

Rain Forests and the Earth's Climate

The Importance of Rain Forests

[A] Rain forests cover only about six percent of the earth's surface, but they are very important to the earth. What is a rain forest? It is an area of land that gets a lot of rainfall and is mostly covered by tall, old trees. Some rain forests get up to 33 feet (10 meters) of rain each year. Some of their trees are thousands of years old. Most of the world's rain forests are in Africa, Asia, Australia, Central America, and South America. More than half of the world's plant and animal species live in rain forests or originally came from rain forests. Scientists continue to discover plants in the rain forests that have *medicinal value* (useful for treating medical problems). In fact, over 25 percent of the medicines we have come from rain forest plants, and there are still a lot of plants to find.

The Effects of Rain Forests on the Earth's Climate

[B] Rain forests are important not only for the plants and animals that live in them but for the medicines that come from them. They also have major effects on the earth's atmosphere and climate. According to some scientists, global warming is causing dangerous changes to the earth's climate. Rain forests can help us to fight global warming. Some scientists believe that rain forests cool the atmosphere by absorbing the sun's heat. To absorb means "to soak up." Also, plants and trees use carbon dioxide. The cause of global warming is an increase of gases like carbon dioxide in our atmosphere. So rain forests can clean some of the *excess* (extra) carbon dioxide out of the air.

How We Are Destroying Rain Forests

[C] Rain forests are so important to the earth, but we are cutting them down and burning them very quickly. Why? Some companies want to use the trees to make wood and paper. Others want to use the land to raise animals or grow *crops* (plants that farmers grow to use as food). This is dangerous for the climate in two ways. First, we are destroying something that helps cool down the earth's atmosphere. And second, by burning rain forests, we add a lot of carbon dioxide to the air. In fact, the burning of rain forests is responsible for about 30 percent of the carbon dioxide in our atmosphere. Some people believe that in 40 years, all the rain forests will be destroyed. What will happen to the earth's climate when all the rain forests are gone?

Reading Comprehension and Reading Strategies

Answer these questions about the reading passage.

1. What is the main idea of this reading?
 - A. Rain forests are important because they are very old and most of our medicines come from their plants.
 - B. We need to protect rain forests because they are important to the earth in many ways.
 - C. We are destroying the rain forests very quickly.
 - D. The rain forests are important, but they do not have a major effect on the earth's climate.
2. In some rain forests, _____.
 - A. the trees grow to 33 feet
 - B. there are no animals because there is so much rain
 - C. 33 feet of rain falls each year
 - D. 25 percent of the plants can be used for medicine
3. Rain forests can be helpful to the earth because _____.
 - A. they heat the atmosphere
 - B. they put carbon dioxide into the atmosphere
 - C. they burn the carbon dioxide in the atmosphere
 - D. they soak up the carbon dioxide in the atmosphere

4. Scientists and researchers probably _____.
 - A. are still looking for medicinal plants in rain forests
 - B. are not looking for medicinal plants in the rain forests any more
 - C. don't believe there are any more important plants to find in the rain forests
 - D. all agree that global warming is harming the earth's atmosphere
5. Burning rain forests _____.
 - A. helps farmers grow strong crops
 - B. adds carbon dioxide to the air
 - C. cools the atmosphere
 - D. cools the carbon dioxide in the air
6. Which of the following sentences supports the main idea of this reading?
 - A. Rain forests cover only about six percent of the earth's surface.
 - B. Some of their trees are thousands of years old.
 - C. Rain forests can help us to fight global warming.
 - D. Some rain forests get up to 33 feet (10 meters) of rain each year.
7. Which of the following statements is true?
 - A. About 25 percent of the world's plants and animals live in or come from rain forests.
 - B. Almost 33 percent of the world's rain comes from rain forests.
 - C. More than six percent of the world's rain comes from rain forests.
 - D. Over half of the world's animal species live in or come from rain forests.
8. According to scientists, global warming is caused by _____.
 - A. absorbing the sun's heat
 - B. carbon dioxide and other gases in the air
 - C. dangerous changes to the earth's climate
 - D. the plants and animals that live in the rain forest
9. The writer of this reading probably thinks that _____.
 - A. rain forests are not good for the earth
 - B. it is important to stop burning rain forests
 - C. it is not important to save rain forests
 - D. it is important to use rain forest land to grow crops
10. Some people think that _____.
 - A. there will be no rain forests in 40 years
 - B. there will be no rain forests in 30 years
 - C. 30 percent of the rain forests will be gone in 40 years
 - D. 40 percent of the rain forests will be gone in a few years
11. What is the title of the reading?
 - A. The Effects of Rain Forest on the Earth's Climate
 - B. The Importance of Rain Forests
 - C. How We Are Destroying Rain Forests
 - D. Rain Forests and the Earth's Climate
12. What is the title of Paragraph A?
 - A. The Effects of Rain Forest on the Earth's Climate
 - B. The Importance of Rain Forests
 - C. How We Are Destroying Rain Forests
 - D. Rain Forests and the Earth's Climate
13. What is Paragraph B about?
 - A. how rain forests can help the atmosphere
 - B. how humans are hurting the rain forests
 - C. the causes of global warming
 - D. how big the rain forests are

