

Name \_\_\_\_\_

Date \_\_\_\_\_

## Human Activity in the Amazon Answer Key

The Amazon rain forest is rich in resources that are in high demand around the world. These resources often lie deep in the forest. This makes it difficult to transport these resources to other places where they can be easily exported to the countries that want them. A transcontinental railroad could transport resources more efficiently, but it also means developing areas of the forest that had previously been untouched. This level of development will affect the land cover that surrounds the railroad, which will alter the ecosystem and impact the livelihood of indigenous people. Using the map, Amazonia: The Human Impact, complete this worksheet to predict the effects the railroad may have on the surrounding ecosystem and neighboring indigenous territories.

### Part 1. Land Cover in the Amazon

1. What countries and territories are located in Amazonia?

Brazil

Peru

Colombia

Venezuela

Ecuador

Bolivia

Guyana

Suriname

French Guiana (territory)

2. Which country holds most of the rain forest? How much? Brazil (60%)

3. Look at the lower right of the map for the land cover key. Use the large map and the land cover key to answer the questions below.

a. Where are high-density evergreen forests located? With the exception of the southeastern part of the Amazon Basin in Brazil and some patches around cities and along the border of Venezuela and Guyana, most of the Amazon Basin is high-density evergreen forest.

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# Human Activity in the Amazon Answer Key, continued

b. Where do you see a lot of cropland, grassland, and savannah? Mostly in the areas noted above that did not have heavy evergreen forest. There is also a pattern of this type of land cover around roads (paved roads seem to be surrounded by this type of land cover).

c. Identify patterns of land cover throughout the Amazon rain forest. In general, where there is a lot of human activity (as indicated by cities and roads), there is less evergreen forest and more cropland, grassland, and savannah.

## Part 2. Habitat Loss in the Amazon

In the bottom left of the map Amazonia: The Human Impact, you will see a smaller map titled Altered Landscape. Use this map and keys to answer the questions below.

1. What parts of the Amazon rain forest are experiencing the most habitat loss due to fires?  
Most habitat loss due to fires is occurring in the south/southeastern region of the Amazon Basin in Brazil. There is also a patch in Colombia and another one in northern Brazil that have a high number of fires per square mile.

2. What parts of the Amazon rain forest are experiencing the most habitat loss due to deforestation?  
A similar trend to the habitat loss due to fires can be observed with deforestation. The south/southeastern region of the Amazon Basin in Brazil has a high density of deforestation along with patches at the northwestern tip of Colombia and the northern part of Brazil. Peru also has some patches of deforestation. Heavy deforestation also seems to be occurring around the eastern part of the Amazon River in Brazil.

# Human Activity in the Amazon Answer Key, continued

3. Why do you think habitat loss due to fires and deforestation is occurring in these areas?

Answers will vary, but students should see a pattern between human activity and habitat loss. Where cities are located and roads are constructed, there is a lot of habitat loss. Rivers also provide access to deeper parts of the forest. Where people can access resources, habitat loss is occurring.

4. What are the implications of habitat loss in these areas and what might this mean for the future of the forest?

Answers will vary, but students should notice that habitat loss is currently occurring where people have access to the forest (by water, roads, or the edges near cities). As the routes of access get deeper into the forest, so will the habitat destruction. Eventually, habitat loss could reach all parts of the forest.

## Part 3. Indigenous Territories in the Amazon

In the top right of the map Amazonia: The Human Impact there is a smaller map of Managed Areas. Identify the key for indigenous territories and use the map to answer the questions below.

1. How many indigenous territories are in Amazonia? There are 2,467 indigenous territories in Amazonia.

2. What parts of the Amazon Basin have a lot of indigenous territories? There are many indigenous territories in northern, central, and western Brazil and the border of Brazil and Colombia. The border of Brazil and Peru has a high density of isolated groups.

3. Where are there few indigenous territories in the Amazon Basin? There are few indigenous territories in the south/southeastern region of the Amazon Basin in Brazil.

# Human Activity in the Amazon Answer Key, continued

4. Why do you think indigenous territories are located in the places they are in the Amazon Basin? They seem to be located close to tributaries of the Amazon River and within high-density evergreen forests, which suggests they depend on the water in addition to the forest to survive. They are not close to urban centers or areas of high habitat loss.

5. What might the implications of habitat loss be for indigenous territories? If indigenous people depend on the forest for survival, then they will have to relocate deeper into the forest to maintain that lifestyle.

## Part 4. Human Activity in the Amazon

Use all the map keys and maps from the previous sections to answer the questions below.

1. Study the roads throughout the Amazon rain forest. Where are most of the roads located on the map? The roads are located around the perimeter of the Basin, with a high density of roads in the southern and eastern parts of the Basin in Brazil and in cities throughout the Basin.

2. How many miles of roads are in the Brazilian Amazon alone? There are 164,000 miles of paved and unpaved roads (3/4 of which are illegal).

3. Is there a relationship between habitat loss and roads? If so, what is the relationship? A map caption indicates that 95% of all deforestation has occurred within 3.4 miles of a road.

# Human Activity in the Amazon Answer Key, continued

4. Is there a relationship between land cover and roads? If so, what is the relationship?

Yes. The map shows an obvious relationship of less high density evergreen forest in areas where road density is high.

5. What does the following statement mean? The first road through a natural habitat can mark the beginning of the end. This suggests that once a road is created, it provides access to places

that had previously been untouched by human activity. The road allows people to collect resources that had been unavailable to them. As soon as a road is laid, trees will come down, resources will be excavated, and the ecosystem changes.

## Part 5. Considering the Impact of a Railroad in the Amazon

Look at the area around the proposed transcontinental railroad. Brainstorm potential effects if the railroad is to be constructed. Complete the chart to consider various implications.

	What does this look like now?	What might this look like if the railroad is built?
<b>Land Cover</b>	Answers will vary.	Answers will vary.
<b>Habitat Loss</b> (due to fires and deforestation)	Answers will vary.	Answers will vary.
<b>Indigenous Territories</b>	Answers will vary.	Answers will vary.