

# Unit 1: The Natural World

## ENVIRONMENTAL IMPACTS OF LOGGING

### Words

Write the letter of each definition with the word it defines. If you don't know the definition, use the context of the reading passage to help you. Look for the words in bold as you read the passage.

### PARAGRAPH 1

| Words                      | Definitions   |
|----------------------------|---|
| <b>1</b> ..... logging     | <b>A</b> n., the natural world                              |
| <b>2</b> ..... array       | <b>B</b> n., damage to air, water, etc.                     |
| <b>3</b> ..... environment | <b>C</b> n., the cutting down of trees for commercial use   |
| <b>4</b> ..... habitat     | <b>D</b> n., a large number; a collection                   |
| <b>5</b> ..... pollution   | <b>E</b> n., the natural area where a plant or animal lives |
| <b>6</b> ..... extend      | <b>F</b> v., to disappear                                   |
| <b>7</b> ..... fell        | <b>G</b> n., the goodness in food                           |
| <b>8</b> ..... nutrients   | <b>H</b> adj. living in the water                           |
| <b>9</b> ..... terrestrial | <b>I</b> adj., living on the land                           |
| <b>10</b> ..... aquatic    | <b>J</b> v., to cut down                                    |
| <b>11</b> ..... vanish     | <b>K</b> v., to reach past; get bigger                      |

### PARAGRAPH 2

| Words                                  | Definitions   |
|--|---|
| <b>12</b> ..... myriad                 | <b>L</b> adj., whole; complete                                |
| <b>13</b> ..... intact                 | <b>M</b> adj., many; numerous                                 |
| <b>14</b> ..... intercept              | <b>N</b> n., loss of soil from the action of water or wind    |
| <b>15</b> ..... stabilize <sup>1</sup> | <b>O</b> v., to keep from changing; maintain                  |
| <b>16</b> ..... erosion                | <b>P</b> v., to catch; to interrupt the progress of something |

<sup>1</sup>BrE: stabilise

## PARAGRAPHS 3–5

| Words                         | Definitions   |
|-------------------------------|---|
| 17 ..... vegetation           | <b>Q</b> n., plants                                     |
| 18 ..... inhibit              | <b>R</b> n., the removal of all trees from a large area |
| 19 ..... defense <sup>1</sup> | <b>S</b> v., to prevent; slow down                      |
| 20 ..... deforestation        | <b>T</b> n., protection                                 |

## Reading

## Environmental Impacts of Logging

## (1) A

From shipping crates to paper bags, the **logging** industry supplies the raw materials for an **array** of products. However, this is not without untold harm to the **environment**. The damage includes **habitat** loss, **pollution**, and climate change, with the effects spanning the globe from the rainforests of Central Africa, Southeast Asia, and South America to the northern forests of Canada and Scandinavia. The effects of logging **extend** beyond just the **felling** of a swath of trees. **Nutrients**, water, and shelter for plants, animals, and microorganisms throughout the ecosystem are also lost; many life forms—both **terrestrial** and **aquatic**—are becoming endangered as forests **vanish**.

## (2) B

Trees protect the soil beneath them; thus, tree loss can affect its integrity. For example, the rainforest floor, home to **myriad** plant life as well as insects, worms, reptiles, amphibians, and small mammals, relies on a dense canopy of branches and leaves to keep it healthy and **intact**. The canopy prevents surface runoff by **intercepting** heavy rainfall so that water can drip down onto the porous earth. Tree roots also **stabilize** the soil and help prevent **erosion**. In return, a healthy soil encourages root development and microbial activity, which contribute to tree growth and well-being. A major factor in logging-related soil damage comes from road building, with trucks and other heavy equipment compressing the spongy soil, creating furrows where water collects, and disrupting the

<sup>1</sup>BrE: defence

underground water flow. Eventually, the topsoil wears away, leaving behind an infertile layer of rocks and clay.

(3) **C**

Logging can also damage aquatic habitats. **Vegetation** along rivers and stream banks helps maintain a steady water flow by blocking the entry of soil and other residue, while tree shade **inhibits** the growth of algae. Removing trees obliterates these benefits. When eroding soil flows into waterways, the organic matter within it consumes more oxygen, which can lead to oxygen depletion in the water, killing fish and other wildlife.

(4) **D**

Trees provide a natural **defense** against air pollution. They remove carbon dioxide from the atmosphere while they emit oxygen, and their leaves filter pollutants from the air. Cutting down trees keeps pollutants airborne, where they can mix with water vapor<sup>1</sup> and form acid rain. Water quality in nearby streams and rivers also deteriorates as tree loss contributes to increased sedimentation.

(5) **E**

In a healthy forest ecosystem, trees draw moisture from the soil and release it into the atmosphere while they provide shade to lessen evaporation. Thus, **deforestation** affects rainfall patterns, leading to flooding as well as drought and forest fires. Deforestation is responsible for about one-fifth of carbon dioxide emissions worldwide, making it a major contributor to climate change—in particular, global warming. In the Amazon basin alone, deforestation is responsible for millions of tons of carbon being released into the atmosphere annually. Some logging companies burn large tracts of forest just to facilitate access to one area—a practice<sup>2</sup> that discharges even more carbon dioxide.

(6) **F**

Forests, especially the tropical rainforests, are a vital natural resource with extensive biodiversity and irreplaceable wildlife habitats. More responsible logging practices would help ensure that they are protected for future generations.

<sup>1</sup>BrE: vapour

<sup>2</sup>BrE: practice *n.*, practise *v.*

Answer the questions about **Environmental Impacts of Logging**.

