

NAME: _____

Tropical Rainforest Case Study – The Amazon Rainforest



This case study contains information about the Amazon Rainforest, South America. Read through this information and observe the images. Questions will be presented which can be answered using the stimulus material of this case study or additionally by internet research.

Location: The Amazon rainforest is located in the northern half of South America. Although it spans over 9 countries, 60% of the forest is located in Brazil, 13% in Peru and 10% in Columbia. It is the world's largest tropical rainforest, and covers an area of 5.5 million km².



Figure 1 (Adjacent Image): Shows the position (shaded) of the Amazon Rainforest on the Northern half of South America.

As mentioned on the previous page, the Amazon Rainforest spans across 9 countries, three of which are Brazil, Peru and Columbia.

1. Name the other 6 countries the Amazon Rainforest spans across using the map below:



Some **interesting facts** about the Amazon Rainforest are:

- 11% of all global plant/animal species or 50% of Earth's organisms live here.
- Uaupes, Brazil, has a mean monthly rainfall averages 2677mm per annum.
- 22% of the world's oxygen is produced by the Amazon.
- The Amazon Basin holds one-fifth of the world's fresh water.
- Covers 5.5 million km².
- 25% of western pharmaceuticals / medications come from rainforests such as the Amazon.



Above Image: The Amazonian Reticulated Poison Dart Frog, one of the many species of animals found in the Amazon Rainforest.

2. Amazing Amazon facts

There are some interesting facts mentioned about the Amazon Rainforest on the previous page. Using the *10 Amazing Amazon Facts* handout, List **3** more interesting facts about the Amazon Rainforest below.

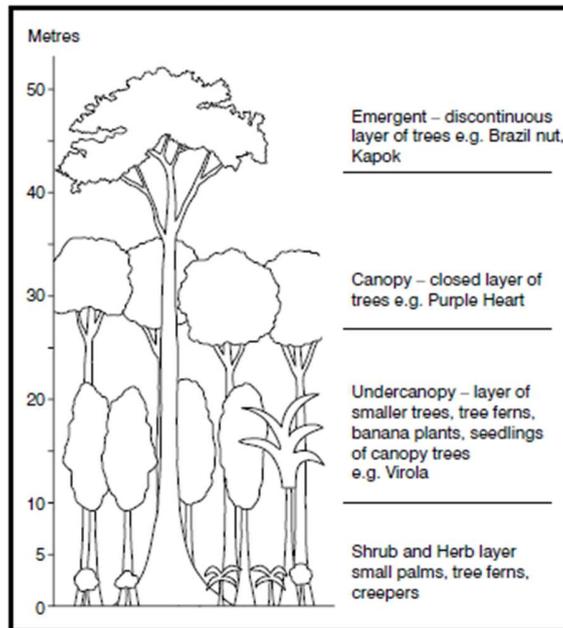
Amazon Rainforest Animal Species and Vegetation Structure

Below are two diagrams. The first is Figure 2 that shows the typical animal species that live in the Amazon. The second is figure 3 that shows the structure of the layers or stratification of the rainforest vegetation.

Figure 2: Typical Amazonian species

| | |
|-------------|--|
| Birds: | toucan, macaw, harpy eagle |
| Insects: | blue morpho butterfly, leaf-cutter ants |
| Mammals: | spider monkey, howler monkey, sloth, jaguar, tapir, ant-eater, pink river dolphins, manatee, peccary, capybara |
| Reptiles: | black caiman, green anaconda |
| Amphibians: | poison dart frog, tree frog |
| Fish | piranaha, catfish |

Figure 3: Stratification of the rainforest



Fact: All the 4 main components of the forest stratification (Figure 3) are home to many of the animals listed (Figure 2). During most cases of deforestation (clearing of the vegetation), all 4 layers of vegetation are removed in preparation for either cattle ranching or cash crop agriculture.

3. Response Statement

Using the **interesting facts about the Amazon Rainforest** and **Figures 2 and 3** above respond to the following statement:

“Deforestation of the Amazon Rainforest will have negative effects on society (people) and the environment (natural surroundings)”