14. Which paragraph explains how rain forests help stop global warming?
- A. Paragraph A
 - B. Paragraph B
 - C. Paragraph C
 - D. None of the choices are correct.
15. Which paragraph explains what rain forests are?
- A. Paragraph A
 - B. Paragraph B
 - C. Paragraph C
 - D. None of the choices are correct.

Seasonal Affective Disorder: Symptoms, Causes, and Treatments

What is Seasonal Affective Disorder?

[A] Many people feel very happy and have a lot of energy on sunny days and feel less happy and less energetic on cold, gray days. But for some people, cold gray days cause more than a little sadness and low energy. Dark days without a lot of sun cause these people to feel very depressed and irritable. Another symptom is that they can't *concentrate* (focus their attention on something for a certain amount of time) and they sleep a lot because they feel tired all the time. They also gain weight because they *crave* (have a strong desire for) sugary and starchy foods like cookies and potato chips. These people have Seasonal Affective Disorder (SAD). SAD is a serious illness with real symptoms and some possible cures.

Darkness and Melatonin

[B] No one really knows what causes SAD, but many experts believe that changes in light are the cause. Sunlight is brighter in the summer and weaker in the winter, and there are more daylight hours in the summer than in the winter. Our bodies make a chemical called melatonin when we are in the dark. Melatonin is a *hormone* (a chemical in our bodies that affects things like growth and emotions) that lowers the body temperature and causes *drowsiness* (sleepiness). For example, melatonin helps animals such as bears *hibernate* (sleep during the winter). Scientists explain that the *increase* (rise in number or amount) of melatonin might be the reason some people feel so tired and depressed during the winter months.

Possible Treatments

[C] There are a few things that people with SAD can do to feel better in the winter. First, they can try to get more light. Light stops our bodies from making melatonin. People can take walks in the morning or eat lunch outside. Or they can work in sunny rooms next to windows. They can also use special lamps that are ten times brighter than regular lamps. Regular lamps are not bright enough. Second, it might help to avoid alcoholic drinks. Alcohol is a depressant, so it can make people feel worse. A third possible treatment is exercise. There is no scientific proof that exercise can cure SAD, but some people with SAD feel better when they get regular exercise. But if the symptoms are very serious, people with SAD can see a doctor. The doctor can give them *antidepressants* (medication used for depression) to help them feel better.

Reading Comprehension and Reading Strategies

Answer these questions about the reading passage.

16. What is the main idea of this reading?
- A. SAD is just a word for the way most people feel in the winter.
 - B. Sunlight is brighter in the summer and weaker in the winter.
 - C. SAD is a real illness that makes people feel bad during the winter.
 - D. No one knows what causes SAD.

