Triton Hacks 2024

NATURE CONSERVATION & PRESERVATION

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01 ABOUT THE TOPIC

What is our idea and why does this topic matter?

LOOK AT THAT VIEW!

Rapid Fire Question!

How long will it take to destroy the rainforests on earth at this rate of deforestation?

A) 100 years ✓
B) 300 years
C) 500 years
D) 1000 years

What's up with the Amazon?

The Amazon Rainforest spans millions of square miles (the world's largest rainforest!)
Rainforest biomes are some of the most susceptible to human impacts from development, including:

- deforestation and pollution from unsustainable forestry and logging
- harmful mining operations
- agricultural land conversion
- urbanization
- etc etc etc

- Ongoing problems despite efforts of Brazilian government
- Illegal operations
- Unsustainable practices even on protected land

WHY DOES THIS MATTER?

- Rainforests (especially tropical) provide several **ecosystem services**

- carbon sequestration (climate change mitigation)
- oxygen production
- flood/drought regulation
- biodiversity hotspots
- recreational value

- Some **quantifiable**, like the amount of carbon sequestration
- Others **unquantifiable** like recreational value

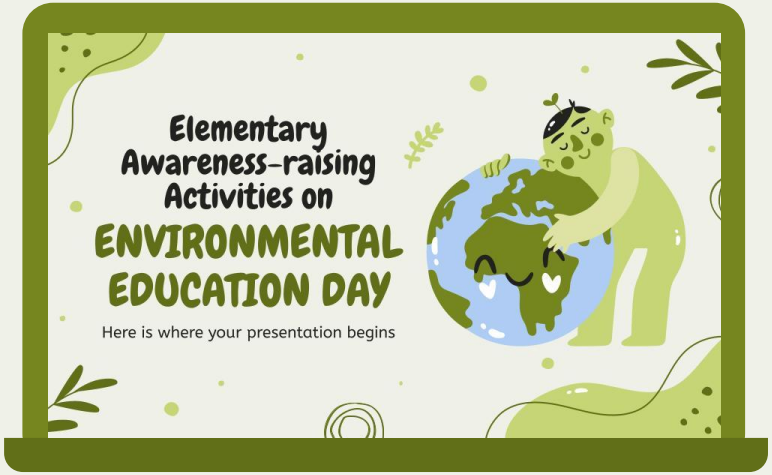
- Difficult to stop development in these valued areas
- Enforcement of **legislation** key
- simulation based models that allow companies to realize how their efforts affect the environment

- prevents them from making harmful decisions
- prevents need for them to invest in cleaning up their mistakes later
- educational tool in classrooms!

02

THE DEMO!

TO SCRATCH!


Elementary
Awareness-raising
Activities on
ENVIRONMENTAL
EDUCATION DAY
Here is where your presentation begins

DEFORESTATION

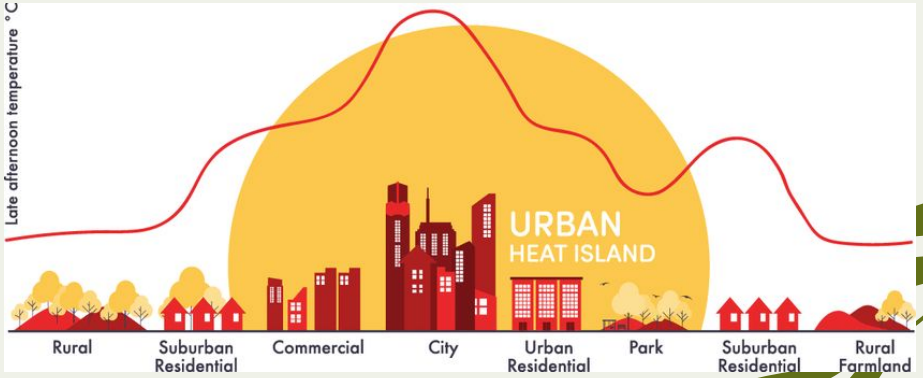
HABITAT LOSS

HABITAT FRAGMENTATION

MINING POLLUTION

ATMOSPHERIC POLLUTION

THERMAL POLLUTION (URBANIZATION)



"Forests are the lungs of our land, purifying the air and giving fresh strength to the people"

– FRANKLIN D. ROOSEVELT

THANKS!

Do you have any questions?

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SOURCES

https://forestgeo.si.edu/research-programs/affiliated-programs/biological-dynamics-forest-fragments-project-bdffp
https://www.sciencedirect.com/science/article/pii/S0006320710004209?via%3Dihub
https://en.wikipedia.org/wiki/Biological_Dynamics_of_Forest_Fragments_Project
https://www.osgeo.org/projects/osgeo4w/
https://github.com/GLOBIO4/GlobioModelPublic/wiki
https://globio.info/globioweb

AI Prompts to Chat GPT:
“what biomes are the most at risk from habitat fragmentation/loss”
“do you have access to data from the bdffp study?”
“**Land Use Models**: Simulate changes in land use and their effects on habitat fragmentation and biodiversity.”
- “what are some examples of this that already exist? provide links if possible”

“what laws protect the amazon rainforest? is development allowed?
“what specific areas of the amazon are open for development and what areas are affected by this development”