Deforestation Of The Amazon Rainforest

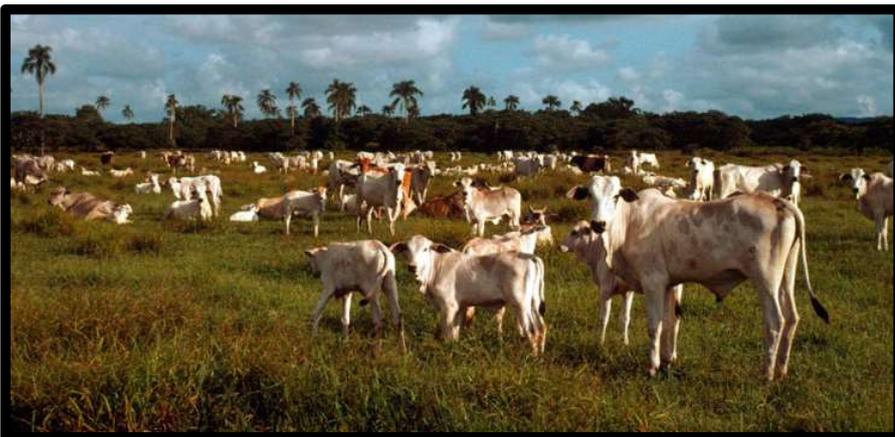
Deforestation (removal of trees) has occurred in the Amazon Rainforest since 1966. The main causes of this deforestation include the following:

Quarrying (2%)



A quarry in Amazonia, Brazil.

Cattle ranching (70%)



One of many Cattle Ranches on cleared Amazon Rainforest, Brazil.

Logging/timber (3%)



A stockpile of logged Amazon hardwood species, Columbia.

Agriculture (25%)



One of many Soybean plantations, Brazil.

4. Data Activity

Using the causes of deforestation statistics below:

Quarrying (2%)

Cattle ranching (70%)

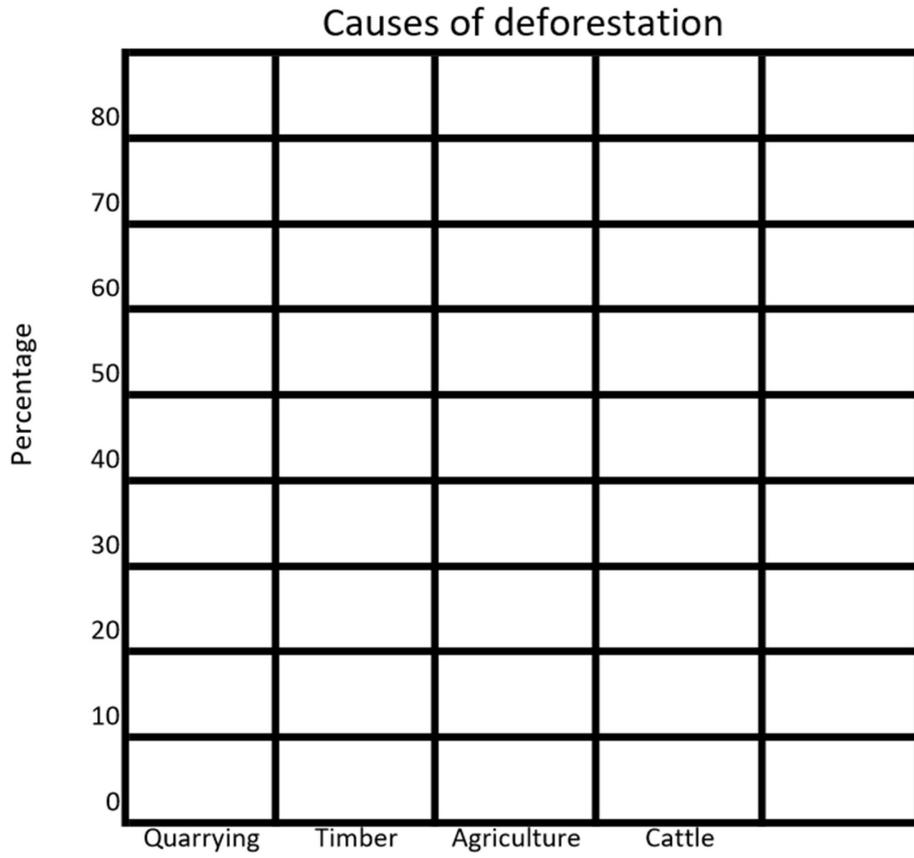
Logging/timber (3%)

Agriculture (25%)