17. Which of the following problems is *not* a symptom of SAD?
- A. having a lot of energy
 - B. feeling irritated
 - C. wanting to sleep a lot
 - D. gaining weight
18. Why do people with SAD often gain weight?
- A. They sleep too much.
 - B. They feel irritable and they can't concentrate on work.
 - C. They want to eat foods with a lot of sugar and starch.
 - D. They have a serious illness with real symptoms.
19. Some experts think that _____ can make people feel depressed and tired.
- A. growth and development
 - B. lower body temperatures
 - C. bright sunlight in the summer
 - D. darkness in the winter
20. We make melatonin _____.
- A. in factories
 - B. in the dark
 - C. in the summer
 - D. after we hibernate
21. Which of the following sentences is *not* true?
- A. No one is sure about what causes SAD.
 - B. Most experts know that melatonin causes SAD.
 - C. Melatonin helps bears hibernate.
 - D. Melatonin can make people feel tired.
22. Some possible treatments of SAD are _____.
- A. bright light and alcohol
 - B. regular lamps and exercise
 - C. bright lights and exercise
 - D. eating lunch every day
23. Which of the following things is not a possible treatment for SAD?
- A. spending more time in the light
 - B. exercise
 - C. antidepressants
 - D. getting more sleep
24. People with SAD probably _____.
- A. feel depressed in the summer
 - B. feel better in the summer
 - C. feel worse in the summer
 - D. don't feel better in the summer
25. Which do you think is another possible treatment for SAD?
- A. moving to a sunnier climate
 - B. staying in the house when it's dark outside
 - C. getting a lot of rest
 - D. drinking a lot of coffee
26. What is the topic of this reading?
- A. how sunlight affects our moods
 - B. the causes of SAD
 - C. changes in sunlight
 - D. what SAD is and how to treat it

27. Which sentence states the main idea of Paragraph B?
- A. Sunlight is brighter in the summer and weaker in the winter.
 - B. Scientists explain that an increase in melatonin might be the reason some people feel so tired and depressed during the winter months.
 - C. No one really knows what causes SAD, but many experts believe that changes in light are the cause.
 - D. Our bodies make a chemical called melatonin when we are in the dark.
28. Which of the following sentences does not support the main idea of Paragraph B?
- A. No one knows the causes of SAD.
 - B. Melatonin can make people depressed.
 - C. Sunlight is weak in the winter.
 - D. Melatonin makes us sleepy.
29. Which sentence states the main idea of Paragraph C?
- A. Light stops our bodies from making melatonin.
 - B. People can take walks in the morning or eat lunch outside.
 - C. There are a few things that people with SAD can do to feel better in the winter.
 - D. There is no scientific proof that exercise can cure SAD.
30. Which of the following does *not* support the main idea of Paragraph C?
- A. More light can make people with SAD feel better.
 - B. Regular lamps can help depressed people feel better.
 - C. Some people with SAD feel better when they exercise.
 - D. People can take walks and eat outside to feel better.
31. According to the reading, which of the following statements is true?
- A. Sleepiness causes our bodies to make more melatonin.
 - B. Melatonin causes us to feel sleepy.
 - C. Darkness causes us to feel sleepy.
 - D. Hormones cause our bodies to make melatonin.
32. According to the reading, which of the following statements is true?
- A. Sunlight causes our bodies to stop making melatonin.
 - B. Alcohol causes our bodies to stop making melatonin.
 - C. Alcohol causes our bodies to make more melatonin.
 - D. Alcohol causes us to feel more energetic.
33. According to the reading, which of the following statements is true?
- A. Alcohol can cause depression.
 - B. Too much exercise can cause depression.
 - C. Not enough exercise can cause depression.
 - D. Antidepressants can cause depression.
34. According to the reading, which of the following statements is true?
- A. Hibernation can cause lower body temperatures.
 - B. Melatonin can cause people to hibernate.
 - C. Lower body temperatures can cause our bodies to make more melatonin.
 - D. Melatonin can cause lower body temperatures.
35. According to the reading, which of the following statements is true?
- A. Too much sunlight can cause an increase in drowsiness.
 - B. Melatonin can cause an increase of energy.
 - C. Darkness can cause an increase of melatonin.
 - D. Drowsiness can cause an increase in melatonin.

Vocabulary

Match the words to the sentences. Answers may be used only once.

