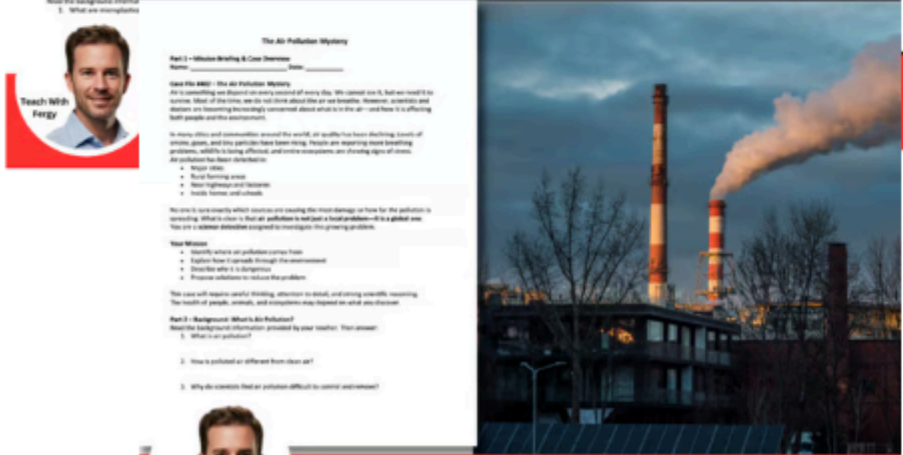
DEFORESTATION & HABITAT DESTRUCTION MYSTERY



THE RESOURCE DEPLETION & MINING MYSTERY



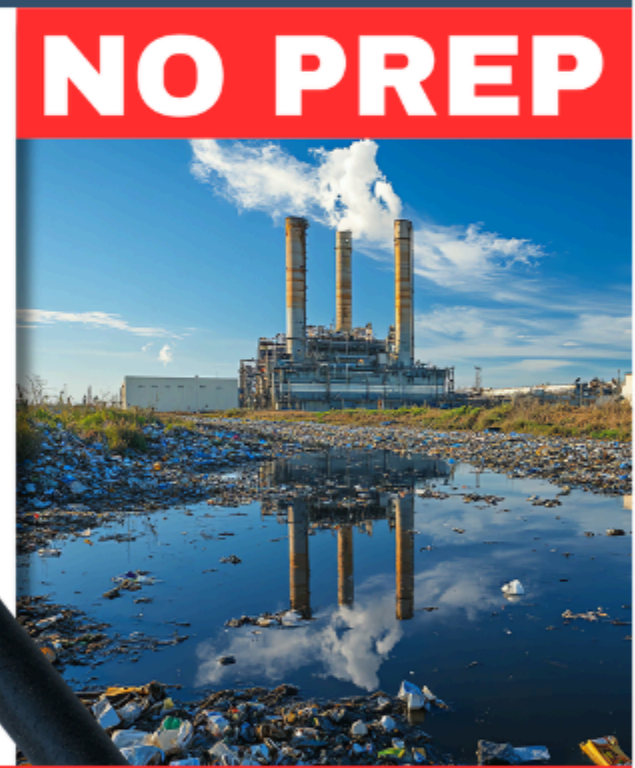
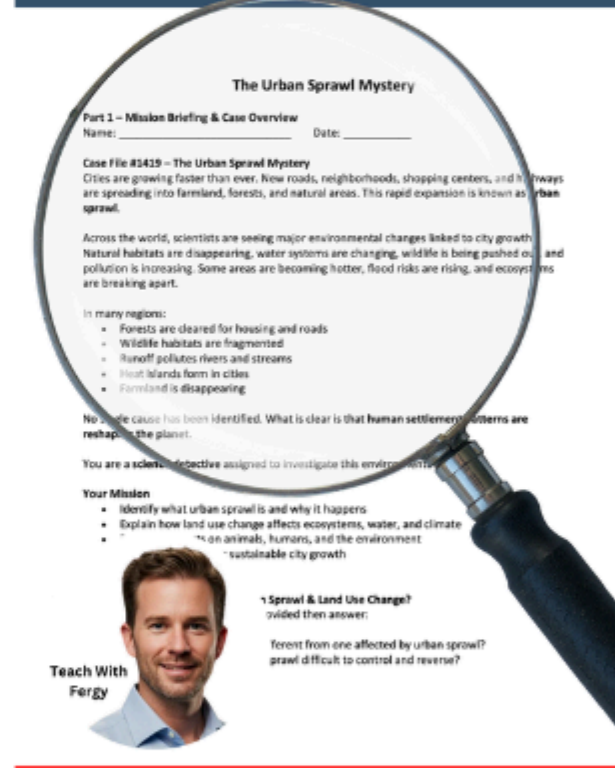
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