**Questions 1–4**

The reading passage contains six paragraphs, **A–F**. Which paragraphs discuss the following information?

Write the correct letter, **A–F**.

- ..... **1** The impact of logging on the weather
- ..... **2** How trees inhibit soil erosion
- ..... **3** How deforestation contributes to air pollution
- ..... **4** The impact of erosion on fish

**Questions 5–8**

Complete the summary using words from the list below.

aquatic arrays

defense fells

habitats intercepts

myriad vegetation

The logging industry **5**..... trees to get the wood that is used to make many products. This practice has **6**..... effects on the environment. The natural **7**..... of many terrestrial and aquatic animals are damaged. Trees protect the environment in many ways. They are an effective **8**..... against both air pollution and soil erosion.

**Word Families**

**A**

Complete each sentence with the correct word from the word family chart. Make nouns plural where necessary. Use the correct form of verbs.

| <b>noun</b> | <b>noun</b> | <b>verb</b> |
|-------------|-------------|-------------|
| defense     | defender    | defend      |

**1** The shade of trees provides a .....against the drying effects of the sun.

2 Fish cannot ..... themselves from the effects of water pollution.

3 A ..... of the environment works to protect plants and animals from damage caused by logging.

| <b>noun</b> | <b>adjective</b> | <b>adverb</b>   |
|-------------|------------------|-----------------|
| environment | environmental    | environmentally |

4 It is important to develop more ..... friendly logging practices.

5 Logging causes a great deal of ..... damage.

6 The ..... needs to be protected from the effects of logging.

| <b>noun</b> | <b>verb</b> |
|-------------|-------------|
| erosion     | erode       |

7 When soil ....., there are no nutrients left to help plants grow.

8 Soil ..... leads to the pollution of streams and rivers.

| <b>noun</b> | <b>verb</b> | <b>adjective</b> | <b>adverb</b> |
|-------------|-------------|------------------|---------------|
| extent      | extend      | extensive        | extensively   |

9 The Amazon Rainforest ..... from Brazil into neighboring countries.

10 The Amazon Rainforest is the most ..... rainforest in the world.

11 The ..... of environmental damage caused by logging is frightening.

12 Rainforests around the world have been ..... logged.

| <b>noun</b> | <b>noun</b> | <b>verb</b> |
|-------------|-------------|-------------|
| pollution   | pollutant   | pollute     |

13 Factories add ..... to the air and water.

**14** Eroding soil ..... water.

**15** Deforestation contributes to the effects of both air and water

### Word Families

#### B

Choose the correct word family member from the list below to complete each blank.

|                      |               |                 |
|----------------------|---------------|-----------------|
| <b>1</b> environment | environmental | environmentally |
| <b>2</b> pollution   | pollutants    | pollutes        |
| <b>3</b> extent      | extend        | extensive       |
| <b>4</b> stability   | stabilizes    | stable          |
| <b>5</b> erosion     | erode         | eroded          |
| <b>6</b> Defenses    | Defenders     | Defends         |

Modern industry has caused damage to our natural **1** ..... in many ways. The air and water are filled with **2** ..... . One result of this is acid rain, which has caused **3** ..... damage to vegetation in many areas. When large amounts of vegetation die off, the environment loses **4** ..... . If there are no plants to hold the soil, it starts to **5** ..... . This leads to myriad problems, including water pollution and habitat loss. **6** ..... of wildlife work hard to prevent further damage to natural areas.

## Paraphrases

Read the sentence from the reading passage. Then, choose the sentence that has the same meaning.

1 For example, the rainforest floor, home to myriad plant life, as well as insects, worms, reptiles, amphibians, and small mammals, relies on a dense canopy of branches and leaves to keep it healthy and intact. (paragraph 2)

A A variety of plants and animals live in the rainforest, both on the ground and in the branches and leaves of the trees.  
 B The rainforest floor and the many plants and animals that live there depend on the protection of the tree canopy.  
 C The thick rainforest tree canopy stays healthy as long as the forest floor is healthy.

2 Vegetation along rivers and stream banks helps maintain a steady water flow by blocking the entry of soil and other residue, while tree shade inhibits the growth of algae. (paragraph 3)

A Plants around waterways help keep the water moving and stop the spread of algae.  
 B Trees and other plants grow on river banks because they depend on the water supply to live.  
 C Plants that grow near moving water provide shade to keep the water cool and fresh.

## Word Skill

Prefix *de-*

The prefix *de-* can mean “remove.”

Read the sentences. Write a definition for each underlined word.

1 When we deforest an area, many animals lose their habitat.

*deforest*: .....

2 You can debone a chicken before cooking it.

*debone*: .....

3 I had to deice the windshield before I could drive.

*deice*: .....

## Listening

Track  
1

*Listen to the lecture. Choose the correct letter, A, B, or C.*

- 1 Trees provide a habitat for .....  
**A** birds only.  
**B** a myriad of animals.  
**C** aquatic animals.
- 2 ..... are a source of nutrients for birds.  
**A** Insects  
**B** Roots  
**C** Leaves
- 3 Trees provide aquatic animals with a defense from .....  
**A** coolness.  
**B** rain.  
**C** heat.
- 4 ..... inhibit soil erosion.  
**A** Branches  
**B** Roots  
**C** Trunks

## Writing (Task 2)

**Deforestation caused by human activity is happening in many parts of the world, with serious results for the environment. What do you think can be done to solve this problem?**

Support your opinion with reasons and examples from your own knowledge and experience.

Write at least 250 words.

## Speaking

*Talk about the following topics.*

What kinds of natural environments do you enjoy spending time in?

What do you think can be done to solve the problems caused by environmental pollution?