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# Climate change and forests

## TEST ANSWERS

### What learning session did you participate in?

Teacher

Books and bytes

Bytes

**1. Which of the following statements describes climate?** \_\_\_ / 2

*Please mark the correct option(s).*

- A. "It is raining in Munich."
- B. "Spring in Middle Europe was unusually warm in recent years."
- C. "In Copenhagen there is usually no snow in July."
- D. "Last year's easter season was sunny and warm."

**2. Which of the following items influence climate?** \_\_\_ / 2

*Please mark the correct option(s).*

- A. Humidity
- B. Altitude
- C. Wind
- D. Temperature

**3. Which of the following statements regarding climate zones are true?** \_\_\_ / 2

*Please mark the correct option(s).*

- A. "Because of the flat angle of the sun, the polar areas receive less heat through solar radiation."
- B. "Spring, summer, autumn and winter differ significantly in equatorial and tropical regions."

**4. How much forest is there on planet earth currently?** \_\_\_ / 4

*Please mark the answer that is closest to reality.*

- A. 10 - 20%
- B. around 30%
- C. more than 60%
- D. exactly 50%

**5. Which of the following statements regarding climate change are true?** \_\_\_ / 2

*Please mark the correct option(s).*

- A. "Within the last 100 years, the average temperature has risen almost 1°C on earth."
- B. "Global warming affects only temperature. Precipitation (rain, snow, etc.) and wind patterns in our atmosphere are not concerned."
- C. "The average temperature on planet earth has never been as high as today in the existence of planet earth."
- D. "The human influence on climate, especially since the beginning of industrialization, is acknowledged by the majority of scientists."

**6. What means "natural greenhouse effect" in relation to climate?** \_\_\_ / 2

*Please mark the correct option(s).*

- A. "Gases within our atmosphere act like a glass roof of a greenhouse by trapping heat and warming the planet."
- B. "The natural levels of the greenhouse gases within our atmosphere are being supplemented by emissions from human activities."
- C. "The earth's surface and lower atmosphere is warming more rapidly than usually."
- D. "Without the natural greenhouse effect, the average temperature on earth would be much lower than it is at the moment."

**7. Where do additional greenhouse gases in our atmosphere come from?** \_\_\_ / 2

*Please mark the answer that is closest to a full answer.*

- A. whenever coal, oil or wood is being burned
- B. from huge animal farms
- C. from photosynthesis

**8. How do forests affect climate change?**

\_\_\_ / 4

*Please mark the correct option(s).*

- A. Through photosynthesis, forests act as carbon sink and absorb huge amounts of carbon dioxide (CO<sup>2</sup>), one of the greenhouse gases.
- B. Carbon dioxide (CO<sup>2</sup>) is released into the atmosphere when trees burn or after they died.

**9. What are the main threats to forests in climate change?**

\_\_\_ / 10

*Please give examples and explain why these threats are enhanced through climate change.*

*Forests in climate change are directly endangered due to the rapidly increasing temperatures, changing mean precipitation, natural catastrophes, diseases and infestation.*

- intense drought causes water stress
- forest damaging insects benefit from rising temperature and drought
- extension of range and increase in mass outbreaks of pests
- more frequent fires during long lasting heatwaves
- increased windthrow damage through heavier storms
- flooding and soil erosion through intense rainfall
- higher risk of early frost damages (buds, leaves, flowers) because of weather extremes
- reduction of genetic diversity through dieback
- decrease in number of tree species through dieback