- a. affect
- b. atmosphere
- c. carbon dioxide
- d. damage
- e. diseases
- f. effects
- g. extreme
- h. increases
- i. rain
- j. scientists

36. Some _____ believe that global warming is changing our earth's climate.

37. Some of the _____ of global warming are strong winds and hurricanes in some places and droughts in other places.

38. This kind of _____ weather can cause problems.

39. Terrible weather can cause _____ to people's homes.

40. Scientists say that _____ in gases are the cause of global warming.

41. Some gases like _____ are the cause of global warming.

42. Rain forests can help us fight global warming. They can _____ the climate in good ways.

43. Rain forests can cool the _____ and remove carbon dioxide from the air.

44. Medicines made from rain forest plants help people with serious _____ and health problems.

45. Rain forests usually get more than 33 feet of _____ each year, so they're very wet.

Vocabulary

Match the words to the sentences. Answers may be used only once.

- a. depressed
- b. diseases
- c. floods
- d. heart attack
- e. humidity
- f. influence
- g. meteorologist
- h. slowly
- i. typical
- j. worse

46. It rained for five nights last week. There were _____ all over the state.

47. The _____ in rainforests is really high. The air feels very wet.

48. Some people feel bad during the winter months. But people with SAD feel _____ than other people.

49. Sudden temperature changes can cause people to get _____ like pneumonia.

50. Weather can really _____ the way people feel. Bad weather can make them feel depressed and good weather can make them feel happy.

51. My brother is a(n) _____. He researches the weather for the Channel 7 news.

52. I feel so _____ today. I'm sad and I don't have any energy.

53. The earth's climate is changing _____. The changes are not happening quickly.

54. After having a(n) _____, my father had to change his diet and exercise more often.

55. On a(n) _____ day in Southern California the weather is warm and the sky is clear. It doesn't get cold and cloudy very often.

Vocabulary Building

Complete the sentences with words from the reading "Rain Forests and the Earth's Climate." The letters in parentheses refer to the paragraphs in the reading.

56. These areas of land get a lot of rainfall and are covered by tall trees. They are _____. (A)

57. This word means *to find*. It is _____. (A)

58. Some plants are useful for treating medical problems. They have _____. (A)

59. This word means *extra*. It is _____. (B)

60. Another word for *soak up* is _____. (B)

Vocabulary Building

Look for the bold words in the reading "Seasonal Affective Disorder: Symptoms, Causes, and Treatments." Choose the best answer.

61. Some medicines can cause **drowsiness**. This means they can _____.
A. make you feel depressed
B. make you feel sick
C. make you feel tired
D. make it difficult to sleep
62. If something **increases**, it _____.
A. gets stronger
B. gets more powerful
C. is affected by something
D. gets bigger
63. If you can't **concentrate** on a book, you _____.
A. can't understand what it is about
B. don't enjoy it
C. don't like to read it for long periods of time
D. can't pay attention to it or focus on it
64. Sometimes, I **crave** chocolate. This means that _____.
A. I eat a lot of chocolate
B. I buy a lot of chocolate
C. I want to eat a lot of chocolate
D. I don't like chocolate
65. Some animals **hibernate** in the winter. This means they _____.
A. sleep
B. eat
C. stay awake
D. spend time in the sunlight

ch02 Key

1. B
2. C
3. D
4. A
5. B
6. C
7. D
8. B
9. B
10. A
11. C
12. B
13. A
14. C
15. B
16. C
17. A
18. C
19. D
20. B
21. B
22. C
23. D
24. B
25. A
26. D
27. C
28. A
29. C
30. B
31. B
32. A
33. A
34. D
35. C
36. j

- 37. f
- 38. g
- 39. d
- 40. h
- 41. c
- 42. a
- 43. b
- 44. e
- 45. i
- 46. c
- 47. e
- 48. j
- 49. b
- 50. f
- 51. g
- 52. a
- 53. h
- 54. d
- 55. i
- 56. rain forests
- 57. discover
- 58. medicinal value
- 59. excess
- 60. absorb
- 61. C
- 62. D
- 63. D
- 64. C
- 65. A

ch02 Summary

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