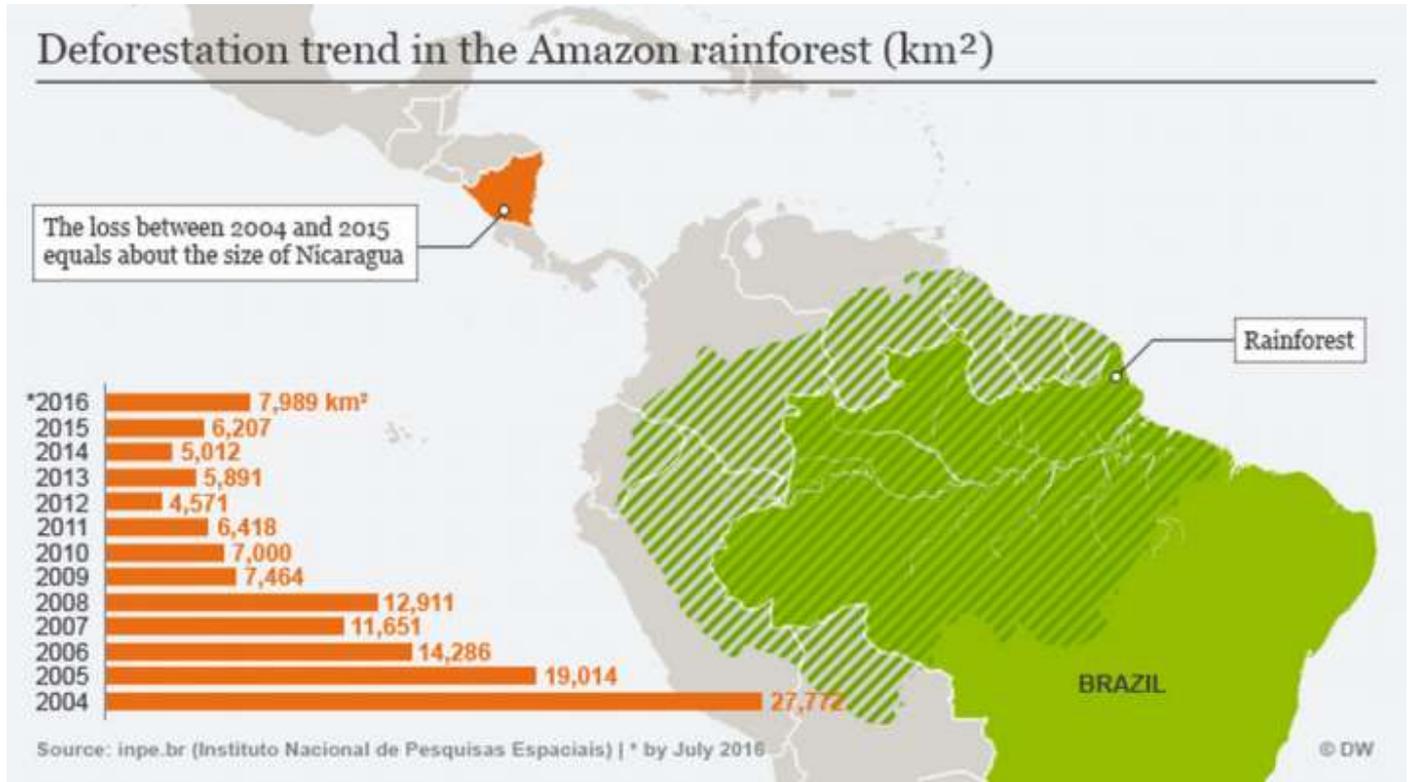
a. Construct a table displaying the deforestation causes in the Amazon Rainforest.

| Cause of deforestation | Percentage of total deforestation |
|------------------------|-----------------------------------|
| | |
| | |
| | |
| | |

b. Construct a column graph in the grid provided to visually represent the data in your table.



5. Data Analysis Activity



Study the image below which contains information about the area of the Amazon Rainforest being lost due to deforestation each year from 2004-2016, then answer the questions that follow.

a. What year had seen the most deforestation occurring in the Amazon Rainforest?

b. What year had seen the least deforestation occurring in the Amazon Rainforest?

c. What was the average annual deforestation occurring in the Amazon Rainforest between and including the years of 2012-2015? Show your working.

d. How much more deforestation occurred in the year 2015 compared to year 2012? Show your working.

6. Extension Reflection

The image below shows a portion of forest undergoing deforestation.



Throughout the past century, the Amazon Rainforest has been given the nick-name of “**The Lungs Of The Earth.**” With reference to the Amazon Rainforest, explain the significance of the above image.

Biomes / Ecosystems Exit slip

1. The two main categories of Biome are:

a. T _____

b. A _____

2. List two features of the following Biomes:

a. Desert

d. Rainforest

e. Estuary

f. Freshwater

3. Name the Tropical Rainforest you read about in your case study

4. List 4 interesting facts about the Tropical Rainforest in the case study.

5. List the 4 causes of deforestation to this Tropical Rainforest.
